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ENS 507

Environmental Planning, Policies and Acts

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Department of Forestry and Environmental Science
School of Earth and Environmental Science



Uttarakhand Open University
 Haldwani, Nainital (U.K.)

Environmental Planning, Policies and Acts



UTTARAKHAND OPEN UNIVERSITY SCHOOL OF EARTH AND ENVIRONMENTAL SCIENCE

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Unit 1: Introduction to Environmental Planning

Unit Structure

1.0 Objectives

1.1 Introduction

1.2 Planning Process

1.2.1 Analysis of the Business Environment

1.2.2 Defining Objectives and Goals

1.2.3 Thinking about and establishing planning objectives

1.2.4 Identifying Potential Substitutes

1.2.5 Considering Potential Solutions in light of the Objectives

1.2.6 Selection of Best Alternative

1.2.7 Developing Back-Up Plans

1.2.8 Quantifying Plans through Budgeting

1.2.9 Plan Execution and Results Evaluation

1.3 A brief description of the Environmental Management System (EMS)

1.4 The Environment Management Strategy/Plan

1.5 Objectives of the Environmental Plan

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1.7 Process of Environmental Planning

1.7.1 The Planning Team

1.7.2 Development of Vision Statement

1.7.3 Defining Needs through Environmental Assessment

1.7.4 Determine Potential Solution

1.7.5 Putting the Strategy Together

1.7.6 Executing the Envisioned Plan

1.7.7 Evaluating the Plan/Strategy

Summary

1.0 Objectives

Once you studied this unit, you will be able to:

- Know how the planning process works in general.
- Understand the significance of the Environmental Management System.
- Discuss the various steps involved that make up the environmental planning process.

1.1 Introduction

It is actually a thoughtful process that begins with planning. Selecting what needs to be done (the type of work), why it needs to be done (the locations), when it needs to be

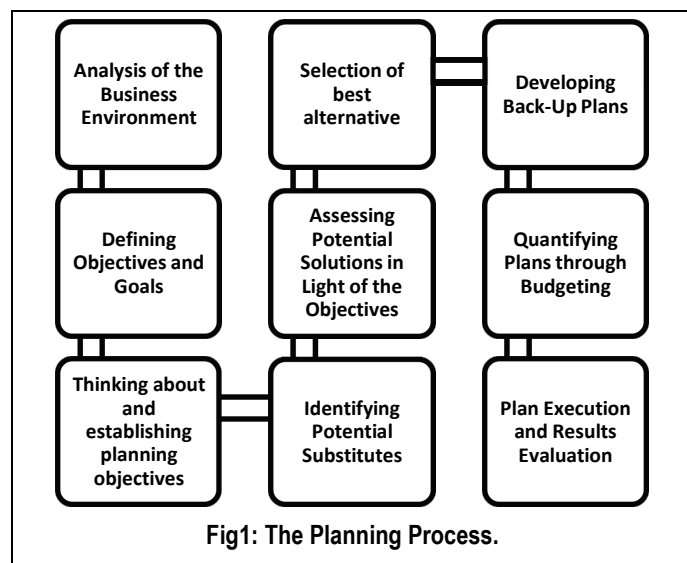
done (the time), where it needs to be done (the place or region), how it should be done (the strategies and processes), and who will do it are important administrative responsibilities (individuals). Each of these options involves picking the option that can contribute the most to the organization's goals out of all those that are available. In essence, planning is a decision-making process that focuses mostly on the long term. Therefore, in order to make an arrangement, a planner must create the organizing assumptions, circumstances, or suspicions. Let's examine the methodology employed in the organization's planning strategies.

1.2 Planning Process

Arranging is fundamentally having two viewpoints, determining and decision-making. The method of arranging comprises of the various steps as appeared within the chart underneath.

1.2.1 Analysis of the Business Environment

This stage really comes before planning and is not purely a planning step. Planning begins with becoming aware of the opportunities present in both the external and internal environments (inside the organization). A realistic analysis of the opportunity scenario is necessary to determine



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the course of action that must be taken right now in order to achieve the intended objectives.

1.2.2 Defining Objectives and Goals

The planning process is setting up the organization's aims and defining its general objectives is the next phase in the planning process. Then, in accordance with the goals that must be accomplished by the organization, each sub-objectives unit's and targets are defined. The action is crucial because it establishes the end outcome that

the business wants to attain. An organization or unit cannot operate (manage) effectively and efficiently without defined objectives.

1.2.3 Thinking about and establishing planning objectives

The assumptions made about the setting in which the plan will be implemented are known as premises. Any organization's planning is based on a number of assumptions about the environment it expects to operate in. The personnel in charge of planning must comprehend and consent to use consistent planning premises in order to have a coordinated organization planning. A revision to the strategy may be necessary if any assumption about the anticipated environment changes.

1.2.4 Identifying Potential Substitutes

The fourth phase is to determine the various potential choices based on the planned assumptions. There are various strategies that can be applied to accomplish the goals that have been established. To determine the most practical solutions, each of these must be carefully analyzed.

1.2.5 Considering Potential Solutions in light of the Objectives

Investigating and evaluating various action plans is part of the planning process that are necessary to achieve the organization's objectives. Typically, these plans are assessed in light of things like potential expenses and risks, as well as their advantages for the organization. It is possible to examine the alternative using mathematical tools in order to determine which alternative would be best suited to achieving the organization's objectives.

1.2.6 Selection of Best Alternative

It is adopting a plan, which requires decision-making over the choice of alternatives, is the sixth phase. When looking into and analyzing potential courses of action, particularly those that are not immediately obvious, it is possible that two or more options turn out to be wise and advantageous. The best alternative is chosen, but in some cases, several alternative courses may also be adopted for the organization's benefit.

1.2.7 Developing Back-Up Plans

In accordance with the plan chosen, a number of plans must be produced at various levels/units. Each functional unit prepares plans in order to comprehend the future

requirements and risks associated with it. These plans aid in the implementation of the primary plan, increasing its effectiveness.

1.2.8 Quantifying Plans through Budgeting

It is necessary to develop budgets for various periods and divisions in order to offer plans more tangible significance for implementation. The plans of several units can be combined through the use of budgets, which can also serve as performance criteria.

1.2.9 Plan Execution and Results Evaluation

It represents the culmination of the planning process. The success of the overall process will be determined by how well each unit and the organization as a whole execute the course of action chosen. Making decisions and planning are both part of management. Setting goals for an organization and determining the best path to achieving them are both part of planning. The process of planning includes decision-making, as was previously discussed. It entails choosing a path of action from a variety of options. Let's look at how these two management functions are used in environment management to maintain managerial effectiveness.

1.3 A brief description of the Environmental Management System (EMS)

The idea of environmental management is very new. It is focused on controlling the environment that surrounds a firm. Environment unites all inanimate creatures and forces at work in the natural world, including people. It might be characterized as a system that includes procedures for compiling, analyzing, reporting, and carrying out environmental policy. It includes a number of waste management techniques. Rather of focusing on garbage treatment and disposal, more emphasis should be placed on waste prevention initiatives.

A corporate approach that supervises develops, and implements an organization's environmental policy is known as environmental management. The definition of environmental management is a process that increases compliance while minimizing waste. The procedure was developed to address environmental problems that negatively affect the world either directly or indirectly. It focuses on averting ecological catastrophes and providing acceptable solutions to environmental crises. In order to

prevent the depletion of fossil fuels, it can also identify prospective sources of renewable energy.

Environmental Management System (EMS) meets the challenges of environmental protection and sustainable development and demonstrates the dedication of the organization's towards the environment. Enhancing the financial, quality, and environmental performance may be made possible by integrating environmental management with other organizational operations. The use of a systematic approach to organizing, regulating, measuring, and enhancing an organization's environmental performance is the key to effective environmental management.

The "Plan Do Check Act" model created by Shewart and Deming serves as the foundation for the EMS models. The basic objective of EMS is to set minimum standards and develop site-specific EMS. We require an action plan, which should be integrated with other organizational plans, strategies, and budgets, to accomplish the goals of EMS. With a strong environment management plan (EMP), environmental activities can be tracked and carried out in a more structured way, making environmental management simpler. Specifying the organization's goals for the environment is a crucial part of environmental management planning. Now let's get into more information about the environment management planning.

1.4 The Environment Management Strategy/Plan

Over the course of the plan, organizational growth is driven by the environment management plan, which is a crucial component of the environment management system. Its purpose is to develop a strategy for the steps that will be done to lessen the harm to the environment that the project will bring about. A "plan or programme that seeks to enhance the benefits of the projects" is defined as "a plan or programme that seeks to achieve a required end state and describes how activities, which have or could have an adverse impact on the environment, will be mitigated, controlled, and monitored throughout the commissioning, mobilization, construction, operation, maintenance, and decommissioning of a project." Every mitigation measure for each environmental component brought on by operations-related project activities is included in the environment management plan. The plan is generally developed in accordance with the standards provided by the Ministry of Environment, Forestry, and Climate Change (MoEFCC). The fundamental advantage of having an EMP is that it

acts as a tool for controlling environmental performance, improving environmental quality in the process. Additionally, it promotes enhanced stakeholder relations and cost control. An EMP's primary components are:

- **Policy and Commitment:** Plans for all issues involving the air, water, land, and noise should be included in the organization's strategy and put into action.
- **Planning:** This include determining environmental implications, doing environmental assessments and analyses, abiding by legal requirements, and setting environmental objectives.
- **Implementation:** It includes the tools at the disposal of the designers, the responsibility of the contractors, the education of operational staff members involved in environmental control facilities, and the documenting of the steps to be done.
- **Evaluation and Measurement:** To carry out environmental monitoring and have effective mitigating measures implemented. To evaluate the EMP in place by doing recurring environmental audits. Creating a strategy for remedial action to address the issues found during the audit.

1.5 Objectives of the Environmental Plan

Identification, evaluation, and development of solutions for environmental problems are the main goals of environmental planning. Environmental quality protection, improvement, and pollution prevention, control, and mitigation are the main goals. In addition, there are numerous more reasons to have an environmental plan, including:

- To promote sound management techniques via preparation and dedication to environmental concerns.
- To ensure careful use of natural resources to satisfy present and future needs and goals.
- Gives a general overview of how to periodically report on environmental management and assess its effectiveness.
- List environmental issues and suggested safety precautions.
- Offer environmental regulations that will help practically reduce activities' possible negative effects on the environment.

- To safeguard delicate and threatened plants and animals.
- Include environmental considerations in projects, plans, and programmes that promote social and economic growth.
- To stop the deterioration of land caused by soil erosion, alkali-stalinization, water logging, pollution, and a decrease in the amount of organic matter.
- Reducing environmental disturbances of all kinds, including socioeconomic, cultural, biological, and ecological ones.
- To obey and abide by the laws, rules, criteria, and standards established to protect the environment.
- Reduce environmental risk and improve the environment's health, safety, and quality.
- Clearly detailing the monitoring techniques required to discover environmental impacts.
- To draw attention to particular needs that will be observed during development and, if environmental problems cannot be avoided, will demand corrective action.

1.6 Environmental Assessment/Evaluation

As we are all aware, assessment is the outcome of something being examined and assessed. Analyzing involves making meticulous observations, and evaluating involves forming an opinion or judgment based on what we observe and what we already know to be accurate. Environmental assessment includes a review and assessment of the immediate environment, including the land, the wildlife, the water, and other elements.

Creating plans and procedures to make sure that the mitigation measures and monitoring requirements established throughout the environmental acquiescence evaluation will be execute in the project's later stages is a key goal of environmental assessment. The entire community could be included in an assessment, and a survey approach could be used. It can also be done by conducting in-depth interviews, conducting research, creating a film, getting a contractor's help, or using a combination of other techniques. Typically, environmental evaluations are carried out at the outset of the environmental planning process.

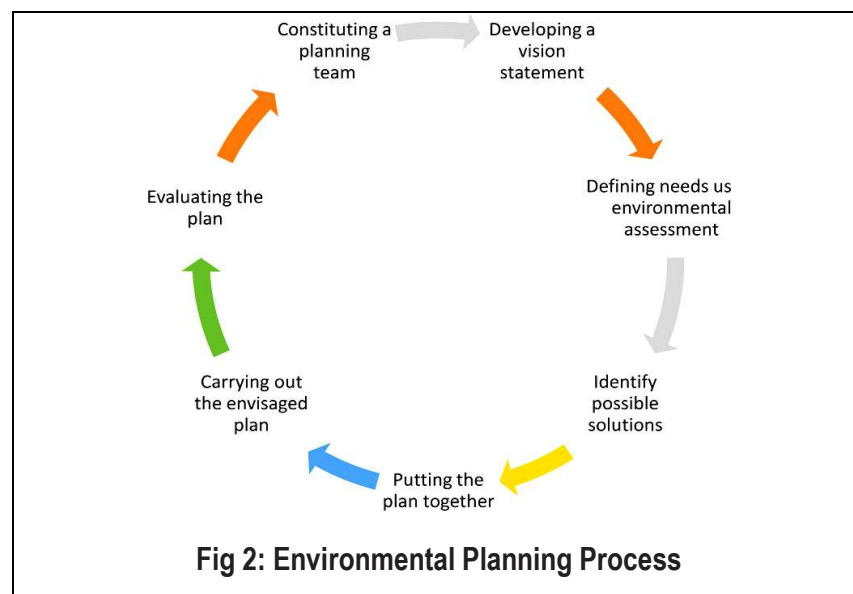
1.7 Process of Environmental Planning

Environmental planning is a method that makes it easier to make decisions on how to develop land while taking into account the natural environment, social aspects, political issues, economic factors, and governance factors. It provides a comprehensive framework to achieve sustainable outcomes.

Environmental planning seeks to build livable communities that can preserve and safeguard undeveloped areas. Enhancing both the environment's quality and people's health and wellbeing is the main objective of environmental planning.

Environmental planning considers the impact of social, political, economic, and governmental factors on the environment while considering development. The ability to use the land productively benefits society, and the ability of the ecosystem to sustain itself benefits future generations. The current state of the natural environment should be taken into account as the initial step in environmental planning. Aspects like current use, features, natural resources, infrastructure, and buildings will be assessed.

Setting goals and objectives is the second element. It includes taking into account societal requirements as well as norms, laws, and regulations. Implementation is the final element, which includes carrying out the strategy. It considers the manpower, equipment, and technology required to carry out the strategy. Planning for the environment is extremely difficult since it must take into account both the environmental and human issues.



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Being competitive requires competent environmental planning because it is a component of the corporate vision, mission, and strategy. Corporate executives must formulate their plans with environmental issues in mind, embracing international and national legislation to ensure compliance with environmental standards. These factors are crucial for creating an environmentally friendly product or service. Planning results in future environmental changes and preventative measures. By anticipating and addressing the majority of the sources of environmental strain, effective planning will facilitate implementation and lower its impact. Let's talk about the planning procedure that may be used to create a successful strategy. The following steps make up the environmental planning process:

- The Planning Team
- Development of Vision Statement
- Defining Needs through Environmental Assessment
- Determine Potential Solution
- Putting the Strategy Together
- Executing the Envisioned Plan
- Evaluating the Plan/Strategy

1.7.1 The Planning Team

Finding leaders from the community is the first step in the environment planning process, who are prepared to work as well as provide their vital inputs in the planning process, concerned about the about the environment, health, and wellbeing of the organizations or community and holding regular gatherings to talk about any environmental and health issues that any member may be experiencing. Some issues are treated right away, while others are addressed later. By addressing every issue, the planning team and the organization/community will feel more ownership. Customers, stakeholders, and employees are needed on the team so that environmental issues may be taken into account at this time.

The first thing that needs to be clarified is why the organization is working to create an EMS, whether it will be used at a single location or several, and how it will assist in attaining the organization's objectives. The top management should have faith in the planning staff. The management needs to be made aware of the advantages and disadvantages of the current strategy as well as how it may impact the organization's

financial and environmental performance. In order for the top management to effectively ensure that EMS goals are in line with corporate goals, this information must be shared with all levels of the organization.

Meetings, agendas, reporting, and keeping the team on task are all the leaders' responsibilities. They ought to be in charge of managing survey planning so that the issues can be resolved right away. The team leader needs to be thoughtful, committed to creating an EMS, and able to work well with upper management. Key management functional areas like finance, human resources, production, etc. should be represented on the team. A cross-functional team aids in fostering ownership and commitment to the environment management system by ensuring that procedures are workable and efficient.

1.7.2 Development of Vision Statement

A long-term plan for the organization must be created by the team and top management. The team members are able to recognize and evaluate problems, chances, and current procedures. Based on prior performance, it is necessary to determine whether a business is making an effort to enhance its environmental performance, whether it relates to pollution control, waste disposal, etc. Does this task involve all departments and employees? It is necessary to periodically review the goals to determine whether they are being achieved and to determine what should be the new ones. What should be the action plan's future line of action be described? Who will be in charge of the project? What resources are necessary? These specifics will be useful when the organization develops its vision statement over time.

For example in the case of village development, the process of creating a vision starts with the community gathering data regarding its members' values, beliefs, and worldviews. Ask people to list all pertinent environmental issues that affect their community. The list and categorization of connected issues, such as roadside litter, river water contamination, etc., can help with the creation of surveys. The community's members should then reflect on whether their current actions put the group's future survival or ability to support itself in threat. If so, a different line of action must be chosen. The next question is: What does the community wants for the village's future? A vision statement is a declaration that sum up the goals and dreams of the community for the future.

1.7.3 Defining Needs through Environmental Assessment

One can always learn from their mistakes, and EMS is no different; by doing so, they can steer clear of such errors in the future. Therefore, the statements must be a little flexible in order to make the necessary adjustments in response to the assessments made via formal or informal surveys. The reason why an EMS is necessary and how it helps the firm minimize environmental consequences in an economical way should be made clear to all personnel. By evaluating the current system in use, more affordable options for the organization's management of environmental duties can be offered. Implementing modifications to the EMS is more successful and sustainable in the present and the future.

In the village environmental planning is to determine the needs and preference of the community and take into account the potential effects that various operations, such as mining, backyard fires, or climate change. The scientific studies carried out by the technical members of the team on issues including drinking water, solid waste, air pollution, energy use, disaster preparedness, etc. helped the team become more aware with potential environmental problems that the community might encounter. By conducting a village environmental survey, include the community in identifying and ranking the environmental issues. These surveys can suggest that the community's top concern is not as serious as it seems, or that it doesn't really have a problem.

On the other hand, a technical survey may identify some issues that the community has deemed to be of low priority as major problems. The community may need to reevaluate the demands that were prioritized in light of the need to educate and make the people aware of the many environmental challenges.

1.7.4 Determine Potential Solution

To determine solutions to these difficulties after having recognized, prioritized, and discussed the environmental challenges that various organizational divisions and personnel are facing. It's also crucial to learn how much each of those solutions will cost. There may be both immediate and long-term answers found.

All citizens, particularly the younger generations, must participate in order to propose potential solutions for their town. While putting the solutions into practice, any and all suggestions may be taken into account and carefully considered. Gaining access to better solutions may be facilitated by networking with other communities. If other towns

have practical answers to comparable environmental problems, those may be simply adopted.

1.7.5 Putting the Strategy Together

The development of the environmental plan comes when senior management, team leaders, and employees have reached consensus on a vision statement and the perceived environmental concerns and outlining the numerous issues and their likely remedies. In order to achieve environmental protection and public health, the community's priorities and goals are documented in an environmental plan. This will make it easier for the current and future personnel to pinpoint problem areas and ascertain what work still has to be done. The strategy should priorities protecting the environment while also addressing critical issues with resources that are conveniently located in the hamlet. In order to support the environmental plan, the goals must be divided into smaller, more doable tasks.

1.7.6 Executing the Envisioned Plan

Employees are a valuable source of information about environmental health and safety issues that are pertinent to their workplace. They might assist the team in creating the procedures that will be detailed in the plan thanks to their knowledge of current processes and procedures. They bear a greater responsibility for the plan's success because they contributed to its creation. The staff may be informed of the plan's progress as it is being carried out. Top management may be informed of the successes, particularly if further resources are needed.

After completion of the village's environmental plan, it would be necessary to create a detailed schedule for each activity, taking resource availability into consideration. Another important consideration is figuring out how much it will cost to implement the planned approach and where the money will come from. Lastly, decide who will be responsible for carrying out each of those activities, whether it be local governments, private citizens, or external organizations.

1.7.7 Evaluating the Plan/Strategy

The project plan must be periodically compared to the progress. To make the necessary improvements, it is necessary to gauge how effectively the plan worked. Digital before-and-after images of the work done in the present day could be useful for keeping track of the work done. Environmental advocacy organizations can be

established to keep an eye on the project's development, inspire the workers, and set up checks and balances. The plan may also be evaluated by external organizations, increasing transparency.

The Environmental Plan is continually evolving, and after assessment, the process starts over. You must repetitively review the goals, needs, and choices in this never-ending cycle. The planning process includes deciding how people or organizations will use energy, natural resources and even outdoor leisure areas.

Summary

In this unit we have covered the Planning Process and the development of Environmental Plans in great detail in this section. Forecasting and decision-making are the two main components of planning. There are eight steps in the planning process overall: Analyzing the Business Environment is not exactly a phase in the planning process; rather, it comes before planning. Setting the organization's aims and defining its general objectives is the next phase in the planning process. The fourth phase after considering and establishing the planning premises is to determine the numerous options that are possible in light of those premises. The next phase in the planning process is to investigate and assess potential plans of action that are necessary to achieve the organization's objectives.

There has been extensive discussion on the Environmental Management System, which includes procedures for establishing, monitoring, reporting, and carrying out environmental policies. The creation of an environmental management plan is described in detail. In-depth explanations of the various processes in the environmental planning process have been provided. It is also highlighted what an environmental plan is for and how important it is to the organization.

Environmental Management: It is described as a business strategy that oversees, creates, and puts into practice an organization's environmental policy.

Planning: It entails determining the best way to attain a company's goals and creating goals for the organization.

Environmental Planning: It is a process that makes it easier to make decisions on how to develop land while taking into account the natural environment, social issues,

political aspects, economic factors, and governance factors. It provides a holistic framework to produce sustainable outcomes.

Environmental Assessment: It comprises a review and analysis of the environment, including the plants, animals, soil, water, etc.

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Terminal Question

1. How would you define "environmental management"?

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2. What do you understand by the community based environmental planning?

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3. To learn about the government's regulatory and outreach efforts regarding environmental impact, discuss the National Conservation Strategy and Policy Statement on Environment and Development.

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Unit 2: Environmental Protection

Unit Structure

2.0 Objectives

2.1 Introduction

2.2 India's Environmental Protection Legislation Evolution

2.3 Environmental protection provisions in the Constitution

2.4 Impact of India's Environmental Framework on Industries and Businesses

2.4.1 Water (Prevention and Control of Pollution) Act 1974

2.4.2 Air (Prevention and Control of Pollution) Act 1981

2.4.3 Environment (Protection) Act 1986

2.4.4 Rules for Waste Management

2.4.5 Notification of an environment impact assessment (EIA)

2.4.6 Forest (Conservation) Act, 1980

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2.5 Enforcement, Compliance, and Implementation

2.6 Environment-related judicial forums and corporate responsibility

2.6.1 The Supreme Court

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2.8 Planned actions, fiscal policies, and market-based interventions

2.8.1 Perform, Achieve and Trade (PAT) Scheme

2.8.2 The Green Bonds

2.8.3 Securities and Exchange Board of India (SEBI)

2.8.4 Micro, Small and Medium Enterprises (MSME)

2.9 Major Developments

Summary

2.0 Objectives

After studying this unit, you should be able to:

- Understand the key constitutional provisions in India relating to Environment
- Discuss the International Developments in the field of Environmental Law and its impact on Businesses and Industries
- Appreciate the important provisions of Water Act, 1974, Air Act 1981, Environment Act, 1986, and Forest Act, 1980.
- Describe the major schemes that have been specially implemented for the MSME sector.

2.1 Introduction

The world has gained a lot of knowledge about how people and the environment interact during the past fifty years. The Stockholm Declaration, which was adopted at the United Nations Conference on Environment in Stockholm, Sweden, in 1972, elevated environmental concerns to the top of the international agenda and signaled the beginning of a conversation between industrialized and developing nations about the relationship between economic development, pollution of the air, water, and oceans, and the well-being of people around the world.

Special attention was paid to the role of corporations in the general discussion because the majority of developing countries complained against the actions of multinational businesses and contended that the developed nations were overusing their natural resources. The requirement for more efficient and less wasteful use of natural resources.¹

Since 1972, environmental challenges have become increasingly more widely known. The environment has been negatively impacted by human activities such as deforestation, the burning of fossil fuels, changes in land use, population growth, excessive exploitation of natural resources, and uncontrolled industrialization. However, in light of modernization, economic expansion, and profit maximization, such challenges frequently take a backseat. The Brundtland Commission published a report titled "Our Common future" in 1987 in an effort to link economic growth and environmental stability. The report discusses the idea of sustainable development and defines it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."²

In the previous ten years, there have been a number of significant advancements on the global stage that are directly related to sustainable industrialization, production, and consumption.

The 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development, which was adopted in September 2015, contain SDGs 9³ and 12⁴, which place responsibility for sustainable development on stakeholders outside governments, such as businesses, consumers, and other industries. The Paris Agreement⁶ and the Kyoto Protocol⁵ of the United Nations Framework Convention on Climate Change both

call on richer nations with greater financial means to provide aid to less developed, more vulnerable nations.

Furthermore, the Caring for Climate business forum saw unprecedented participation from a number of businesses, including the Indian Mahindra group, which displayed its clean technologies and committed to slashing its greenhouse gas emissions. With clean and sustainable technology integrated into the business structure, it is crucial to instill a culture of sustainability and profitability. Even the corporate sector has admitted in recent years that addressing environmental issues and addressing climate change is essential to managing risks and ensuring long-term returns on investment. This is due to the economic effects of environmental pollution⁷ and climate change becoming more and more apparent.

According to the International Finance Corporation's report⁸, private entities are far more suited to invest in climate-friendly projects than governments alone. The report also predicts that South Asia will see USD 3.4 trillion in climate investment opportunities between 2018 and 2030 if NDCs are met by member nations in the region. Of this amount, USD 3.1 trillion of opportunities will be presented in India.

However, as the global economy expands, resource usage might potentially triple by 2050.⁹ Population growth is prevalent, especially in emerging nations, where it is projected that the present global population of 7.3 billion people would expand to 9.7 billion people by the year 2050. Global consumption, manufacturing, and pollution levels are rising, and we are far from meeting the Paris Agreement's 1.5 degree Celsius target, which will worsen the effects on our environment, way of life, and health.

Dealing with such interdisciplinary and cross-sectoral issues calls for a two-pronged approach. First, proactive legal mechanisms must be developed with effective compliance and monitoring for reducing pollution. Second, sustainable industrial development and infrastructure must be promoted through the use of suitable incentive-based schemes, fiscal policies, and market mechanisms. It's crucial to remember that the effective implementation of such policies depends on the combined efforts of all relevant parties, including governments, consumers, and businesses and industries.

2.2 India's Environmental Protection Legislation Evolution

India had a reactive and piecemeal approach to environmental conservation. In reaction to the 1972 Stockholm Declaration, the Air (Prevention and Control of Pollution) Act and the Water (Prevention and Control of Pollution) Act were introduced. The 42nd amendment to the Indian Constitution was passed in 1976 and added Article 48 A and Article 51(g). Unfortunately, industries are also generating serious and widespread disasters that kill millions of people. This is in addition to continuously harming the environment. The Bhopal gas tragedy 1984 resulted in the deaths of thousands of people, was an unfortunate industrial calamity for India. This occurrence marked a turning point for Indian environmental laws. Following this tragedy, a number of major legislation, regulations, and announcements were passed while taking into account the problems and difficulties that were progressively revealed as a result of recent advances. India saw a virtual increase in public interest petitions, particularly those focusing on environmental issues. Courts also took on a more significant role as public educators¹⁰, policymakers, and administrators. Due to the Supreme Court's repeated emphasis on the significance of environmental issues, India even began considering creating a specialized tribunal¹³ to address just environmental issues.¹⁴ The National Green Tribunal was finally set up in 2010 after much consideration and failed attempts. The environmental legislation in India has been significantly shaped by it from its inception.¹⁵

As a result, India began to take a more comprehensive and holistic strategy to protecting the environment and controlling industrial pollution.

2.3 Environmental protection provisions in the Constitution

It has expanded and changed over time, and the Indian Constitution is a living document. In our initial Constitution, there were no significant protections for environmental responsibilities and rights. The 42nd Amendment, which brought about specific clauses for environmental protection in the form of Directive Principles of State Policy¹⁶ and Essential Duties¹⁷, however, altered the picture. Both the State and the Public are now required by the Constitution to protect, maintain and safeguard the environment as a result of the inclusion of these two Articles. The Indian Constitution's Article 21 revealed that "no individual shall be deprived of his personal liberty or life unless in accordance with the procedure established by law." The Supreme Court gave

a liberal interpretation of "life" in the case of Virender Gaur and others v. State of Haryana¹⁸, saying that,

'In accordance with Article 21, the right to life is protected. In order to fully enjoy life and fulfill their right to a dignified existence, they must also safeguard the environment, maintain an environmental integrity free from pollution of the air and water, and practice good hygiene, without which life cannot be fully appreciated. Any unlawful acts or behaviors that would result in environmental, ecological, air, water, or other pollution should be seen as a violation of Article 21.'

In addition, the Supreme Court considered the right to live in a clean, healthy environment as a component of the fundamental right to "life" under Article 21 of the Constitution in the case of M.C. Mehta v. Union of India¹⁹.

An environmental judiciary of significant detail has developed in India as a result of Public Interest Litigations under Article 32 and Art 226. As a result, the right to a healthy environment²⁰, clean air²¹, and clean water²² are now protected under the Indian Constitution.

The right to practice any profession and to engage in any occupation, trade, or business is guaranteed to every citizen of India under Article 19(1)(g) of the constitution. But there are logical limitations on it. In the case Burra bazar Fireworks Dealers Association v. Commissioner of police, Calcutta²³, it was determined that,

"According to Article 19(1) (g) of the Indian Constitution, it is not a basic right to engage in trade or enterprise that pollutes the environment or endangers the safety, health, or peace of a community."

2.4 Impact of India's Environmental Framework on Industries and Businesses

In this section, we'll discuss the Environment Protection Act of 1986, the Water (Prevention and Control of Pollution) Act of 1974, the Air (Prevention and Control of Pollution) Act of 1981, the Forest Conservation Act of 1980, and the Wildlife (Protection) Act of 1972 etc.

2.4.1 Water (Prevention and Control of Pollution) Act 1974

The Water Act, which was passed in 1974 as a response to the problem of water pollution, was primarily intended to prevent and regulate water pollution as well as to

maintain or restore the water's wholesomeness. To accomplish this, it established Central and State Pollution Control Boards with the task of creating standards for effluents and sewage as well as the quality of water, among other things. The Act expressly forbids the disposal of any poisonous, noxious, or polluting matter directly or indirectly into any stream, well, sewer, or land.²⁴ It gives the State Boards the authority to ask any facility for information about how it was built, installed, or operated with the intention of preventing and controlling water pollution.²⁵ Additionally, it permits the State Boards to collect water samples through any stream, well, or vessel that is being used to process sewage or trade effluent.²⁶

Additionally, the act gives the State Boards²⁷ permission to enter and examine any facility, database, register, or documentation in order to check on whether or not the Boards' orders or directives have been followed. According to section 94 of the CRPC, which deals with search and seizure, the State Boards should have the same powers as district magistrates with regard to the right of access and inspection. In the event that a corporation violates this Act, it is crucial to note that everyone who was in charge of the firm's operations at the time of the offence is liable for the offence and will be penalized appropriately.²⁸

The Act stipulates a wide range of punishments, including daily fines and imprisonment for up to 6 years, depending on the frequency of the offence. Consent to Establish and Operate—The Board must first grant prior approval before any industry, operation, or process that has the potential to discharge sewage or wastewater into a stream, well, sewer, well, or property can be established.²⁹

2.4.2 Air (Prevention and Control of Pollution) Act 1981

In order to prevent, control, and reduce air pollution in India, the Act was passed in 1981. *State of Bihar* ³⁰, v. *New Era High School*³⁰, it was argued that,

“According to the statute, the board must periodically check places with strict air quality controls, evaluate the air there, and take action to reduce air pollution there”.

The Act includes noise pollution similar to the Water Act, the Air Act also grants the State Boards the authority to obtain information³², authority of entering and inspection³³, power to take samples from air emissions³⁴, and permits action against company officials in case of a company's violation of its provisions by a company³⁵. It strictly prohibits industries from emission air pollutants in excess of the standards

established by the State Boards. The Air Act also stipulates a wide range of punishments, including daily fines and prison terms of 3 months to 6 years for persistent offences.

Authorization to Conduct and Establish - According to the Act, some industrial sites must get the State Boards' approval before constructing or starting up operations at any industrial site inside an air pollution control zone.³⁶ The Board may set additional requirements that the affected industry must adhere to before giving consent. Industry closure is a possibility if prerequisites are not met or if operations are conducted without the proper authorization. In *M.C. Mehta v. Union of India*³⁷, the Supreme Court ruled that,

"Carrying out a stone mining operation on the boundary between Rajasthan and UP without the required license from the competent authorities was deemed to be illegal and individuals were barred from carrying out mining activities."

2.4.3 Environment (Protection) Act 1986

There was no comprehensive law in India preserving the environment, despite the fact that there were already laws that dealing either directly or indirectly with a variety of environmental issues. In India, the perception of the necessity for overarching environmental protection laws arose from the field of environmental law's ongoing structural changes. By passing this Act, regulatory organizations would be able to work together more effectively and respond in a timely and effective manner to a range of environmental problems. The Bhopal Gas Tragedy also highlighted the need for effective environmental laws in India and exposed flaws in the country's existing environmental protection system. In response to these issue the Environment (Protection) Act, passed in 1986.

The Act granted the Central Government³⁸ broad authority and said that it could take *"any such actions as it seemed as for the purpose of safeguarding and promoting the ecological integrity and prevention, reducing and mitigating environmental degradation."*

In particular, for instance, restrictions on the locations where specific industries, operations, or processes may be conducted or may be conducted according to certain safeguards could be part of the measures; establishing guidelines and protections for preventing accidents that could pollute the environment and taking corrective action in

the event of such occurrence; establishing guidelines and safety measures for handling dangerous chemicals; assessment of production practices, materials, and substances that could harm the environment.³⁹

Additionally, the Act gave the Central Government the authority to issue notifications containing regulations on particular matters relating to environmental protection and conservation.⁴⁰ The Act, however, mandates that every regulation be presented to each House of Parliament for approval.⁴¹ Given this authority, the Central Government of India has been able to make notifications on a variety of environmental concerns in the country, including wastewater treatment, environmental impact assessments, Coastal Regulation Zones (CRZ), etc.

The Act further stipulates that continuing violations will result in a five- to seven-year prison sentence, fines up to one lakh rupees, and daily penalties of five thousand rupees.

- **Notification of Coastal Regulation Zones:** Since the first CRZ Notification was published in 1991, these notifications have undergone several alterations and amendments. The far more recent notification was introduced in 2019. According to the 2019 announcement, CRZs have been categorized as follows:
 - CRZ I A- Mangrove forests, coral reefs, salt marshes, bird and mammal nesting grounds, and other environmentally sensitive areas are crucial for sustaining the integrity of coasts.
 - CRZ I B- Inter- tidal zone i.e., the area between the high tide and low tide lines is known as the intertidal zone.
 - CRZ II- Established regions around or near the shoreline.
 - CRZ III- According to population density, comparatively untouched land has also been divided into categories A and B.
 - CRZ IV- Focuses on water and seabed regions, which are further divided into A and B according to how far they are from the low tide line.

Particular elements of the revised notification are advantageous for certain industries and businesses, particularly as:

- Clearance procedures for projects or activities that will be handled by the Ministry of Environment, Forests & Climate Change and are located in CRZ-I

and CRZ-IV. While CRZ-II and CRZ-III clearance authority has been assigned to the state level with the appropriate guidance.

- The tourism business has benefited from the No Development Zone of CRZ-III regions being allowed for temporary tourist facilities including shacks, restrooms, change rooms, and drinking water facilities with a shortest distance of 10m from the HTL.
- The announcement also reduced the previously protected no-development zones around water bodies that are tidally influenced to 100 meters from 200 meters for densely inhabited rural regions and 200 meters from 100 meters for rural areas that are subject to tidal influence to 50 meters. This will results from more real estate and hotels.
- According to the 1991 Development Control Regulation, the floor area ratio had been set at a fixed value. It is currently frozen and Floor Area ratio Index is permitted for construction projects, which benefits the real estate sector.

2.4.4 Rules for Waste Management

Lack of effective management and disposal systems can be a severe problem in a developing nation like India with a high consumption pattern and enormous amounts of various types of garbage. In India, a number of regulations addressing various types of trash, including municipal solid waste, plastic waste, toxic waste, bio-medical waste, etc., have been notified. These regulations are founded on the idea of holding stakeholders accountable for waste management.

Most significantly, the regulations state that it is the producers' duty to see to it that the waste produced by their goods is disposed of in a way that is beneficial to the environment.

It can be summed up as "a policy principle to promote overall life cycle sustainability initiatives of lifecycle management by extending the manufacturer's duties to various aspects of the product's full life cycle, including the take-back, recycling, and final disposal of products."⁴²

In India, the Extended Producers Responsibility (EPR) idea has been a crucial component of the waste management regulations. The first rule to directly reference EPR was The Batteries (Management and Handling) Rules (BMHR), which was

published in 2001. Following that, the regulations for managing plastic garbage and e-waste (Plastic Waste [Management and Handling] Rules, 2011 and E-Waste [Management and Handling] Rules, 2011) specifically outlined the requirements for EPR in waste management.

The recently developed guidelines for efficient solid waste management have given the concept of EPR the much-needed attention it needs. It is one of the most crucial provisions of the 2016 Plastic Waste Management Rules and the 2016 E-Waste Rules. It has also been added for the first time to the 2016 Solid Waste Management Rules. According to the Plastic Waste Management Rules of 2016, the producers, importers, and brand owners who bring the products to the market are primarily responsible for collecting old multi-layered plastic sachets, pouches, and packaging. They must set up a method for recovering the plastic garbage that their products cause to be generated. Different strategies can be used to deploy EPR successfully. With the use of a ward-by-ward strategy, Indore managed to segregate all home and commercial garbage at the source 100 percent in just one year. The recyclers can readily buy the rubbish after it has been sorted. The recyclers are waiting in line every day to pick up their categorization of waste in a quantity and quality that is guaranteed.

2.4.5 Notification of an environment impact assessment (EIA)

The current EIA Notification 2006, which was formally introduced in 1994, lays out a detailed procedure for obtaining Prior Environment Clearance for every new projects and programs, as well as the expansion or modernization of current investments and programs seeking capacity addition with changes in process or technology. Category B projects apply for permissions to the State Environment Impact Assessment Authority, while Category A projects receive their clearance from the Ministry of Environment, Forest, and Climate Change (MoEF&CC) (SEIAA).

The projects and activities that need an EIA before being approved can be identified by further dividing category B projects into B1 and B2. Since January 2016, institutions have also been established at the district level, and they were included in the EIA Notification for sanctioning specific cases of mining minor minerals. These include the District Environmental Impact Assessment Authority (DEIAA) and the District Level Expert Appraisal Committee (DEAC).

A new system of categorizing each type of industry has been used by the Ministry of Environment, Forest and Climate Change since March 2016. The term "white industries" has been used to refer to "non-polluting" enterprises. All that is required is that they notify the appropriate State Pollution Control Board; they don't need a permit or permission.

Depending on the type of activity being undertaken and the extent of the activity, environmental licenses are required for various industries that are colour coded (red, orange, and green). Each industry receives a Pollution Index (PI) score based on its resource use, air emissions, production of hazardous waste, etc. (For instance, the red category has a PI score of 60 or higher, which includes, but is not limited to, asbestos, nuclear power plants, ship breaking, and oil and gas extraction; the orange category has a PI score of 41 to 59, which includes food processing and pharmaceutical formulations; the green category has a PI score of 21 to 40, which includes sawmills and tire/tube retreading; and the white category has a PI score of up to 20, which includes wind power and Normally, no red category industries are allowed in ecologically sensitive or protected areas.⁴³

To get permission to establish and permission to operate, authorization under various Acts and Rules, and other permissions, an integrated permit system can be presented to the respective State Pollution Control Board or Central Pollution Control Board. A new online environmental portal called Parivesh—which continues to stand for Pro-Active and Responsive encouragement by Dynamic, Virtuous and Environmental Single Window Hub—was introduced by the MoEFCC in August 2018 to make it easier to submit and track different environmental clearance applications online. It enables one registration, one sign-in, and one project ID for all clearance kinds (environment, forest, wildlife, and CRZ). Most consent orders, ECs, and other permissions have a specific time period during which they are valid.

2.4.6 Forest (Conservation) Act, 1980

The rules governing the use of forest area for non-forest purposes are outlined in the Forest (Conservation) Act of 1980. This has the declared goal of guaranteeing the long-term protection of the Indian forests and preventing further forest degradation. Before de-reserving any forest land, cutting down trees, or diverting any forestland for non-forest use, any user agency (government or non-government) must obtain prior

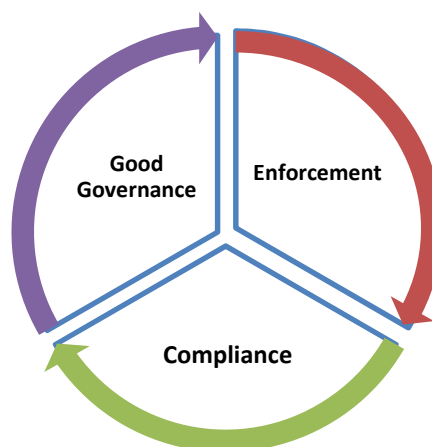
approval from the Central Government. The State Government's Forest Department, which is the last step in the approval process for forest diversions under this act, receives the applications for the same. The regional office of the MoEFCC is responsible for proposals involving up to 40 hectares of forest land (excluding activities connected to mining and encroachments). The MoEFCC handles requests for proposals involving encroachments and mining on forest area larger than 40 hectares.

2.4.7 The Wildlife (Protection) Act, 1972

A law enacted in 1972 called the Wildlife (Protection) Act aims to conserve wild animals, birds, and plants. It allows for the designation of national parks and wildlife sanctuaries, outlaws the killing of wild animals, and generally forbids uprooting of certain flora. If any commercial, mining, or construction projects has the potential to harm, damage, or remove any animals, including forest resources, from a Protected Area, it must obtain a permit. A sanctuary, national park, biosphere reserve, or community reserve are all examples of protected areas. Additionally, it is necessary when an activity has the potential to alter, destroy, or divert the habitats of any wild species, as well as when it has the potential to alter, divert, stop, or increase the water flow that flows into or out of the protected area. Only once the state government, in cooperation with the National Board for Wild Life (NBWL), is convinced that such action is required for the enhancement and better management of the wild life, is this permitted through the Chief Wildlife Warden. If there is a violation, the permits may be revoked and the offender may be sentenced to jail time and/or pay a fine.

2.5 Enforcement, Compliance, and Implementation

Establishing effective institutions with sufficient authority and qualified staff who are equipped with the tools and knowledge to address difficulties while keeping the public interest in sight is necessary for good governance. This is particularly true in the case of environmental contamination, which calls for specific scientific



understanding to address a variety of pollution-related issues.

Environmental Regulatory Authorities in India, a report from the Tata Institute of Social Sciences, was released in 2013. An Evaluation of State Pollution Control Boards found that: "Time and time again, state governments have been unable to choose a highly skilled, independent, and politically unaligned person to this key regulatory office. The most recent appointments of the chairpersons of various State Pollution Control Boards, including those in Karnataka (a senior BJP leader), Himachal Pradesh (a former MLA and leader of the Congress party), Uttar Pradesh (appointment on recommendation of SP leader X), Arunachal Pradesh (a sitting NCP party MLA), Manipur Pollution Control Board (a sitting MLA), and Maharashtra Pollution Control Board (a former bureaucrat), are in flagrant violation of the regulations.

Additionally, the Supreme Court pointed out that State Pollution Control Boards (or SPCBs) established there under Water (Prevention and Control of Pollution) Act of 1974 and the Air (Prevention and Control of Pollution) Act of 1981 only have a few or occasionally none of the qualities of good governance, and again only a few or none of them have sufficient authority. It added that this has been a significant issue for the SPCBs for at least couple of decades (if not more).

Additionally, according to NCRB data from 2020, a total of 589 incidents were reported across India under the Water and Air Act. Furthermore, 992 lawsuits total were filed across India under the Environmental Protection Act. Even if there has been a substantial growth in the number of cases from 2019, there is still a long way to go before environmental protection is guaranteed and those who are guilty for environmental pollution are held accountable. Therefore, despite the fact that India has laws and specific procedures in place to preserve the environment, there are still problems with implementation, compliance, and regulation. In India, judicial forums have made some effort to address these problems.

2.6 Environment-related judicial forums and corporate responsibility

In India, the National Green Tribunal and the Supreme Court, in particular, have been crucial in establishing who is responsible and how much damage should be paid for environmental wrongs.

2.6.1 The Supreme Court

The Supreme Court of India has amassed a substantial body of environmental policy and law decisions over the years. This court has worked to promote and incorporate environmental protection law ideas such as the precautionary principle⁴⁵, the carbon emitter's pays principle⁴⁶, and environmental sustainability⁴⁷ into domestic law and to support sustainability practices. Numerous times, the court has ordered the offenders to pay high fines, which serves as a deterrent to other infractions and also improves the way the law is enforced.

In the case of Indian Council for Enviro-Legal Action v. Union of India⁴⁸, the Hon. Supreme Court ruled that

According to the "polluter pays idea," businesses that produce the pollutants or the things that cause pollution should bear the financial burden of preventing or repairing damage caused by their products.

Similarly, The Hon'ble Supreme Court stated the following definition of the polluter pays concept in the case of Vellore Citizens Welfare Forum v. Union of India⁴⁹ as:

"The 'Polluter Pays' theory has been deemed a valid theory. According to the Supreme Court's interpretation of the Polluter Pays principle, the expense of reversing environmental deterioration as well as compensation for pollution victims are included in the absolute obligation for causing harm to the environment. The process of "Sustainable Development" includes rehabilitation of the damaged environment, therefore the polluter is responsible for both the costs associated with compensating the affected individuals as well as the costs associated with reversing the damaged ecological. There are many post-independence laws on the subject in addition to the constitutional requirement to enhance and protect the environment. The Polluter Pays Principle and the Precautionary Principle must be regarded as being a part of national environmental law in light of the legislative and constitutional regulations."

The Supreme Court has never shied away from creating new liability standards in accordance with the changing circumstances when addressing various environmental challenges in the nation. In the case of M.C. Mehta, the issue of assessing the responsibility of businesses involved in risky or intrinsically harmful conduct was raised.^v Union of India⁵⁰, The Ryland v. Fletcher ruling that created the concept of strict

liability was overturned by the Supreme Court, who also developed the concept of absolute liability. The court said that,

“A corporation that engages in a hazardous or inherently dangerous activity owes the community an absolute and non-delegable duty to ensure that no one is harmed as a result of the activity's risky or dangerous nature. This duty applies to both workers at the business and residents in the surrounding areas.”

Further, in the case of *Indian Council for Enviro Legal Action Vs. Union of India*⁵¹, The Court determined that the principle of absolute culpability for damages should be applied in this instance after considering the severe pollution of a community brought on by the operation of several "rogue" companies.

In addition, the Supreme Court emphasised the distinction between damages and exemplary damages that offenders are expected to pay and issued a punishment of Rs. 10 lakh as exemplary damages in the case of *Kamal Nath v. Union of India*⁵² while adopting the public trust concept. It declared that

“A person who violates the law by generating pollution must pay damages (compensation) for the environment's and ecology's rehabilitation. Additionally, he must compensate people who lost money as a result of the offender's actions. In addition to the aforementioned damages, the polluter may also be required to pay punitive damages in order to serve as deterrence to others and prevent further pollution. The criteria used to determine whether to fine someone who violated the law differ from the criteria used to determine whether to award exemplary damages”

As a result, the High Court and the Apex Court examine cases involving environmental harm and impose exemplary damages. In the *Sterlite Industries* case (2013), it was discovered that the copper smelting plant was running without a current environmental consent to operate. In determining the company's need to pay damages, the Supreme Court looked over the company's annual report and found that 10% of profitability beyond degradation, interest, and taxes (PBDIT), or had to be paid INR 1 billion.

The Supreme Court of India issued a landmark decision⁵³ in an effort to advance environmental justice in the country, in which it was contended that statutory tribunals like the NGT lack *suo moto* authority because only constitutional courts may wield it. However, while highlighting the significance of NGT in addressing environmental challenges in this modern day, the court added that,

“NGT was conceived as a specialized forum not only as a like substitute for a civil court but more importantly to take over all the environment related cases from the High Courts and the Supreme Court. Many of those cases transferred to the NGT, emanated in the superior courts and it would be appropriate thus to assume that similar power to initiate suo motu proceedings should also be available with the NGT.”

2.6.2 The National Green Tribunal

In order to improve access to, effectiveness of, and timeliness of environmental justice in India, NGT was founded as a statutory tribunal in 2010. Since its origin, it has been crucial in establishing the guilt of wrongdoers and delivering prompt justice to the individuals who have been wronged.

State Pollution Control Boards' unwillingness to take action against companies and other such offenders, as well as the absence of enforcement of the environmental framework, led NGT in the matter of *Paryavaran Suraksha Samiti & Anr. Vs. Union of India & Ors.*⁵⁴ vide order dated 03.08.2018 stated that-

“If there is any failure, the Central Pollution Control Board may impose penalties on individuals responsible for installing and operating STPs, CETPs, and ETPs. The Central Pollution Control Board has the authority to assess and collect damages for the environment, and the resulting fund must be stored in a separate account and used as part of an environmental protection strategy.”

Further, in the case of *Praveen Kakar & Ors v. Ministry of Environment & Forests & Ors.*⁵⁵ vide Order dated 08.01.2019 the Pollution Control Board had failed to perform its duties by taking statutorily required coercive measures under Section 31A of the Air (Prevention and Control of Pollution) Act, 1981, and Section 33A of the Water (Prevention and Control of Pollution) Act, 1974, or by bringing legal action,” the tribunal declared. This Tribunal ordered CPCB to use its legal authority to assess and recoup damages for the respondent's infringement of environmental standards.”

In response to the NGT's directives, CPCB has begun managing an environmental compensation fund. In order to oversee the aforementioned fund, a committee has also been formed.

In accordance with the NGT's regulations, explicit rules on how to calculate the environmental compensation that would be levied on offenders have also been released.

It should be emphasized that the NGT Act has significantly enhanced penalties. According to Section 26(1) of the Act, the tribunal may impose a fine of up to 10 crores or a sentence of up to three years for violating an NGT order.

As a result, a practical system of fines and environmental compensation in accordance with the polluter pays principle has been developed for a variety of offences such as illegal mining, improper disposal of waste, including hazardous waste, air pollution, water pollution, etc. This is due to the NGT's proactive approach to the preservation and conservation of the environment in India. It has improved environmental law enforcement and served as a powerful deterrence against further infractions.

2.7 India and Climate Change

In 2008, India unveiled its national climate change action plan. India has played a key role in hosting Clean Development Mechanism investments, allowing Annex 1 nations to fund initiatives that reduce emissions (thereby earning certified emission reductions). In CDM projects, India is now the second-largest beneficiary after China. Around 20% of CDM projects involve it, compared to 50% for China, and 13% of CER projects, compared to 60% for China. There are numerous prospects for CDM in the energy and electric car industries.

India's Intended Nationally Determined Contribution, which outlines the country's post-2020 climate commitments, was filed in October 2015. The International Solar Alliance was founded in 2015, and India is one of its founding members. India has announced new climate action goals at COP 26 and stated that it would achieve carbon neutrality by 2070.

2.8 Planned actions, fiscal policies, and market-based interventions

One of the economies in the world with the quickest growth is India. In order to encourage sustainable production, consumption, and the provision of better, cleaner technologies to industry, the Indian government has launched a number of initiatives in the shape of regulations, plans, etc. These include:

2.8.1 Perform, Achieve and Trade (PAT) Scheme

It is a centrepiece initiative of the National Mission for Enhanced Energy Efficiency's Bureau of Energy Efficiency (NMEEE). PAT is a multi-cycle programme that was

launched in 2012 with the aim of lowering particular energy consumption in the nation's most energy-intensive businesses. The Energy Conservation Act of 2001 was modified to provide the initiative legal standing, although the operational components were largely based on the ideas of market-based methods. Overachieving consumers are given energy saving certificates, which can then be traded on the Indian Energy Exchange, and the programme determines sectors and designated users within those sectors.⁵⁶

2.8.2 The Green Bonds

Green bonds are any bonds issued by a sovereign authority, an intergovernmental organization or alliance, or a corporation with the intention of using the bond proceeds for ecologically friendly initiatives. India had \$16.3 billion in outstanding green bonds as of February 12, 2020. Since January 1, 2018, India has issued green bonds worth roughly \$8 billion, or about 0.7% of all the bonds issued on the Indian financial market. India maintained a good position in comparison to several established and emerging nations, despite the fact that the value of eco-friendly bonds issued in India since 2018 made up a very small fraction of the total bond issuance.

2.8.3 Securities and Exchange Board of India (SEBI)

According to the disclosure requirement derived from the "National Voluntary Guidelines on Social, Environmental, and Economic Responsibilities of Business," SEBI mandated in 2012 that the top 100 listed entities by market capitalization submit Business Responsibility Reports (BRR) as part of their annual report (NVGs). The top 500 listed firms were gradually added to the need for reporting BRRs. Further, SEBI announced Business Sustainability and Responsibility Report on March 25, 2021, which mandates mandatory disclosure of resource utilisation, pollutant emissions, waste management, and compliance with EPR and PAT scheme for the top 1000 listed businesses (by market capitalization).

2.8.4 Micro, Small and Medium Enterprises (MSME)

Millions of people are employed by the MSME sector in India, which is one of the major contributors to manufacturing and is regarded as the foundation of our economy. However, the majority of the industries in this sector are still utilising first-generation technology, which has a negative impact on production and raises pollution levels.

Government has developed many programmes and policies, including the following, to promote new and environmentally friendly technologies in this sector:

- **Zero Defect Zero Effect (ZED) Certification Scheme:** It takes a lot of work to educate MSMEs about the benefits of ZED production, inspire them to evaluate their businesses for ZED, and provide them with support. Following ZED assessment, MSMEs can significantly reduce waste, boost productivity, expand their customer base as IOPs, work with CPSUs as suppliers, obtain additional IPRs, create new goods and procedures, etc.
- **Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE):** It was started to create a chain of technology centres and development centres to foster start-ups for innovations in the agro industry and to speed up entrepreneurship.
- **Credit Linked Capital Subsidy for Technology Up gradation (CLCSS):** The Scheme's goal is to make it easier for MSEs to upgrade their technology by offering a 15% upfront capital subsidy (on institutional financing up to Rs 1 crore that they have accessed) for the introduction of established and enhanced technology in the designated 51 sub-sectors and goods.

2.9 Major Developments

- **Concept of Corporate Social Responsibility-** While environmental protection appeared as a nominal component, the 2013 change to the Companies Act established the key notion of CSR as an actual regulatory tool. An additional definition of corporate environmental responsibility needs to be developed in India.
- **Environmental Audit-** it is not required, however certain governments, including Karnataka, Gujarat, and Maharashtra, provide incentives to industrial entities that achieve an ISO certification. Longer consent/authorization periods of validity and quick approval of renewal applications are among the incentives. To act as the required stimulus for sustainable development, these initiatives must be integrated at the national level.

Summary

The globe has gained a great deal of knowledge about the interaction between humans and the environment over the past fifty years. The Stockholm Declaration, which was adopted at the United Nations Conference on Environment in Stockholm in 1972, elevated environmental concerns to the top of the international agenda and signalled the beginning of a conversation between industrialised and developing nations about the relationship between global economic development, pollution of the air, water, and oceans, and human well-being.

The way India approached environmental protection was reactive and haphazard. The Air (Prevention and Control of Pollution) Act of 1981 and the Water (Prevention and Control of Pollution) Act of 1974 were introduced in response to the Stockholm Declaration of 1972. In addition, Articles 48 A and 51(g) were added to the Indian Constitution by way of 42nd amendment in 1976.

In India, the National Green Tribunal and the Supreme Court, in particular, have been crucial in establishing who is responsible and how much damage should be paid for environmental wrongs.

One of the economies in the world with the quickest growth is India. In order to encourage sustainable production, consumption, and the provision of better, cleaner technologies to industry, the Indian government has launched a number of initiatives in the shape of regulations, plans, etc. comprehensive structure for damages that are payable, and second;

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1. Para 45 and 46, General debates, Report on the Conference of Human Environment, 1972
2. United Nations General Assembly, 1987, p. 43
3. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
4. Ensure sustainable consumption and production patterns
5. Kyoto Protocol established flexible market-based mechanisms namely International emissions trading, clean development mechanism and joint implementation in order to help the countries to achieve their targets.
6. Art. 9 Paris Agreement- reaffirms the obligations of developed countries to support the efforts of developing country Parties to build clean, climate-resilient futures, while for the first time encouraging voluntary contributions by

other Parties.

7. As per World Bank study released in 2016, India lost more than 8.5% of its GDP in 2013 due to the cost of increased welfare and lost labour due to air pollution.
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13. Law Commission of India, Proposal to Constitute Environmental Courts, Report No. 186 (September 2003)
14. M.C. Mehta v. Union of India, 1986 (2) SCC 176; Indian Council for Enviro-Legal Action v. Union of India, 1996 (3) SCC 212; A.P. Pollution Control Board v. M.V. Nayudu, 1999 (2) SCC 718.
15. See
 - Aryavart Foundation Versus M/s Vapi Green Enviro Ltd. &Ors. (Original Application No. 95/2018);
 - News item published in “The Times of India” Authored by Shri Vishwa Mohan Titled “NCAP with multiple timelines to clean air in 102 cities tobe released around August 15”(Original Application No. 681/2018);
 - Westend Green Farms Society Versus Union of India & Ors. (Original Application No. 400/2017);
 - News item published in “The Asian Age” Authored by Sanjay Kaw Titled “CPCB to rank industrial units on pollution levels” (Original Application No. 1038/2018)
 - Compliance of Municipal Solid Waste Management Rules, 2016 (OA 606/2018)
16. Art. 48A- *‘the state shall endeavour to protect and improve the environmentand to safeguard the forests and wild life of the country’*. Also entries 17(A)and 17 (B) (protection of wild animals and birds) have been added to the concurrent list.
17. Art 51A (g)- it shall be the duty of every citizen of India to protect and improvethenatural environment including forests, lakes, rivers, wildlife and to have compassion for living creatures.

18. (1995) 2 SCC 577
19. *MC. Mehta v. Union of India*, AIR 1987 SC 1086(Ind.) (Popularly known as 'Oleum Gas Leak Case').
20. *Subhash Kumar v. State of Bihar*, (1991) 1 SCC 598
21. *MC. Mehta v. Union of India*, (1998) 6 SCC 60
22. *A.P. Pollution Control Board II case* (2006) 6 SCC 543(Ind.), *Narmada Bachao Andolan v. Union of India*, (2000) 10 SCC 664
23. AIR 1998 Cal. 121
24. Section 24, Water (Prevention and Control of Pollution) Act 1974
25. Section 20, Water (Prevention and Control of Pollution) Act 1974
26. Section 21, Water (Prevention and Control of Pollution) Act 1974
27. Section 23, Water (Prevention and Control of Pollution) Act 1974
28. Section 47, Water (Prevention and Control of Pollution) Act 1974
29. Section 25, Water (Prevention and Control of Pollution) Act 1974
30. AIR 2013 Pat 70
31. Section 22 Air (Prevention and Control of Pollution) Act 1981
32. Section 25 Air (Prevention and Control of Pollution) Act 1981
33. Section 24 Air (Prevention and Control of Pollution) Act 1981
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48. Para 67 of [(1996 AIR SCW 1069)].
49. Para 11-14 (1996 5 SCC 647)
50. AIR 1987 S.C. 1086

51. Refer Para No.70, Supra note 42
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54. Original Application No. 593/2017
55. O.A. No. 661/2018
56. Unleashing Market-Based Approaches To Drive EnergyEfficiency Interventions In India: An Analysis Of The Perform, Achieve, Trade (Pat) Scheme, Adb Working Paper SeriesNo. 1177, August 2020
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Self Assessment Question

1. What are the key constitutional provisions in India relating to Environment?
2. Write a brief note on International Developments in the field of Environmental Law and its impact on Businesses and Industries?
3. What are the important provisions of Water Act, 1974 and Air Act 1981?
4. What is the concept of Extended Producer's Responsibility?
5. Describe the major schemes that have been specially implemented for the MSME sector?
6. Briefly discuss how the concept of sustainable development is being implemented in India?

Unit 3: Environment in Indian Constitution

Unit Structure

3.0 Objectives

3.1 Introduction

3.2 Indian Constitution and Environmental Protection

3.3 Preamble to the Indian Constitution

3.4 Directive Principles of State Policy

3.5 Fundamental Duties

3.6 Fundamental Rights

3.7 Distribution of Legislative Powers between Union and States

3.8 Judicial Approach

Summary

3.0 Objectives

After going through this unit you will be able -

- To apprise about the constitutional provisions concerning the protection of environment and promotion of clean and healthy environment
- To understand about the fundamental right and duty
- To understand about the directive principles of state policy
- To understand about the legal regime established under the Constitution.

3.1 Introduction

Traditionally, environmental ethics have formed an inherent part of Indian religious precepts and philosophy. Protection of forests and environment has always been part of Dharma (PC Joshi, 2007). Worship of nature – Sun, Moon, Earth, Air and Water – was not merely a primitive man's response to the fear of the unknown, but it arose from the deep reverence shown to the forces of nature which sustained and preserved human life on earth. The basic tenet that underlies this deep reverence for nature is the belief that life is a singular, continuous and uniform phenomenon and even a small change in one part of the eco-system is likely to reverberate throughout. Guru Nanak (Founder of the Sikh Religion, 1469-1539), said 'Pawan Guru, Pani Pita Mata Dhart Mahat, Divis Raat Doi Daia, Khele Sagal Jagat' (Air is like God, Water is father and

Earth is the mother. It is through the harmonious interaction of all these three vital ingredients that the whole universe is being sustained) [Jaspal Singh, 2009]. However, rapid industrialization and urbanization coupled with declining social values have contributed towards degradation of environment throughout the globe and India has also witnessed and contributed towards the same. (Manoj Kumar, 2011).

Constitution of India is a dynamic instrument which echoes the values, aspirations and the ideals of our freedom movement. Constitutional provisions strive for having clean environment and it is reflected in Constitutional provisions as interpreted by the higher judiciary.

3.2 Indian Constitution and Environmental Protection

Constitution of India lays down unique federal structure for India. It is a bulky piece of legislation which not only gives shape to the aspirations of freedom fighters by laying emphasis on fundamental rights but also lays down the Directive Principles of State Policy which the legislature should keep in mind while legislating. Part XI of the Constitution dealing with legislative relations lays down detailed division of subjects on which Union and State governments can legislate. This part deals with the constitutional provisions pertaining to environment contained in different parts of the constitution.

3.3 Preamble to the Indian Constitution

The Preamble to the Indian Constitution which starts with “We the People” sets out the goals and objectives of the Constitution. It declares India to be a Sovereign Socialist Secular Democratic Republic. It has been declared to be a key to open the mind of constitution makers.ⁱ Though Words “Secular and Socialist” were added later on to the Constitution by 42nd Amendment yet the Constitution had secular as well as socialist fabric right from its inception. Various provisions in the Constitution deal with the socialist and secular fabric of the nation in particular Part IV lays down emphasis on Socialistic pattern of governance and Part III spells out the secular fabric of the country.

Word Socialist in the Indian Constitution read in conjunction with Part IV of the Indian Constitution points out that the Constitution adopted welfare government on socialistic pattern whose prime aim was welfare of people. Social welfare is not possible if the

people are forced to live in unclean environment which jeopardise their health and lives. The use of words “Democratic Republic” further brings the point home that the government is to work for the welfare of the masses and that the people have right in participate in government process. This implies that government shall seek to provide, apart from other things, a clean environment suitable for human abode.

The Preamble also aims to achieve Justice - Social, Economic and Political. A nation where rich and influential pollute the environment by uncontrolled and rampant industrialization and unregulated, unhindered and illegal mining without caring for the environment causing irreparable loss to the ecology and people cannot be said to be a nation having welfare state and providing social and economic justice. Hence, the Preamble not only talks about socialistic pattern but also that there shall be economic, political and social justice. Thus, though the Preamble does not expressly deal with environment yet the language of Preamble is wide enough to cover environment protection and clean environment as implicit therein.

3.4 Directive Principles of State Policy

Part IV of the Constitution of India lays down Directive Principles of State Policy. They lay down the socio-economic goals of the nation. Though Directive Principles are non-justifiable yet they have been declared to be fundamental in the governance of the country (Article 37). Before 42nd Amendment, there was no specific provision in Part IV dealing exclusively with environment. However, goal of environment protection in the Indian Constitution can be inferred from the provisions enshrined in Articles 38, 47 and 50 read with Article 37.

Article 37 casts a duty on the State (i.e. all the organs of the State – legislature, executive and judiciary) to apply directive principles in making laws.

Article 38 seeks to achieve welfare of the people by casting obligation on the State to target social, economic and political justice. As explained earlier, social, economic and political justice alongwith welfare of people enjoins a duty upon State to protect and preserve the environment which is essential for the well being of the country and of future generation.

Article 47 spells out the primary duty of the State to improve public health (Article 47). Improvement of Public Health takes within itself that the environment is free from pollution and conducive for human dwelling and public health. The surrounding

environment filled with smoke, pollutants and smog caused by rampant, uncontrolled and unregulated industrialization, construction activities and stubble burning causing irreparable damage to the lungs of people living in vicinity and causing other health hazards is surely anti-thesis to the goal enshrined in Article 47 i.e. improvement of public health. Thus, though article 47 does not spell out in express terms the duty of the government to protect environment and promote clean environment yet it is implicit in it because improvement of public health is not possible in an unclean environment.

Article 51 provide for promotion of internal peace and security and for fostering respect for international law and treaty obligations. Henceforth, State shall endeavour to implement international law and treaties and foster respect for them including but not limited to international obligations pertaining to protection of environment. Thus Article 51 seeks to promote protection of environment in consonance with international obligations.

Thus, though there were no express provisions pertaining to protection of environment in the Constitution yet promotion of environmental protection was implicit in Part IV of the Constitution of India even prior to its amendment by Constitution (Forty-second Amendment) Act, 1976.

Constitution (Forty-second Amendment) Act, 1976 inserted an express provision pertaining to environmental protection in Part IV in the form of Article 48A. It reads as under:

“The State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country.”

After insertion of an express provision in Part IV along with other provision in other parts of the Constitution, it became incumbent on the part of the State to protect the environment and to promote clean environment. As stated earlier directive principles are fundamental in the governance of the country and all the organs of the State while making laws are to apply directive principles. ⁱⁱ

It must be remembered that though directive principles of state policy are non-justifiable yet it does not preclude the courts to declare any law as unconstitutional which is in violation of Part IV (Paramjit Jaswal, 2015). Similarly, courts are to ensure that the other organs of the State act as per the law of the land. Moreover, as observed

by the Supreme Court in *Mumbai Kamgar Sabha v. Abdulbhai*ⁱⁱⁱ where two choices are available in the interpretation of the laws, the judiciary should lean in favour of the construction which is in conformity with the socio-economic philosophy enshrined in Part IV of the Constitution.

Further, as will be evident from the discussion in the next section, many of the directive principles of state policy when interpreted in conjunction with Part III and Part IV-A have been elevated to the status of fundamental right including the right to live in pollution free environment.

3.5 Fundamental Duties

Part IV A of the Constitution of India inserted by Constitution (Forty-second Amendment) Act, 1976 imposes duties upon every citizen of India. Article 51A casts eleven duties upon the citizens of India.^{iv} Article 51A(g) casts the following duty upon the citizens of India

“To protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures”

Mode of enforcement of fundamental duties was not expressly provided by the Constitution. However, the powerful pronouncement of the Rajasthan High Court in *L.K. Koolwal v. State of Rajasthan*^v clarified the co-relation between rights and duties when the court observed that rights and duties co-exist and there can not be any right without any duty and there can not be duty without any right. Hence, the duty of one is the right of another and rights are justifiable.

While considering the enforcement of fundamental duty enshrined in Article 51A(g) and the directive principle contained in Article 48A, the Supreme Court in *Shri Sachidanand Pandey v. State of West Bengal*^{vi} observed that Court cannot shrug its shoulders on the ground that priorities are matter of policy and therefore, the court should leave the matter. The court concluded that court can always give necessary directions in the matter.

3.6 Fundamental Rights

Part III of the Constitution of India enumerates fundamental rights. One of the most important fundamental rights is the right to life and personal liberty enshrined in Article 21. Article 21 provides as under

“No person shall be deprived of his life or liberty except according to procedure established by law.”

Taking leaf from the observation of Field, J. in *Munn v. Illinois*^{vii} wherein it was held that life does not mean mere animal existence it is much more than that, the Supreme Court of India has held in *Francis Coralie v. Union Territory of Delhi*^{viii} that right to life includes right to live with human dignity and what Article 21 prohibits is not only the deprivation of life but deprivation of all those limbs and faculties by which life is enjoyed including the basic necessities of life such as food, shelter, clothing etc.

The Supreme Court in *Maneka Gandhi v. Union of India*^{ix} interpreted the expression ‘procedure established by law’ to mean that the procedure must be just, fair and reasonable. After this interpretation coupled with judicial activism, many rights have come to be included within the ambit Article 21. Of late, Article 21 whose potential was never discovered in the past was ultimately pulled out of its deep slumbers and harnessed to engineer social justice which is one of the goals to be attained by the Constitution (Shailja Chander, 1992). Liberal court decisions in the field of life and personal liberty have opened new vistas in the Indian Constitutional Law whereby Article 21 read with Articles 14 and 19 may become a substitute for all other fundamental rights. It has come to be regarded as bundle of rights.

With the expansive interpretation of terms ‘life’ and ‘personal liberty’^x, right to live in clean and unpolluted environment has been held to be part of fundamental right guaranteed under Article 21.^{xi} The pragmatic approach of the Supreme Court including right to clean environment in Article 21 has been discussed in the next sections.

3.7 Distribution of Legislative Powers between Union and States

Constitution of India provides a federal structure of governance. Part XI and XII of the Constitution of India deals relations with Union and States. Part XI deal with the legislative relations between Union and States. Whereas Article 246 confer legislative competence on Union and States, Schedule VII distribute the subjects of legislation between the Union and States. Schedule VII contains three lists viz., List-I (Union List), List-II (State List) and List-III (Concurrent List). Union has exclusive competence to legislate with reference to subjects enumerated in list I, States have exclusive

competence to legislate on subjects listed in List-II and Union and States have concurrent jurisdiction to make laws on subjects mentioned in List III subject to Union supremacy in case of repugnancy.^{xii} There is no explicit entry pertaining to environment in any of the lists under the Seventh Schedule. Though List I contains subjects like UNO, entering into treaties and agreements with foreign countries and implementing Conventions, treaties and agreements. It also contains subjects relating to regulations of industry, mines and minerals, ports etc i.e. which have inter-state and pan-India impact. List II contains subjects like Public Health and Sanitation apart from other subjects regarding agriculture and industry. Under Article 248 read with entry 97 List I, Union has exclusive competence to make laws on subjects not enumerated in any of the lists. Constitution (Forty-second Amendment) Act, 1976 inserted entries 17A and 17B in the Concurrent List relating to Forests and Protection of Wild Animals and birds respectively.

This apart, Part XI of the Constitution of India contains Article 253 which empowers the Parliament to legislate for the purpose of giving effect to any treaty, agreement or convention with any country or countries and for the purpose of implementing decisions made at any international conferences. Accordingly, Parliament has enacted laws under Article 253 read with entries 13 and 14 of Union List to meet its international obligations under the International Conventions and agreements like Stockholm Declaration of 1972.^{xiii}

Thus, there are adequate provisions in the Constitution of India concerning the protection of environment in various parts of the Constitution. Though the subject of environment was not explicitly mentioned in the Constitution prior to Constitution (Forty-second Amendment) Act, 1976 yet the goals enshrined in the Preamble and the directive principles together with provisions incorporated in Part III, in particular Article 21 and its interpretation by the judiciary to include right to clean environment in it coupled with provisions incorporated in Part XI were sufficient to deal with the subject and issues relating to environment. Constitution (Forty-second Amendment) Act, inserted specific provisions pertaining to environment in the Indian Constitution.

3.8 Judicial Approach

The Indian judiciary has been alive to environmental concerns and has adopted pragmatic and activist approach in interpreting constitutional provisions concerning

environment protection. The pragmatic and realistic approach of the judiciary has enabled it to read right to live in clean environment as included in right to life and personal liberty enshrined in article 21. The most remarkable feature of this expansion of Article 21 is that many of non-justifiable Directive Principles embodied in Part-IV of the constitution have now been resurrected as enforceable fundamental rights by the magic wand of judicial activism, playing on Article 21, which was almost a surplusage in the days of Gopalan.

Pollution is the result of modern industrialization and urbanization. Rich and literate raise cry against pollution though sometimes they are themselves responsible for it. The poor and slum dwellers remain dumb about it (V.K. Bansal, 1987). Discharge of industrial effluents in water, ponds of dirty water in streets, lack of sewage facilities etc. add to grim water pollution scenario. Air suffocating with smoke and smog created by polluting vehicles, industry and stubble burning have created lots of air pollution thereby adversely affecting health of millions of people. The legislature had enacted various laws to curb and control environmental pollution but they failed to have cut much ice. This being the plight of Indian masses the Supreme Court had to come forward and read right against environment pollution as part of right to life enshrined in Article 21, to relieve the ignorant masses from the trauma and tyranny caused by increasing environmental pollution.

In *B.L. Wadehra v. Union of India*^{xiv}, the petition was filed for directions to Municipal Corporation, Delhi and the New Delhi Municipal Corporation to perform their duties, in particular the collection, removal and disposal of garbage and other waste. Apex court speaking through Kuldeep Singh J expressed grave dissatisfaction over the pollution in the Capital of India and observed,

Historic City of Delhi – the Capital of India – is one of the most polluted cities of the world. The authorities responsible for pollution control and environment protection have not been able to provide clean and healthy environment to the residents of Delhi. The ambient air is so much polluted that it is difficult to breathe. More and more Delhi-its are suffering from respiratory diseases and throat infections. The River Yamuna – the main source of drinking water – is the free dumping place for untreated sewage and industrial waste. Apart from Air and water pollution, the city is virtually an open dust-bin. Garbage thrown all over Delhi is a common sight..... It is no doubt correct that

rapid industrial development, urbanization and regular flow of persons from rural to urban areas have made major contribution towards environmental degradation but at the same time the Authorities – entrusted with the work of pollution control – cannot be permitted to sit back with folded hands on the pretext that they have no financial or other means to control pollution and protect the environment...^{xv}

The court held that right against environmental pollution and to have clean environment is a fundamental right to be found in Article 21 read with article 48A and thus issued directions to Municipal Corporation, Delhi and New Delhi Municipal Corporation regarding collection and disposal of garbage to keep the city clean.

In *Ratlam Municipality v. Vardhi Chand*^{xvi} Supreme Court ordered the closure of limestone quarries in Dehra Dun-Mussoorie Area. It realized that the closure of limestone quarries would cause financial hardships but the court observed that it is the price that has to be paid for protecting and safeguarding the right of the people to live in a healthy environment with minimal disturbance of ecological balance, and without avoidable hazard to them and to their cattle, homes and agricultural land and undue affection of air, water and environment.

In *Subash Kumar v. State of Bihar*^{xvii} it was held that right to live is a fundamental right under Article 21 of the constitution and it includes the right to enjoyment of pollution free water and air for full enjoyment of life. If anything endangers or impairs that quality of life in derogation of laws, a citizen has a right to have recourse to Article 32 of the constitution for removing the pollution of water or air which may be detrimental to the quality of life.

In *Vellore Citizens Welfare Forum v. Union of India*^{xviii} the petition was directed against the pollution caused by enormous discharge of untreated effluent by the tanneries and other industries in the State of Tamil Nadu. It was argued that untreated effluents discharged by tanneries in the State of Tamil Nadu have polluted the main water supply source and the ground water. The petitioner argued that the ground water near these tanneries have been so polluted that it has become unsuitable for drinking, large pieces of agricultural land had been turned into barren land and the productivity of large area of land has been reduced considerably. The court discussed Precautionary Principle and concluded that right against environmental pollution is implicit in right to life enshrined in Article 21 of the constitution. After having so

concluded, the court proceeded to direct the closure of industries which are not complying with the directions of the Pollution Control Board and NEERI.

Similarly in *M.C. Mehta v. Union of India*^{xix} where a petition was filed for preventing the degradation of the Taj Mahal due to pollution caused by coal using industries via Trapezium, the Apex Court issued directions to 292 industries located in Agra to change over within a time schedule to Natural Gas as industrial fuel or stop functioning with coal/coke and to apply for relocation or otherwise stop functioning w.e.f. 30-04-1997 on account of violation of Articles 21, 48A, 51A and 47 of the Constitution.

In *M.C. Mehta v. Kamal Nath*^{xx} it was contended by the petitioner that if a person disturbs the ecological balance and tinkers with the natural conditions of rivers, forests, air and water, which are the gifts of nature, he will be violating the fundamental right guaranteed under Article 21 of the Constitution. Supreme Court accepted the contention of the petitioner and held that any disturbance of basic environment elements namely air, water, soil which is necessary for "life" would be hazardous to "life" within the meaning of Article 21 of the constitution. The court after holding it to be a violation of article 21 proceeded to observe that in these cases polluter pays principle and principle of Public Trust Doctrine applies

In *M.C. Mehta v. Union of India*^{xxi} with a view to safeguard the countrymen from the vices of air pollution, the Supreme Court refused to grant blanket extension of dead line for conversion of vehicles to CNG. It is pertinent to mention here that the Supreme Court vide its order dated 28th July 1998^{xxii} issued guidelines to convert vehicles to CNG in a reasonable time schedule.

In *N.D. Jayal v. Union of India*^{xxiii}, the Supreme Court again reiterated that right to clean environment is implicit in right to life and personal liberty guaranteed under Article 21. Again, in *Municipal Corporation of Greater Mumbai v. Kohinoor CTNL Infrastructure Co. (P) Ltd.*^{xxiv}, the Apex court laid down that right to live in clean and healthy environment is part of right to life and personal liberty guaranteed under Article 21. The court went on to hold that this right is also part of common law jurisprudence.

Thus the courts have clearly held that right to live in unpolluted environment is a fundamental right implicit in right to life and personal liberty enshrined in Article 21. Not only this, judiciary has also issued guidelines in certain cases to prevent and remedy ecological balance including the directions to close certain industrial establishments.

Summary

From the foregoing analysis, it can be safely concluded that the constitution of India is a dynamic document and Indian judiciary has, by using interpretative tools, declared various unremunerated rights as fundamental rights. Judiciary has not only declared right to clean environment as a fundamental right but has also developed environmental jurisprudence underlying various important principles like Polluter Pays Principle, Precautionary Principle, Public Trust Doctrine etc. However, despite active role played by the judiciary, the environmental pollution is on the rise. Moreover, no right can be fully protected and guaranteed unless the entire community recognize their moral, ethical, social and constitutional duties and rise up to abide by them.

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Unit 4: Judicial Remedies and Procedures

Unit Structure

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Summary

4.0 Objectives

This unit aims at the following outcomes:

- Understand the legal scenario in India on environment and its protection;
- Develop an understanding about the institutions for protecting the environment and their role; and
- Provide an insight into the role of judiciary in developing environmental jurisprudence in India
- Understand the mandate of the National Green Tribunal, a special tribunal constituted to hear environmental cases.

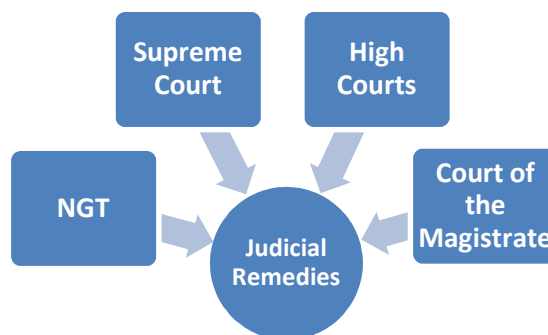
- A basic understanding of the role of criminal courts, the Supreme Court of India, and the High Courts in environmental cases.

4.1 Introduction

Protection of environment in India has its foundations in the obligations undertaken by India in international instruments, the Constitutional framework of the country, the legislation enacted, and the judicial decisions. Sources of environmental law, for that reason, can be located in these instruments. Apart from these formal sources, a number of informal mechanisms supplement the efforts to protect the environment in terms of conservation, management and regulation. Informal mechanisms may be traced to the efforts of communities, NGOs or the efforts of public-spirited individuals.

Environmental governance has direct (and indirect) implications on the rights and interests of persons, and the environment. Whether it is poor quality of air or water, a decision to clear forests, build an industry or a dam, mine land, dispose of waste in a particular manner, or inaction on the part of governmental agencies to stop environmental degradation – all these situations, among many others, have repercussions. These repercussions can take various forms such as: increased health impacts or increased mortality

rates; reduced access to certain natural resources (e.g. clean ground water or forest produce); or economic loss (e.g. crop yields reduction, or an industry is not permitted to commence operation). Persons affected or



aggrieved in these situations turn to law for appropriate remedies. While certain types of remedies may be sought directly from the concerned government agency (the executive) or special grievance redressal mechanism under specific environmental laws, often people turn to the judiciary for grievance redressal. Depending on the nature of the grievance, there are different types of judicial remedies available. The main forum for environmental cases that are civil in nature is the National Green Tribunal. Criminal environment cases, such as cases filed against persons causing air or water pollution, have to be filed before criminal courts (Magistrate's court). Cases may also be filed before the High

Courts of different states and the Supreme Court of India, particularly if fundamental rights guaranteed under filed before the High Courts of different states and the Supreme Court of India, particularly if fundamental rights guaranteed under the Constitution have been violated, or to ensure the protection of such rights if they are likely to be under threat.

4.2 The Constitution and Protection of the Environment

The Constitution of India is the supreme law of the land. It is worth examining the scope of environmental protection envisaged under the Constitution.

To begin with, one may refer to the Constituent Assembly debates (see Divan & Rosencranz, 2001: 43- 44). There was no specific discussion about regulation of the environment by Parliament or the state legislatures. The discussion centered on the division of legislative powers on the environment under the Government of India Act, 1935 and the differences expressed by those who wanted a strong Centre and those who preferred more powers to the states. Items of economic importance like fisheries and forests over which control was asserted both by the Centre and the states became strongly contested. In the meeting of the Drafting Committee of the Constituent Assembly in July 1949, the Ministry of Agriculture wanted these items to be placed in the Concurrent List. It was argued by the Ministry that the country's agricultural prosperity was dependent on forests and therefore activities by the states shall not be prejudicial to that common interest. However, this proposal faced stiff resistance from the provinces and heads of states. Therefore, forests were classified as a state subject. Fisheries find mention in the State List (item no.21). However, legislative competence on fisheries and fishing beyond territorial waters find mention in the Union List (item no.57).

Post-independence, any discussion on constitutional protection for the environment becomes incomplete without a reference to the distribution of legislative and executive powers envisaged in the Constitution. Parliament and state legislatures, the nodal agencies for law-making, are vested with legislative powers on the basis of items distributed in the three lists, namely, Union List (List I), State List (List II) and the Concurrent List (List III) in the Seventh Schedule. There are articles (for example, Article 252) in the Constitution, which in exceptional situations vest the Union/Central Government with powers to legislate on an item described in the State List. This is

apart from the principles of interpretation followed in the Constitution regarding conflict between central and state laws.

A perusal of the items in the Seventh Schedule shows how different subject matters in relation to the environment are distributed across the three lists. Residuary powers of lawmaking in the Indian context are vested with the Union under Article 248. It may be true that the Constitution makers did not give priority to environmental protection in the sense in which it is understood today. However, the constitutional scheme includes many subject heads in the Lists, which are of crucial concern to protection of the environment today. Hurdles are posed due to the tension between the Centre and the states over who exactly could exercise the legislative power. For instance there is tension about water regulation, which is an item in the State List. Except for inter-state river water disputes, regulation of water sector is within the state jurisdiction. It is suggested to bring the water related items in the Concurrent List.

The Stockholm Conference on Human Environment, 1972 is a landmark achievement in environmental protection internationally. After participation in the Conference, India made serious inroads into environmental protection by introducing the 42nd amendment to the Constitution. Article 48-A was added to Part IV of the Constitution, which covers Directive Principles of State Policy. It reads as follows:

The State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country.

During the Lok-Sabha debates there were suggestions to vest the state with the duty to conserve and develop water, soil and other natural resources. Some others suggested that state should assure that protection of the environment would not harm tribal forest dwellers. In the Rajya-Sabha while welcoming the new Article, some members suggested mineral wealth to be included and governments to undertake adequate and effective measures to check environment pollution (Divan & Rosencranz, 2001: 45).

In the newly added chapter on Fundamental Duties, Article 51A(g) imposed a responsibility on every citizen to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures.

Often constitutional provisions, particularly Article 21 (right to life) is referred to for adjudication of environmental disputes. Part 4 of this unit analyses some of the

landmark decisions of the Supreme Court wherein the Court has referred to Article 21 as the basis for its decision.

Article 253 vests the power in Parliament to enact legislation to implement India's international obligations. Based on this legislative power, the Central Government has enacted a number of legislation to protect the environment. The next section will discuss the legislation.

4.3 The National Green Tribunal

The National Green Tribunal (Tribunal) has been set up under the National Green Tribunal Act, 2010 (NGT Act). The objective of the NGT Act is to provide effective and expeditious disposal of cases relating to the protection of the environment including the enforcement of any legal right relating to the environment. The Tribunal is a multi-disciplinary body, with judicial and non-judicial/expert members, which hears and decides cases before it.

The need to set up special environmental courts, such as the National Green Tribunal, was highlighted by the Supreme Court of India in a series of cases,¹ and by the Law Commission of India in its 186th report in 2003. The Court was of the opinion that environmental cases raised issues which required technical knowledge and expertise, speedy disposal, and continuous monitoring, and therefore they should be adjudicated upon by dedicated courts with adequate expertise and technical assistance. The National Environmental Tribunal Act 1995 was passed by the Parliament but never implemented. Subsequently, the National Environment Appellate Authority Act 1997 was enacted under which the National Environment Appellate Authority was set up in 1997. There were several problems in the functioning of this Authority, including its limited mandate (only persons wishing to challenge environmental clearances could approach the Authority). When the National Green Tribunal was set up in 2010, it replaced the Authority. The Tribunal can be approached with cases pertaining to any of the following seven environmental laws:

- The Water (Prevention and Control of Pollution) Act, 1974 [Water Act]
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Forest (Conservation) Act, 1980
- The Air (Prevention and Control of Pollution) Act, 1981 [Air Act]

- The Environment (Protection) Act, 1986
- The Public Liability Insurance Act, 1991
- The Biological Diversity Act, 2002

4.4 Jurisdiction

The Tribunal has two kinds of jurisdiction – **original** and **appellate** jurisdiction. Original jurisdiction refers to the powers of the Tribunal to decide an issue for the first time, before any other authority with judicial powers has made any decision on it. Appellate jurisdiction refers to the power to sit in appeal – i.e. when an authority has issued an order or decision, and against such an order or decision a case has been filed.

4.4.1 Original jurisdiction (section 14)

The Tribunal has original jurisdiction over all civil cases raising a substantial question relating to environment and which arise out of the implementation of any of the aforementioned seven laws. This includes the enforcement of any legal right arising from these laws, or if there is a direct violation of a specific statutory environmental obligation by a person which affects the community at large (not just an individual); or causes substantial damage to the environment or property; or causes damage to public health that is broadly measurable. The environmental consequences could relate to a specific activity or a point source of pollution.

Examples of cases that the Tribunal can decide while exercising original jurisdiction are: cases of industrial pollution where the applicants are not challenging a specific approval or consent granted to the industry but are aggrieved by the impacts of the industry on, say, groundwater, or ambient air quality or noise levels; cases like the one challenging rampant illegal construction and development which contributed to the Uttarakhand floods and massive destruction in 2013; cases highlighting illegal activities with adverse impacts on the environment like unregulated sand mining, etc.

Such cases have to be brought before the Tribunal within a period of six months from the date on which the cause of action of the dispute first arose. After six months, a case may still be brought but within 60 days, and the case will only be heard if the Tribunal is convinced that the applicant was prevented by reasonable cause to file the case within stipulated time. However, if it is an ongoing activity or continuing

adverse impact on the environment, the six months period is not applied very strictly, as any point of time could be selected as the point when the cause of action first arose.

Victims of environmental damage, including accidents occurring while handling hazardous wastes, can approach the Tribunal to seek relief and compensation (section 15). The Tribunal can order for restoration of damaged property and the environment. Any case for relief and compensation has to be brought to the Tribunal within five years from the date on which the cause for such relief and compensation first arose. After that a grace period of sixty days (as above) is given. A five year time period has been allowed, because it is possible that the impact of environmental degradation (like industrial pollution) may not be apparent for a long time, but manifests itself only much later.

4.4.2 Appellate jurisdiction (section 16)

While exercising its appellate jurisdiction, the Tribunal hears and decides cases in which a regulatory approval or consent granted or rejected by the relevant government agency is being challenged. These approvals or consents relate to the seven aforementioned laws. The Tribunal has the power to cancel an approval or consent granted – if it is found to be illegally obtained. It can also issue a stop work notice or a stay order; or direct the constitution of committees of experts to carry out fact finding or monitor the implementation of its orders.

For example, persons who are aggrieved by the grant of an environmental clearance (which is granted in accordance with the EIA Notification 2006, issued under the Environment (Protection) Act, 1986) or a forest clearance (under the Forest (Conservation) Act, 1980) by the government to a thermal power plant near their village can approach the Tribunal in an appeal against such clearances. Similarly, if a company is denied an environmental clearance or a forest clearance, it can approach the Tribunal to challenge the decision of the government.

Another important set of cases which can be brought under the appellate jurisdiction of the Tribunal relate to the consents to establish and operate granted by the State Pollution Control Boards (SPCBs) under the Water Act and the Air Act to industrial plants. If a consent is granted or denied, the aggrieved party (could be person/s living near the industrial plant, or the industry) has to first approach the appellate authority

set up under the Water Act and the Air Act. If either party before the appellate authority is dissatisfied with the decision of the appellate authority, it can approach the Tribunal.

An appeal has to be filed within 30 days from the date on which the order or decision that is being challenged was communicated. Beyond that, another 60 days may be granted by the Tribunal, if it is convinced that there was a sufficient cause for the delay in filing.

4.4.3 Exclusive jurisdiction of the Tribunal

Cases relating to compensation and relief for environmental damage, and those in which appeals are being filed against regulatory approvals, as discussed above, can only be brought before the Tribunal. No other court is supposed to entertain such a case, and if such a case is filed, then the court is expected to ask the parties to approach the Tribunal for proper adjudication.

4.4.4 Who can approach the Tribunal?

According to the NGT Act, an aggrieved person can file a case before the Tribunal – could be an individual, a company, a firm, an association of person (like a NGO) - even if not registered or incorporated, a trustee, a local authority (like a municipal corporation), a government body (like the SPCB) etc. The person need not be directly affected by the project or development in question, but could be any person who is interested in protecting and preserving the environment.

The Principal Bench of the Tribunal is situated in New Delhi, with four Zonal Benches in Bhopal, Kolkata, Pune and Chennai. Cases arising in the states mentioned in Column 2 of the following table have to be filed in the Bench mentioned in Column 1:

| Column 1 | Column 2 |
|--------------------------|--|
| Principal bench | Uttar Pradesh, Uttarakhand, Haryana, Himachal Pradesh, Jammu & Kashmir, Delhi and Chandigarh |
| Central (Bhopal) bench | Madhya Pradesh, Rajasthan and Chhattisgarh |
| Eastern (Kolkata bench) | West Bengal, Odisha, Bihar, Jharkhand, Assam, Nagaland, Mizoram, Arunachal Pradesh, Manipur, Tripura, Meghalaya, Sikkim, and Andaman & Nicobar Islands |
| Western (Pune) bench | Maharashtra, Gujarat, Goa, Daman & Diu, Dadra & Nagar Haveli |
| Southern (Chennai) bench | Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Pondicherry, and Lakshadweep |

4.4.5 The Tribunal's decision

The NGT Act requires the Tribunal to hear cases as expeditiously as possible and *endeavour* to decide the case within six months from the date on which the case is filed. Although an indicative time limit of six months has been set, often it takes longer as all parties have to be given a complete hearing, including presenting necessary evidence, and sometimes, the Tribunal initiates special investigations into facts, which may take up some time.

The Tribunal has the powers of a civil court, including the powers to summon any person, examine witnesses, receive evidence on affidavits, review its decisions, etc. It can regulate its own procedure, and is guided by the principles of natural justice. The NGT Act requires the Tribunal to consider the principle of sustainable development, the precautionary principle, and the polluter pays principle while deciding cases, and in a case involving an accident, the principle of no fault has to be applied while determining liability. Failure to comply with the orders of the Tribunal could lead to a fine or imprisonment of the person responsible, or both – depending on the fact situation.

If any of the parties before the Tribunal is not happy with the decision of the Tribunal, it can file an appeal before the Supreme Court of India within 90 days from the date of the Tribunal's order, or later if sufficient cause for the delay is shown to the Supreme Court.

4.5 Criminal Courts

While the National Green Tribunal hears only civil cases, certain violations of environmental laws constitute criminal offences, and cases have to be filed in criminal courts by appropriate government authorities.

Under the Water Act and the Air Act, several illegal acts have been identified as criminal offences. For example, as has been mentioned earlier, industrial units are required to obtain prior consents to establish and operate from the SPCBs. If units commence operation without proper consents, it is a criminal offence. If an industry is issued consent, it has to ensure that it complies with all the standards and specifications for equipment and processes mentioned in the consent. If the emissions or sewage discharge from the plant exceed the standards laid down by the SPCB, it is a criminal offence.

Complaints against offences under the Water Act and Air Act have to be filed in the Court of the Metropolitan Magistrate or a Judicial Magistrate First Class (and not any court inferior to that). The complaint has to be filed by the SPCB of the state in which the act has been committed. If any other person intends to file a complaint, he or she has to first give notice of at least sixty days to the concerned SPCB of the alleged offence, and his or her intention to file a case. The courts can order imprisonment of the person responsible for committing the offence, and direct the payment of a fine. In case a company commits an offence, the person or persons directly in-charge of conducting the business of the company can be held responsible.

Similarly, under the Wildlife (Protection) Act, 1972, several acts are considered to be criminal offences. Examples of criminal offences under this Act would include hunting or injuring protected animals, smuggling of animal skins, meat or body parts, and illegal trade in protected animal or plant species. These offences may be prosecuted in courts once a complaint is filed by one of the designated officials under the Act (e.g. the Chief Wildlife Warden, the officer-in-charge of a zoo, the Director of the concerned Tiger Reserve, etc.). Any other person can also file a complaint, but only after a notice of at least sixty days is given to the Central Government about the alleged offence, and the person's intention of filing a complaint in court. The punishment of offences under this Act could include imprisonment and/or fine. In some cases the period imprisonment could be anything between three to seven years with fine of not less than ten thousand rupees.

4.6 Supreme Court of India and High Courts

4.6.1 Writ petitions

As has been discussed in other units, the Supreme Court of India and High Courts of various states have held that the fundamental right under Article 21 of the Constitution of India – the right to life – includes the right to clean and healthy environment; pollution free environment; clean and hygienic environment, etc.² Over the last three decades, persons affected by environmental degradation have approached the Supreme Court and the High Courts on numerous occasions, requesting the courts to protect their fundamental right to life which was being violated due to environmental degradation.

Every person has a fundamental right under Article 32 of the Constitution to approach the Supreme Court in case his/her fundamental right has been violated. Therefore, any person who believes that his/her right to life under Article 21 is being violated by certain actions or inactions of the government or even a private party, can file **a writ petition** before the Supreme Court.

For example, in 1989 a writ petition was filed by Indian Council for Environmental legal Action, an environmental organization, in the Supreme Court under Article 32 highlighting the plight of villagers in Rajasthan affected by chemical pollution due to certain industries. The pollution had poisoned the ground water, and the soil had become unfit for cultivation. The government agencies – the Central Government, the Rajasthan government and the Rajasthan State Pollution Control Board – had not been able to take adequate action against the industries. The Supreme Court held that the inability of the government agencies to perform their statutory duties and control pollution from industries was violating the fundamental right to life of the villagers under Article 21.

Persons can also file a writ petition in the High Court of their state under Article 226 of the Constitution in environmental matters. Unlike the jurisdiction of the Supreme Court under Article 32 of the Constitution, the High Courts may be approached not only for a violation of a fundamental right, but also for a violation of a statutory right. An appeal from a judgment of the High Court can be filed in the Supreme Court.

The Supreme Court and the High Courts have very wide powers under Articles 32 and 226. The courts can direct the concerned government agencies to comply with their legal duties and protect the rights of people and communities. They can also direct the suspension (temporary or permanent) of activities causing environmental problems, or cancel permits granted to future activities that could potentially cause environmental damage. Courts can award compensation for loss suffered due to environmental degradation, direct the restoration of the environment (for example a polluted pond) to a condition before the pollution, order assessment studies, inspection of sites by experts, installation of pollution control devices, etc.

4.6.2 Public Interest Litigation

Sometimes cases filed before the Supreme Court or the High Courts are in the form of **Public Interest Litigations** or PILs. In these cases, typically, the issues before the

court relate to sustained inaction or illegal action by government agencies which violate fundamental or statutory rights of a section of the society. PILs do not deal with a dispute between two private parties, nor do they raise issues that affect the rights and interests of a few individuals. While in traditional litigation, only the person whose rights and interests have been affected can bring a case to court, in case of PILs this rule of standing or *locus standi* is relaxed. PILs can be filed by public spirited individuals or organizations on behalf of affected communities, or to bring to light rampant illegalities, and the petitioner need not be directly affected. PILs have been encouraged by courts to ensure that even sections of the society that are disadvantaged economically, socially or politically, and are not in a position to access the courts and claim the protection of their rights, can still receive justice. PILs allow citizens to highlight instances of poor and inefficient governance in the country.

Another characteristic of PILs is that the courts do not apply rigid procedural rules to the case, but adopt innovative methods that can address the issues raised in the case more effectively. Unlike traditional litigation, wherein a case is not admitted if a lot of time has elapsed since the issue first arose, in PILs the courts generally overlook any delay in filing the case. The courts have also not insisted on a strict format for filing PILs, and even letters written to the Supreme Court, or articles in newspapers have triggered adjudication in the courts on the issues raised.

PILs very often involve a large number of parties including various government agencies, and the courts do away with the conventional adversarial or confrontational approach to adjudication. Instead they adopt a more collaborative approach in which all parties make efforts to achieve common goals. Another distinguishing aspect of PILs is that courts' orders in PILs are binding even on third parties – i.e. those who are not even party to the petition before the courts.

One of the most well-known PILs before the Supreme Court in the environmental context involved illegal limestone quarrying in the Doon Valley.⁴ Rural Litigation and Entitlement Kendra, an organization based in Dehradun, sent a letter to the Supreme Court alleging unauthorized and illegal limestone quarrying in the Doon Valley that was leading to major environmental damage. The Court treated this letter and the accompanying affidavits as a PIL and in the following years issued several orders to regulate the quarrying activities in the area. The Court relied on various expert

committee reports and inspection reports, and several parties were allowed to make representations before the Court.

4.6.3 'Alternative and efficacious remedy' exception

Although any person can approach the Supreme Court under Article 32 of the Constitution in environmental matters, the Supreme Court has often held that if there is an alternative and efficacious remedy, then the person must approach that forum first. So for instance, if a petition is filed before the Court on the issue of air pollution caused due to emissions from an industrial estate, the Court is likely to direct the petitioners to approach the National Green Tribunal, which is a specialized body constituted to deal with environmental matters, and which has jurisdiction over air pollution related cases. It is also expected to decide cases within a shorter time frame. However, if the case is of grave national importance or the issue involves activities in several states, the Supreme Court may take up the matter.

4.7 Environmental Legislation

Protection of the environment till the 1970s was piecemeal wherein provisions incidentally touched upon the environment (for example, the provisions of the Indian Penal Code and the Code of Criminal Procedure). This trend changed in the 1970s wherein laws were made to prevent water pollution and to protect wildlife. In the 1980s, forest conservation and air pollution laws were passed. The Bhopal gas leak in 1984 paved the way for umbrella legislation, namely, the Environment (Protection) Act in 1986 and amendments in the pollution laws and the laws dealing with hazardous activities.

Exercising the legislative power, the Centre and the states have adopted laws, rules and regulations in fields like the environment in general, and forests, pollution, wildlife, biodiversity, mines and minerals, coastal zones and public liability in particular. Institutions like the National Green Tribunal and state Pollution Control Boards have been set up through laws. Many a times the discussions focus on central laws. However, it may be pertinent to note that states too have initiated legislative efforts depending on their legislative power and local needs. Apart from the exercise of their legislative powers, the legislatures are influenced by judicial decisions. The subsequent section will show how the initiatives of the Supreme Court were

instrumental in influencing executive and legislative actions. The key features of some of the legislation are mentioned below.

4.7.1 Wildlife Protection Act, 1972

The colonial rulers were drawn to wildlife for vested reasons. Some wild birds therefore enjoyed protection under the Wild Birds Protection Act, 1887. During the breeding season their possession or sale was prohibited. Later on, the Wild Birds and Animals (Protection) Act was passed in 1912 to prevent the excessive killing of birds and animals. After independence, Parliament enacted the Wildlife (Protection) Act in 1972 on the request of states under Article 252 of the Constitution. This Act allows the central and state governments to establish national parks and sanctuaries for the protection and propagation of wildlife. In the subsequent years the Act also expanded its focus to prohibition and regulation of internal and international trade. The Ministry of Environment and Forests prepared a Manual on Wildlife in 2007 in order to assist the enforcement personnel in the implementation of the Act stringently. The Act was amended in 1993, 2002 and 2006. A Bill for further amendment, namely, the Wildlife (Protection) Amendment Bill, 2013 has been introduced in the Rajya Sabha. Due to increase in wildlife crime, the Tiger Task Force recommended stringent provisions for tackling the crime. The Committee constituted for examining the recommendations of the Tiger Task Force favoured the recommendation and also suggested amendments in the Act to make it consistent with the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 (CITES). A separate chapter namely, Chapter VB is proposed for incorporating the CITES obligations under the proposed Amendment Bill.

4.7.2 Water (Prevention and Control of Pollution) Act, 1974

The Water Act was enacted with the objective of prevention and control of water pollution in India. It aims at the maintaining or restoring of the wholesome nature of water.

The Act provides for constitution of State Pollution Control Boards (SPCB or the Board) with powers and functions, which include developing comprehensive plan for the prevention, control, or abatement of pollution, inspecting plants for the treatment of effluents and evolve economical and reliable methods for their treatment. The Board has the power to take samples of effluents, entry and inspection and the power to

refuse or withdraw consent if the industry does not install treatment and disposal system. The Board is vested with powers to take emergency measures in the case of pollution of a stream or well and make application to the court for restraining apprehended pollution thereby. The Act envisages the Board to be bound by the directions given by the State Government or the Central Pollution Control Board (CPCB).

Pollution

- contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water which may or is likely to create a nuisance or render such water harmful or injurious to public health or safety or to domestic, commercial, industrial, agricultural or other legitimate uses or to the life and health of animals or plants or of aquatic organisms

The Central Government shall be the final authority in decision making in cases where the direction given by the State Government is inconsistent with that of the CPCB. The State Government may supersede the SPCB in cases where the latter is in default in terms of performance of its duties or in the interests of public. Activities like the use of stream or well for disposal of polluting matter are treated as offences and the Board may impose penalties accordingly. Similarly offences by companies and Government departments may also be subject to liability.

4.7.3 Air (Prevention and Control of Pollution) Act, 1981

The Air Act, 1981 is enacted as an outcome of the Stockholm Conference, 1972. It is implemented with the help of Rules.

Air pollutant

- any solid, liquid or gaseous substance including noise present in the atmosphere in such concentrations as may be or tend to be injurious to human beings or other living creatures or plants or property or environment

The SPCBs constituted under the Act are envisaged to plan a comprehensive programme for prevention, control or abatement of air pollution and to secure its execution. The Board exercises power to grant consent to establish or operate some industrial plants. It also holds the power to make application to the court for restraining

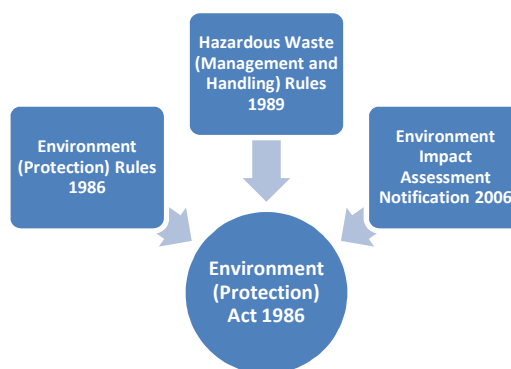
anyone from causing air pollution. The Board holds an advisory role vis-a-vis the State Government.

Provisions in relation to offences by the companies and Government departments are the same as those mentioned in the Water Act.

Under the Act, the State Government has the power to declare air pollution control areas. For instance, the entire area under the State of West Bengal is declared as an air pollution control area.

4.7.4 Environment (Protection) Act, 1986

Parliament enacted the Environment (Protection) Act in 1986 to give effect to the objectives of the Stockholm Conference, 1972. This legislation was enacted in the aftermath of the Bhopal disaster. It is an umbrella legislation followed by a set of rules, regulations and notifications, which include:



It is stipulated in the Act that rules or orders made therein shall have effect notwithstanding anything inconsistent therewith contained in any other enactment.

| | |
|--------------------------------|--|
| Environment | • water, air, land and the inter-relationship, which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property |
| Environmental pollutant | • any solid, liquid or gaseous substance present in such concentrations as may be or tend to be injurious to environment |
| Hazardous substance | • any substance or preparation which by reason of its chemical or physical-chemical properties or handling is liable to cause harm to human beings, other living creatures, plant, micro-organism, property or the environment |

Under the Act, the Central Government has the power to take measures to protect and improve environment, to constitute authorities, to give directions, to enter and inspect, procure information from a State Government, etc. The scope for delegating powers and functions to any authority or State Government is envisaged. The Central Government has the power to make rules under the Act.

The Act characterizes certain activities like excess emission, handling hazardous substances in violation of procedural safeguards and obstruction of person empowered to enter and inspect as offences for which a penalty is imposed. The Act addresses offences committed by companies and Government departments separately. Cognizance of an offence can be taken on a complaint by the Central Government or any authority or person authorized in that behalf. The Act also provides that any person who has given notice of not less than sixty days of the alleged offence and his intention to make the complaint to the SPCB or any officer authorized in this behalf may also be considered. Section 22 of the Act bars the jurisdiction of civil courts with respect to any action taken by the duly competent authority under the Act.

4.7.5 Public Liability Insurance Act, 1991

The Public Liability Insurance Act, 1991 was enacted subsequent to the Bhopal tragedy. It provides for immediate relief to victims of an accident while handling any hazardous substance.

Accident

- involves fortuitous, sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of or injury to any person or damage to any property
- excludes an accident by reason of war or radioactivity

The Act vests liability on the owner on a no-fault basis for compensation. The owner is liable to take insurance policies and renew the same on expiry before he starts handling the hazardous substances. He is also liable to contribute to a Relief Fund.

State Governments are vested with the power to issue directions, which include the direction to prohibit or regulate the handling of any hazardous substance and the stoppage or regulation of the supply of electricity, water or any other service. SPCBs hold the power to make an application to the court to restrain an owner from handling

hazardous wastes. Offences by companies and Government departments are the same as those mentioned in the Water Act, 1974.

4.7.6 Biological Diversity Act, 2002

In view of India's rich reserves of biological resources and the Convention on Biological Diversity (CBD)'s recognition of the sovereign rights of countries over their biological resources, India enacted the Biological Diversity Act in 2002 and the Rules in 2004. The Act aims to undertake and implement India's obligations in accordance with the provisions of the CBD. The Act classifies users of biological diversity into two categories based on the involvement of foreign partners or institutions in the utilization of resources of India. For the first category, the Act provides for prior approval of the National Biodiversity Authority (NBA) if their uses are for research, commercial utilization or bio-survey and bio-utilization. Persons in the second classification (any citizen of India, body corporate, undertaking or organization registered in India) shall give prior intimation to the State Biodiversity Board. The following categories who are citizens of India are exempted from this requirement:

- Local communities or people of the area
- Growers and cultivators of biodiversity
- Vaid and hakims practicing indigenous medicine

4.7.7 National Green Tribunal Act, 2010

The National Green Tribunal, which is set up under the Act of 2010, is the nodal authority to receive complaints from any one on an environmental dispute or for seeking compensation. The Tribunal has its principal place of sitting in Delhi with Bhopal, Pune, Kolkata and Chennai as the zonal places of sitting. A time limit is prescribed for bringing disputes or compensation claims before the Tribunal. A decision from the Tribunal is appealable to the Supreme Court. The Tribunal consists of judicial members and experts from the field of the environment. The Tribunal is guided by the principles of natural justice.

Legislation like the Indian Forest Act, 1927, the Forest Conservation Act, 1980, the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 and mining laws are also significant in the discussion on environmental protection. The EIA and CRZ Notifications, Noise Pollution Regulations, Hazardous

Substances (Handling) Rules and many other similar measures strengthen the legislative initiative.

4.8 Judicial Decisions

The initial period of judicial remedies centered on tortuous and public nuisance claims (for instance, *Municipal Council, Ratlam v. Sri Vardhichand*, AIR 1980 SC 1622). Gradually writ petitions and Public Interest Litigations (PIL) were used to access the Supreme Court and High Courts to seek justice in environmental matters. This section analyses some of the decisions laid down by the Supreme Court of India.

In *M.C. Mehta v. Union of India*, (1987) 1 SCC 395, the Court was addressing the issue of closure and relocation of some units of Sriram Foods on the ground that such hazardous industries cannot be operating from populated areas. While this petition was pending, two instances of oleum gas leakage occurred from one of the units and the workmen and the public suffered. A PIL was filed for compensation to the victims. The Court for the first time laid down the rule of absolute liability by stating that an enterprise engaged in hazardous activity is a potential threat to the people working in the factory and those living in the nearby areas. Therefore, the enterprise owes an absolute duty to the community. In the event of an accident, such enterprise is strictly and absolutely liable to compensate all the victims. This liability is not subject to any exception.

In *Rural Litigation and Entitlement Kendra v. State of UP*, (1986) Supp SCC 517, a PIL was filed under Article 32 for a direction banning all illegal mining operations in the Mussoorie Hills and surrounding areas due to adverse impact on the ecology of the area. In this case the Court held that it is for the government to decide in each case to what extent can the exploitation of mineral deposits be allowed at the cost of ecology based on appropriate advice. The Court reiterated that the task on environmental protection is not only the task of the government but also of every citizen under Article 51A(g) of the Constitution.

In a PIL under Article 32 of the Constitution concerning the discharge of effluents into the river Ganga by the tanneries of Kanpur, the Supreme Court observed that even though there are provisions under the Water Act, 1974 and the Environment (Protection) Act, 1986, no preventive measures have been taken and therefore the Court may issue appropriate directions for the removal of such public nuisance.

Therefore, in *M.C. Mehta v. Union of India*, (1987) 4 SCC 463, the Court held that tanneries cannot function without fulfilling the minimum requirement of a primary treatment plant. Just like an industry which cannot pay minimum wages cannot be permitted to continue functioning, a tannery which cannot set up a primary treatment plant cannot be allowed to function as the adverse effects on the public outweigh the loss to the management and labour on its closure. In a further case, namely, *M.C. Mehta v. Union of India*, (1987) 4 SCC 471, the Court while dealing with water pollution of the river Ganga issued directions to the Nagar Mahapalikas which have jurisdiction over the areas through which the Ganga flows to submit to the SPCBs the plan regarding the disposal of waste, sewerage and treatment of trade effluents discharged into the river. The Court also held that it is the duty of the Central Government under Article 48A of the Constitution to introduce compulsory lessons on environmental protection in schools. In *M.C. Mehta v. Union of India*, (1992) 1 SCC 358, the Court gave directions in order to spread awareness on environment protection through mass media, information films and educational courses.

In *Dahanu Taluk Environment Protection Group and Another v. BSES Co. Ltd.*, (1991) 2 SCC 539, a Special Leave Petition under Article 136 of the Constitution was filed seeking directions for setting up of a thermal power plant in an ecologically sensitive area. The Court held that it is primarily for the government concerned to consider the importance of public projects for the betterment of the conditions of living of the people and the necessity for the preservation of ecological balance, avoidance of deforestation, etc. that may be brought to its notice by various bodies of laymen and experts and strike a just balance between these conflicting interests. The Court's role is limited to examine whether the government has taken all relevant aspects into account and not been influenced by extraneous or immaterial considerations while arriving at the final decision. In this case, the Court held that the government had taken the decision after due consideration of material considerations and providing for sufficient safeguards under the Environment (Protection) Rules, 1986. However the Court noted that if there is a request for relaxation of any condition, the petitioners must be given an opportunity to be heard.

In *Tarun Bharat Sangh v. Union of India*, (1993) 3 SCR 21, Tarun Bharat Sangh, a voluntary organization, brought to the notice of the Court the widespread illegal mining

carried on in the area declared as a Tiger Reserve in Alwar district of Rajasthan. The petitioner contended that this area is declared as a Tiger Reserve under the Rajasthan Wild Animals and Birds Protection Act, 1951 as a sanctuary and a National Park under the Wildlife (Protection) Act, 1972 and as a protected forest under the Rajasthan Forest Act, 1953. The petitioner contended that in spite of its protected status, the State Government granted licenses for mining in the area in violation of the law. The Court held that the case involves allegations about the failure of the executive to do its duty by law and by the people when faced with the might of money. The Court held that once an area is declared as a protected forest, it falls within the purview of the Forest (Conservation) Act, 1980. No non-forest activity can be carried out even by the State Government except with the prior approval of the Central Government. Mining is a non-forest activity and granting of mining leases/licences and renewal of the same by the State Government without prior approval by the Central Government in the protected forest area after 1 January 1975 is contrary to law.

In *Vellore Citizens' Welfare Forum v. Union of India*, (1996) 5 SCC 647, a PIL was filed under Article 32 of the Constitution about the discharge of untreated effluents by tanneries into agricultural lands and waterways in Tamil Nadu. The Court held that the state must adopt the principle of sustainable development keeping in view the Constitutional obligations under Articles 21, 47, 48-A and 51A (g). In addition, the Court considered the precautionary principle and the polluter pays principle as the essential components of the principle of sustainable development and as part of the environmental law of the country. The Court held that these principles are part of customary international law and since not inconsistent with the municipal law shall be deemed to have been incorporated into national law.

In *S. Jagannath v. Union of India*, (1997) 2 SCC 87, a writ petition was filed under Article 32 of the Constitution with respect to the enforcement of the CRZ Notification, 1991. The petition was about intensive and semi-intensive type of prawn farming in the ecologically fragile coastal areas. The Court observed that traditional and improved traditional shrimp farming technologies are benign and pollution-free. However, the Court referred to the constitutional provisions and laws like the Environment (Protection) Act, 1986 and its Rules, the Water Act, 1974, the Fisheries Act, 1897, the Wildlife Protection Act, 1972 and the Forest (Conservation) Act, 1980 to suggest that

intensive and semi-intensive technologies cannot be permitted in prawn farming. The CRZ Notification was held to have overriding effect over other legislation since it is issued under the Environment (Protection) Act, 1986. The Court directed commercial shrimp industry in an ecologically fragile area to be scrutinized by a High Powered Authority under the Act and the need to conduct an environmental and social impact assessment. The Court held that this industry is neither directly related to waterfront nor directly needing foreshore facility. As far as the workmen were concerned, the Court directed the matter to be considered under the Industrial Disputes Act, 1947.

In *M.C. Mehta v. Union of India* (Taj Trapezium case), (1997) 2 SCC 353, the Court held that industries in the Taj Trapezium Zone using coke or coal are polluting industries therefore these industries have to convert to natural gas or must stop functioning and relocate themselves.

In *M.C. Mehta v. Union of India*, (1997) 11 SCC 312, taking note of the falling groundwater level, the Court directed the Central Government to appoint the Central Groundwater Board as an authority under the Environment (Protection) Act, 1986. This Board would be empowered to regulate groundwater management and address the issue of indiscriminate boring and withdrawal of groundwater.

In *M.C. Mehta v. Kamal Nath*, (1997) 1 SCC 388, the petitioner contested the grant of a lease of riparian land to a private company for commercial purposes on the banks of the river Beas. The Court held that the lease amounted to a violation of the public trust doctrine, which means that State is the trustee of all natural resources to be used for the enjoyment of the general public. In this case the Court found that the construction was interfering with the natural flow of the river.

In *A.P. Pollution Control Board v. Prof. M.V. Naydu*, (2001) 2 SCC 62, the Court held that the establishment of industries within the 10 kilometre radius of two major reservoirs of Andhra Pradesh, namely Osman Sagar and Himayat Sagar, falls within clear prohibition and the State Government cannot grant exemption.

In *M.C. Mehta v. Union of India*, (2001) 3 SCC 756, the Court directed the phasing out of non-CNG buses and fixed the time limit for the switch over to CNG.

In *M.C. Mehta v. Union of India*, (2004) 12 SCC 118, the question which came up for consideration was whether mining activity up to 5 kilometers from the Delhi-Haryana Border on the Haryana side of the ridge and in the Aravalli Hills causes environmental

degradation and if so what directions need to be issued. After a perusal of the background of the case and its previous orders, the Court held that the Aravalli Hill range needs to be protected at any cost. Therefore mining activity can be permitted only on the basis of sustainable development and on compliance of stringent conditions.

In *Inre Noise Pollution* case, AIR 2005 SC 3136, the Supreme Court examined the implications of noise pollution vis-à-vis Article 21 of the Constitution. The Court dealt with the noise pollution caused by firecrackers, loud speakers and vehicles in the light of the Noise Pollution (Regulation and Control) Rules, 2000 and its own previous decisions. Accordingly, the Court issued direction to the states to make provisions for seizure and confiscation of loud speakers, amplifiers and other devices causing noise pollution beyond the permissible levels. As per Rule 3, ambient air quality standards are to be prescribed for different areas and a categorization of the areas accordingly for implementation. The Court directed the Central and State Governments to implement these rules wherever it is not done. The Court stated the need to create public awareness about the hazardous effects of noise pollution.

In *G. Sundarrajan v. Union of India*, (2013) 6 SCC 620, the appeals from the Madras High Court were concerned with setting up of a nuclear power plant in Kudankulam in the State of Tamil Nadu. The Court noted that the Government of India set up a 15 member expert group to study the matter and allay the fears of the general public. The State Government also appointed an Expert Committee. Both Committees were satisfied with the safety and security of the plant and environmental safeguards. Accordingly, the Court held that KKNPP has been set up and made functional based on the principle of sustainable development and its impact on ecology has been taken care of keeping in view national and international environmental principles.

The close relationship between protection of the environment and management of natural resources is well explained by the Court in *Reliance Natural Resources Ltd v. Reliance Industries Ltd*, (2010) 7 SCC

1. The Court stated that inter-generational equity is part of the constitutional jurisprudence on equality and sustainable development and protection of the environment are pre-conditions for the use of nature. The Court reminded the

Government of India to frame a comprehensive legislation on energy security and supply of natural gas under production sharing contracts.

A PIL was filed under Article 32 of the Constitution on behalf of the people living in and around the Nilgiri forests on the Western Ghats. The petitioner challenged the validity of the actions by the state authorities which amount to destruction of the tropical rain forests of the region which he alleged were a clear violation of the Indian Forest Act, 1927, the Forest (Conservation) Act, 1980, the Tamil Nadu Hill Stations Preservation of Trees Act, 1955 and the Environment (Protection) Act, 1986. Reiterating the public trust doctrine, the Court held that common properties like rivers, seashore, forest and the air are held by the Government in trust for the free and unimpeded use of the general public. It criticized the way afforestation fund is utilized by the state governments (In *T.N. Godavarman Thirumulpad v. Union of India* (2014), <http://judis.nic.in/supremecourt/imgs1.aspx?filename=41309>)

Summary

In this unit, we discussed various judicial remedies available in response to environmental problems. We studied the National Green Tribunal constituted under the National Green Tribunal Act, 2010, its powers and functions, and the types of cases it can hear and decide. The National Green Tribunal can only hear civil cases. Criminal cases such as those concerning air and water pollution, or cases relating to wildlife protection can be filed in the lower courts (Court of the Metropolitan Magistrate or Judicial Magistrate First Class). The Supreme Court of India and the High Court's also play a very crucial role in environmental conservation, and they can issue a variety of orders and directions to ensure that the rights and interests of persons and the environment are protected effectively.

The national environmental law of India has its formal sources in the Constitution, legislation, rules, regulations and judicial decisions. The right to life guaranteed under Article 21, the duty of the State under Article 48-A and the fundamental duty under Article 51A(g) of the Constitution of India are important in the discussion on environment protection. Constitutional provisions on legislative powers empower the Central and State Legislatures to enact laws aimed at environment protection. Article 253 of the Constitution vests power in the Centre to make laws to implement India's international obligations.

India has enacted a number of legislation since 1970. The colonial legislation on protection of birds, wildlife and forests are either amended or supplemented with legislation in post-independent India. Now there are laws in general on environmental protection, wildlife, forest conservation, biodiversity, water and air pollution, mining, liability and hazardous substances. The Central Government has also made Environment Impact Assessment (EIA) mandatory for developmental activities. The CRZ Notification addresses the issue of usage of coastal areas, which in turn would highlight the importance of eco-tourism apart from pollution. The National Green Tribunal Act, 2010 has brought in a new adjudicatory mechanism to resolve disputes and determine compensation issues. The Tribunal's decisions are subject to appeal to the Supreme Court.

The Supreme Court of India many a times has shown an active interest in environmental protection and adjudicated inter alia on the legitimacy of developmental activities having an impact on environment. The Court has extensively used Article 21 of the Constitution to provide relief to the parties and thereby link environment with human rights. The Court at times criticized the lack of execution of laws by the concerned authorities. The Court introduced doctrines like the public trust doctrine to highlight the significance of common properties. Principles of international environmental law like sustainable development, the precautionary principle, the polluter pays principle and intergenerational equity was applied to adjudicate the matter. However, the Court restrained itself in some of the cases where it took the position that if the government has duly followed the procedures and laws, the Court shall not perform the role assigned to the executive.

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Unit 5: The Environmental Authorities

Unit Structure

5.0 Objectives

5.1 Introduction

5.2 The Ganga Action Plan Authority

5.3 National Biodiversity Authority (Section 8)

5.4 The Protection of Plant Variety and Farmers Right Authority of India

5.5 The National Green Tribunal

Summary

5.0 Objectives

After studying this unit you will be able to understand:

- Depth understanding of The Ganga Action Plan Authority
- Depth understanding of National Biodiversity Authority (Section 8)
- Depth understanding of The Protection of Plant Variety and Farmers Right Authority of India
- Depth understanding of The National Green Tribunal

5.1 Introduction

The environmental authorities are established through environmental governance (EG). Which consist of a system of laws, norms, rules, policies and practices that dictate how the board members of an environment related regulatory body should manage and oversee the affairs of any environment related regulatory body. These are responsible for ensuring sustainability (sustainable development) and manage all human activities—political, social and economic. Environmental governance includes government, business and civil society, and emphasizes whole system management.

5.2 The Ganga Action Plan Authority

The Ganga Action Plan (GAP) was launched by Rajiv Gandhi, the then Prime Minister of India, in June 1986. Its main objective was to improve the water quality by the interception, diversion, and treatment of domestic sewage and to prevent toxic and

industrial chemical wastes from identified polluting units from entering the river. The other objectives of the GAP are as follows:

- Control of non-point from human defecation, cattle wallowing, and the disposal of human remains in the river.
- Research and development to conserve the biotic diversity of the river to augment its productivity.
- Development of sewage treatment technology such as Up-flow Anaerobic Sludge Blanket (UASB) and sewage treatment through afforestation.
- Rehabilitation of soft-shelled turtles for pollution abatement.
- Resource recovery options such as methane production for energy generation and use of aquaculture for revenue generation.
- To act as a trendsetter for taking up similar action plans in other grossly polluted stretches in other rivers.
- The ultimate objective of the GAP is to have an approach of integrated river basin management considering the various dynamic interactions between abiotic and biotic eco-system.

Notwithstanding some delay in the completion of the first phase of the GAP, it has generated considerable interest and set the scene for evolving a national approach towards replicating this program for the other polluted rivers of the country. The Government of India proposed to extend this model with suitable modifications to the national level through a National River Action Plan (NRAP). The NRAP mainly draws upon the lessons learned and the experience gained from the GAP besides seeking the views of the State Governments and the other concerned Departments/Agencies.

National Ganga River Basin Authority (NGRBA) is a financing, planning, implementing, monitoring and coordinating authority for the Ganges River, functioning under the Jal Shakti ministry of India. The mission of the organization is to safeguard the drainage basin which feeds water into the Ganges by protecting it from pollution or overuse. In July 2014, the NGRBA has been transferred from the Ministry of Environment and

Forests to the Ministry of Water Resources, River Development & Ganga Rejuvenation, formerly Ministry of Water Resources (India).

Union government in a notification issued on 20 September 2016 has taken decision under River Ganga (Rejuvenation, Protection and Management) Authorities Order 2016 for a new body named "National Council for River Ganga (Rejuvenation, Protection and Management)" NCRG to replace existing NGRBA. The new body will act as an authority replacing the existing National Ganga River Basin Authority for overall responsibility for superintendence of pollution prevention and rejuvenation of river Ganga Basin.

It was established by the Central Government of India, on 20 February 2009 under Section 3(3) of the Environment Protection Act, 1986, which also declared Ganges as the "National River" of India.

The Prime Minister is the chair of the Authority. Other members include the cabinet ministers of ministries that include the Ganges among their direct concerns and the chief ministers of states through which the Ganges River flows. The Chief Ministers as members are from the states through which Ganges flow viz. Uttarakhand, UP, Bihar, Jharkhand, West Bengal, among others.

5.3 National Biodiversity Authority (Section 8)

The NBA shall be established by the central government Biodiversity Act 2002 (Section 8). The National Biodiversity Authority shall be a body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold and dispose of property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

The National Biodiversity Authority shall consist of the following members:

- (a) A Chairperson, who shall be an eminent person having adequate knowledge and experience in the conservation and sustainable use of biological diversity and in matters relating to equitable sharing of benefits, to be appointed by the Central Government;
- (b) Three ex officio members to be appointed by the Central Government, one representing the Ministry dealing with Tribal Affairs and two representing the

Ministry dealing with Environment and Forests of whom one shall be the Additional Director General of Forests or the Director General of Forests;

- (c) Seven ex officio members to be appointed by the Central Government to represent respectively the Ministries of the Central Government dealing with –
- i. Agricultural Research and Education;
 - ii. Biotechnology;
 - iii. Ocean Development;
 - iv. Agriculture and Cooperation;
 - v. Indian Systems of Medicine and Homoeopathy;
 - vi. Science and Technology;
 - vii. Scientific and Industrial Research;
- (d) five non-official members to be appointed from amongst specialists and scientists having special knowledge of, or experience in, matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources, representatives of industry, conservers, creators and knowledge-holders of biological resources.

❖ **The functions of the National Biodiversity Authority (Section 18)**

The Board shall advise the Central Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources. It shall also advise the State Governments in the selection of areas of biodiversity importance. It is also authorized to take any measures necessary to oppose the grant of intellectual property rights in any country outside India. Prior Approval of the NBA is necessary to obtain any biological resource occurring in India and to apply for intellectual property protection whether in India or outside India.

❖ **State Biodiversity Board (Section 22)**

The State Government may, by notification in the Official Gazette, appoint for the purposes of this Act, a Board for the State to be known as the (name of the State) Biodiversity Board. The Board shall be a body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold and dispose of

property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

The Board shall consist of the following members, namely:

- (a) a Chairperson who shall be an eminent person having adequate knowledge and experience in the conservation and sustainable use of biological diversity and in matters relating to equitable sharing of benefits, to be appointed by the State Government;
- (b) not more than five ex officio members to be appointed by the State Government to represent the concerned Departments of the State Government;
- (c) not more than five members to be appointed from amongst experts in matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources.

❖ **The Functions of State Biodiversity Boards (Section 23)**

- a) advise the State Government, subject to any guidelines issued by the Central Government, on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources
- b) regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians
- c) perform such other functions as may be necessary to carry out the provisions of this Act.

Further one has to seek prior approval of the State Board to obtain Biological Resources for commercial utilization after giving prior intimation.

❖ **Biodiversity Management Committees (Section 41)**

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee. The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

❖ **Penalties (Section 55)**

1. Whoever contravenes or attempts to or abets the contravention of the provisions of Section 3(to obtain Biological Resources with the permission of the National Board) or Section 4(results of research not to transferred to a foreigner or NRI without the permission of the National Board) or Section 6(application of Intellectual property right not to be made without the approval of National Board) shall be punishable with imprisonment for a term which may extend to five years, or with fine which may extend to ten lakh rupees and where the damage caused exceeds ten lakh rupees such fine may commensurate with the damage caused, or with both.
2. Whoever contravenes or attempts to contravene or abets the contravention of the provisions of section 7 (Prior intimation to State Biodiversity Board for obtaining biological resource for certain purposes)or any order made under sub-section (2) of Section 24(order, prohibiting or restricting any such activity which is detrimental or contrary to the objectives of conservation and sustainable use of biodiversity or equitable sharing of benefits) shall be punishable with imprisonment for a term which may extend to three years, or with fine which may extend to five lakh rupees, or with both.

5.4 The Protection of Plant Variety and Farmers Right Authority of India

The Protection of Plant Varieties and Farmers' Rights Authority confers Plant Genome Savior "Farmer Reward" and "Farmer Recognition" to the farmers engaged in the conservation of genetic resources of landraces and wild relatives of economic plants

and their improvement through selection and preservation and the material so selected and preserved has been used as donors of gene in varieties registerable under the PPV&FR Act, 2001 (53 of 2001) upto 10 rewards and 20 recognitions (consisting of a citation, memento and cash prize) are conferred in a year.

The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act) is an Act of the Parliament of India that was enacted to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders, and to encourage the development and cultivation of new varieties of plants. This act received the assent of the President of India on the 30 October 2001.

The PPV&FR Act, 2001 was enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties. The Intellectual Property Right granted under PPV & FR Act, 2001 is a dual right – one is for the variety and the other is for the denomination assigned to it by the breeder. The rights granted under this Act are heritable and assignable and only registration of a plant variety confers the right. Essentially Derived Varieties (EDV) can also be registered under this Act and it may be new or extant. Farmers are entitled to save, use, sow, re-sow, exchange or sell their farm produce including seed of a registered variety in an unbranded manner. Farmers' varieties are eligible for registration and farmers are totally exempted from payment of any fee in any proceedings under this Act. The period of protection for field crops is 15 years and for trees and vines is 18 years and for notified varieties it is 15 years from the date of notification under section 5 of Seeds Act, 1966. Annual fee has to be paid every year for maintaining the registration and renewal fee has to be paid for the extended period of registration. Farmers can claim for compensation if the registered variety fails to provide expected performance under given conditions. The rights granted under this Act are exclusive right to produce, sell, market, distribute, import and export the variety. Civil and criminal remedies are provided for enforcement of breeders' rights and provisions relating to benefit sharing and compulsory license in case registered variety is not made available to the public at reasonable price are provided. Compensation is also provided for village or rural communities if any registered variety has been developed using any variety in whose evolution such village or local

community has contributed significantly. The procedural details and modes of implementing this Act are provided in PPV&FR Rules, 2003.

According to sec 2(c), "breeder" means a person or group of persons or a farmer or group of farmers or any institution which has "bred, evolved or developed any variety." [1]

According to sec 2(k), "farmers" means any person who – "Cultivates crops by cultivating the land himself; or" "Cultivates crops by directly supervising the cultivation or land through any other person; or conserves and preserves, severally or jointly, with any other person any wild species or traditional varieties"; or "Adds value to such wild species or traditional varieties through selection and identification of their useful properties."

Genetic resources of economic plants and their wild relatives particularly in areas identified as agro-biodiversity hotspots are awarded annually from Gene Fund. The name of the award is Plant Genome Saviour Community Award and the amount is INR 10, 00,000 for each community. A maximum of five awards are conferred in a year.

The Protection of Plant Varieties and Farmers' Rights Authority also confers Plant Genome Savior "Farmer Reward" and "Farmer Recognition" to the farmers engaged in the conservation of genetic resources of landraces and wild relatives of economic plants and their improvement through selection and preservation and the material so selected and preserved has been used as donors of gene in varieties registerable under the PPV&FR Act, 2001 (53 of 2001). [2] Up to 10 rewards and 20 recognitions (consisting of a citation, memento and cash prize) are conferred in a year.

5.5 The National Green Tribunal

The National Green Tribunal (Tribunal) has been set up under the National Green Tribunal Act, 2010 (NGT Act). The objective of the NGT Act is to provide effective and expeditious disposal of cases relating to the protection of the environment including the enforcement of any legal right relating to the environment. The Tribunal is a multi-disciplinary body, with judicial and non-judicial/expert members, which hears and decides cases before it.

The need to set up special environmental courts, such as the National Green Tribunal, was highlighted by the Supreme Court of India in a series of cases, 1 and by the Law Commission of India in its 186th report in 2003. The Court was of the opinion that environmental cases raised issues which required technical knowledge and expertise, speedy disposal, and continuous monitoring, and therefore they should be adjudicated upon by dedicated courts with adequate expertise and technical assistance. The National Environmental Tribunal Act 1995 was passed by the Parliament but never implemented. Subsequently, the National Environment Appellate Authority Act 1997 was enacted under which the National Environment Appellate Authority was set up in 1997. There were several problems in the functioning of this Authority, including its limited mandate (only persons wishing to challenge environmental clearances could approach the Authority). When the National Green Tribunal was set up in 2010, it replaced the Authority. The Tribunal can be approached with cases pertaining to any of the following seven environmental laws:

- The Water (Prevention and Control of Pollution) Act, 1974 [Water Act]
- The Water (Prevention and Control of Pollution) Cess Act, 1977
- The Forest (Conservation) Act, 1980
- The Air (Prevention and Control of Pollution) Act, 1981 [Air Act]
- The Environment (Protection) Act, 1986
- The Public Liability Insurance Act, 1991
- The Biological Diversity Act, 2002

❖ **Jurisdiction:**

The Tribunal has two kinds of jurisdiction – original and appellate jurisdiction. Original jurisdiction refers to the powers of the Tribunal to decide an issue for the first time, before any other authority with judicial powers has made any decision on it. Appellate jurisdiction refers to the power to sit in appeal – i.e. when an authority has issued an order or decision, and against such an order or decision a case has been filed.

❖ **Original jurisdiction (section 14)**

The Tribunal has original jurisdiction over all civil cases raising a substantial question relating to environment and which arise out of the implementation of any of the aforementioned seven laws. This includes the enforcement of any legal right arising

from these laws, or if there is a direct violation of a specific statutory environmental obligation by a person which affects the community at large (not just an individual); or causes substantial damage to the environment or property; or causes damage to public health that is broadly measurable. The environmental consequences could relate to a specific activity or a point source of pollution.

Examples of cases that the Tribunal can decide while exercising original jurisdiction are: cases of industrial pollution where the applicants are not challenging a specific approval or consent granted to the industry but are aggrieved by the impacts of the industry on, say, groundwater, or ambient air quality or noise levels; cases like the one challenging rampant illegal construction and development which contributed to the Uttarakhand floods and massive destruction in 2013; cases highlighting illegal activities with adverse impacts on the environment like unregulated sand mining, etc.

Such cases have to be brought before the Tribunal within a period of six months from the date on which the cause of action of the dispute first arose. After six months, a case may still be brought but within 60 days, and the case will only be heard if the Tribunal is convinced that the applicant was prevented by reasonable cause to file the case within stipulated time. However, if it is an ongoing activity or continuing adverse impact on the environment, the six months period is not applied very strictly, as any point of time could be selected as the point when the cause of action first arose.

Victims of environmental damage, including accidents occurring while handling hazardous wastes, can approach the Tribunal to seek relief and compensation (section 15). The Tribunal can order for restoration of damaged property and the environment. Any case for relief and compensation has to be brought to the Tribunal within five years from the date on which the cause for such relief and compensation first arose. After that a grace period of sixty days (as above) is given. A five year time period has been allowed, because it is possible that the impact of environmental degradation (like industrial pollution) may not be apparent for a long time, but manifests itself only much later.

❖ Appellate jurisdiction (section 16)

While exercising its appellate jurisdiction, the Tribunal hears and decides cases in which a regulatory approval or consent granted or rejected by the relevant government

agency is being challenged. These approvals or consents relate to the seven aforementioned laws. The Tribunal has the power to cancel an approval or consent granted – if it is found to be illegally obtained. It can also issue a stop work notice or a stay order; or direct the constitution of committees of experts to carry out fact finding or monitor the implementation of its orders. For example, persons who are aggrieved by the grant of an environmental clearance (which is granted in accordance with the EIA Notification 2006, issued under the Environment (Protection) Act, 1986) or a forest clearance (under the Forest (Conservation) Act, 1980) by the government to a thermal power plant near their village can approach the Tribunal in an appeal against such clearances. Similarly, if a company is denied an environmental clearance or a forest clearance, it can approach the Tribunal to challenge the decision of the government.

Another important set of cases which can be brought under the appellate jurisdiction of the Tribunal relate to the consents to establish and operate granted by the State Pollution Control Boards (SPCBs) under the Water Act and the Air Act to industrial plants. If a consent is granted or denied, the aggrieved party (could be person/s living near the industrial plant, or the industry) has to first approach the appellate authority set up under the Water Act and the Air Act. If either party before the appellate authority is dissatisfied with the decision of the appellate authority, it can approach the Tribunal. An appeal has to be filed within 30 days from the date on which the order or decision that is being challenged was communicated. Beyond that, another 60 days may be granted by the Tribunal, if it is convinced that there was a sufficient cause for the delay in filing.

❖ **Exclusive jurisdiction of the Tribunal**

Cases relating to compensation and relief for environmental damage, and those in which appeals are being filed against regulatory approvals, as discussed above, can only be brought before the Tribunal. No other court is supposed to entertain such a case, and if such a case is filed, then the court is expected to ask the parties to approach the Tribunal for proper adjudication.

❖ **Who can approach the Tribunal?**

According to the NGT Act, an aggrieved person can file a case before the Tribunal – could be an individual, a company, a firm, an association of person (like a NGO) - even

if not registered or incorporated, a trustee, a local authority (like a municipal corporation), a government body (like the SPCB) etc. The person need not be directly affected by the project or development in question, but could be any person who is interested in protecting and preserving the environment.

The Principal Bench of the Tribunal is situated in New Delhi, with four Zonal Benches in Bhopal, Kolkata, Pune and Chennai. Cases arising in the states mentioned in Column 2 of the following table have to be filed in the Bench mentioned in Column 1:

| Column 1 | Column 2 |
|--------------------------|--|
| Principal bench | Uttar Pradesh, Uttarakhand, Haryana, Himachal Pradesh, Jammu & Kashmir, Delhi and Chandigarh |
| Central (Bhopal) bench | Madhya Pradesh , Rajasthan and Chhattisgarh |
| Eastern (Kolkata bench | West Bengal, Odisha, Bihar, Jharkhand, Assam, Nagaland, Mizoram, Arunachal Pradesh, Manipur, Tripura, Meghalaya, Sikkim, and Andaman & Nicobar Islands |
| Western (Pune) bench | Maharashtra, Gujarat, Goa, Daman & Diu, Dadra & Nagar Haveli |
| Southern (Chennai) bench | Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Lakshadweep and Pondicherry |

❖ The Tribunal's decision

The NGT Act requires the Tribunal to hear cases as expeditiously as possible and endeavor to decide the case within six months from the date on which the case is filed. Although an indicative time limit of six months has been set, often it takes longer as all parties have to be given a complete hearing, including presenting necessary evidence, and sometimes, the Tribunal initiates special investigations into facts, which may take up some time.

The Tribunal has the powers of a civil court, including the powers to summon any person, examine witnesses, receive evidence on affidavits, review its decisions, etc. It can regulate its own procedure, and is guided by the principles of natural justice. The NGT Act requires the Tribunal to consider the principle of sustainable development, the precautionary principle, and the polluter pays principle while deciding cases, and in a case involving an accident, the principle of no fault has to be applied while determining

liability. Failure to comply with the orders of the Tribunal could lead to a fine or imprisonment of the person responsible, or both – depending on the fact situation.

If any of the parties before the Tribunal is not happy with the decision of the Tribunal, it can file an appeal before the Supreme Court of India within 90 days from the date of the Tribunal's order, or later if sufficient cause for the delay is shown to the Supreme Court.

Summary

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Unit 6: The Environmental Boards

Unit Structure

6.0 Objectives

6.1 Introduction

6.2 Central Pollution Control Board (CPCB)

6.3 State Pollution Control Boards

6.4 The Wild Life Board

Summary

6.0 Objectives

After studying this unit you will be able to:

- To know about the Central Pollution Control Board (CPCB)
- To know about the State Pollution Control Boards
- To know about the Wild Life Board

6.1 Introduction

India decided to implement the decisions taken at Stockholm conference, it enacted Water Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 (hereinafter referred to as Air Act). Air Act was enacted under Article 253 of the Constitution. The Act came into force on 16th May 1981 and it applies to whole of India. Under the objective of the Act the Central and State Boards were established for carrying out the functions assigned by the Act.

6.2 Central Pollution Control Board (CPCB)

The Air Act adopts integrated and comprehensive approach to tackle environmental pollution^{xiii} and accordingly, the Act provides that Central Board constituted under the Water Act, shall have the powers and shall perform the functions assigned to the Central Board under the Air Act also. Therefore, the Central Board constituted under the Water Act shall be the Central Board for the purposes of Air Act also and it shall perform functions of State Board in Union Territories apart from performing the functions of Central Board.

❖ Functions of Central Pollution Control Board (CPCB)

As stated earlier, CPCB established under the Water Act is to perform functions and duties under the Air Act also with a view to have coordinated and integrated approach for the protection and prevention of environment. As such, CPCB, apart from performing functions under the Water Act, will discharge duties under the Air Act also. The functions are almost similar under both the Acts. The primary function of CPCB under the Air Act is to improve the quality of air and to prevent control and abate air pollution throughout the country. CPCB has been mandated to perform the following functions.

- i. CPCB is to advise the Union government regarding matters concerning improvement of quality of air and regarding prevention, control and abatement of air pollution;
- ii. To plan and execute a national programme for the prevention, control and abatement of air pollution;
- iii. CPCB is required to co-ordinate the activities of State Boards and to resolve any disputes arising among them;
- iv. CPCB is to provide technical assistance and guidance to State Boards and to sponsor investigation and research relating to problems concerning air pollution;
- v. To plan and organize training of persons associated or likely to be associated with programmes for prevention, control and eradication of air pollution;
- vi. To organize programmes through mass media campaigns for prevention and control of air pollution;
- vii. To lay down ambient air quality standards;
- viii. To collect, compile and publish technical and statistical data relating to air pollution, measures for prevention and abatement of the same;
- ix. To collect and disseminate information pertaining to air pollution;

- x. To perform such other functions as may be prescribed from time to time;
- xi. To issue directions to State Boards;
- xii. If the State Boards defaults in complying with the directions of the CPCB and consequently there arises grave emergency, then in public interest, CPCB can discharge the functions of State Boards

Central government is empowered to issue directions to CPCB and CPCB is bound by such directions. Therefore, under the Air Act, CPCB is to perform functions similar to functions assigned under the Water Act. CPCB has launched National Air Quality Monitoring Programme at 342 operating stations covering 127 cities in various States and UTs for monitoring four air pollutants i.e. Sulphur Dioxide, Oxides of Nitrogen, Suspended Particulate Matter (SPM) and Respirable Suspended Particulate Matter (RSPM/PM10).

6.3 State Pollution Control Boards

Air Act provides that State Boards constituted under the Water Act shall be the State Boards for the purposes of Air Act also. It implies that if a State has adopted Water Act and has constituted State Board under the Water Act, it shall not be required to constitute another board for the purpose of implementation of Air Act and all powers and functions shall be carried out by that Board only. However, if any State has not adopted the Water Act or has not constituted the State Pollution Control Board, then the State government is required to constitute State Pollution Control Board under the Air Act. Like Water Act, Air Act also casts various duties and confers multifarious powers under the State Pollution Control Boards. The State Boards have the task of implementing the provisions of the Air Act. Like Water Act, State Boards under the Air Act also have the attributes of a Body Corporate, capacity to sue and be sued, capacity to hold, acquire and dispose of property, perpetual succession, common seal etc. Composition of State Pollution Control Boards is as under:

- (i) The Chairman of the Board shall be either full time or Part-time Chairman to be nominated by the State government. To be eligible to be appointed as Chairman, the person shall possess special knowledge or practical experience in matters relating to environmental protection.

- (ii) Not more than five Government officials as representative of the State government. These officials are required to be nominated by the State government.
- (iii) Not more than five persons from amongst the local authorities functioning with the States.
- (iv) These members are also required to be nominated by the State government.
- (v) State government is required to nominate non-officials (not more than three) to represent the interests of Agriculture, fishery, industry or trade or any other interest which the State government believes that it should also be represented in the Board.
- (vi) Two persons representing Companies or Corporations owned or controlled by the State government. These persons are also to be nominated by the State government.
- (vii) State government is required to nominate one Full time member-secretary. Member Secretary is required to possess administrative experience and practical experience in relation to environmental protection.

From the above members, at least two members must have special knowledge or practical experience relating to improvement of quality of air or matters pertaining to prevention, control and abatement of air pollution.

The perusal of the above makes it clear that the composition of State Board under the Air Act is almost similar to the composition of State Board under the Water Act. It is further clarified that after constitution of the State Board under Air Act, if any State adopts Water Act and constitutes State Board under the Water Act, State Board constituted under Air Act shall be dissolved.

The tenure of members of the Board is three years. However, the tenure of official members shall come to an end as soon as they cease to hold the office under the government by virtue of which they were appointed. Similarly, members appointed to represent Companies/Corporations owned or controlled by the State government or the Local authority shall cease to be members of the Board as soon as they cease to be the officers of the Company/Corporation or the Local authority. If any member is absent from three consecutive meetings without sufficient reason, he shall be deemed

to have vacated the office of the State Board. A member may be removed from office after giving him a reasonable opportunity of being heard. Member may also resign from office before the expiry of his tenure. Members are eligible for re-nomination. If any person suffers from the following disqualifications, he shall not be eligible to be appointed as a member of State Board and if he is the member, he shall cease to be a member of the State Board:

- (i) Declared as insolvent;
- (ii) Declared as person of unsound mind;
- (iii) Convicted of an offence involving moral turpitude;
- (iv) Convicted of any offence under the Air Act;
- (v) Having economic interest
 - a) Being member/partner/having share in firm or company manufacturing control equipment, industrial plant etc. for improvement of quality of air;
 - b) Being director, secretary, manager or salaried employee of a company or a firm which is having any contract with the government or government instrumentalities regarding improvement of quality of air, prevention, control and abatement of air pollution
 - c) Abused his position as a member

Any member who becomes subject to any of the above disqualifications shall be removed by the State government after giving him reasonable opportunity of being heard and such member shall not be eligible for re-appointment.

State Boards are required to have at least one meeting in every three months. However, if any urgent business is required to be transacted, Chairman of the Board is authorized to convene meetings for the purpose.

❖ Functions of State Boards

In addition to the functions under the Water Act, State Boards are required to perform the following functions;

- (i) To collect and disseminate information pertaining to air pollution;
- (ii) To plan and execute programme for the prevention, control, abatement and eradication of air pollution;

- (iii) To advise the State government regarding matters pertaining to air pollution;
- (iv) To inspect air control equipment manufacturing plants and to issue appropriate directions concerning prevention, control and abatement of air pollution;
- (v) To co-ordinate and collaborate with CPCB in organizing training of persons engaged in connection with prevention, control and abatement of air pollution;
- (vi) To inspect air pollution control areas, assess the quality of air and to take steps for prevention, control and abatement of air pollution;
- (vii) To lay down, in consultation with CPCB and having regard to ambient air quality standards prescribed by CPCB, standards for emission of air pollutants into the atmosphere by industrial plants and vehicles;
- (viii) To establish or recognize a laboratory in connection with functions under the Air Act;
- (ix) To advise the government regarding suitability of any premises for the purposes of carrying on of any industry likely to cause air pollution;
- (x) To perform such other functions as may be prescribed from time to time.^{xxviii}

Perusal of the above shows that the State Boards are to perform multifarious functions under the Air Act also. Whenever, State government is of the opinion that the State Board has defaulted persistently in the performance of its functions under the Air Act, State government can supersede the State Board by notification in official gazette for a period of six months. Similarly, State Board can be superseded when State government is of the opinion that in public interest it is required. The period can be further extended by six months by the State government or State Government may reconstitute the State Board.^{xxix} Where CPCB or the State Boards constituted under the Water Act are superseded by the Central or the State government under the Water Act, the functions under the Air Act shall also be performed by the authority or persons so authorized or by the Central or State government.

6.4 The Wild Life Board

Section 5 A of the Amendment Act of 2002 provides that the Central Government shall within three months for National Board and within a period of six months for State Boards from the date of commencement of the Amendment Act of 2002 constitute the National and State Board for Wild Life.

❖ Functions of the National Board (Section 5 C)

- (i) It shall be the duty of the National Board to promote the conservation and development of wild life and forests by such measures as it thinks fit.
- (ii) Without prejudice to the generality of the foregoing provision, the measures referred to therein may provide for-
 - a. framing policies and advising the Central Government and the State Governments on the ways and means of promoting wild life conservation and effectively controlling poaching and illegal trade of wild life and its products;
 - b. making recommendations on the setting up of and management of national parks, sanctuaries and other protected areas and on matters relating to restriction of activities in those areas;
 - c. carrying out or causing to be carried out impact assessment of various projects and activities on wild life or its habitat;
 - d. reviewing from time to time, the progress in the field of wild life conservation in the country and suggesting measures for improvement thereto; and
 - e. Preparing and publishing a status report at least once in two years on wild life in the country.

❖ Constitution of State Board for Wild Life (Section 6)

The State Government shall, within a period of six months from the date of commencement of the Wild Life (Protection) Amendment Act, 2002 constitute a State Board for Wild Life.

❖ Duties of State Board for Wild Life (Section 8): It shall be the duty of the State Board for Wild Life to advise the State Government

- In the selection and management of areas to be declared as protected areas;
- In formulation of the policy for protection and conservation of the wild life and specified plants;
- In any matter relating to the amendment of any Schedule;
- In relation to the measures to be taken for harmonizing the needs of the tribal and other dwellers of the forest with the protection and conservation of wild life; and]
- In any other matter connected with the protection of wild life which may be referred to it by the State Government.

Summary

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Unit 7: International Environmental Policies and Protocols

Unit Structure

7.0 Objectives

7.1 Introduction

7.2 The Millennium development goals

7.3 The World Conservation Strategy 1975–1985

7.4 The Clean Development Mechanism (CDM)

7.5 The Convention on Biological Diversity (CBD)

7.6 Kyoto Protocol

7.7 Montreal Protocol, 1987

7.8 Trans-regional environmental policies

Summary

7.0 Objectives

After reading this unit, you will have

- An understanding of the origin, evolution and expansion of international environmental policies and protocols.
- To identify and critically analyze international environmental policies and protocols instruments.

7.1 Introduction

It is now widely recognized that the planet is facing a range of environmental challenges, which can only be addressed through international co-operation. Developments in science and technology have enhanced the possibility of understanding the environmental implications of various naturally occurring events as well as human activities. The last few decades have witnessed an exponential increase in multilateral environmental agreements covering a wide range of issues such as ozone depletion, climate change, loss of biodiversity, toxic and hazardous products and wastes, pollution of rivers and depletion of freshwater resources.

International environmental law, policies and protocols are comparatively new branch of international law. It has expanded dramatically over the years particularly since the

United Nations Conference on the Human Environment, 1972. The development of international environmental law, policies and protocols has produced mixed results. While some treaty regimes have been effective in producing the desired results (e.g. Vienna Convention on Protection of the Ozone Layer, 1985), some other regimes are struggling to produce results (e.g. United Nations Framework Convention on Climate Change, 1992).

This unit provides an overview of the development of international environmental law, policies and protocols and briefly introduces its sources and important underlying principles. This unit explains the sources of international environmental policies and protocols and narrates the development of international environmental policies and protocols in its historical context. It also highlights the expansion of international environmental law, policies and protocols and the role played by important international conferences on the environment in this process.

Early legal developments in the field of the environment were limited in nature and scope. Legal initiatives mostly focused on specific issues such as regulation of whaling, fisheries, watercourses and birds (e.g. Convention between France and Great Britain Relating to Fisheries, 1867 and Convention for the Regulation of Whaling, 1931).

In the 1930s, the trans-boundary consequences of air pollution were acknowledged in arbitral proceedings leading to the award of the arbitral tribunal in the *Trail Smelter* case. The *Trail Smelter* case (Canada v. US) (1941) laid down the rule of international law, policies and protocols on state responsibility in the context of trans-boundary pollution (and for trans-boundary effects on environment in general). It was held that: No state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidences.

7.2 The Millennium development goals

The ethos of development that emerged in the 1990s continued in the new millennium, and emphasis on sustainability and human development carried forward, albeit the presence of neoliberal policies. The United Nations in September 2000, organized the Millennium Summit with attendance of heads of states of 189 countries, and adopted

the Millennium Development Goals (MDG). The MDGs dominated the development discourse of 2000s, where the UN and its 189 signatory countries committed themselves to achieve the following eight Goals and 21 targets by 2015:

- Goal 1: Eradicate Extreme Poverty and Hunger
 - Target 1A: Halve the proportion of people living on less than \$ 1.25 between 1990 and 2015
 - Target 1B: Achieve Decent Employment for Women, Men and Young
 - Target 1C: Halve the proportion of people who suffer from hunger between 1990 and 2015
- Goal 2: Achieve Universal Primary Education
 - Target 2A: Achieve full course of primary schooling for all children by 2015
- Goal 3: Promote Gender Equality and Empower Women
 - Target 3A: Eliminate gender disparity at all levels by 2015
- Goal 4: Reduce Child Mortality Rates
 - Target 4A: Reduce under-five mortality by two-third by 2015
- Goal 5: Improve Maternal Health
 - Target 5A: Reduce maternal mortality by three-fourth by 2015
 - Target 5B: Achieve universal access to reproductive health by 2015
- Goal 6: Combat HIV/AIDS, Malaria and other diseases
 - Target 6A: Reverse the spread of HIV/AIDS by 2015
 - Target 6B: Achieve universal access to treatment of HIV/AIDS
 - Target 6C: Reverse the incident of spread of malaria and other major diseases
- Goal 7: Ensure Environmental Sustainability
 - Target 7A: Integrate the principles of sustainable development into country policies and programmes, reverse loss of environmental resources
 - Target 7B: Reduce biodiversity loss and reduction in rate of loss
 - Target 7C: Halve the proportion of population without sustainable access to safe drinking water and basic sanitation by 2015
 - Target 7D: Achieve significant improvement in the lives of at least 100 million slum dwellers

- Goal 8: Develop a Global Partnership for Development
 - Target 8A: Develop further an open, rule based, predictable, non- discriminatory trading and financial system
 - Target 8B: Address the special needs of Least Developed Countries (LDCs)
 - Target 8C: Address the special needs of landlocked developing countries and small island developing countries
 - Target 8D: Deal comprehensively with the debt problems of developing countries through national and international measures
 - Target 8E: In cooperation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries
 - Target 8F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications.

The MDGs in the new millennium reiterated the notions of human development and sustainability, along with an added emphasis on international cooperation. The notion of development within MDGs framework got a wider connotation, involving human capital, infrastructure and human rights, which intended to improve the living standards of people. The goals intended to increase individual 'capabilities' and ensure the means to a productive life to the world's poor.

The MDGs, which set for a 15 years target at the beginning of the millennium, were extended in the recent UN Sustainable Development Summit of September 2015. On 25th September 2015, 193 world leaders committed to 17 Global Goals with an aim to: (a) end extreme poverty, (b) fight inequality and injustice, and (c) fix climate change by 2030. These goals emphasized the issues of environmental sustainability and climate change; sustainable cities, poverty, hunger, education, and health. It also reiterated the need for global partnership and cooperation to achieve the goals of development.

To summarize different meanings of development over time, we may say that the concept, which started with a meaning of catching up with developed countries of west through economic growth and industrialization, has substantially changed its meaning by the beginning of the 21st Century. Eradicating poverty, access to

education health and basic services, attaining environmental sustainability and mitigating climate change, achieving gender equality and all other forms of social justice, etc. have become defining elements of 'development', albeit the persistent emphasis on 'economic growth' as a means to achieve the above ends of development. The Table below befittingly sums up different meanings of development.

Table 1: Meanings of Development over Time

| Period | Perspectives | Meanings of Development |
|--------|------------------------------|--|
| 1800s | Classical political economy | Remedy for progress, catching up |
| 1850 > | Colonial economies | Resource management, trustee ship |
| 1870 > | Latecomers | Industrialization, catching up |
| 1940 > | Development economics | Economic growth – industrialization |
| 1950 > | Modernization theory | Growth, political and social modernization |
| 1960 > | Dependency theory | Accumulation – national, auto-centric |
| 1970 > | Alternative development | Human flourishing |
| 1980 > | Human development | Capitation, enlargement of people's choices |
| 1980 > | Neoliberalism | Economic growth – structural reforms, de-regularization, liberalization, privatization |
| 1990 > | Post-development | Authoritarian engineering, disaster |
| 2000 > | Millennium Development Goals | Structural reforms |

Source: Nederveen, P. J. *Development Theory: Deconstruction/Reconstruction*. Sage, 2001, pg. 7.

7.3 The World Conservation Strategy 1975–1985

In 1975 IUCN started work on the *World Conservation Strategy* (1980). The drafting process, and the discussions with the UN agencies involved, led to an evolution in thinking within IUCN and growing acceptance of the fact that conservation of nature by banning human presence no longer worked. The Strategy was followed in 1982 by the *World Charter for Nature*, which was adopted by the United Nations General Assembly, after preparation by IUCN.

In 1980, IUCN and WWF moved into shared new offices in Gland, Switzerland. This marked a phase of closer cooperation with WWF, but the close ties between IUCN and WWF were severed in 1985 when WWF decided to take control of its own field projects, which so far had been run by IUCN.

❖ Sustainable development and regionalization: 1985 to present day:

In 1982, IUCN set up Conservation for Development Centre within its secretariat.

The Centre undertook projects to ensure that nature conservation was integrated in development aid and in the economic policies of developing countries. Over the years, it supported the development of national conservation strategies in 30 countries. Several European countries began to channel considerable amounts of bilateral aid via IUCN's projects. Management of these projects was primarily done by IUCN staff, often working from the new regional and country offices IUCN set up around the world. This marked a shift within the organization. Previously, the volunteer Commissions had been very influential, now the Secretariat and its staff began to play a more dominant role. In 1989, IUCN moved into a separate building in Gland, close to the offices it had shared with WWF. Initially, the focus of power was still with the Headquarters in Gland but the regional offices and regional members' groups gradually got a bigger say in operations. In 1991, IUCN (together with UNEP and WWF) published *Caring for the Earth*, a successor to the World Conservation Strategy.

- ❖ Social aspects of conservation were now integrated in IUCN's work; at the General Assembly in 1994 the IUCN mission was redrafted to its current wording to include the equitable and ecologically use of natural resources.

7.4 The Clean Development Mechanism (CDM)

The Clean Development Mechanism (CDM), a cooperative mechanism established under the Kyoto Protocol, has the potential to assist developing countries in achieving sustainable development by promoting environmentally friendly investment from industrialized country governments and businesses. This document provides an overview of the CDM's background, structure, and project cycle, and examines the potential value and benefits for participating developing countries. The document also suggests steps for developing a national CDM strategy and provides examples of CDM projects. While the basic rules have been established, the CDM is a work in progress by participating governments. This document presents the latest available information and will be updated in the future to reflect important changes.

The 1997 Kyoto Protocol, a milestone in global efforts to protect the environment and achieve sustainable development, marked the first time that governments accepted legally-binding constraints on their greenhouse gas emissions. The Protocol also broke new ground with its innovative "cooperative mechanisms" aimed at cutting the cost of

curbing these emissions. As it does not matter to the climate where emission reductions are achieved, sound economics argues for achieving them where they are least costly. The Protocol therefore includes three market-based mechanisms aimed at achieving cost-effective reductions — International Emissions Trading (IET), Joint Implementation (JI), and the CDM. The CDM, contained in Article 12 of the Kyoto Protocol, allows governments or private entities in industrialized countries to implement emission reduction projects in developing countries and receive credit in the form of “certified emission reductions,” or CERs, which they may count against their national reduction targets. The CDM strives to promote sustainable development in developing countries, while allowing developed countries to contribute to the goal of reducing atmospheric concentrations of greenhouse gases.

The Protocol establishes three cooperative mechanisms designed to help industrialized countries (Annex I Parties) reduce the costs of meeting their emissions targets by achieving emission reductions at lower costs in other countries than they could domestically.

- International Emission Trading permits countries to transfer parts of their ‘allowed emissions’ (“assigned amount units”).
- Joint Implementation (JI) allows countries to claim credit for emission reductions that arise from investment in other industrialized countries, which result in a transfer of equivalent “emission reduction units” between the countries.
- The Clean Development Mechanism (CDM) allows emission reduction projects that assist in creating sustainable development in developing countries to generate “certified emission reductions” for use by the investor.

The mechanisms give countries and private sector companies the opportunity to reduce emissions anywhere in the world—wherever the cost is lowest—and they can then count these reductions towards their own targets. Through emission reduction projects, the mechanisms could stimulate international investment and provide the essential resources for cleaner economic growth in all parts of the world. The CDM, in particular, aims to assist developing countries in achieving sustainable development by promoting environmentally friendly investment from industrialized country governments and businesses.

The funding channeled through the CDM should assist developing countries in reaching some of their economic, social, environmental, and sustainable development objectives, such as cleaner air and water, improved land use, accompanied by social benefits such as rural development, employment, and poverty alleviation and in many cases, reduced dependence on imported fossil fuels. In addition to catalyzing green investment priorities in developing countries, the CDM offers an opportunity to make progress simultaneously on climate, development, and local environmental issues. For developing countries that might otherwise be preoccupied with immediate economic and social needs, the prospect of such benefits should provide a strong incentive to participate in the CDM.

7.5 The Convention on Biological Diversity (CBD)

The CBD is one of the three conventions agreed by governments at the 1992 Rio Earth Summit. It is probably the most important international agreement ever adopted. It recognizes that setting social and economic goals for the use of biological resources and the benefits derived from genetic resources is central to the process of sustainable development, and that this in turn will support conservation.

The United Nations Environment Programme (UNEP) convened the Ad Hoc Working Group of Experts on Biological Diversity in June 1987 to explore the need for an international convention on biological diversity. Soon after, in May 1989, it established the Ad Hoc Working Group of Technical and Legal Experts to prepare an international legal instrument for the conservation and sustainable use of biological diversity. The experts were to take into account "the need to share costs and benefits between developed and developing countries" as well as "ways and means to support innovation by local people".

By February 1991, the Ad Hoc Working Group was re-named as the Intergovernmental Negotiating Committee. Its work culminated on 22 May 1992 with the Nairobi Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity.

The Convention was opened for signature on 5 June 1992 at the United Nations Conference on Environment and Development (the Rio "Earth Summit"). It remained open for signature until 4 June 1993, by which time it had received 168 signatures. The

Convention entered into force on 29 December 1993, which was 90 days after the 30th ratification. The first session of the Conference of the Parties was scheduled for 28 November – 9 December 1994 in the Bahamas.

The Convention on Biological Diversity was inspired by the world community's growing commitment to sustainable development. It represents a dramatic step forward in the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.

❖ **Objectives of the Convention of Biological Diversity (Article 1):** The Convention, while reaffirming sovereign rights of nations over their biological resources, establishes three main goals:

- The conservation of biological diversity
- The sustainable use of components of biological resources;
- Fair and equitable sharing of the benefits arising out of the utilization of genetic resources

❖ **Important Definitions (Article 2)**

- "Biological diversity" means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems.
- "Biological resources" includes genetic resources, organisms or parts thereof, populations, or any other biotic component of ecosystems with actual or potential use or value for humanity.
- "Biotechnology" means any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.
- "Country of origin of genetic resources" means the country which possesses those genetic resources in in-situ conditions. "Country providing genetic resources" means the country supplying genetic resources collected from in-situ sources, including populations of both wild and domesticated species, or taken from ex-situ sources, which may or may not have originated in that country.

- "Domesticated or cultivated species" means species in which the evolutionary process has been influenced by humans to meet their needs.
- "Ecosystem" means a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.
- "Ex-situ conservation" means the conservation of components of biological diversity outside their natural habitats.
- "Genetic material" means any material of plant, animal, microbial or other origin containing functional units of heredity.
- "Genetic resources" means genetic material of actual or potential value.
- "Habitat" means the place or type of site where an organism or population naturally occurs.
- 'In-situ conditions' means Conditions where genetic resources exist within ecosystems and natural habitats, and. in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.
- "In-situ conservation" means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties.
- "Protected area" means a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives.
- "Regional economic integration organization" means an organization constituted by sovereign States of a given region, to which its member States have transferred competence in respect of matters governed by this Convention and which has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to it.
- "Sustainable use" means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological

diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.

- "Technology" includes biotechnology

❖ **Principles of CBD (Article 3):** The underlying principles of the convention are:

1. States have sovereign right to exploit their own resources pursuant to their own environmental policies.
2. States have responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.
3. Principles of CBD lays down the rights as well as obligations of the Member states.

❖ **Cooperation (Article 5):**

1. Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, for the conservation and sustainable use of biological diversity.
2. The Cooperation can be bilateral or Multilateral.
3. If required any party can through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest seek help for arranging cooperation.

❖ **Obligations of the States (Article 6):** Each Contracting Party shall, in accordance with its particular conditions and capabilities:

1. Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the Contracting Party concerned; and
2. Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.

- ❖ **Identification and Monitoring (Article 7):** Enhancing knowledge and understanding of biological diversity and the impacts on it are important measures addressed in the Convention. Signatories are required to identify (for example, through surveys) and monitor important ecosystems, species and genetic components of biological diversity, as well as processes and activities that have or are likely to have significant adverse impacts on biological diversity. Countries are then able to determine their priorities with regard to conservation and sustainable use measures which need to be undertaken.
- ❖ **In-situ & Ex-situ conservation (Article 8 and 9):** *In-situ* conservation is the conservation of ecosystems, natural habitats and species in their natural surroundings. Signatories are required to give emphasis to *in-situ* conservation through a broad range of actions, including
- Establishment and management of protected areas;
 - Conservation and sustainable use of biological resources within and outside protected areas;
 - Promotion of environmentally sound and sustainable development in areas adjacent to protected areas;
 - Rehabilitation and restoration of degraded ecosystems; control of alien species and genetically modified organisms;
 - Protection of threatened species and populations; and regulation of damaging processes and activities.

While the Convention emphasised the importance of *in-situ* conservation, it also acknowledges that *ex-situ* measures also have an important role to play. *Ex-situ* conservation means conservation outside natural habitats, for example in zoos, botanic gardens and seed banks. Parties are to take *ex-situ* measures, while ensuring that ecosystems and natural populations of species are not threatened.

- ❖ **Conservation and Sustainable Use of Biological Diversity:** An overarching objective of the CBD is encouraging the conservation and sustainable use of the components of biological diversity. The CBD requires

Parties to integrate considerations relating to conservation and sustainable use into national decision-making (Article 10).

It requires its Parties to adopt measures relating to the use of biological resources to avoid or minimize adverse impacts on biological diversity (Article 10(b)). Further, Parties are encouraged to integrate the conservation and sustainable use of biological diversity into relevant sectorial or cross-sectorial plans, programmes and policies (Article 6(b)). Parties are responsible for identifying the processes and categories of activities that have or are likely to have significant adverse impact on biological diversity and monitoring their effects (Article 7(c)).

- ❖ **Access to and the Fair and Equitable Sharing of Benefits arising from the Utilization of Genetic Resources:** The CBD encourages the parties to provide access to and to equitably share the benefits arising from the utilization of genetic resources, as also the CBD seeks to establish incentives to conserve biodiversity. The CBD approach is first of all based on the fundamental premise that nation states have sovereign rights over the biological diversity within their territory (Preamble and Article 15(1)). The CBD also recognizes that national governments have the authority to determine access to these resources in accordance with national legislation (Article 15(1)). It provides that access to genetic resources must be obtained with the Prior Informed Consent (PIC) of the CBD party, and on mutually agreed terms (Article 15(4) and (5)). The CBD envisages the use of legal measures that could feasibly include IPRs (Article 15(7)), by calling on Parties to take legislative, administrative or policy measures to ensure the benefits arising from research, development and commercial use of genetic resources are shared in an equitable way with the provider of the genetic resources. The Conference of the Parties (COP) has established a number of subsidiary bodies to consider access and benefit sharing. First, it has established a Panel of Experts on Access and Benefit Sharing whose role is to develop a common understanding of basic concepts and to explore all options for Access and Benefit Sharing on mutually agreed terms including guiding

principles, guidelines, and codes of best practice for Access and Benefit-Sharing arrangements

- ❖ **Capacity Building under CBD through Research and Training:** Effective global action requires the expansion of national capacities, particularly in developing countries, for the conservation and sustainable use of biological diversity. In this regard the Convention provides for national and international action on research, training, the exchange of public information, and scientific and technical co-operation with emphasis on building national capabilities through human resource development and institution building. Provisions for encouraging public understanding of the significance of biological diversity and the measures required for its conservation are also included. Technology transfer of this and other pertinent information is an important aspect of ensuring the convention meets its objectives.

- ❖ **Institutional Arrangements:** The Convention establishes a number of institutional arrangements necessary to ensure effective implementation. The Conference of the Parties (Article 23) is the key decision-making body responsible for monitoring the implementation of the Convention and has a major role in funding matters. Signatories are required to submit reports on measures taken for the implementation of the Convention and their effectiveness in meeting the objectives of the Convention.

The Subsidiary Body on Scientific, Technical and Technological Advice (Article 25) is to provide the Conference of the Parties with advice relating to the implementation of the Convention, including the status of biological diversity and the effectiveness of measures taken to give effect to the Convention. It also has a major role in identifying technologies for the conservation and sustainable use of biological diversity suitable for transfer to developing countries.

- ❖ **Settlement of Disputes (Article 27):** In the event of a dispute between Contracting Parties concerning the interpretation or application of this Convention, the parties concerned shall seek solution by negotiation. If the parties concerned cannot reach agreement by negotiation, they may jointly seek the good offices of, or request mediation by, a third party. The party can

also resort to compulsory dispute settlement mechanisms as Arbitration or Submission of the dispute to the International Court of Justice.

- ❖ **Protocols to Convention on Biological Diversity**
Cartagena Protocol: The Cartagena Protocol on Biosafety to the Convention on Biological Diversity is an international treaty governing the movements of living modified organisms (LMOs) resulting from modern biotechnology from one country to another. It was adopted on 29 January 2000 as a supplementary agreement to the Convention on Biological Diversity and entered into force on 11 September 2003.

The Protocol seeks to protect biological diversity from the potential risks posed by living modified organisms resulting from modern biotechnology. It establishes an advance informed agreement (AIA) procedure for ensuring that countries are provided with the information necessary to make informed decisions before agreeing to the import of such organisms into their territory. The Protocol contains reference to a precautionary and reaffirms the precaution language in Principle 15 of the Rio Declaration on Environment and Development. The Protocol also establishes a Biosafety Clearing-House to facilitate the exchange of information on living modified organisms and to assist countries in the implementation of the Protocol.

- ❖ **Nagoya Protocol:** The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity is a supplementary agreement to the Convention on Biological Diversity. It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

The Nagoya Protocol on ABS was adopted on 29 October 2010 in Nagoya, Japan and entered into force on 12 October 2014, 90 days after the deposit of the fiftieth instrument of ratification. Its objective is the fair and equitable sharing of benefits arising from the utilization of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity.

The Nagoya Protocol sets out core obligations for its contracting Parties to take measures in relation to access to genetic resources, benefit-sharing and compliance. The Nagoya Protocol addresses traditional knowledge associated with genetic resources with provisions on access, benefit-sharing and compliance. It also addresses genetic resources where indigenous and local communities have the established right to grant access to them. Contracting Parties are to take measures to ensure these communities' prior informed consent, and fair and equitable benefit-sharing, keeping in mind community laws and procedures as well as customary use and exchange.

❖ **United Nations Decade of Biological Diversity**

The United Nations General Assembly at its 65th session declared the period 2011-2020 to be "the United Nations Decade on Biodiversity, with a view to contributing to the implementation of the Strategic Plan for Biodiversity for the period 2011-2020" (Resolution 65/161). The United Nations Decade on Biodiversity will serve to support the implementation of the Strategic Plan for Biodiversity and promote its overall vision of living in harmony with nature. Its goal is to mainstream biodiversity at different levels. Throughout the United Nations Decade on Biodiversity, governments are encouraged to develop, implement and communicate the results of national strategies for implementation of the Strategic Plan for Biodiversity.

❖ **Key Elements of the Strategic Plan 2011 – 2020**

- **Rationale:** The rationale for the new plan is that biological diversity underpins ecosystem functioning and the provision of ecosystem services essential for human well-being. It provides for food security, human health, the provision of clean air and water; it contributes to local livelihoods, and economic development, and is essential for the achievement of the Millennium Development Goals, including poverty reduction.
- **Vision:** The vision for the new plan is: "Living in Harmony with Nature" where "By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."

- **Mission:** The mission of the new plan is to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach."
- **Implementation:**
 - **Means for implementation:** The Strategic Plan will be implemented primarily through activities at the national or subnational level, with supporting action at the regional and global levels. The means of implementation for this Strategic Plan will include provision of financial resources in accordance with respective obligations under the Convention, taking into account Article 20 of the Convention.
 - **Programmes of work:** The thematic programmes of work of the Convention include: biodiversity of inland waters, marine and coastal biodiversity, agricultural biodiversity, forest biodiversity, biodiversity of dry and sub-humid lands, mountain biodiversity and island biodiversity. Together with the various cross-cutting issues, they provide detailed guidance on implementation of the Strategic Plan, and could also contribute to development and poverty reduction.
 - **Broadening political support:** for this Strategic Plan and the objectives of the Convention is necessary, for example, by working to ensure that Heads of State and Government and the parliamentarians of all Parties understand the value of biodiversity and ecosystem services.

- **Partnerships:** Partnerships at all levels are required for effective implementation of the Strategic Plan, to leverage actions at the scale necessary, to garner the ownership necessary to ensure mainstreaming of biodiversity across sectors of government, society and the economy and to find synergies with national implementation of multilateral environmental agreements.
- **Reporting by Parties:** Parties will inform the Conference of the Parties of the national targets or commitments and policy instruments they adopt to implement the Strategic Plan, as well as any milestones towards these targets, and report on progress towards these targets and milestones, including through their fifth and sixth national reports.
- **Review by the Conference of the Parties:** The Conference of the Parties, with the support of other Convention bodies, in particular the Ad Hoc Open-ended Working Group on Review of Implementation of the Convention, will keep under review implementation of this Strategic Plan, and support effective implementation by Parties ensuring that new guidance is informed by the experience of Parties in implementing the Convention, in line with the principle of adaptive management through active learning.

The Convention on Biological Diversity is the only international treaty which protects the biological resources of a country. Biological resources and the traditional knowledge of indigenous people is the asset of the country owned exclusively by the people of that country. Thus, there is a need, at international level, to ensure protection against unauthorized and illegal exploitation of biological resources by another country. At the same time, intra country too, judicious use of the resources must be promoted.

The Convention on Biological Diversity is a step in this direction which promulgates the principles of prior consent before the access of the resources and benefit sharing wherein the indigenous people who are true owners of such resources are recognized and get due share from usage of such resources.

Another vital aspect being covered by the Convention is that it stipulates transfer of technology, a much needed step for optimal utilization of the biological resources

and to strike balance between resource rich developing countries and technology rich developed countries and provide adequate legal framework for the same. Irrespective of the aforesaid, the Convention is mere framework and stronger initiative on the parts of the signatory states is required to practice the principles embedded in the Convention and realize the UN Goals laid down in the General Assembly resolution declaring 2011 -2020 as UN Decade of Biological Diversity.

7.6 Kyoto Protocol

UNFCCC provided for a framework to deal with climate change and laid down the obligations of the parties to reduce the emission of GHG but it did not lay down any specific targets to be achieved within a specific time frame. Instead it left the same to be decided by COP. Framework Convention also contained provisions for further amendments and for adoption of Protocols to achieve the objectives of the Convention. Accordingly, immediately after adoption of UNFCCC and its entry into force in 1994, there was felt a need to have specific targets for parties for reducing emission of GHG within a specific time frame and to further strengthen the Convention. Accordingly, negotiations began for adoption of a Protocol and within an year of entry into force of the Convention, the Protocol was negotiated. The Protocol was finally adopted on December 11, 1997 in Kyoto, Japan by consensus with more than 150 signatories. The Protocol is known as Kyoto Protocol. The main feature of the Protocol is that it laid down mandatory targets for reduction of GHG emissions which were accepted by leading developing nations of the World. The Protocol provided for reduction of emission of six major GHGs viz., carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, per fluorocarbons and sulfur hexafluoride.

In 2001, at Marrakesh, Morocco, detailed rules for implementation of Kyoto Protocol were adopted. It called for establishment of Special Climate Change Fund to finance projects for mitigation and adaptation to climate change and for development and transfer of technology to developing countries. In addition, Least Developed Countries Fund was also created. In 2003, reporting guidelines for reporting under the Protocol were adopted on the recommendations of IPCC. It is worth mentioning here that USA did not ratify the Protocol and it was only when Russian Federation ratified the Protocol in November 2004 that the path was set for the entry into force of the Protocol. The Protocol entered into force on 16th February 2005.

The object of the Protocol was to reduce emission of GHG by atleast 5% below 1990 levels during the first commitment period i.e. 2008-2012. The Protocol was based on CDDR and RC and therefore the targets were different for different countries like the target was 8% for European Union, 6% for Canada, Hungary, Japan, Poland, 7% for USA. As a matter of fact, European Union was able to go beyond their stipulated targets during the first commitment period. USA indicated that it shall not ratify Kyoto Protocol and Canada withdrew from the Kyoto Protocol in 2011 claiming that the Protocol is not workable because the highest emitters of GHG viz USA and China have not ratified the Protocol.

The Protocol was made for the period upto 2012 and was set to expire thereafter. Accordingly on December 8, 2012 at Doha, Qatar, Doha Amendment to Kyoto Protocol was adopted. Doha Amendment introduced Second Commitment Period i.e. from 01st January 2013 to 31st December 2020. The amendment introduced revised list of GHG and the commitment of parties to reduce GHG emission. Doha Amendment added seventh GHG to the list of gases whose emission is to be limited i.e. Nitrogen Trifluoride. It has prescribed higher emission reduction targets for the second commitment period. Annex II countries decided to reduce their GHG emission by 18% of their 1990 level. European Union has agreed to have joint target of 20% reduction of GHG of its 1990 level.

The Protocol offers flexibility to the nations to reduce emissions in their own territory or to finance projects in other countries to reduce emissions. Further, the emission targets can be compensated by increasing sinks of carbon dioxide. Oceans and forests are the sinks of carbon dioxide therefore increasing forest cover can reduce increased carbon dioxide from the atmosphere.

- ❖ **Mechanism under Kyoto Protocol Clean Development Mechanism:** Protocol has also established Clean Development Mechanism (CDM) which allows flexibility to developed countries to achieve their emission reduction targets by sponsoring emission reduction projects in developing countries and earning saleable Certified Emission Reduction (CER) credits each credit being equivalent to one tonne of carbon dioxide which can be used to achieve reduction targets. CDM project may include Rural Electrification projects based on solar power. Mechanism became

operational in 2006 and since then it has more than 1650 projects registered under it.

- ❖ **Joint Implementation:** Kyoto Protocol offers flexibility in the form of Joint Implementation as well. This mechanism allows a party (annex B party) which is obligated to have reduction in emission of GHG to have a project in another country having emission reduction target i.e. another annex B country and earn units which can be utilized to achieve their targets.
- ❖ **Emission Trading:** First Commitment Period allowed parties with emission reduction responsibility to sell their unused units of emission reduction targets i.e. the parties, who have been allowed to have emissions upto certain level but have not utilized them, can sell their assigned units which is known as Carbon Trading.

As of date only 108 parties have ratified Doha Amendment to the Kyoto Protocol as against total of 144 countries required for entry into force of Doha Amendment. Moreover, New Zealand, Japan and Russia have decided not to participate in the second commitment period. India has ratified Second Commitment Period of the Kyoto Protocol in 2017. Further, in the absence of US, China, Russia, the total emission of countries who have ratified the Doha Amendment is not more than 20% of the total global GHG emission. (www.bmub.bund.de). Hence, the gains made by reduction of emission of GHG by select developed countries are offset by increased emission of developing countries like China and India. The problem is further aggravated by non participation of various developed countries like Russia, USA, New Zealand and Canada.

7.7 Montreal Protocol, 1987

Discovery of abnormally low ozone concentration levels near South Pole in 1985 later termed as Ozone hole led to increased international emphasis on taking concrete measures to control, limit and phase out ODS in a time bound manner. Initially when it was pointed out that this ozone layer is the result of increased level of CFCs in the atmosphere, the CFC industry opposed it on the ground that there is no enough scientific evidence to suggest that the hole is caused by the CFC emissions. Further, it was argued that in the absence of certainty in scientific information, it was not worthwhile to take concrete action as they thought that there was no imminent danger

at that point of time. However, further research and the results of such research showed the linkage between depletion of ozone layer and ODS emissions which led to the negotiations for establishing a framework and for creating legally binding responsibilities to identify and phase out ODS in a time bound manner to protect the ozone from further depletion. The negotiations led to the adoption of a Protocol in Montreal on Substances that Deplete the Ozone Layer. The Protocol was agreed in September 1987 by forty six countries and it entered into force on January 1, 1989. Like Vienna Convention, Montreal Protocol also achieved universal ratification in 2009. Montreal Protocol is based on two important principles of international environmental jurisprudence i.e.

- Precautionary Principle
- Principle of Common but Differentiated Responsibilities

As stated earlier that at the time when Vienna Convention and Montreal Protocol were adopted, there was lack of scientific certainty and therefore, the reduction of emission of ODS was basically adopted on Precautionary Principle to save the ozone layer from probable effect of emission of ODS. Further, it was recognized that the damage to ozone is the result of emission of ODS particularly by developed countries, therefore, the primary responsibility was theirs to control, limit and phase out ODS. Furthermore, the developing countries also had their right to development and to tap their resources, therefore, greater onus was put on developed countries while recognizing the need of developing countries on the basis of the Principle of Common but Differentiated Responsibilities and Respective Capabilities. Accordingly, special provisions were made for developing countries in the phase out schedules. Developing countries with reference to the Protocol imply a country where consumption of Annex A controlled substances was less than 0.3 kg per capita till 01st January 1999 (Article 5).

❖ **Control Measures under the Protocol**

As stated earlier, Montreal Protocol laid down legally binding responsibilities for the parties to phase out ODS in a time bound manner. These ODS have been identified from time to time in accordance with new scientific and technological advancements and are included in the list of controlled substances under various provisions of Article 2 by way of amendment to the Protocol. Various controlled substances identified so far and for which phase out schedule has been laid down are CFCs

(Chlorofluorocarbons), Halons, Fully Halogenated CFCs, Carbon Tetrachloride, Methyl Chloroform, Hydro chlorofluorocarbons (HCFC), Hydro-bromo-fluorocarbons (HBFC), Methyl Bromide and Bromo-chloro-methane and HFCs. The time schedule for the phasing out of these ODS is given in the next section after discussion on amendments to Montreal Protocol.

In addition, Protocol has prohibited trade i.e. import or export of controlled substances with non- parties with a view to compel non-parties to join the Protocol and therefore to achieve control over controlled circumstances so as to protect Ozone layer from depletion (Article 4). Protocol further provides that if a party is unable to stop production of a controlled substance even after its best efforts during the time frame provided in the Protocol, in such an eventuality, such party must stop export of used, recycled or reclaimed quantities of such substance except for the purpose of destruction (Article 4A). The parties to the Protocol are obligated to establish a system of licensing of import and export of the controlled substances in a time bound manner (Article 4B).

Special provisions have been incorporated for developing countries based on the Principle of Common but Differentiated Responsibilities and respective capacities. For developing countries, the phase out schedule has been delayed/relaxed keeping in view their development needs. The details of the same are given in the phase out schedule discussed in the table given hereinafter.

Further, the parties have been obligated to report data regarding production, import and export of controlled substances for the base year and subsequently (Article 7). Protocol mandates parties to cooperate in conducting research and development on controlled substances and in creating public awareness and exchange of Information (Article 9). Parties are required to submit a summary of activities every two years. The Protocol obligates parties to cooperate -

- For finding out best technologies for improvement, recovery, recycling or destruction of controlled substances, for reducing their emissions
- To find out Alternatives to controlled substances
- To promote public awareness on environmental effects of emissions of controlled substances

❖ **Amendments to the Protocol:** Mechanism for monitoring and reviewing the implementation of the Protocol and for making adjustments and amendments to the Protocol has been vested in Meeting of Parties (MOP). Parties are required to meet at regular intervals. MOP is required to take decisions regarding reduction/alteration in emission targets and to review the implementation of the Protocol. MOP has in various meetings adopted six amendments to the Montreal Protocol keeping in view scientific and technological advancements. These are discussed hereinafter

❖ **Montreal Amendment, 1997:** Montreal Amendment was adopted on 17-09-1997 in the 9th MOP. The amendment made the following changes to Montreal Protocol

- Imposed prohibition on trade in Methyl bromide with non parties (Article 4A)
- Required all Parties to institute a system of licensing for the import and export of all new, used, recycled, and reclaimed controlled substances, including methyl bromide (Article 4B)

❖ **Implementation of Montreal Protocol in India**

India is a developing country but it has made its contribution in acceding to international instruments and in discharging international obligations concerning environment. Regarding ODS; India became party to Vienna Convention on 18th March 1991 and to Montreal Protocol on 19th June 1992. To implement the Protocol Implementation authority has been vested in the Union Ministry of Environment, Forests and Climate Change. The Ministry has established an Empowered Steering Committee Chaired by Secretary, Environment Forests and Climate Change. This apart, Ministry has also established Technology and Finance Standing Committee (TFSC) and the Standing Committee on Monitoring for implementing the objectives and provisions of the Protocol. In addition, Ozone Cell has been constituted. To implement the objectives of Montreal Protocol a detailed Country Plan was prepared in 1993 to phase out ODS in accordance with the requirements of the Protocol. In accordance with the aims and purposes of the Protocol, India has taken the following steps:

- India has phased out the production and consumption of CFCs, CTC and Halons before 1st January, 2010 (except use of pharmaceutical grade CFCs in

manufacturing of Metered Dose Inhalers (MDIs) for Asthma and Chronic Obstructive Pulmonary Diseases.

- India has Phased-out production and consumption of Methyl Chloroform and Methyl Bromide
- On the eve of Kigali Amendment, India mandated its chemical industry to collect and destroy HFC-23 with immediate effect. As per the estimates, it is expected to prevent half Billion tonnes of CO₂ equivalent emissions in next 15 years (Business Wire, 2016)
- 304 projects have been approved and funded by the Executive Committee of the MLF for Implementation of the Montreal Protocol. A total amount of US \$279,342,203 has been approved by the Executive Committee of the MLF to phase-out 58,980 ODP tonne of ODSs (Ozone Cell, 2016). As of 2017, total 379 projects have been approved and funded by the Executive Committee of the MLF for Implementation of the Montreal Protocol and the total assistance as reached US \$ 30,43,89,305 (OZONE Cell, 2017)
- This apart, India has also enacted Ozone Depleting Substances (Regulation and Control) Rules, 2000. Salient features of these rules are:
 - To regulate production, consumption, import and export of ODS - Registration of ODS producers, manufacturers of ODS based products, importers, exporters and stockists has been made compulsory.
 - Monitoring Mechanism has been established in the form of maintenance of records and periodic filing of returns
 - Rules have provided for obtaining compulsory licences for import and export of ODS
 - Rules have prohibited the use of CFCs in manufacturing various products except Metered Dose Inhalers
 - Use of Halons, CTC, methyl chloroform, methyl bromide has been prohibited
 - Import of Air-conditioning and refrigeration equipments and other products using HCFCs has been banned

From the above, it is clear that India has taken steps to reduce emission of ODS controlled substances commensurate with the capabilities of the country keeping in mind the development needs of the country. From the foregoing discussion, it is safe to conclude that Vienna Convention and Montreal Protocol of Vienna Convention are one of the most successful international treaties which have achieved universal ratification. The success story of the Convention and the Protocol is owing to the application of the Principle of Common but Differentiated Responsibilities wherein the developing countries have been given an extended time frame to phase out ODS and provisions have also been made for financial support and technology transfer. Unlike the more glamorous Paris agreement that will come into force by 2020 and which does not legally bind countries to their promises to cut emissions, the amended Montreal Protocol will bind countries to their HFC reduction schedules from 2019.

7.8 Trans-regional environmental policies

The Basel Convention on the Control of Trans-boundary Movement of Hazardous Wastes and their Disposal is one of the important international measures taken to combat the menace of hazardous wastes and its Trans-regional movement and their disposal. The Convention was adopted on 22nd March 1989 in Basel. The Convention entered into force in 1992. The objective of the Convention is to protect human health and environment from the adverse effects of hazardous wastes. The Convention was aimed at reduction of hazardous waste generation and to promote proper disposal and effective and environmentally sound management of the hazardous wastes. The Convention further aims at restricting Trans-regional movement of hazardous wastes and to provide for a regulatory system. Not only that international community has entered into various Conventions, treaties and Protocols but has also created institutions for international environmental governance like United Nations Environment Programme (UNEP), Global Environment Facility (GEF), High Level Political Forum, United Nations Development Programme, World Meteorological Organization etc.

Advancements in biotechnology and development of genetically modified organisms led to concerns on biosafety. Accordingly, Cartagena Protocol on Biosafety under CBD was adopted in 2000 which entered into force on 11th September 2003. The Protocol basically aims at governing and regulating trans-boundary movement of Living Modified Organisms. The objective of the Protocol is to ensure safety and protection

while dealing with the transfer of Living Modified Organisms and to ensure safe handling of such organisms during international Trans-regional movement

Summary

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Unit 8: Indian Environmental Policies

Unit Structure

8.0 Objectives

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Summary

8.0 Objectives

After studying this unit you will be able to understand:

- The National Environment Policy 2006
- The National Action Plan on Climate Change
- The Forest Conservation policy/National Forest Policy 1988
- The National Agroforestry Policy 2014
- The Green India mission

8.1 Introduction

Over the last three decades, India has witnessed the evolution of a number of environmental rules, regulations and policies towards the protection and improvement of the environment. These are:

8.2 National Environment Policy 2006

The National Environment Policy 2006 is a response to India's national commitment to a clean environment, mandated in the Constitution in Articles 48 A and 51 A (g), (DPSP) strengthened by judicial interpretation of Article 21. It is recognized that the maintenance of the Healthy environment is not the responsibility of the state alone. It is the responsibility of every Citizen and thus a spirit of partnership is to be realized

through the environment Management of the country. Here is the summary of the National Environment Policy 2006

The National Environment Policy is intended to be a guide to action: in regulatory reform, programmes and projects for environmental conservation; and review and enactment of legislation, by agencies of the Central, State, and Local Governments. The policy also seeks to stimulate partnerships of different stakeholders, i.e. public agencies, local communities, academic and scientific institutions, the investment community, and international development partners, in harnessing their respective resources and strengths for environmental management. The National Environment Policy seeks to extend the coverage, and fill in gaps that still exist, in light of present knowledge and accumulated experience. It does not displace, but builds on the earlier policies². The main Objectives of the Policy are mentioned as under:

❖ **Conservation of Critical Environmental Resources:**

To protect and conserve critical environmental resources and invaluable natural and man-made heritage which are essential for life-supporting livelihoods and welfare of the society.

❖ **Inter-generational Equity:**

- To ensure judicious use of environmental resources.
- To meet the needs and aspirations of present and future generations.

❖ **Efficiency in Environmental Resources Use:**

- To ensure efficient use of environmental resources in the sense of reduction in their use per unit of economic output.
- To minimize adverse environmental impacts on society.

❖ **Environmental Governance in the Management of Resources:**

- To apply the principles of resources.
- To apply the principles of good governance (i.e. transparency, rationality, accountability, reduction in costs and time, and public participation) to the management of environmental resources.

❖ **Enhancement of Resources:**

Appropriate technology and traditional knowledge, managerial skills, and social capital are used for conservation and enhancement of resources.

❖ Livelihood Security for the Poor:

To ensure equitable access; to environmental resources for poor tribal community, which are most dependent on environmental resources for their livelihood.

❖ Integration of Environmental Concerns for Socio-economic

Development; to integrate environmental concerns into policies, plans, programmes and projects for socio-economic development.

There are various Principles of the National Environment Policy 2006. These are discussed as under:

❖ Principles of National Environment Policy 2006

The Policy evolved from the recognition that only such development is sustainable, which respects ecological constraints, and the imperatives of justice. The Objectives stated above are to be realized through various strategic interventions by different public authorities at Central, State, and Local Government levels. They would also be the basis of diverse partnerships. The principles followed in the policy are:

- a) Human Beings are at the Centre of Sustainable Development Concerns:
- b) Right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations.
- c) In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.
- d) Where there are credible threats of serious or irreversible damage to key environmental resources, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.
- e) In various public actions for environmental conservation, economic efficiency would be sought to be realized

❖ Strategic Plan:

The foregoing statement of policy Objectives and Principles are to be realized by concrete actions in different areas relating to key environmental challenges. A large number of such actions are currently underway, and have been for several years, in

some cases, for many decades. In some aspects new themes would need to be pursued to realize the Principles and Objectives. Action plans is needed to encourage and to formulate their own strategies or action plans consistent with the National Environment Policy. Therefore, the empowerment of Panchayats and the Urban Local Bodies, particularly, in terms of functions, functionaries, funds, and corresponding capacities, require greater attention for operationalizing some of the major provisions of this policy.

The following Strategic Themes, and outlines of actions to be taken in each, focus on ongoing activities, functions, and roles, as well as new initiatives that are necessary.

- **Revisiting the Policies**

There are various laws available on the protection of environment. For example; The present legislative framework is broadly contained in the umbrella Environment Protection Act, 1986, the Water (Prevention and Control of Pollution) Act, 1974, The Air (Prevention and Control of Pollution) Act, 1981 etc. Therefore, there are several other enactments, which complement the provisions of these basic enactments. The following specific actions may be taken:

- a. Integrated approach to the management of environmental and natural resources
- b. Identify emerging areas for new legislation, due to better scientific understanding, economic and social development, and development of multilateral environmental regimes, in line with the National Environment Policy.
- c. Review the body of existing legislation in order to develop synergies among relevant statutes and regulations, eliminate obsolescence, and amalgamate provisions with similar objectives, in line with the National Environment Policy.
- f) Take steps to adopt and institutionalize techniques for environmental assessment of sector policies and programmes to address any potential adverse impacts, and enhance potential favorable impacts.
- g) Ensure accountability of the concerned levels of Government (Centre, State, Local) in undertaking the necessary legislative changes in a defined time-frame, with due regard to the Objectives and Principles of National Environment Policy, in particular, ensuring the livelihoods and well-being of the poor by ensuring improved access to the necessary environmental resources.

- **Process Related Reforms**

The process related reforms are required at two levels: (a) at the Approach and (b) at the level of the Framework of Legal action.

The approach is to reduce delays and levels of decision-making, realize decentralization of environmental functions, and ensure greater transparency and accountability.

- ❖ **Framework for Legal Action:**

- a. Criminal Law: At present approach to dealing with environmentally unacceptable behavior in India has been largely based on criminal processes and sanctions. Although criminal sanctions, if successful, may create a deterrent impact, in reality they are rarely fruitful for a number of reasons.
- b. Civil law, on the other hand, offers flexibility, and its sanctions can be more effectively tailored to particular situations. The evidentiary burdens of civil proceedings are less daunting than those of criminal law. It also allows for preventive policing through orders and injunctions.
- c. Accordingly, a judicious mix of civil and criminal processes and sanctions be employed in the legal regime for enforcement, through a review of the existing legislation. Civil liability law, civil sanctions, and processes, would govern most situations of non-compliance. Criminal processes and sanctions would be available for serious, and potentially provable, infringements of environmental law, and their initiation would be vested in responsible authorities. Recourse may also be had to the relevant provisions in the Indian Penal Code, and the Criminal Procedure Code. Both civil and criminal penalties would be graded according to the severity of the infraction.
- d. Tortious Liability: The alternatives to Civil Liability may also apply viz. Fault Based liability and Strict Liability.

In Fault Based Liability a party is held liable if it breaches a preexisting legal duty, for example, an environmental standard.

Strict liability imposes an obligation to compensate the victim for harm resulting from actions or failure to take action, which may not necessarily constitute a breach of any law or duty of care.

❖ The Doctrine of Public Trust

As per this doctrine, the State is not an absolute owner, but a trustee of all natural resources, which are by nature meant for public use and enjoyment, subject to reasonable conditions, necessary to protect the legitimate interest of a large number of people, or for matters of strategic national interest.

❖ “Polluter Pays” principle

The National Environment Policy promotes the internalization of environmental costs, including through the use of incentives based policy instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest, and without distorting international trade and investment.

❖ Substantive Reforms:

Although there are various judicial measures available still various substantive reforms are also available. These are explained as under:

- **Environment Impact Assessment:** The policy focuses on encouraging the regulatory authorities, Central and State, to institutionalize regional and cumulative environmental impact assessments (R/CEIAs) to ensure that environmental concerns are identified and addressed at the planning stage itself.
- **Costal Regulations Zone:** The policy aims to revisit the Coastal Regulation Zone (CRZ) notifications to make the approach to coastal environmental regulation more holistic, and thereby ensure protection to coastal ecological systems, coastal waters, and the vulnerability of some coastal areas to extreme natural events and potential sea level rise. In pursuance with the Policy CRZ Notification 2011 was released recently.
- **The Problem of LMOs:** LMO refers to the Living Modified Organisms. Living modified organisms (known as LMOs) result from modern biotechnology is broadly equivalent to genetically modified organisms.

❖ Enhancing and Conserving Environmental Resources

The causes of degradation of environmental resources lie ultimately in a broad range of policy, and institutional, including regulatory shortcomings, leading to the direct causes.

- **Land Degradation:** The degradation of land, through soil erosion, alkali-salinization, water logging, pollution, and reduction in organic matter content has several proximate and underlying causes. The proximate causes include loss of forest and tree cover (leading to erosion by surface water run-off and winds), unsustainable grazing, excessive use of irrigation (in many cases without proper drainage, leading to leaching of sodium and potassium salts), improper use of agricultural chemicals (leading to accumulation of toxic chemicals in the soil), diversion of animal wastes for domestic fuel (leading to reduction in soil nitrogen and organic matter), and disposal of industrial and domestic wastes on productive land.

❖ Desert Habitats:

The arid and semi-arid region of India covers 127.3 mha (38.8%) of India's geographical area and spreads over 10 states. The Indian desert fauna is extremely rich in species diversity of mammals and winter migratory birds. However, the pressures of a rapidly increasing population on the natural resource base necessitate adoption of innovative and integrated measures for conservation of desert ecosystems. The policy aims at measures such as Intensive water and moisture conservation through practices based on traditional and science based knowledge, and relying on traditional infrastructure.

❖ Forests and Wildlife:

(i) **Forests:** Forests provide a multiplicity of environmental services. Foremost among these is the recharging of mountain aquifers, which sustain our rivers. They also conserve the soil, and prevent floods and drought. They provide habitat for wildlife and the ecological conditions for maintenance and natural evolution of genetic diversity of flora and fauna. They are the homes of traditional forest dependent communities. They yield timber, fuel wood and other forest produce, and possess immense potential for economic benefits, in particular for local communities, from sustainable eco-tourism.

(ii) **Wildlife:** The status of wildlife in a region is an accurate index of the state of ecological resources, and thus of the natural resource base of human well-being. This is because of the interdependent nature of ecological entities, in which wildlife is a vital link. Moreover, several charismatic species of wildlife embody "Incomparable Values", and at the same time, comprise a major resource base for sustainable eco-tourism.

❖ Biodiversity, Traditional Knowledge, and Natural Heritage

Conservation of genetic diversity is crucial for development of improved crop varieties resistant to particular stresses, new pharma products, etc., apart from ensuring the resilience of ecosystems. Traditional Knowledge (TK), referring to ethno-biology knowledge possessed by local communities, is the basis of their livelihoods, and also a potent means of unlocking the value of genetic diversity through reduction in search costs.

- **Fresh water Resources:** India's fresh water resources comprise the single most important class of natural endowments enabling its economy and its human settlement patterns. The freshwater resources comprise the river systems, groundwater, and wetlands. Each of these has a unique role, and characteristic linkages to other environmental entities
- **Wetlands:** The Ramsar Convention defines wetlands as, 'areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters', thereby giving a wide scope to the term. Wetlands are under threat from drainage and conversion for agriculture and human settlements, besides pollution. The policy aims at setting up a legally enforceable regulatory mechanism for identified valuable wetlands, to prevent their degradation and enhance their conservation. Develop a national inventory of such wetlands.
- **Pollution Abatement:** Pollution is the inevitable generation of waste streams from the production and consumption of anything. Pollution directly impacts the quality of the receiving medium, i.e. air, water, soil, or electromagnetic spectrum, and when this impaired medium acts upon a receptor, say, a living being, also impacts the receptor. In general, the impacts on the receptor are adverse, but not always. Typically, ecosystems have some natural capacities to assimilate pollution; however, these vary considerably with the nature of the pollutant and the ecosystem. In general, it is cheaper to reduce the emissions of pollution, than to mitigate it after generation, or to treat the receiving medium or receptor. The impacts of pollution may differentially impact the poor, or women, or children, or developing regions, who may also have relatively low contributions to its

generation, and accordingly the costs and benefits of abatement may have important implications for equity.

- **Conservation of Manmade Heritage:** The criteria for, and processes of identification of heritage sites, besides legislation and fiscal measures to ensure that they are not damaged or converted by direct human interference, are outside the scope of the National Environment Policy. However, the impact of environmental quality on their conservation is an environmental policy concern. Heritage sites may be impacted by pollution, or they may face threats of inundation or conversion by development projects. Several prominent heritage sites may be held to possess “Incomparable Values”.
- **Climate Change:** Climate change, resulting from anthropogenic emissions of a suite of gases (called “greenhouse gases” or GHGs) due to fossil fuel use, certain agricultural and industrial activities, and deforestation, leading to their increasing concentrations in the atmosphere, has the potential, over the next few generations, to significantly alter global climate. This would result in large changes in ecosystems, leading to possibly catastrophic disruptions of livelihoods, economic activity, living conditions, and human health. On the other hand, abatement of GHGs, would involve significant economic costs.

❖ **Environmental Standards, Management Systems, Certification, and Indicators**

- **Environmental Standards:** It is now well understood that environmental standards cannot be universal, and each country should set standards in terms of its national priorities, policy objectives, and resources. These standards, may, of course, vary (in general, become more stringent) as a country develops, and has greater access to technologies and financial resources for environmental management. While within the country different states, UTs and local bodies may adopt stricter standards, based on local considerations, they would require concurrence of the Central Government to ensure adherence to the provisions of this policy. Environmental standards also need to relate to other measures for risk mitigation in the country, so that a given societal commitment of resources for achieving overall risk reduction yields the maximum aggregate reduction in risk.

- **Environmental Management Systems, Eco labeling and Certification:** Environmental Management Systems (EMS), such as ISO 14000, by requiring the adoption of standardized environmental management practices, documenting their actual use, and credible third party verification of the fact may significantly ease the public burden of monitoring and enforcement of prescribed emissions standards. On the other hand, their adoption may involve transaction costs, which, for small and medium enterprises may be significant in relation to their total investment. Global harmonization of EMS, however, is a safeguard against adoption of arbitrary national EMS regimes to serve as non-tariff barriers. Eco labeling (and other voluntary certification mechanisms) differ from the EMS in that they address the preferences of environmentally conscious consumers, rather than ensuring adherence to national environmental standards.
- **Clean Technologies and Innovations:** Clean technologies, as distinct from “end-of-pipe” abatement technologies minimize the generation of waste streams in the production processes and utilize waste from other consumption goods and production processes, rather than treating the waste after generation. In general, clean technologies are less intensive in use of raw materials and energy, than conventional technologies, which rely on pollution abatement after generation. For this reason, they may also offer significant cost advantages to the producer.
- **Environment Awareness, Education and Information:** Enhancing environmental awareness is essential to harmonize patterns of individual behavior with the requirements of environmental conservation. This would minimize the demands placed on the monitoring and enforcement regimes; in fact, large scale non-compliance would simply overwhelm any feasible regulatory machinery. Awareness relates to the general public, as well as specific sections, e.g. the youth, adolescents, urban dwellers, industrial and construction workers, municipal and other public employees, etc. Awareness involves not only internalization of environmentally responsible behavior, but also enhanced understanding of the impacts of irresponsible actions, including to public health, living conditions, sanitation, and livelihood prospects.

❖ Research and Development

In order to rapidly advance scientific understanding of environmental issues, it is necessary to promote properly focused research by competent institutions. A continuous engagement with the scientific community, in government, academic, and private institutions, provide important insights for policy making and regulation, including in the field of multilateral negotiations, and help realize deeper and broader skills in the scientific community.

❖ Panchayats & Women Participation

The policy aims at working towards giving the legal recognition of the traditional entitlements of forest dependent communities taking into consideration the provisions of the (PESA). This would remedy a serious historical injustice, secure their livelihoods, reduce possibilities of conflict with the Forest Departments, and provide long-term incentives to these communities to conserve the forests.

❖ International Cooperation

India has participated in major international events on the environment, since 1972. The country has contributed to, and ratified several key multilateral agreements on environmental issues in recognition of the transboundary nature of several environmental problems, and has complied with its commitments. It has also participated in numerous regional and bilateral programs for environmental cooperation. Given the need to enhance our own capacities to comply with our commitments, and ensure sustained flows of resources for environmental management, the following steps would be taken:

- a. Avail of multilateral and bilateral cooperation programs, for capacity building for environmental management, particularly in relation to commitments under multilateral instruments
- b. Participate in mechanisms and arrangements under multilateral agreements for enhancing flows of resources for sustainable development
- c. Provide assistance to other developing countries, in particular for scientific and technical capacity building for environmental management.

❖ Review of the Policy

A prudent course would be to provide for updating every few years in light of new knowledge and developments, and a comprehensive review in about a decade.

Review is also important to grow and improve the policy in future as per the change of the society. So review shall be done from time to time.

❖ Review of Implementation

Any policy is only as good as its implementation. The National Environment Policy outlines a significant number of new and continuing initiatives for enhancing environmental conservation. These require the coordinated actions of diverse actors, for the major part organized and stimulated by one or more public agencies.

Accordingly, the Cabinet or a nominated Committee of the Cabinet may be requested to review the implementation of the National Environment Policy, once a year, within three months from the close of the previous fiscal year. The findings of the review should be publicly disclosed, so that stakeholders are assured of the seriousness of the Government in ensuring implementation of the Policy.

The environmental degradation is a major causal factor in enhancing and perpetuating poverty, particularly among the rural poor, when such degradation impacts soil fertility, quantity and quality of water, air quality, forests, wildlife and fisheries.

Poverty itself can accentuate environmental degradation, given that institutional failures persist. For the poor, several environmental resources are complementary in production and consumption to other commodities (e.g. water in relation to agricultural production, fuel wood in relation to consumption of food), while a number of environmental resources are a source of income or food (e.g. fisheries, non-timber forest produce). This is frequently a source of cumulative causation, where poverty, gender inequalities, and environmental degradation mutually reinforce each other. Poverty and environmental degradation are also reinforced by, and linked to population growth, which in turn, depends on a complex interaction of diverse causal factors and stages of development. The social and economic context of population growth has been detailed in the National Population Policy 2000, which recognizes stabilization of population as a necessary condition for sustainable development.

Economic growth, in its turn, bears a dichotomous relationship to environmental degradation. On the one hand, growth may result in “excessive” environmental degradation through use of natural resources and generation of pollution aggravated by institutional failures.

8.3 National Action Plan on Climate Change

India has also launched a National Action Plan on Climate Change (NAPCC) in 2008. The Action Plan consists of eight national Missions which are briefly discussed hereunder:

- **Jawahar Lal Nehru National Solar Mission** – Mission was launched in 2008 to establish India as a global leader in solar energy to contribute towards clean energy and clean development. The aim of the mission is to develop 20000 MW of solar energy. To facilitate the generation of solar energy, 20 million square meter thermal collector area is required. The country has also established Clean Energy Fund in 2010 and levied cess on Coal i.e. Clean Energy Cess which has been renamed as Clean Environment Cess in 2017. The purpose of this fund is to finance clean energy project and promote clean energy. To further contribute towards clean energy, Electricity Act, 2003 has mandated purchase of grid based power from renewable sources.
- **National Mission for Enhanced Energy Efficiency** – The aim of this mission is to ensure energy efficiency improvement in large energy intensive industries and to facilitate Energy Efficient Economic Development. For this purpose, country is focusing on development and use of energy efficient appliances and equipment's e.g. super-efficient ceiling fans have been developed. India has also been promoting and distributing LED bulbs so as to promote energy efficiency and thereby lower energy consumption. Target is to save fuel and avoid capacity addition.
- **National Mission on Sustainable Habitat** – The target of this mission is to make cities sustainable by improvements in energy efficiency and by promoting use of public transport. The chief features of this mission are
 - Extension of Energy Conservation Building Code, 2007 to all new and existing buildings
 - To optimize energy demands of large commercial buildings
 - Shift to energy efficient and convenient Public Transport
 - Utilization of Urban Waste to derive fuel – Refuse derived Fuel (RDF)

- National Water Mission – One of the components of NAPCC is national water mission. The aim of this mission is
 - To Conserve Water, minimize wastage and equitable distribution of water
 - Creation of Ground Water Monitoring Wells
 - Development of water database
- India has made efforts for revision of National Water Policy, 2012 in line with these aims
- National Mission for Sustainable Agriculture – This mission aims at developing sustainable agriculture as a climate resilient system and at the same time to ensure food security which is an important need of developing country like India. For the purpose, the mission promotes
 - On farm water use efficiency
 - Soil health management
 - Development of degraded land and
 - Micro irrigation
- National Mission for Sustaining the Himalayan Ecosystem – Himalayan Ecosystem is very important not only for India but for the world at large and it is important that adequate efforts are made to sustain the Himalayan Ecosystem. For this purpose, this mission has promoted following steps
 - Sustaining and safeguarding Himalayan glaciers and mountain ecosystems
 - Protection of Biodiversity, wildlife of Himalaya
 - Identification of institutions for studies on Himalayan ecosystems
 - Creation of centers for bridging knowledge gaps
 - Identification and training of experts
 - Creating and strengthening Observational network
- National Mission for a Green India – Green India is an important mission on which both the Union and State governments have been working in cohesion. States have been asked to make State level plans for the same and many states have submitted and are implementing their plans. The aim of this mission in consonance

with National Forest Policy is to increase the forest cover on 5 million hectares of forest and non-forest land and also to increase forest based livelihood.

- National Mission on Strategic Knowledge for Climate Change – The purpose of this mission is to promote research and development on climate change and the likely impact of climate change on India so as to make mitigation and adaptation strategy accordingly. The mission aims at providing and ensuring funding for research on climate change.

The PM's Council on Climate Change and Ministry of Environment, Forests and Climate Change is working on strengthening and revamping NAPCC and it is expected to launch three more missions under NAPCC on Impact of Climate Change on Health, Coastal Zones and regarding Waste to Energy (The Hindu, 2017).

8.4 Forest Conservation policy/National Forest Policy 1988

The Government of India in the erstwhile Ministry of Food and Agriculture enunciated a Forest Policy to be followed in the management of State Forests in the country. However, over the years,* forests in the country have suffered serious depletion. This is attributable to relentless pressures arising from ever-increasing demand for fuel-wood, fodder and timber; inadequacy of protection measures; diversion of forest lands to non-forest uses without ensuring compensatory afforestation and essential environmental safeguards; and the tendency to look upon forests as revenue earning resource. The need to review the situation and to evolve, for the future, a new strategy of forest conservation has become imperative. Conservation includes preservation, maintenance, sustainable utilization, restoration, and enhancement of the natural environment. It has thus become necessary to review and revise the National Forest Policy.

❖ **Basic Objectives:** The basic objectives that should govern the national forest policy - are the following:

- Maintenance of environmental stability through preservation and, where necessary, restoration of the ecological balance that has been adversely disturbed by serious depletion of the forests of the country.

- Conserving the natural heritage of the country by preserving the remaining natural forests with the vast variety of flora and fauna, which represent the remarkable biological diversity and genetic resources of the country.
- Checking soil erosion and denudation in the catchment areas of rivers, lakes, reservoirs in the "interest of soil and water conservation, for mitigating floods and droughts and for the retardation of siltation of reservoirs.
- Checking the extension of sand-dunes in the desert areas of Rajasthan and along the coastal tracts.
- Increasing substantially the forest/tree cover in the country through massive afforestation and social forestry programmes, especially on all denuded, degraded and unproductive lands.
- Meeting the requirements of fuel-wood, fodder, minor forest produce and small timber of the rural and tribal populations.
- Increasing the productivity of forests to meet essential national needs.
- Encouraging efficient utilization of forest produce and maximizing substitution of wood.
- Creating a massive people's movement with the involvement of women, for achieving these objectives and to minimize pressure on existing forests.

The principal aim of Forest Policy must be to ensure environmental stability and maintenance of ecological balance including atmospheric equilibrium which are vital for sustenance of all lifeforms, human, animal and plant. The derivation of direct economic benefit must be subordinated to this principal aim.

❖ Essentials of Forest Management

- Existing forests and forest lands should be fully protected and -their productivity improved. Forest and vegetal cover should be increased rapidly on hill slopes, in catchment areas of rivers, lakes and reservoirs and ocean shores and, on semi-arid, and desert tracts.
- Diversion of good and productive agricultural lands to forestry should be discouraged in view of the need for increased food production.
- For the conservation of total biological diversity, the network of national parks, sanctuaries, biosphere reserves and other protected areas should be strengthened and extended adequately.

- Provision of sufficient fodder, fuel and pasture, specially in areas adjoining forest, is necessary in order to prevent depletion of forests beyond the sustainable limit. Since fuelwood continues to be the predominant source of energy in rural areas, the programme of afforestation should be intensified with special emphasis on augmenting fuelwood production to meet the requirement of the rural people.
- Minor forest produce provides sustenance to tribal population and to other communities residing in and around the forests. Such produce should be protected, improved and their production enhanced with due regard to generation of employment and income.

8.5 National Agroforestry Policy 2014

Agroforestry is defined as a land use system which integrates trees and shrubs on farmlands and rural landscapes to enhance productivity, profitability, diversity and ecosystem sustainability. It is a dynamic, ecologically based, natural resource management system that, through integration of woody perennials on farms and in the agricultural landscape, diversifies and sustains production and builds social institutions.

Agroforestry systems include both traditional and modern land-use systems where trees are managed together with crops and or/ animal production systems in agricultural settings. Agroforestry is practiced in both irrigated and rain fed conditions where it produces food, fuel, fodder, timber, fertilizer and fibre, contributes to food, nutritional and ecological security, sustains livelihoods, alleviates poverty and promotes productive and resilient cropping and farming environments. Agroforestry also has the potential to enhance ecosystem services through carbon storage, prevention of deforestation, biodiversity conservation, and soil and water conservation. In addition, when strategically applied on a large scale, with appropriate mix of species, agroforestry enables agricultural land to withstand extreme weather events, such as floods and droughts, and climate change.

Agroforestry has significant potential to provide employment to rural and urban population through production, industrial application and value addition ventures. Current estimates show that about 65 % of the country's timber requirement is met

from the trees grown on farms. Agroforestry also generates significant employment opportunities. It is also recognized that agroforestry is perhaps the only alternative to meeting the target of increasing forest or tree cover to 33 per cent from the present level of less than 25 per cent, as envisaged in the National Forest Policy (1988).

A major role for agroforestry is emerging in the domain of environmental services. Agroforestry is known to have the potential to mitigate the climate change effects through microclimate moderation and natural resources conservation in the short run and through carbon sequestration in the long run. Agroforestry species are known to sequester as much carbon in below ground biomass as the primary forests, and far greater than the crop and grass systems.

Agroforestry systems offer means to address to a significant extent the present challenges of food, nutrition, energy, employment and environmental security. However, appropriate research interventions, adequate investment, suitable extension strategies, incentives to agroforestry practitioners, enabling legal and regulatory environment, marketing of agroforestry produce, post-harvest processing, development of new products, and above all a forward looking National Agroforestry Policy is required to address these issues.

Given the fact that land-holding size is shrinking, tree farming combined with agriculture is perhaps the only way forward to optimize the farm productivity and thus, enhancing livelihood opportunities of small farmers, landless and the women. Agroforestry interventions can be a potent instrument to help achieve the 4 percent sustained growth in agriculture. In short, trees on farm or agroforestry are uniquely place for achieving multiple objectives, especially the food, nutrition, employment, health and environmental security. It is contended that an ever-green revolution is unlikely without a major groundswell of growing trees on farms.

Agroforestry can become an important tool to build resilience of farmers and rural people against threats of climate change and natural calamities. This can also help in greening the rural employment and rural development opportunities by providing agroforestry tree produce based economic opportunities.

❖ **Need for Agroforestry Policy in India**

- **Absence of a dedicated and focused national policy and a suitable institutional mechanism:** Major policy initiatives, including the National Forest Policy 1988, the National Agriculture Policy 2000, Planning

Commission Task Force on Greening India 2001, National Bamboo Mission 2002, National Policy on Farmers, 2007 and Green India Mission 2010, emphasize the role of agroforestry for efficient nutrient cycling, organic matter addition for sustainable agriculture and for improving vegetation cover. However, agroforestry has not gained the desired importance as a resource development tool due to various factors. Some of these factors include: restrictive legal provisions for harvesting & transportation of trees planted on farmlands and use of non-timber produce, near non-existent extension mechanisms, lack of institutional support mechanisms, lack of quality planting materials, inadequate research on agroforestry models suitable across various ecological regions of the country, inadequate marketing infrastructure and price discovery mechanisms, lack of post-harvest processing technologies, etc. This is also due to the fact that the mandate of agroforestry falls through the cracks in various ministries, departments, agencies, state governments, etc. The value and position of agroforestry is ambiguous and undervalued, and despite of its numerous benefits, it is only sporadically mentioned at the national level, because of the lack of appropriate public policy support. While there are many schemes dealing with tree planting / agroforestry, there is an absence of a dedicated and focused policy, and lack of an institutional mechanism for coordination and convergence among the schemes/ ministries to pursue agroforestry in a systematic manner.

- **Lack of an integrated farming systems approach:** Farming enterprise of small farmers needs to be understood and developed as a portfolio of activities rather than as “fixed one type of cropping system”. Development along this direction requires a convergent programme which integrates trees, crops, water, livestock and other livelihood initiatives. This perspective of integration seems to be missing in the national agroforestry initiatives in whatever form it may currently be. In fact the key mantra of the success of the agro-horticulture programme of BAIF, NABARD, poplar based commercial scale (though small holder based), agro-timber systems in north-western parts of the country and other successful initiatives is their ability to integrate various livelihood aspects with the tree planting in the farm. Survival of trees is one of the most challenging tasks in the establishment phase of the trees, and

without addressing the issue of water this does not seem to be possible. The enthusiasm of farmers depleted substantially with the higher mortality rate as experienced from various programmes in the past.

- **Restrictive regulatory regime:** There are restrictions imposed by the state governments on harvesting and transportation of agroforestry produce, especially those species which are found growing in the nearby forests. These restrictions were basically designed to prevent pilferage from government forests. However, the rationale for such restriction is not very convincing as the species grown in the forest are to be best grown in the nearby private farms because of their suitability to that agro-climatic condition. Obtaining permits for harvesting and transportation are cumbersome, costly & frustrating, and hence, discourage farmers from undertaking tree planting on farm lands. Multiple agencies, including the State Revenue Department are involved in issuing these permits. Similarly, tax is imposed at various stages of the processing by multiple agencies. These restrictions also negatively impact the in-situ, or on-farm primary processing, jeopardize local employment in these operations and increase transport cost because of the transportation of the entire bulk raw material to the processing centers. As a result, the domestic agroforestry produce (raw materials and finished goods) is increasingly losing grounds against the imported materials, which are cheaper and of better quality. India, having all the natural advantages, should be able to develop agroforestry as a major sector for income and employment generation.
- **Inadequate attempts at liberalization of restrictive regulations:** There are sporadic examples of States taking steps for liberalization of above restrictions, such as, exempting agroforestry species from the harvesting and transit, but this has not been uniformly done by all the States. Also the extent of liberalization is not widely known to the farmers and thus, their problem continues. It is also learnt that farmers do not take interest in tree planting on the farm land fearing that too many trees on farm may lead to change in their land-use. Clearly such apprehensions have no basis; however this does emphasize the lack of awareness that persists on the ground. The Arun Kumar Bansal Committee, appointed by the Ministry of

Environment and Forests in 2011 in its report has also identified the regulatory bottlenecks, impeding the growth of the agroforestry, which need to be acted upon.

- **Insufficient research, extension and capacity building:** Research results on agroforestry, available in the public and private domain do not regularly reach the farmers due to lack of a dedicated extension system. There is a serious lack of institutional mechanisms at all levels to promote agroforestry. The efforts to dovetail agroforestry programmes to any other established programmes which have strong institutional mechanism up to the implementation level, such as the Integrated Watershed Management Programme are non-existent. Also, there is not enough research on the agroforestry models suitable for the diverse agro-climatic regions; for the indigenous and multi-purpose species (viz. *Prosopis cineraria*) or on domestication of species, resulting in over emphasis on few species (poplar, eucalyptus, Kadam, etc.) and their limited varieties in certain pockets of the country. It is also important to note that India lacks processing technologies for fast growing timber species.
- **Dearth of quality planting material:** Planting material such as seeds, seedlings, clones, hybrids, improved varieties, etc. are generally of mixed quality and not available commonly, particularly in the resource poor regions. It is estimated that only about 10% of planting material is of high quality, the rest without any guarantee for quality standards. This issue mainly relates to the production, handling, distribution and planting & supervision of high quality planting material.
- **Institutional finance and insurance coverage:** Institutional finance in agroforestry has not been at par with its potential due to the lack of awareness of technical and economic data on different agroforestry models, and the techno-economic parameters required by financial institutions (FI) to evaluate finance needs and viability of the projects. Similarly, little is done in developing and popularizing insurance products for agroforestry ventures. Lack of awareness, unavailability of products suitable to growers, high cost of premium and unclear procedure of claim settlements are reported to be the factors responsible for this poor state of affairs.

- **Weak market access for agroforestry produce:** The marketing infrastructure (market yard, etc.), including “price discovery” mechanisms for agroforestry produce in general are unavailable in the country except in few states which have either developed exclusive marketing infrastructure for agroforestry produce or have dovetailed with the regulated agriculture commodity marketing systems. As a result, it is largely a buyer’s market and the middlemen get the major share in profit.
- **Industry operations at a sub-optimal level:** The Wood Based Industries (WBI) has played an important role in the promotion of agroforestry and economy in Punjab, Haryana, and in parts of U.P. and Uttarakhand. However, the regulations governing this industry have become stringent. The procedure for setting up new units or fulfilling of compliance by existing units is cumbersome and time consuming, not very encouraging to instill confidence in industries. The restrictions on primary processing at production sites after harvesting, leads to higher cost for transporting entire stock to the factory. This also results in lower supply of raw material, forcing the WBI to operate at sub-optimal level. The role of industries in promotion of agroforestry cannot be ignored and therefore, issues preventing growth need to be addressed urgently. Nearly \$ 7-8 billion worth of wood-based products are being imported annually. The low import tariff for raw materials and finished goods, cumbersome procedures for sourcing raw materials domestically are some of the major reasons for the slow or negative growth of the WBI in India. Therefore, the agroforestry policy should facilitate that products are developed at competitive prices within India for generating local employment and reducing burden on imports. It could be summarized that although farmers are interested to expand agroforestry, as the evidence on adoption shows, there are many missed opportunities for agroforestry to benefit farmer income and the environment due to neglect /oversight of the agencies that are supposed and expected to adequately promote and support it.

3.1 Goal: The major policy goals are:

- Setting up a National Agroforestry Mission or an Agroforestry Board to implement the National Policy by bringing coordination, convergence and synergy among various elements of agroforestry scattered in various existing, missions, programmes, schemes and agencies pertaining to agriculture, environment, forestry, and rural development sectors of the Government.
- Improving the productivity; employment, income and livelihood opportunities of rural households, especially of the smallholder farmers through agroforestry.
- Meeting the ever increasing demand of timber, food, fuel, fodder, fertilizer, fibre, and other agroforestry products; conserving the natural resources and forest; protecting the environment & providing environmental security; and increasing the forest / tree cover, there is a need to increase the availability of these from outside the natural forests.

❖ **Basic Objectives:** The basic objectives of the National Agroforestry Policy are to:

- Encourage and expand tree plantation in complementarily and integrated manner with crops and livestock to improve productivity, employment, income and livelihoods of rural households, especially the small holder farmers.
- Protect and stabilize ecosystems, and promote resilient cropping and farming systems to minimize the risk during extreme climatic events.
- Meet the raw material requirements of wood based industries and reduce import of wood and wood products to save foreign exchange.
- Supplement the availability of agroforestry products (AFPs), such as the fuel-wood, fodder, non-timber forest produce and small timber of the rural and tribal populations, thereby reducing the pressure on existing forests.
- Complement achieving the target of increasing forest/tree cover to promote ecological stability, especially in the vulnerable regions.
- Develop capacity and strengthen research in agroforestry and create a massive people's movement for achieving these objectives and to minimize pressure on existing forests.

8.6 Green India mission

The National Mission for a Green India, as one of the eight Missions under the National Action Plan on Climate Change (NAPCC), recognizes that climate change phenomena

seriously affect and alter the distribution, type and quality of natural biological resources of the country and the associated livelihoods of the people. Mission for a Green India (henceforth referred to as Mission) acknowledges the influences that the forestry sector has on environmental amelioration through climate mitigation, food security, water security, biodiversity conservation and livelihood security of forest dependent communities.

GIM puts “greening” in the context of climate change adaptation and mitigation. Greening is meant to enhance ecosystem services such as carbon sequestration and storage (in forests and other ecosystems), hydrological services and biodiversity; as well as other provisioning services such as fuel, fodder, small timber and non-timber forest products (NTFPs).

The Mission aims at responding to climate change by a combination of adaptation and mitigation measures, which would help:

- Enhancing carbon sinks in sustainably managed forests and other ecosystems;
- Adaptation of vulnerable species/ecosystems to the changing climate; and
- Adaptation of forest-dependent communities.

❖ **Mission Objectives:** The objectives of the Mission are:

- a) Increased forest/tree cover on 5 m ha of forest/non-forest lands and improved quality of forest cover on another 5 m ha (a total of 10 m ha).
- b) Improved ecosystem services including biodiversity, hydrological services and carbon sequestration as a result of treatment of 10 m ha.
- c) Increased forest-based livelihood income of about 3 million households living in and around the forests.
- d) Enhanced annual CO₂ sequestration by 50 to 60 million tonnes in the year 2020.

❖ **Mission Targets (Outputs)**

The Mission have clear targets for different forest types and ecosystems which enable achievement of the overall objectives of the Mission. The Mission targets 10 m ha of forest/non-forest lands and includes: qualitative improvement of forest cover/ecosystem in moderately dense forests (1.5 m ha), open degraded forests (3 m ha), degraded grassland (0.4 m ha) and wetlands (0.1 m ha); b) eco-restoration/afforestation of scrub, shifting cultivation areas, cold deserts, mangroves, ravines and abandoned mining areas (1.8 m ha); c) bringing urban/ peri-urban lands

under forest and tree cover (0.20 m ha); and d) agro-forestry /social forestry(3 m ha). The Mission also targets improvement of forest- based livelihoods for about three million households living in and around forests.

❖ **Key Elements of Mission Strategy:** The key highlights of the Mission strategy are listed below:

- **Holistic view to “greening” (broader than plantations):** The scope of greening goes beyond trees and plantations to encompass both protection and restoration. Emphasis be placed on restoration of degraded ecosystems and habitat diversity, for example, grasslands and pastures (more so in arid/ semi-arid regions), mangroves, wetlands and other critical ecosystems. The greening not only strives to restore degraded forests, but also contribute to protection and enhancement of forests with relatively dense forest cover.
- **‘Vulnerability’ and ‘Potential’ as criteria for intervention:** Criteria for selection of project areas/ sub-landscapes/ sub-watersheds under the Mission include projected vulnerability to climatic change, potential of areas for enhancing carbon sinks and the significance of the area from ecosystem services angle, such as biodiversity and hydrological services.
- **Integrated cross-sectoral approach to implementation:** The Mission foster an integrated approach that treats forests and non-forest public lands as well as private lands simultaneously, in project units/ sub-landscapes/ sub- watersheds. Livelihood dependencies, for example firewood needs and livestock grazing, be addressed using inter-sectoral convergence (e.g., animal husbandry, forest, agriculture, rural development and energy)

❖ **Key role for local communities and decentralized governance:**

Local communities are required to play a key role in project governance and implementation. The Mission brings primacy to Gram Sabha as an overarching institution to oversee Mission implementation at the village level. The committees set up by the Gram Sabha, including revamped JFMCs, CFM groups, Van Panchayats, Committees set up under Forest Rights Act, Biodiversity Management Committees etc., be strengthened as the primary institutions on the ground for nested decentralized forest governance in rural areas. Similarly in the schedule VI areas, the traditional village level institution/Village Councils be

supported. The Mission also support revamping/strengthening of the Forest Development Agencies to support the field institutions.

- **Cadre of Community Foresters:** The Mission invests in the development of a cadre of community- based change agents from amongst educated community youth. These community foresters facilitate planning, implementation and monitoring of the Mission activities at the local level. This provides skilled employment opportunity to about one lakh educated community youths.
 - **Robust and effective monitoring framework:** A comprehensive monitoring framework at four different levels is proposed. In addition to on-the-ground self-monitoring by multiple agencies, including communities, the Mission support the use of modern technology like Remote Sensing with GPS mapping of plot boundaries for monitoring at the input /output/ outcome level. The Gram Sabha carries out the social audit of the Mission activities at the village level.
 - The Mission identifies research priorities in support of the Mission aims and objectives. The Mission set up a cell under the overall guidance of MoEF to link to REDD Plus activities in the country.
 - The Mission implemented its strategy through a set of five Sub Missions and cross-cutting interventions.
- ❖ **Timeframe:** The actual implementation period of the Mission spread over 10 years, coinciding with the 12th and 13th five year plan periods. The preparatory phase of the Mission envisages institutional reforms, settingup of the Mission organization, to get state action plans in place, identification of sub-landscapes/areas for the Mission interventions, identification of partners, and awareness and capacity building in advance etc.

Summary

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Unit 9: International Environmental Laws- Basic Aspects

Unit Structure

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Summary

9.0 Objectives

After reading this unit you will:

- An understanding of the origin, evolution and expansion of international environmental laws.
- Able to identify and critically analyze international environmental laws.

9.1 Introduction

It is now widely recognized that the planet is facing a range of environmental challenges, which can only be addressed through international co-operation. Developments in science and technology have enhanced the possibility of understanding the environmental implications of various naturally occurring events as well as human activities. The last few decades have witnessed an exponential increase in multilateral environmental agreements covering a wide range of issues such as

ozone depletion, climate change, loss of biodiversity, toxic/hazardous products and wastes, pollution of rivers and depletion of freshwater resources.

International environmental law is a comparatively new branch of international law. It has expanded dramatically over the years particularly since the United Nations Conference on the Human Environment, 1972. The development of international environmental law has produced mixed results. While some treaty regimes have been effective in producing the desired results (e.g. Vienna Convention on Protection of the Ozone Layer, 1985), some other regimes are struggling to produce results (e.g. United Nations Framework Convention on Climate Change, 1992).

This unit provides an overview of the development of international environmental law and briefly introduces its sources and important underlying principles. An in-depth analysis of the substantive aspects of international environmental law is not an objective of this unit. This unit explains the sources of international environmental law and narrates the development of international environmental law in its historical context. It also highlights the expansion of international environmental law and the role played by important international conferences on the environment in this process. This unit also highlights the North-South debate in the international environmental law regime.

9.2 Early Legal Developments

Early legal developments in the field of the environment were limited in nature and scope. Legal initiatives mostly focused on specific issues such as regulation of whaling, fisheries, watercourses and birds (e.g. Convention between France and Great Britain Relating to Fisheries, 1867 and Convention for the Regulation of Whaling, 1931).

In the 1930s, the trans-boundary consequences of air pollution were acknowledged in arbitral proceedings leading to the award of the arbitral tribunal in the *Trail Smelter* case. The *Trail Smelter case* (Canada v. US) (1941) laid down the rule of international law on state responsibility in the context of trans-boundary pollution (and for trans-boundary effects on environment in general). It was held that:

No state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons

therein, when the case is of serious consequences and the injury is established by clear and convincing evidences.

This principle was concertized subsequently through case laws (e.g. *Corfu Channel* case (UK v Albania) (1949) ICJ Reports 4). A number of treaties and declarations have also incorporated this principle. For example, Article 194 of the United Nations Convention on the Law of the Sea, 1982 and Principle 21 of the Declaration of United Nations Conference on the Human Environment, 1972 reflect this principle. The *Trail Smelter* case is a landmark case because it influenced the subsequent development of international environmental law significantly. The case together with the treaties adopted and organizations established in the late 19th century and the early 20th century is believed to have provided the basis of international environmental law.

9.3 Sources of International Environmental Law

Article 38(1) of the Statute of the International Court of Justice provides that treaties, customs and general principles of law recognized by civilized nations are the major sources of international law. Judicial decisions and teachings of the most highly qualified publicists are recognized as subsidiary sources. While treaties and customary law are important sources of international environmental law, the legal regime for the protection of the environment also includes a range of legally non-binding instruments generally known as 'soft law', which includes declarations and guidelines.

9.3.1 Treaties

Treaties are the most frequently used source of international environmental law. The last few decades, particularly the 1980s and the 1990s, have witnessed a proliferation of multilateral environmental agreements (MEAs). Between the Stockholm Conference, 1972 and the Rio Conference, 1992, several treaties were concluded covering a range of issues such as regulation of trade in endangered species (Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 (CITES)), marine pollution (International Convention for the Prevention of Pollution from Ships, 1973), ozone protection (Vienna Convention on Protection of the Ozone Layer, 1985) and trans-boundary movement of hazardous waste (Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal, 1989). More than 100 MEAs were concluded between 1972 and 1992. Environmental catastrophes such as the Amoco Cadiz oil spill (1978), the Chernobyl nuclear accident (1986) and

the Exxon Valdez oil spill (1989) also triggered the rapid development of international environmental law.

Even though the number of MEAs has grown significantly, this development was criticized mainly because of their ambiguous and indeterminate legal substance and non-compliance by state parties. The proliferation of MEAs has also made coordination between different treaty regimes a difficult task. Consequently, in recent years, the focus has shifted towards stronger emphasis on treaty coordination, effectiveness, and compliance as opposed to the adoption of new treaties.

The treaty making process in international environmental law has also witnessed the introduction of novel ideas, most importantly, the Convention-Protocol approach, which envisages a framework convention with broad principles. Concrete obligations and actions will be laid down in subsequent agreements known as protocols. For example, general principles pertaining to the protection of biodiversity are laid down under the Convention on Biological Diversity, 1992. However, concrete rights and duties have been laid down in subsequent protocols on different issues such as bio-safety (Cartagena Protocol on Bio-safety, 2000) and benefit sharing (Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, 2010). The climate change regime is another example with the United Nations Framework Convention on Climate Change, 1992 as the framework convention and the Kyoto Protocol, 1997 as a subsequent agreement with concrete rights and duties.

This method is progressive on various grounds. The idea of a framework convention without concrete rights and duties helps to bring more countries on the table. The cooperation, which begins with the framework convention, in theory, would nurture cooperation and trust among parties and would help to develop a strong and effective legal mechanism subsequently. This flexible mechanism also gives an opportunity to respond to new issues according to evolving scientific evidence.

9.3.2 Custom

Custom is also an important source of international environmental law. An important advantage of customary international law norms is that they can inform the development of treaties or be codified into a treaty as was the case of the United

Nations Convention on the Non-Navigational Uses of International Watercourses, 1997.

Courts and tribunals at the international level have recognized and used customary norms on various occasions. For example, the International Court of Justice recognized the principle of reasonable and equitable utilization as a customary norm in the context of the use and conservation of international watercourses in the *Gabcikovo-Nagymaros case* (Hungary v. Slovakia) (1997) ICJ Reports 7). In the *Pulp Mills case* (Argentina v. Uruguay) (2010) ICJ Reports 14), the International Court of Justice has recognized trans-boundary environmental impact assessment as a requirement of customary or general international law.

Nevertheless, identification of international customary norms is not an easy task. Given the fact that environmental issues are evolving, it is a challenge to ascertain the two essential components of international custom – state practice and *opinio juris*. While the former denotes the actual practice followed by states, the later denotes the part whether the states have considered it as their legal obligation to follow such practice. It is extremely difficult to ascertain the state practice of over 190 countries. Further, there is a lack of clarity as to how to ascertain these components. While the traditional method suggests that more weight age ought to be given to actual state practice, the modern approach relies heavily on documents such as declarations or the work of international organizations such as the International Law Commission.

9.3.3 General principles of law

General principles of law recognized by civilized nations are important in the context of development and expansion of international environmental law. It is to be noted that the reference to 'civilized nations' in Article 38(1) of the statute of the International Court of Justice is now regarded as outdated. This term refers to the colonial practice of classifying nations as civilized, uncivilized and barbarians adopted by the Europeans and probably the term was carried forward to the ICJ statute from its predecessor, that is, the Statute of the Permanent Court of International Justice, 1920.

International courts and tribunals have relied on general principles of national law in a number of cases. However, its use in the field of environmental law has been marginal. The *Trail Smelter Arbitration* (US v. Canada, 1941) is one classic example of an environment related case where in the general principle of national law was used. The

tribunal in the *Trail Smelter* case relied on decisions of the United States Supreme Court on cases concerning air pollution and water pollution between states of the Union in arriving at its finding that 'no state has the right to use or permit to the use of its territory in such a manner as to cause injury by fumes in or to the territory of another'. General principles are of great significance in the context of principles highlighted in various soft law instruments. For example, principles such as the precautionary principle, polluter pays principle, sustainable development and common but differentiated responsibility in declarations adopted at different conferences on environment (e.g. Rio Declaration, 1992) have influenced interpretation, application and development of treaties. General principles may also influence the development or concretization of customary norms.

9.3.4 Judicial decisions and teachings of the most highly qualified publicists

Judicial decisions and teachings of the most highly qualified publicists are regarded as 'subsidiary means for the determination of rules of law' under the ICJ Statute. They are subsidiary when compared other three sources described above. Generally international law does not recognize precedential value of decision of international courts and tribunals. Therefore, judicial decisions cannot be treated as a formal source of law. Article 59 of the ICJ Statute explicitly provides that a decision of the Court has no precedential value. ICJ's decisions bind only the parties to the dispute. However, in practice, decision of international courts and tribunals strongly influence subsequent decision. For example, the ICJ in the *Gabcikovo-Nagymaros (Hungary v. Slovakia, ICJ, 1997)* case relied on explicitly its advisory opinion in the *Legality of Nuclear Weapons* case (1995).

In addition to judicial decisions, teachings of the most highly qualified publicists are another 'subsidiary' source of international law. One critical issue in this regard is the reference in Article 38(1)(d) of the ICJ Statute to the terms 'most highly qualified'. It is problematic to ascertain who are the 'most highly qualified publicists' in the field of international law.

The teachings of the most highly qualified publicists are a rarely used source of international law by international courts and tribunals. A 2012 study by Michael Peil observes that the ICJ 'has explicitly cited to publicists in only 22 of its 139 Judgments

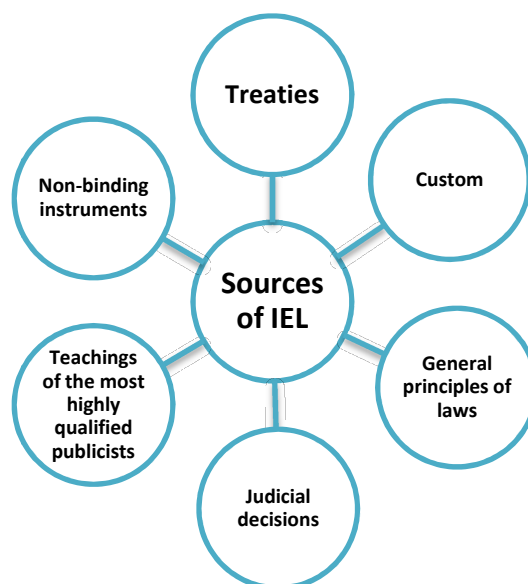
and Advisory Opinions' (file:///C:/Users/ASIM/Desktop/SSRN-id2115529.pdf). Among these cases, the ICJ has referred to the work of the International Law Commission mostly rather than individual writers. For example, in the *Gabcikovo-Nagymaros (Hungary v. Slovakia)*, ICJ, 1997), the ICJ heavily relied on the work of the International Law Commission on state responsibility to determine whether Hungary's action in stopping the work of a dam as agreed under a treaty by citing environmental reasons is justified under international law and therefore does not result in liability under international law.

9.3.5 Non-binding instruments

Non-binding instruments have also been very influential in the development of international environmental law. Even though they are technically not 'law', soft law has played a significant role in international environmental law. First, some of the most influential developments that have shaped international environmental law have been the result of non-binding instruments such as the Stockholm Declaration, 1972 and the Rio Declaration, 1992.

Second, soft law instruments have played a crucial role in concretizing some of the key principles of international environmental law such as state responsibility for trans-boundary harm.

Third, soft laws form a starting point for the development of hard law. Several environmental soft law instruments have played a crucial role in the development of



legally binding treaties. For example, the Helsinki Rules on the Uses of the Waters of International Rivers, 1966 adopted by the International Law Association formed the basis of a treaty subsequently adopted on international watercourses - the UN Convention on the Non-Navigational Uses of International Watercourses, 1997.

9.4 Important Environmental Law Conferences

This part describes the contributions by key international conferences on environment to the development of international environmental law.

9.4.1 Stockholm Conference, 1972

The early 1960s saw the emergence of environmentalism based on scientific evidence of environmental degradation. This led to the realisation that national measures are not sufficient to protect the environment. Pressure was put on the international community to formulate a strategy for the protection of the global environment. The United Nations responded to this pressure by convening the United Nations Conference on the Human Environment, 1972 (Stockholm Conference).

The results of the Stockholm Conference were a non-binding Stockholm Declaration and an Action Plan consisting of 109 recommendations. The Stockholm Declaration laid the foundation for the future development of international environmental law. Some of the important provisions in this regard are Principle 11 (implicit sustainable development), Principle 21 (state responsibility for transboundary harm), and Principle 22 and 24 (liability rules). The Stockholm Conference also led to the establishment of the United Nations Environment Programme (UNEP) in 1972. It was the first institution within the UN system to have environmental protection as its main task and it played and continues to play a significant role in the international environmental law making process. The second document adopted at Stockholm - the Action Plan - contains 109 recommendations adopted by consensus. The Action Plan identifies specific actions to address environmental issues and divides them into three categories: a global environmental assessment program (Earth watch); environmental management activities; and international measures to support the national and international actions of assessment and management.

An important achievement of the Stockholm Conference was that environmental protection became a mandate of the UN, even though environmental protection was not originally and explicitly mentioned in the UN Charter.

9.4.2 Rio Conference, 1992

The second major global conference on the environment - United Nations Conference on Environment and Development (UNCED or the Rio Conference) - took place in Rio

de Janeiro in 1992. More than 30,000 participants from 176 countries were present at the Rio Conference.

The Rio Conference produced five documents setting out the international agenda for sustainable development for the twenty-first century. They are:

- Rio Declaration on Environment and Development, a non-legally binding document containing key principles to guide international action;
- Agenda 21, an ambitious plan of measures and actions to concretely promote sustainable development;
- United Nations Framework Convention on Climate Change;
- Convention on Biological Diversity; and
- Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests (Rio Forest Principles).

In addition to the abovementioned direct outcomes, the issue of desertification was highlighted by state parties during the Rio Conference and this eventually led to the adoption of the United Nations Convention to Combat Desertification in 1994. Further, the concerns of people living in the island countries were highlighted and this led to the Global Conference on the Sustainable Development of Small Island Developing States in 1994. A programme of action to assist the environmentally and economically vulnerable countries was also adopted by the Conference.

The Rio Conference is a landmark in terms of participation of representatives of states and non-governmental organizations. More than 700 NGOs participated in the Conference, which constituted a decisive moment from the participation perspective. This is a significant shift from the traditional practice where the international law making process was the exclusive domain of sovereign states. It also triggered a 'paradigm shift' from international environmental law to the international law of sustainable development because a large number of developmental issues got merged with environmental debates.

The Rio Conference also led to the establishment of the UN Commission on Sustainable Development (CSD) to ensure effective follow-up of the UNCED. The High Level Political Forum on Sustainable Development has replaced CSD in 2013.

9.4.3 World Summit on Sustainable Development (WSSD), 2002

The United Nations General Assembly Resolution 55/199 convened the World Summit on Sustainable Development (WSSD or the Summit) in Johannesburg in 2002. The purpose of the Summit was to conduct a 10-year review of Agenda 21 and to ensure a balance between the three reinforcing components of sustainable development - economic development, social development and environmental protection. WSSD marks a major advancement from the Rio Conference in terms of participation. Around 21000 participants were present at the Summit with delegates from 191 governments. WSSD did not focus on adoption of new MEAs. Instead, the focus was on implementation of existing MEAs.

The two major outcomes of WSSD are:

- Johannesburg Declaration on Sustainable Development; and
- Johannesburg Plan of Action.

WSSD was originally convened to promote sustainable development. However, the Summit ended up focusing mainly on development and it only marginally addressed environmental issues. It failed to make any significant progress in promoting the environmental agenda. At Johannesburg, the environment was treated as a sideshow and the focus was mostly on development and poverty eradication. The Plan of Implementation was also development oriented. In effect, the environment became relevant only in the context of development. For example, the Plan of Implementation indicates that measures to protect and manage natural resources are essentially viewed as a base of economic and social development. WSSD steered the development discourse in a new direction by giving more importance to the development needs of the Third World rather than the environmental part, which the developed countries had been pursuing.

9.4.4 United Nations Conference on Sustainable Development (Rio+20), 2012

The United Nations Conference on Sustainable Development took place in Rio de Janeiro from 20 to 22 June 2012. The Rio+20 outcome document, 'The Future We Want' outlines the key issues and challenges in the path of achievement of the goal of sustainable development. To a great extent, the Rio+20 Summit were a continuation of

WSSD in terms of the nature of the discourse. The outcome document covers almost all issues pertinent to development such as inclusive and equitable economic growth; reduction of inequalities; rising of basic standards of living; equitable social development; and sustainable management of natural resources.

The outcome document reasserts the three pillars of sustainable development identified at WSSD, that is, economic development, social development and environmental protection. It also reinforces poverty eradication as an indispensable requirement for sustainable development. In addition, the outcome document emphasizes the importance of technology transfer to developing countries. It was also resolved to strengthen the institutional framework for sustainable development.



The Rio+20 outcome document does not provide any concrete 'means of implementation' or new and additional resources in order to achieve sustainable development. It has been observed that developed countries failed to fulfill their previous commitments on finance and technology for sustainable development. Some other critiques present an optimistic view of the Rio+20 outcomes. According to them, the mandated actions in the Rio+20 texts reflect the important work in the years ahead at the UN.

9.5 International Institutions: Emerging Trends

The institutional framework for international environmental law used to follow the idea of establishing independent institutions for the proper implementation of MEAs. This is evident from the establishment of the UNEP and CSD in the aftermath of the Stockholm Conference and the Rio Conference respectively. These institutions have indeed played a crucial role in the development and implementation of international environmental law.

However, the institutional mechanism under international environmental law has undergone dramatic changes in the recent past. The new institutional arrangements usually comprise a Conference of Parties (COP) or Meeting of the Parties (MOP) with

decision-making powers, a secretariat, and one or more specialist subsidiary bodies. At the global level, very few MEAs concluded since 1972 rely on an existing inter-governmental organization (IGO) for implementation.

COP is a post-1970 phenomenon. Previously, MEAs used to set up an IGO with legal personality. Examples include the International Whaling Commission (established by the International Convention for the Regulation of Whaling, 1946) and the International Commission for the Northwest Atlantic Fisheries (established by the International Convention for the Northwest Atlantic Fisheries, 1949). However, traditional IGOs were expensive and bureaucratic in nature. This resulted in disinterest to create new IGOs in the environmental field.

COPs are not IGOs in the traditional sense. They are freestanding and distinct both from the states that are parties to a particular agreement and from existing IGOs. They are also autonomous in the sense that they have their own lawmaking powers and compliance mechanisms. This marks a distinct and different approach to institutionalized collaboration between states, being both more informal and more flexible, and often innovative in relation to norm creation and compliance.

COPs perform a variety of functions such as establishment of subsidiary bodies, arrangement of meetings, adoption of rules of procedure for itself and for subsidiary bodies and providing guidance to the subsidiary bodies and the secretariat. COPs also contribute to the development of new substantive obligations by the parties by amending an MEA or by adopting new protocols. Another important function of a COP is its role in ensuring implementation of and compliance with MEAs.

9.6 The North-South Debate

The Stockholm Conference marked the beginning of the North-South divide on environmental protection and development. The South was skeptical of the conservationist approach of industrialized nations mainly because of its implications for their economic development. At the same time, the North argued in favor of protection and conservation of the environment neglecting the social and economic needs of developing countries.

The North-South divide became very clear during the Rio Conference. Developing countries argued for more distributive justice and developed countries insisted on conservation and better use of natural resources. The Forest Principles adopted at the

Rio Conference is an example of the North-South divide on environmental issues. Developing countries strongly resisted a legally binding regime on forests although developed countries pushed for a legally binding agreement.

The Rio Conference attributed historical responsibility to industrialized countries for environmental degradation. While industrialized countries sought progress on climate change, biodiversity, forest loss and fisheries issues, the developing countries pushed for market access, trade, technology transfer, development assistance and capacity building. At the Rio Conference, developing countries managed to include the development agenda as part of the discourse.

Thus, the Rio Declaration represents a delicate balance between the interests of developing and industrialized countries. This balance is reflected in two sets of key principles. They are, on the one hand, the precautionary approach and the polluter-pays principle and, on the other hand, the right to development, poverty alleviation and the recognition of common but differentiated responsibilities.

The North-South debate could also be seen in the fact that developing countries made their acceptance of environmental obligations contingent upon the provision of financial assistance, and at the same time developed countries argued for effective institutions to ensure compliance. This scenario led to two developments – financial mechanism and compliance mechanism.

The North-South debate and the consequent impasse in environment negotiations resulted in finding a via media to achieve consensus between the North and the South by coining the terms 'environment' and 'development' together. It led to a paradigm shift from environmental law to the law of sustainable development. However, the concept of sustainable development remained ambiguous and susceptible to different uses by different actors.

Summary

International environmental law has expanded dramatically both in quantitative and qualitative terms over the last few decades. While it originated with a limited focus on state responsibility for transboundary harm and protection of a limited number of species, international environmental law has been transformed into a key component of international law addressing not just environmental protection but also various other related aspects such as poverty eradication and trade. While the development of

international environmental law has brought about positive changes in controlling environmental degradation in many areas (e.g. protection of the ozone layer), it proved to be inadequate and ineffective in many other areas (e.g. climate change). In some cases, old environmental problems have worsened and new environmental threats and challenges have emerged.

References

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Unit 10: International Environmental Laws in Practice

Unit Structure

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Summary

10.0 Objectives

After reading this unit you will be able to know about:

- General introduction of the Basel Convention
- Understanding the provisions, importance and impact of the Basel Convention
- About the CITES
- About the Ramsar Convention

10.1 Introduction

The advancement of technology and its increased usage has affected the environment and has also created an adverse effect on the natural resource base of civilizations controlling the entire cycle of raw materials exploration and extraction, transformation into products, energy consumption, waste generation and the use of products by consumers. Awakening environmental awareness and corresponding tightening of environmental regulations in the industrialized world in the 1970s and 1980s led to increasing public resistance to the disposal of hazardous wastes – in accordance with

what became known as the NIMBY (Not in My Back Yard) syndrome – and to an escalation of disposal costs. This in turn led some operators to seek cheap disposal options for hazardous wastes in Eastern Europe and the developing world, where environmental awareness was much less developed and regulations and enforcement mechanisms were lacking. It was against this background that the Basel Convention was negotiated in the late 1980s, and its thrust at the time of its adoption was to combat the “toxic trade”, as it was termed. India ratified it on 24th June 1992 and it came into force in India on 22nd September 1992. It has 170 member countries (Parties) and it aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movements and disposal of hazardous and other wastes. The Conference of the Parties (known as the COP), of which all the States that are party to the Convention are members, is the primary organ of the Convention. The Conference of the Parties develops the policies that guide for the implementation of the Convention, also the COP can adopt amendments to the Convention, as well as new instruments, such as Protocols, if it considers that these would assist in the achievement of the goals of the Convention. The COP meets at least once every two years, and seeks to reach its decisions by consensus.

10.2 Aims and Objectives:

The aims and objectives of the Basel Convention are as follows:

1. To protect human health and environment against adverse effects of Hazardous wastes.
2. Reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, at the places of disposal of wastes.
3. Helping developing countries with the environmentally sound management of the hazardous and other waste they generate.
4. The restriction on the transboundary movement of hazardous wastes except where it is perceived to be in accordance with the principles of environmentally sound management; and
5. A regulatory system applying to cases where transboundary movements are permissible.

HISTORICAL BACKDROP

The management of hazardous wastes was included as one of the three priority areas in United Nations Environment Programme's First Montevideo Programme in 1981

The Basel Negotiation Process (1987-1989)

The Cairo guidelines were approved by the governing council of UNEP in June, 1987 to assist the governments in development and implementation of their national policies on hazardous wastes

The Ad Hoc Working Group of Legal and Technical experts with a Mandate to Prepare a Global Convention on the Control of Transboundary Movements of Hazardous Wastes (hereinafter referred to as "the Working Group") began its deliberations at an organizational meeting in October 1987 and held a total of five negotiation sessions between February 1988 and March 1989 under the orders from the Governing Council of UNEP

The Conference of Plenipotentiaries

The Conference of Plenipotentiaries on the Global Convention on the Control of Transboundary Movements of Hazardous Wastes, convened at the invitation of the Swiss Government from 20 to 22 March 1989 in Basel, and in which 116 States were represented, considered the final draft of the Convention submitted to it by the Working Group.

The Basel Convention was adopted unanimously by the Conference on 22 March, 1989. One hundred and five States and the European Economic Community (EEC) signed the Final Act of the Basel Conference. On 22 March 1990, when the Basel Convention was closed for signature in accordance with its article 21, fifty-three States and the EEC had signed it.

IMPORTANT PROVISIONS

Scope of the Convention (Article 1)

- Hazardous Wastes are those wastes that belong to any category in Annexure I, unless they do not possess the characteristics as mentioned in Annexure II
- Wastes that are not covered under the above provision but are defined as or considered to be hazardous waste by the domestic Legislation of the Party of export, import or transit
- Other wastes that are contained in Annexure II

General Obligations (Article 4)

- The Parties shall prohibit the export and import of Hazardous Wastes and other wastes and will inform the other parties of their decision
- Each Party shall take measures to ensure the generation of hazardous and other wastes is reduced to the minimum, ensure the availability of adequate disposal facility, Ensure that the persons involved in the management of hazardous wastes and other wastes take steps to prevent pollution, to ensure the reduction of transboundary movement of hazardous and other wastes and cooperate in activities with other parties and interested organizations on the issue of transboundary movement of hazardous and other wastes and their disposal.
- Each party to consider illegal traffic in hazardous wastes as criminal

Transboundary Movement between Boundaries (Article 6)

- The state of export shall notify the competent authority of the state any proposed transboundary movement of hazardous waste
- The state of Import shall inform the notifier in writing consenting or denying the permission. No such movement will commence till the notifier has received a written consent and a confirmation of the existing contract

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|---|---|
| Illegal Traffic (Article 9) | <ul style="list-style-type: none"> • Illegal Traffic is any transboundary movement of hazardous waste without notification pursuant to provisions of this convention to all the states or a particular state concerned, if consent obtained through falsification, misrepresentation or fraud, or such movement that results in deliberate disposal of hazardous waste |
| International Cooperation (Article 10) | <ul style="list-style-type: none"> • Cooperate with each other in order to improve and achieve environmentally sound management of hazardous and other wastes • Parties to make available information on bilateral or multilateral basis, cooperating the effects of management of hazardous waste on human health and environment, to regulate policies in the implementation and development of environmentally sound technologies, to develop technological sound guidelines, encourage to promote public awareness and sound hazardous management system |
| Conference of Parties (Article 15) | <ul style="list-style-type: none"> • A Conference of parties is established having its first meeting in one year after its formation and thereafter ordinary meetings at regular intervals. It shall by consensus agree upon the rule of procedure • It shall keep under continuous review evaluation effective implementation of the Convention, promote harmonization of policies, consider and adopt amendments in the Convention, consider and undertake any additional action required for the achievement of the purpose of the convention • It shall undertake 3 years after the entry into force of this convention, and at least 6 year thereafter, an evaluation of its effectiveness and if necessary the imposition of complete or partial ban on transboundary movement |

10.3 What is Environmentally Sound Management?

The Environmentally Sound Management is a broad policy concept without a clear universal definition at the current time. However, provisions pertaining to ESM as it applies to hazardous wastes within the Basel and Stockholm conventions, and also the Organization for Economic Co-operation and Development (OECD), provide international direction that is also supportive of ESM efforts under way in various countries and among industrial sectors.

10. 3.1 Provision on ESM under the Basel Convention

- (i) In paragraph 8 of Article 2, the Basel Convention defines Environmentally Sound Management of hazardous wastes or other wastes as “taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environment against adverse effects which may result from such wastes”.
- (ii) In paragraph 2 (b) of Article 4, the Convention requires each party to take the appropriate measures to “ensure the availability of adequate disposal facilities for the environmentally sound management of hazardous or other wastes, that shall be located, to the extent possible, within it, whatever the place of their

disposal”, while in paragraph 2 (c) it requires each party to, “ensure that persons involved in the management of hazardous wastes or other wastes within it take such steps as are necessary to prevent pollution due to hazardous wastes and other wastes arising from such management and, if such pollution occurs, to minimize the consequences thereof for human health and the environment”.

(iii) In paragraph 8 of Article 4, the Convention requires that “hazardous wastes or other wastes, to be exported, are managed in an environmentally sound manner in the State of import or elsewhere. Technical guidelines for the environmentally sound management of wastes subject to this Convention shall be decided by the Parties at their first meeting”. The present guidelines are intended to give a more precise definition of ESM in the context of co-processing hazardous wastes in cement kilns, including appropriate treatment and disposal methods for these waste streams.

Several key principles were articulated in the 1994 framework document on the preparation of technical guidelines for the environmentally sound management of wastes subject to the Basel Convention.

It recommends a number of legal, institutional and technical conditions (ESM criteria) such as:

- A regulatory and enforcement infrastructure to ensure compliance with applicable regulations;
- Sites or facilities are authorized and are of an adequate standard of technology and pollution control to deal with hazardous wastes in the way proposed, in particular ,taking into account the level of technology and pollution control in the exporting country;
- Operators of sites or facilities at which hazardous wastes are managed are required, as appropriate, to monitor the effects of those activities;
- Appropriate action is taken in cases where monitoring gives indications that the management of hazardous wastes has resulted in unacceptable releases;

- People involved in the management of hazardous wastes are capable and adequately trained in their capacity.

The 1999 Basel Declaration on Environmentally Sound Management, adopted by the Conference of the Parties to the Basel Convention at its fifth meeting, calls upon the parties to enhance and strengthen their efforts and cooperation to achieve ESM through prevention, minimization, recycling, recovery and disposal of hazardous and other wastes subject to the Convention, taking into account social, technological and economic concerns; and through further reduction of transboundary movements of hazardous and other wastes subject to the Convention.

10.4 The “Blue Lady” Issue

One of the major instances of Basel convention could be found in the Issue of “Blue Lady”. For over a year, a ship “Blue Lady” containing toxic wastes has idled in a Gujrat port while legal wrangling continued over responsibility for its break up and final disposal . In September 2007, the Indian Supreme court heard overwhelming evidence, and laid down following guidelines:

- (i) The SC empowered the government to send back any contaminated ship that comes to India for breaking at Alang or any other ship-breaking yard in the country. The court has ordered that the government formulate a comprehensive code and immediately incorporate these recommendations until the laws are modified and aligned with the court orders.
- (ii) The continuation and expansion of Alang and other ship-breaking yards across the country shall be permitted, subject to the compliance to these directions by the ship- breakers. The order leaves little space for the authorities to allow ship- breaking even if ship owners do not provide details of contaminants on board.
- (iii) The court has reiterated that India should participate in relevant international conventions with the clear mandate for decontamination of ships for hazardous substances such as asbestos, waste oil, and PCBS prior to export to India for breaking.

- (iv) Until further orders, the court has asked the state pollution control boards, customs department, the National Institute of Occupational Health and Atomic Energy Regulatory Board to oversee the entire arrangement at the shipyards.

It may not always be possible to eliminate waste entirely, some processes will inevitably result in hazardous by-products, but reducing waste drastically is good economic and environmental sense which every state should possess.

10.5 How the Basel Convention works-

First, the Basel Convention regulates the transboundary movements of hazardous and other wastes applying the "Prior Informed Consent" procedure (shipments made without consent are illegal). Shipments to and from non-Parties are illegal unless there is a special agreement. Each Party is required to introduce appropriate national or domestic legislation to prevent and punish illegal traffic in hazardous and other wastes as it is a criminal offence.

Second, the Convention obliges its Parties to ensure that hazardous and other wastes are managed and disposed of in an environmentally sound manner (ESM). To this end, Parties are expected to minimize the quantities that are moved across borders, to treat and dispose of wastes as close as possible to their place of generation and to prevent or minimize the generation of wastes at source. Strong controls have to be applied from the moment of generation of a hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal.

Additional measures to further enhance the effectiveness of Basel Convention are:

- (i) The Convention cooperates with Interpol over illegal traffic. This trade is increasing, as it can yield big profits – at the cost of irreparably damaging the environment – and it tends to flow from developed to developing countries. But nobody knows exactly how big the problem is; though many cases of illegal traffic have been discovered, they are only a small proportion of those incidents that actually occur. There must be cooperation between countries to build up the capacity to tackle illegal traffic. United Nations regional commissions, and other regional bodies or conventions and protocols, should take an effective part in monitoring and preventing this. It is also important that customs officers

and port authorities are adequately trained and able to take full control of the hazardous wastes being moved across frontiers.

- (ii) Parties are to cooperate in helping developing countries minimize the generation of hazardous wastes and their movement across frontiers. Measures can include ensuring that adequate disposal facilities are available, that managers are able to prevent pollution, and that, if pollution occurs, the consequences for human health and the environment can be kept to a minimum.
- (iii) Thus, the Basel Convention lacks effective measures for enforcement, for ensuring compliance, for sanctioning or for assigning liabilities. However, the Convention works actively with governments and private entities in the form of partnerships to minimize trade in waste. Non-state actors have played active role in moving negotiations forward. The Convention has also invested heavily in generating awareness on the problem.

10.6 CITES

Trading in wildlife is one of the major reasons for the rapid extinction of many wildlife species. The annual international wildlife trade is estimated to be several billions of dollars and includes hundreds of millions of plants and animals.

The issue of illegal trade in wildlife has been a key focus of the international community at least since the 1960s and the process culminated in the adoption of the Convention on International Trade in Endangered Species, 1973 (CITES) which came into force on 1 July 1975. India is a signatory to CITES since 1976 and therefore, legally obliged to take all measures to control international trade in wildlife.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between governments that aims to ensure that international trade in specimens of wild animals and plants should not threaten their survival. The international trade is regulated by providing permits and certificates for import and export issued only when certain conditions are met. CITES was conceptualized in 1963 at a meeting of the (IUCN) International Union for Conservation of Nature.

- It came into force in 1975 and consists of 183 member-countries till date that abide by CITES regulations by implementing legislation within their own borders to enforce those regulations.
- Located in Geneva, Switzerland, the CITES is administered by the United Nations under its UNEP (United Nations Environment Programme) Wing.
- The Convention of Parties to CITES is the supreme decision-making body of the Convention and comprises all its Parties.
- The last CoP (17th) was held at Johannesburg (South Africa), in 2016. India hosted CoP (3rd) in 1981.
- Although CITES is legally binding on the Parties, it does not take the place of national laws.
- Rather, it provides a framework to be respected by each Party, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

Moreover, a lucrative foreign market for wildlife and articles made from wildlife is a major reason for illegal poaching and killing of wildlife in India. This situation necessitates strict legal measures to prevent hunting of wildlife within India as well as measures to prevent international transportation of wildlife.

WLPA does not permit trade in wildlife. The 1986 amendment prohibited trade in wildlife, wildlife articles and trophies within the country. The scope of prohibition was expanded through the 1991 amendment which went one step ahead and prohibited the import of ivory and ivory articles. The Act also prohibits, under section 17A, the collection or trade in specified plants (whether alive or dead or part or derivative), i.e., those listed in Schedule VI of the Act, from any forest land and any area specified by notification by the Central Government. Trade in scheduled animals/animal articles, i.e., animals/animal articles covered under Schedule I and Part II of Schedule II which also include some invertebrates such as insects, corals, molluscs and sea cucumber, are prohibited under the Act.

10.7 Ramsar Convention

The Convention on Wetlands, called Ramsar Convention, is the intergovernmental treaty that provides the framework for the conservation and “wise use¹” of wetlands and their resources. At the international level, the Ramsar Convention represents an important component of the legal framework although it does not cover all types of wetlands. Provisions of other international agreements are also applicable to wetlands. The convention was adopted in the Iranian city of Ramsar in 1971 and it came into force in 1975. Since then, almost 90% of UN Members states, from all over the world’s geographic regions, have acceded to become “Contracting Parties²”.

The Convention on Wetlands is an intergovernmental treaty adopted on 2 February 1971 in the Iranian city of Ramsar, on the southern shore of the Caspian Sea. Thus, though nowadays the name of the Convention is usually written “Convention on Wetlands (Ramsar, Iran, 1971)”, it has come to be known popularly as the “Ramsar Convention”. Ramsar is the first of the modern global intergovernmental treaties on the conservation and sustainable use of natural resources, but, compared with more recent ones, its provisions are relatively straightforward and general. The official name of the treaty, The Convention on Wetlands of International Importance especially as Waterfowl Habitat, reflects the original emphasis upon the conservation and wise use of wetlands primarily as habitat for water birds.

In order to know further about the Ramsar convention it is necessary to define the “Wetlands.” Wetland means where water is near to the surface of the land. Where water is shallow is also a place of wetland. Wetlands are those areas where the water is the primary factor in controlling the life of plants and animal life”.

The Ramsar Convention takes a broad approach in determining the wetlands which come under its mandate. Under the text of the Convention (Article 1.1), wetlands are defined as:

- a) “Areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters”.

- b) In addition, for the purpose of protecting coherent sites, the Article 2.1 provides that wetlands to be included in the Ramsar List of internationally important wetlands: “may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six meters at low tide lying within the wetlands”.

It means that the definition of the wetland may also include the riparian and coastal zones which are adjacent to it. It has a wider scope and it can also include the water deeper than six meters in case it is marine water at low tide lying within the wetlands. It is important to mention here that lakes and rivers are understood to be covered by the Ramsar definition of wetlands in their entirety, regardless of their depth. There are five major types of wetlands which are recognized. As Five major wetland types are generally recognized:

- Marine (coastal wetlands including coastal lagoons, rocky shores, and coral reefs);
- Estuarine (including deltas, tidal marshes, and mangrove swamps);
- Lacustrine (wetlands associated with lakes);
- Riverine (wetlands along rivers and streams); and
- Palustrine (meaning “marshy” – marshes, swamps and bogs).

In addition, there are human-made wetlands such as fish and shrimp ponds, farm ponds, irrigated agricultural land, salt pans, reservoirs, gravel pits, sewage farms and canals. The Ramsar Convention has adopted a Ramsar Classification of Wetland Type includes 42 types, grouped into three categories: Marine and Coastal Wetlands, Inland Wetlands, and Human-made Wetlands. According to the text of the Convention, marine wetlands are considered to be wetlands up to a depth of six meters at low tide (the figure is thought to come from the maximum depth to which sea ducks can dive whilst feeding), but the treaty also provides for waters deeper than six meters, as well as islands, to be included within the boundaries of protected wetlands. It is also worth emphasizing that lakes and rivers are understood to be covered by the Ramsar definition of wetlands in their entirety, regardless of their depth.

10.8 Why there is a Need to Preserve Wetland?

Wetlands are among the world's most productive environments. They are cradles of biological diversity, providing the water and primary productivity upon which countless species of plants and animals depend for survival. They support high concentrations of birds, mammals, reptiles, amphibians, fish and invertebrate species. Wetlands are also important storehouses of plant genetic material. Rice, for example, which is a common wetland plant, is the staple diet of more than half of humanity. So there is a need to preserve wetland.

10.9 Pillars of the Convention

The Ramsar Strategic Plan and the “three pillars” of the Convention are mentioned in the third Strategic Plan, Contracting Parties seek to deliver their commitments to wetland conservation and wiseuse through “three pillars” of action. These are:

- a) Working towards the “wise use” of their wetlands through a wide range of actions and processes contributing to human well-being through sustainable wetlands, water allocation, and river basin management, etc.⁴
- b) Devoting particular attention to the further identification, designation and management of a comprehensive suite of sites for the List of Wetlands of International Importance.
- c) Cooperating internationally in the delivery of wetland conservation and wise use, through the management of transboundary water resources and wetlands and shared wetland species, collaboration with other conventions and international organizations, sharing of information and expertise, and increasing the flow of financial resources and relevant technologies to less-developed countries.

10.10 How Does Ramsar Convention Works

The implementation of the Ramsar Convention is a continuing partnership between the Contracting Parties, the Standing Committee, and the Convention Secretariat, with the advice of the subsidiary expert body, the Scientific and Technical Review Panel (STRP), and the support of the International Organization Partners (IOPs).

Every three years, the representatives of the Contracting Parties meet as the Conference of the Contracting Parties, the policy-making organ of the Convention which adopts decisions (Resolutions and Recommendations) to administer the work of the Convention and improve the way in which the Parties are able to implement its objectives.

The Framework for Implementation of the Ramsar Convention, first adopted at the 1984 Conference of the Parties set out both the long-term commitments and the priorities for the attention of the Contracting Parties to the Convention – subsequent meetings of the Conference have updated the Framework in light of decisions of the COP, and, within this framework, priority objectives have been agreed for the Parties, the Standing Committee, and the Secretariat for each coming triennium.

(A) The Conference of the Contracting Parties

The Conference of the Contracting Parties (COP) is the policy-making organ of the Convention. Government representatives from each of the Contracting Parties meet every three years to receive national reports on the preceding triennium, approve the work programme and budgetary arrangements for the next three years, and consider guidance for the Parties on a range of ongoing and emerging environmental issues.

(B) Other Participants in the Conference

Representatives of non-member States, intergovernmental institutions, and national and international non-governmental organizations (NGOs) may participate in these meetings as non-voting observers. There is a procedure stipulated in the treaty and the “Rules of Procedure” for voting by the Parties, but in fact there has not yet been a vote on any substantive decision, and all decisions have in the end been made by consensus.

The programme of each meeting of the COP includes a number of opportunities for presentations and discussions of ongoing and emerging issues of importance in the field of wetland conservation, including further interpretation and development of key Convention concepts and guidance for the Parties on key areas of implementation. These issues are considered in the plenary sessions, which normally leads to the adoption of Resolutions and Recommendations. Ramsar COPs have gained the

reputation of being highly effective events, allowing an active involvement and participation of the non-governmental and academic communities.

(C) Publication of the Proceedings

The Proceedings of each meeting of the Conference of the Contracting Parties are published subsequently, in the Convention's three official working languages (English, French, and Spanish), on CD-ROM by the Secretariat. Normally, the Proceedings contain:

- A Conference Report on the plenary sessions;
- The Resolutions and Recommendations adopted by the Conference;
- Lists of the participants;
- The National Reports submitted by the Parties; and
- Other documentation provided to the COP for consideration or information.

The Proceedings of all of the meetings of the Conference of the Parties have also been published on the Ramsar website, with additional materials.

(D) The Standing Committee

The Standing Committee of the Ramsar Convention is the intersessional executive body which represents the COP between its triennial meetings, within the framework of the decisions made by the COP. The Contracting Parties that are members of the SC are elected by each meeting of the COP to serve for the three years until the next one. The Contracting Parties that have accepted to be elected as Regional Representatives on the Standing Committee shall have the following tasks:

1. To designate their delegates to the Standing Committee taking into account their significant responsibilities as Regional Representatives and to make every effort that their delegates or their substitutes attend all meetings of the Committee.
2. When there is more than one Regional Representative in a regional group, to maintain regular contacts and consultations with the other regional representative(s).

3. To maintain regular contacts and consultations with the Contracting Parties in their regional group, and to use the opportunities of travel within their regions and of attending regional or international meetings to consult about issues related to the Convention and to promote its objectives. To this effect, when there is more than one regional representative, they will agree among themselves which Contracting Parties will be the responsibility of each regional representative.
4. To canvass the opinions of the Contracting Parties in their regional group before meetings of the Standing Committee.
5. To advise the Secretariat in setting the agenda of regional meetings.
6. To assume additional responsibilities by serving as members of the subgroups established by the Standing Committee.
7. To provide advice as requested by the Chairperson and/or the chairs of subgroups and/or the Secretariat of the Convention.
8. In the regions concerned, to make deliberate efforts to encourage other countries to join the Convention.

The Standing Committee normally meets once each year, traditionally at the offices of the Secretariat in Switzerland. There are presently 16 regional and two ex officio members of the Standing Committee, chosen on a proportional basis from the Ramsar regions.

(E) The Secretariat

The Ramsar Convention Secretariat carries out the day-to-day coordination of the Convention's activities. It is located in the headquarters facilities of IUCN-International Union for Conservation of Nature in Gland, Switzerland, and Secretariat staff are legally considered to be employees of IUCN.

(F) The Ramsar Convention Budget

The Conference of the Contracting Parties reviews the financial regulations of the Convention and adopts a core budget for the next triennium at each of its ordinary meetings. The Convention uses the Swiss franc as its working currency. Draft budgets are prepared by the Secretariat and submitted for endorsement to the Standing

Committee prior to ordinary meetings of the Conference. The core budget basically covers the following costs:

- Functioning of the Convention Secretariat
- Some of the costs of the meetings of the Standing Committee and STRP, including the cost of participation of members from less developed countries;
- A contribution to IUCN for costs incurred in hosting the Secretariat offices;
- A contribution to Wetlands International for the management of the Ramsar Sites Database and Ramsar Sites Information Service;
- Modest funding for the Convention's CEPA support activities; and
- A contribution to support regional initiatives under the Convention⁶.

(G) The Ramsar Regions

Regionalization is a significant factor in the operation of the Convention, in terms of the structure of the Standing Committee, the organization of Secretariat staff and duties, and the ways in which Contracting Parties cooperate through regional representation and meetings. This system was reviewed in 1999, so that now, for technical and administrative purposes, the Ramsar Convention has established six regions:

- Africa
- Asia
- Europe
- Neotropics (South and Central America and the Caribbean area)
- North America (Canada, Mexico, and the United States)
- Oceania

(H) Cooperation with other organizations

The Ramsar Convention, through the Secretariat and its other bodies, maintains close working links with other international, intergovernmental, and non-governmental organizations to achieve a strategic alliance for wetland conservation.

In Resolution, the Parties judged that International Water Management Institute meets the qualifications for Ramsar International Organization Partner status that were outlined in 1999 and endorsed the addition of that organization as the fifth official partner of the Convention. The five International Organization Partners are:

- Bird Life International (formerly ICBP)
- IUCN – International Union for Conservation of Nature
- International Water Management Institute (IWMI)
- Wetlands International (formerly IWRB, the Asian Wetlands Bureau, and Wetlands for the Americas)
- WWF

International The IOPs provide invaluable support for the work of the Convention at global, regional, national, and local levels, chiefly by providing expert technical advice, field level implementation assistance, and financial support, both from their headquarters units and from their national and regional offices and affiliates and from their expert networks.

The wise use of wetlands: Through this concept of “wise use”, which was pioneering when the Convention was drafted, the Convention continues to emphasize that human uses on a sustainable basis is entirely compatible with Ramsar principles and wetland conservation in general. The Ramsar wise use concept applies to all wetlands and water resources in a Contracting Party’s territory, not only to those sites designated as Wetlands of International Importance. Its application is crucial to ensuring that wetlands can continue fully to deliver their vital role in supporting maintenance of biological diversity and human well-being. As this term “wise use” gained currency within the Ramsar community and was used elsewhere for different purposes, the Conference of the Parties recognized the need for greater precision and adopted a definition at its 3rd meeting in Regina, Canada, in 1987. To assist the Parties in implementing the wise use concept, the Wise Use Working Group, established at Regina, developed Guidelines for the implementation of the wise use concept, which were adopted in 1990.

The pioneering ‘Wise Use Guidelines’ emphasized the importance for Contracting Parties to:

- Adopt national wetland policies, involving a review of their existing legislation and institutional arrangements to deal with wetland matters (either as separate

policy instruments or as part of national environmental action plans, national biodiversity strategies, or other national strategic planning).

- Develop programmes of wetland inventory, monitoring, research, training, education and public awareness.
- Take action at wetland sites, involving the development of integrated management plans covering every aspect of the wetlands and their relationships with their catchments.

(I) Establishment of national wetland policies

- a) **Institutional and organizational arrangements:** Since the 1st meeting of the Conference of the Contracting Parties (Cagliari, 1980), the Parties have recognized that National Wetland Policies are a key feature in the implementation of the wise use concept. To assist them in developing their Policies, the Conference of the Parties has adopted Guidelines for developing and implementing National Wetland Policies A Handbook which provides a broad-based multi-sectoral consultative process of policy development to resolve conflicting interests and share ownership in the Policy amongst all stakeholders.
- b) **Legislation:** The Contracting Parties has urged that they will ensure national laws to protect wetland in their respective country. The Guidelines for reviewing laws and institutions to promote the conservation and wise use of wetlands was adopted in the conference.

(J) Knowledge of wetlands and their values

To manage wetlands effectively it is necessary to have adequate knowledge of their functioning. Inventory, assessment, monitoring, research, and training activities help in this respect.

- a) **Inventory:** The Contracting Parties confirmed the importance of comprehensive national inventory as the vital basis for many activities necessary for achieving the wise use of wetlands, including policy development, identification and designation of Ramsar Sites, documentation of wetland losses, and identification of wetlands with potential for restoration.

- b) **Monitoring:** Monitoring is the process of measuring change in ecological character in any wetland over a period of time. It can be carried out at different levels of intensity, depending on available funding and/or technology. Monitoring methods include simple field observations, remote sensing, quantitative sampling techniques such as the gathering of wetland plant material, and, where changes in social values and uses are concerned, participatory observation.

(K) Action at particular wetland sites

Maintenance of the ecological functioning of a wetland requires an integrated, catchment approach to management, incorporating the different uses and activities that are compatible with sustainability. Such management must take an interdisciplinary approach drawing upon the principles of biology, economics, policy, and social sciences. Global concerns must also be considered, namely, for example, shared wetland systems, shared species, and global climate change. At the time of joining the Convention, each Contracting Party undertakes to designate at least one site for inclusion in the **List of Wetlands of International Importance** (the “Ramsar List”). The inclusion of a site in the Ramsar List confers upon it the prestige of international recognition and embodies the government’s commitment to take all steps necessary to ensure the maintenance of the ecological character of the site.

- a) **Criteria for Identifying Wetland:** “Wetlands should be selected for the List on account of their international significance in terms of ecology, botany, zoology, limnology or hydrology” and indicates that “in the first instance, wetlands of international importance to waterfowl at any season should be included”.
- b) **The Montreux Record:** The **Montreux Record** is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference. It is maintained as part of the Ramsar List. The Conference of the Parties has adopted working definitions of “ecological character” and “change in ecological character.”

- c) **Transboundary Species Conservation:** Article 5 of the Convention states that “Contracting Parties shall endeavor to coordinate present and future policies and regulations concerning the conservation of wetlands and their flora and fauna”. Many species of migratory birds follow flyways (migratory routes) along which are situated wetlands which they use as resting and feeding areas. Achieving the effective conservation of such species requires cooperation between States sharing wetland systems or situated along a flyway. The Secretariat works to facilitate such cooperation.
- d) **Reserves and Training:** The Convention provides that “each Contracting Party shall promote the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are included in the List or not, and provide adequately for their wardening”. The Convention states that “Contracting Parties shall promote the training of personnel competent in the fields of wetland research, management and wardening”. Trained personnel, particularly in the fields of management, education and administration, are essential for the effective conservation and wise use of wetlands and their resources.
- e) **Awareness through different programmes:** The Communication, Education, Participation, and Awareness through internet, through celebration of world wetland day on 2nd February every year. The awareness may also be created through the Ramsar publications and the material on technical reports on meeting which are available on internet.

(L) How States may Join Ramsar Convention

Any member of the United Nations or of one of the Specialized Agencies or of the International Atomic Energy Agency or Party to the Statute of the International Court of Justice may become a Party to this Convention. Unfortunately, supranational bodies, such as the European Commission, are thus not eligible to join the Convention, but may nevertheless develop bilateral working agreements with the Convention Secretariat.

(M) The cost of joining the Convention

At each ordinary meeting, the Conference of the Parties adopts a budget (in Swiss francs) for the next triennium. Contracting Parties contribute to this budget a percentage that is based upon the United Nations scale of assessments adopted for each year by the UN General Assembly, with the exception that the Conference of the Parties has established a minimum level of contributions at 1000 Swiss francs (ca. US\$ 1,080 or Euros 830 in January 2013) for all Parties to cover basic expenses of invoicing and administration.

Summary

Although there is no national law on wetlands in India, the Wetlands Rules, 2010 cover certain categories of wetlands. Further, in some states, there are laws at the state or local level for wetland protection and management.

In order to ensure there is no further degradation of wetlands, the Rules specify activities which are harmful to wetlands such as industrialization, construction, dumping of untreated waste, reclamation etc. and prohibit these activities in the wetlands. Other activities such as harvesting, dredging etc may be carried out in the wetlands but only with prior permission from the concerned authorities.

The judiciary has also played a role in wetland protection. In addition to the legal framework, wetland regulation is an important concern of the policy framework as well. However, there are a number of outstanding issues and the fact that several wetlands do not fall within the definition of the term under the existing laws, and that local communities are given a limited or no role in the process of protection and management, raise concerns about the future of wetlands.

References

EPG Pathshala Paper No: 13 Environmental Law and Policies, Module: 37 Basel Convention on the Control of Transboundary Movement of Hazardous Waste and Their Disposal

EPG Pathshala Paper No 13: Environmental Law and Policies Module: 31 Convention on Wetland of International Importance (Ramsar Convention), 1972

Unit 11: Indian Environmental Legislations

Unit Structure

11.0 Objectives

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11.7 Hazardous Wastes (Management and Handling) Rules, 1989

11.8 Bio-medical Waste (Management a Handling) Rules, 1998

11.9 Noise Pollution (Regulation) 2000

Summary

11.0 Objectives

After studying this unit you will be able to:

- To know about the Wildlife Protection Act, 1972 and the rules framed thereunder.
- To know about the Water (Prevention and Control of Pollution) Act, 1974 and the rules framed thereunder.
- To know about the provisions and working of Water (Prevention and Control of Pollution) Cess Act, 1977.
- To know about the provisions of the Environment (Protection) Act, 1986
- To know about the Hazardous Wastes (Management and Handling) Rules, 1989
- To know about the Bio-medical Waste (Management a Handling) Rules, 1998
- To know about the Noise Pollution (Regulation) 2000

11.1 Introduction

Over the last three decades, India has witnessed the evolution of a number of environmental rules and regulations towards the protection and improvement of the environment. Perhaps no other country in the world has as many environmental laws as we have in India. Most of these laws came into existence in the post1970s period and by and large driven by judicial activism and the role played by the Indian

environmental movements and organizations. This write-up is an attempt to understand the evolution of environmental laws and regulations in India. This write-up begins by discussing the environmental discourse in India and how the discourse influenced the evolution of environmental rules and regulations, and more importantly, the intervention of the Indian Judiciary in the protection and improvement of environment. The second section gives an overview of environmental laws and their objectives. The reasons for ineffective implementation of laws are discussed in the third section. The fourth section outlines the role of the Indian Judiciary and National Green Tribunal in environmental protection by highlighting selective judgments. Finally, the paper concludes by identifying the major challenges for environmental regulation in India and the possible ways to resolve them

11.2 The Wildlife Protection Act, 1972

Conservation of living natural resources – plants, animals, and microorganisms and the nonliving elements of the environment on which they depend is crucial for development and progress. Wildlife resources constitute a vital link in the survival of the human species, because every one of us depends on plants and animals for all vital components of our welfare. The whole environment runs in the form of a food chain and survival and dependence of all the species is vital and interdependent. Hon'ble Markandey Katju J, has also stated that:

“Preservation of wildlife is important for maintaining the ecological balance in the environment and sustaining the ecological chain. It must be understood that there is interlinking in nature”

In the present society, the challenge that the world faces is not the idea of conservation but can conservation be implemented in national interest and within the means available to each country. The general impression about the term “wildlife” is that it includes ferocious, terrestrial or aquatic animals living in jungle such as lions, tigers etc. But actually the term includes all living organisms i.e. all plants, animals and microorganisms living in their natural habitat in wild state other than the cultivated plants and domesticated animals. The Conservation of wildlife is of immense importance to mankind, the extinction of wildlife would ultimately lead to the extinction of the human species itself. The ecological balance of the nature is disrupted if any harm is caused to the wildlife.

❖ **Legislative History:** In India, the Wildlife laws have a long history.

- The earliest concern for wildlife could be traced to 3rd Century BC when King Ashoka enacted the law of preservation of wildlife and environment.
- Under the Indian Penal Code, 1860 the term “animal” is defined and it declares maiming and killing of animals as an offence punishable under various sections.
- The British Government passed the Elephants Preservation Act, 1879 which prohibited killing, injuring, capturing or any attempt of the same to elephants.
- The first direct codified law for wildlife protection was enacted by the British Government – The Wild Birds Protection Act, 1887 which prohibited possession or sale of any kind of specified wild birds.
- In 1912, the Wild Birds and Animal Protection Act was passed to fulfill the inadequacies of the Wild Birds Protection Act 1887.
- The Indian Forest Act, 1927, thereafter consolidated the law relating to forests and the transit of forest produce.
- The Forest (Conservation) Act, 1980 was enacted to further check deforestation.
- The Cruelty to Animals Act, 1960 and The Wildlife Protection act, 1972 were passed to protect, preserve and improve Wild Life.

The Wildlife (Protection) Act, 1972 was passed by the Parliament under Article 252 of the Constitution at the request of eleven states and was intended to provide a comprehensive National framework for wildlife protection and to adopt a conservation strategy for specified endangered species and provide for protection of all species in specified areas.

The Preamble of the Act Lays down, "An Act to provide for the protection of wild animals, birds and plants and for matters connected therewith or ancillary or incidental thereto with a view to ensuring the ecological and environmental security of the country."

The Act serves the Constitutional purpose mentioned under Article 48 A and Article 51 A(g) as it prohibits hunting of wild animals except in certain limited circumstances. The court has declared that the provisions of the wildlife Act are salutary and are necessary to be implemented to maintain ecological chain and balance.

❖ **Important Definitions (Section 2):** Section 2 of the Act deals with definitions .Some of the important definitions as they exist after the Amendment Act of 2002 are:

- “Animal” includes mammals, birds, reptiles, amphibians, fish, other chordates and invertebrates and also includes their young and eggs.
- “animal article” means an article made from any captive animal or wild animal, other than vermin, and includes an article or object in which the whole or any part of such animal has been used, and ivory imported into India and an article made therefrom.
- “Captive animal” means any animal, specified in Schedule I, Schedule II, Schedule III or Schedule IV, which is captured or kept or bred in captivity.
- “Forest officer” means the Forest officer appointed under clause (2) of section 2 of the Indian Forest Act, 1927 (16 of 1927) or under any other Act for the time being in force in a State “forest produce” shall have the same meaning as in sub-clause (b) of clause (4) of section 2 of the Indian Forest Act, 1927 (16 of 1927)
- “habitat” includes land, water or vegetation which is the natural home of any wild animal;
- “hunting”, with its grammatical variations and cognate expressions, includes
 - a) killing or poisoning of any wild animal or captive animal and every attempt to do so;
 - b) capturing, coursing, snaring, trapping, driving or baiting any wild or captive animal and every attempt to do so;
 - c) injuring or destroying or taking any part of the body of any such animal or, in the case of wild birds or reptiles, damaging the eggs of such birds or reptiles, or disturbing the eggs or nests of such birds or reptiles;
- “National Board” means the National Board for Wild Life constituted under section 5A
- “National Park” means an area declared, whether under section 35 or section 38, or deemed, under sub-section (3) of section 66, to be declared, as a National Park;

- “protected area” means a National Park, a sanctuary, a conservation reserve or a community reserve notified under sections 18, 35, 36A and 36C of the Act;
- “Reserve forest” means the forest declared to be reserved by the State Government under section 20 of the Indian Forest Act, 1927 (16 of 1927), or declared as such under any other State Act.
- “Sanctuary” means an area declared as a sanctuary by notification under the provisions of Chapter IV of this Act and shall also include a deemed sanctuary under sub-section (4) of section 66
- “Weapon” includes ammunition, bows and arrows, explosives, firearms, hooks, knives, nets, poison, snares and traps and any instrument or apparatus capable of anaesthetizing, decoying, destroying, injuring or killing an animal;
- “Wild animal” means any animal specified in Schedules I to IV and found wild in nature;
- “Wild life” includes any animal, aquatic or land vegetation which forms part of any habitat;

❖ **Authorities to be appointed under the Act (Section 3 and Section 4)**

- A Director of Wildlife Preservation and such other officers as necessary are appointed by Central government.
- A Chief Wildlife Warden, Wildlife Wardens, honorary wild life Wardens and such other officers as necessary are appointed by State Government.

❖ **Power to Delegate (Section 5)**

- The Director may, with the previous approval of the Central Government, by order in writing, delegate all or any of his powers and duties under this Act to any officer subordinate to him subject to such conditions, if any, as may be specified in the order.
- The Chief Wild Life Warden may, with the previous approval of the State Government by order in writing, delegate all or any of his powers and duties under this Act, except few to any officer subordinate to him subject to such conditions, if any, as may be specified in the order.
- Subject to any general or special direction given or condition imposed by the Director or the Chief Wild Life Warden, any person, authorized by the Director

or the Chief Wild Life Warden to exercise any powers, may exercise those powers in the same manner and to the same effect as if they had conferred on that person directly by this Act and not by way of delegation.

❖ **Constitution of the Board (Section 5 A):** Section 5 A of the Amendment Act of 2002 provides that the Central Government shall within three months for National Board and within a period of six months for State Boards from the date of commencement of the Amendment Act of 2002 constitute the National and State Board for Wild Life.

❖ **Functions of the National Board (Section 5 C)**

1. It shall be the duty of the National Board to promote the conservation and development of wild life and forests by such measures as it thinks fit.
2. Without prejudice to the generality of the foregoing provision, the measures referred to therein may provide for-
 - a) Framing policies and advising the Central Government and the State Governments on the ways and means of promoting wild life conservation and effectively controlling poaching and illegal trade of wild life and its products;
 - b) Making recommendations on the setting up of and management of national parks, sanctuaries and other protected areas and on matters relating to restriction of activities in those areas;
 - c) Carrying out or causing to be carried out impact assessment of various projects and activities on wild life or its habitat;
 - d) Reviewing from time to time, the progress in the field of wild life conservation in the country and suggesting measures for improvement thereto; and
 - e) Preparing and publishing a status report at least once in two years on wild life in the country.

❖ **Constitution of State Board for Wild Life (Section 6):** The State Government shall, within a period of six months from the date of commencement of the Wild Life (Protection) Amendment Act, 2002 constitute a State Board for Wild Life.

❖ **Duties of State Board for Wild Life (Section 8):** It shall be the duty of the State Board for Wild Life to advise the State Government

- In the selection and management of areas to be declared as protected areas;

- In formulation of the policy for protection and conservation of the wild life and specified plants;
- In any matter relating to the amendment of any Schedule;
- In relation to the measures to be taken for harmonizing the needs of the tribal and other dwellers of the forest with the protection and conservation of wild life; and]
- In any other matter connected with the protection of wild life which may be referred to it by the State Government.

❖ **Hunting of Wild Animals to be permitted in certain cases (Section 11):** The Chief Wildlife Warden may, if he/she is satisfied that any wild animal specified in Sch. 1 has become dangerous to human life or is so disabled or diseased as to be beyond recovery, by order in writing and stating the reasons therefore, permit any person to hunt such animal or cause animal to be hunted.

- a) Provided that no wild animal shall be ordered to be killed unless the Chief Wild Life Warden is satisfied that such animal cannot be captured, tranquilized or translocate: Provided further that no such captured animal shall be kept in captivity unless the Chief Wild Life Warden is satisfied that such animal cannot be rehabilitated in the wild and the reasons for the same are recorded in writing
- b) the Chief Wildlife Warden or the authorized officer may, if he is satisfied that any wild animal specified in Sch. II and Sch. III has become dangerous to human life or to property (including standing crops on any land) or is so disabled or diseased as to be beyond recovery, by order in writing and stating the reasons therefore, permit any person to hunt "such animal or group of animals in a specified area or cause such animal or group of animals in that specified area to be hunted

❖ **Protected Areas:** Chapter IV of the Act deals with protected areas such as Sanctuaries, National Parks and Closed Areas

- **Sanctuaries (Section 18):** The State Government may, by notification, declare its intention to constitute any area other than area comprised with any reserve forest or the territorial waters as a sanctuary if it considers that such area is of adequate ecological, faunal, floral, geomorphological, natural or

zoological significance, for the purpose of protecting, propagating or developing wildlife or its environment.

- According to **Section 18-B**, the state government shall appoint a Collector within 90 days of coming into force of the Wild Life (Protection) Amendment Act, 2002, or within thirty days of the issue of notification under section 18, to inquire into and determine the existence, nature and extent of rights of any person in or over the land comprised within the limits of the sanctuary.
- **According to Section 26 A,**
 1. When
 - a) a notification has been issued under Sec 18 and the period for preferring claim has elapsed, and all claims, if any, made in relation to any land in an area intended to be declared as a sanctuary, have been disposed of by the State Government; or
 - b) any area comprised within any reserve forest or any part of the territorial waters, which is considered by the State Government to be of adequate ecological, faunal geomorphological, natural or zoological significance for the purpose of protecting, propagating or developing wildlife or its environment, is to be included in a sanctuary, the State Government shall issue a notification specifying the limits of the area which shall be comprised within the sanctuary and declare that the said area shall be sanctuary on and from such date as may be specified in the notification. Provided that where any part of the territorial waters is to be so included, prior concurrence of the Central Government shall be obtained by the State Government. Provided further that the limits of the area of the territorial waters to be included in the sanctuary shall be determined in consultation with the Chief Naval Hydrographer of the Central Government and after taking adequate measures to protect the occupational interests of the local fishermen.
 2. Notwithstanding anything contained in sub-section (1), the right of innocent passage of any vessel or boat through the territorial waters shall not be affected by the notification issued under sub-section (1). No alteration of the boundaries of a sanctuary shall be made by the State Government except on a recommendation of the National Board.

According to Section 27: No person other than,

- a public servant on duty
- a person who has been permitted by the Chief Wildlife Warden or the authorized officer to reside within the limits of the sanctuary
- a person who has any right over immovable property within the limits of the sanctuary
- a person passing through the sanctuary along a public highway
- the dependents of the person referred above shall enter or reside in the sanctuary, except under and in accordance with the conditions of a permit granted under Section 28 (Grant of a permit by the Chief Warden on Application)

❖ **Declaration of National Parks**

- Section 35 (1) states that: Whenever it appears to the State Government that an area, whether within a sanctuary or not, is, by reason of its ecological, faunal, floral, geomorphological, or zoological association or importance, needed to be constituted as a National Park for the purpose of protecting and propagating or developing wildlife therein or its environment, it may, by notification, declare its intention to constitute such area as a National Park.
- According to **Section 35(5) and (6)**, no alteration of the boundaries of a National Park by the State Government shall be made except on a recommendation of the National Board. No person shall destroy, exploit or remove any Wild Life including forest produce from a National Park or destroy or damage or divert the habitat of any wild animal by any act whatsoever or divert, stop or enhance the flow of water into or outside the National Park, except under and in accordance with a permit granted by the Chief Wild Life Warden, and no such permit shall be granted unless the State Government being satisfied in consultation with the National Board that such removal of wild life from the National Park or the change in the flow of water into or outside the National Park is necessary for the improvement and better management of wild life therein, authorizes the issue of such permit:

According to **Section 35 (8)**, the provisions of sections 27 and 28, shall, as far as may be, apply in relation to a National Park as they apply in relation to a sanctuary.

❖ **Declaration and management of a Conservation Reserve (section 36 A)**

Section 36-A, inserted by Amendment Act of 2002, provides that the State Government may, after consultation with the local communities, declare any area owned by the Government, particularly the area adjacent to National Parks and sanctuaries and those areas which link one protected area with another as a conservation reserve for protecting landscapes, seascapes, flora and fauna and their habitat. If the conservation reserve includes any land owned by the Central Government, then its prior concurrence is necessary before such declaration.

❖ **Declaration and Management of Community Reserve (Section 36 C)**

Section 36-C, inserted by Amendment Act of 2002, provides that the State Government may, where the community or an individual has volunteered to conserve wild life and its habitat, declare any private or community land as a community reserve for protecting fauna, flora and traditional or cultural conservation values and practices. However, no change in the land use pattern shall be made within the community reserve except in accordance with a resolution passed by the Management Committee and approved by the State Government.

❖ **Central Zoo Authority and Recognition of Zoos:** Chapter IV A was added in 1991 by way of amendment to the 1972, Act. It contains Sections 38-A to 38- J which deal with Central Zoo Authority and recognition of Zoos. Further Section 38 A provides that the Central Government shall constitute the Central Zoo Authority consisting of a Chairperson, Members not exceeding ten in number for a term of three years and a member secretary.

❖ **National Tiger Conservation Authority:** The Project Tiger was launched in the country on 14.04.1973 for conserving the endangered tiger. Initially, 9 Tiger Reserves were covered under the Project which has now increased to 28 reserves falling in 17 states. With the twin objective of tiger conservation and harmonizing the rights of the tribal people living in and around tiger reserves, the Act was amended in 2006 to provide for a statutory authority with a legal backing with well-defined functions, for conservation of tigers, known as the National Tiger Conservation Authority, which will be responsible for implementation of Tiger conservation plans prepared by the state governments keeping in mind the needs of local people.

❖ **Tiger and other Endangered Species Crime Control Bureau:** Chapter IV-C of the Act deals with Tiger and other Endangered Species Crime Control Bureau.

This chapter was also added by the Amendment Act of 2006. It deals with constitution, powers and functions of the Bureau.

- ❖ **Penalties:** Section 51 of the Act deals with penalties for contravening provisions of the Act.
- Any person who contravenes any provisions of this Act [except Chapter VA dealing with prohibition of trade or commerce in trophies, animal articles etc derived from certain animals and section 38J dealing with prohibition of teasing etc in zoo] or any rule or order made there under or **who commits a breach of any of the conditions of any license or permit** granted under this Act, shall be guilty of an offence against this Act, and shall, on conviction, be punishable with **imprisonment for a term which may extend to three years or with fine which may extend to twenty five thousand rupees or with both.**
 - Provided that where the **offence committed is in relation to any animal specified in Scheduled I or Part II of Sch.II**, or meat of any such animal, animal article, trophy, or uncured trophy derived from such animal or where offence relates to hunting in, a sanctuary or a National Park, such offence shall be punishable with imprisonment for a term which shall not be **less than three years but may extend to seven years and also with fine which shall not be less than ten thousand rupees.**
 - Provided further that in the case of a **second or subsequent offence** of the nature mentioned in this sub-section, the term of imprisonment shall not be **less than three years but may extend to seven years and also with fine which shall not be less than twenty five thousand rupees.**
 - Any person who contravenes any provisions of Chapter VA, (dealing with prohibition of trade or commerce in trophies, animal articles etc. derived from certain animals) shall be punishable with imprisonment for a term which shall not be less than three years but which may extend to seven years and also with fine which shall not be less than ten thousand rupees. Any person who contravenes the provisions of Section 38J (dealing with prohibition of teasing etc. in zoo) shall be punishable with imprisonment for a term which may extend to six months or with fine which may extend to two thousand rupees, or

with both. Provided that in case of second or subsequent offence the term of imprisonment may extend to one year or with fine may extend to five thousand rupees.

The Amendment Act of 2006 further provides that any person Any person, who commits an offence in relation to the core area of a tiger reserve or where the offence relate to hunting in the tiger reserve or altering the boundaries of the tiger reserve, such offence shall be punishable **on first conviction with imprisonment for a term which shall not be less than three years but may extend to seven years, and also with fine which shall not be less than fifty thousand rupees but may extend to two lakh rupees;** and in the event of a **second or subsequent conviction with imprisonment for a term of not less than seven years and also with fine which shall not be less than five lakh rupees but may extend to fifty lakh rupees.** If any offence is committed as a consequence of any abetment the person abetting the offence shall also be punished with the same punishment as provided for that offence.

❖ **Forfeiture of Property Derived from Illegal Hunting and Trade:** The Amendment Act of 2002 has added a new Chapter VI A consisting of Section 58 A to 58 Y which deals with various aspects of forfeiture of property derived from illegal hunting and trade.

11.3 The Water (Prevention and control of pollution) Act, 1974

Clean and pure water is essential for the survival of mankind on this planet earth. The Supreme Court of India has categorically declared that right to clean water is part of right to life guaranteed under Article 21ⁱ. Water Pollution amounts to violation of Right to Life enshrined in Article 21 of the Indian Constitution ⁱⁱ. Prior to Independence, there were scanty provisions in various statutes dealing with water and directly or indirectly with the Water pollution ⁱⁱⁱ. Indian Penal Code, Section 277, criminalized the act of corrupting or fouling the water of any public spring or reservoir ^{iv}. Therefore, the law makers in India were alive to the problem of water pollution even prior to the enactment of Indian Constitution.

Under the Constitution of India, 'Water' is a State subject ^v. The Constitution empowers the Union government to enter into treaties and sign conventions at the international

level and it empowered Parliament to make domestic laws to implement the same.^{vi} Part XI of the Constitution of India enabled the Parliament to make laws on matters in State list if two or more states pass resolution to that effect ^{vii}. Stockholm Declaration of 1972 had huge impact on Indian Republic and the law dealing with Water Pollution was the outcome of the same. It reflects the Indian Republic's commitment towards environmental protection. However, as stated earlier, 'Water' is state subject whereas Water (Prevention and Control of Pollution) Act, 1974 is a Union Legislation. Interestingly, Parliament drew legislative competence to enact Water (Prevention and Control of Pollution) Act, 1974 from the resolutions passed to this effect under Article 252 by twelve States ^{viii}.

Water (Prevention and Control of Pollution) Act, 1974 (hereinafter referred to as Water Act) was enacted in pursuance of resolutions passed by State legislatures under Article 252 of the Constitution of India. The Act was first in the series of laws dealing with pollution in India. The Act was passed with the following main objectives:

- to make provisions for prevention and control of Water Pollution
- for providing legal regime aimed at maintaining or restoring wholesomeness of water
- for establishment of Central and State Pollution Control Boards to regulate and curb water pollution

The Water Act contains 64 sections and is divided into eight chapter ^{vi}. Chapter I deals with the preliminary part i.e. date of enforcement, application of the Act and definitions. As stated earlier, originally the Act was passed in pursuance of resolutions passed by 12 State legislatures and it was made applicable in those States and in Union Territories immediately ^x. As of date, the Act is applicable throughout the territory of India. The Union government has enacted Water (Prevention and Control of Pollution) Rules, 1975 under the Water Act.

Section 2 of the Act defines the words and expressions used in the Act. Of these, it is necessary to examine the following for proper understanding of the subject.

The Act lays down a comprehensive definition of the word "Pollution" in the context of water pollution. The definition reads as under:

"Pollution means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms" ^{xi}.

Thus water pollution includes the following

- Contamination of Water;
- Alteration of Physical, Chemical or Biological properties of Water;
- Discharge of sewage, trade effluent or any other liquid, gaseous or solid substance into water

Which creates or is likely to create nuisance or which renders it unfit or less fit for the purpose for which it is to be used or which makes it harmful for human beings, animals, plants and aquatic organisms.

- "Sewage effluent" means affluent from any sewerage system or sewage disposal works and includes sullage from open drains ^{xii}.
- "Sewer" means any conduit pipe or channel, open or closed, carrying sewage or trade effluent ^{xiii}.
- "Trade effluent" includes any liquid, gaseous or solid substance which is discharged from any premises used for carrying on any Industry, operation or process, or treatment and disposal system, other than domestic sewage ^{xiv}.
- In relation to any factory or premises word "occupier" has been defined to mean the person who has the control over the affairs of the factory or premises. In relation to a substance, word "occupier" has been defined to mean a person in possession of the substance ^{xv}.

❖ Implementation Mechanism

Water Act provides for the establishment of Central Pollution Control Board at the National Level and for establishment of State Pollution Control Boards in States to regulate, prevent and control water pollution and lay down standards for emission in streams ^{xvi} and matters connected therewith. Chapter II and III of the Water Act lay

down the provisions for the establishment and Composition of Central, State and Joint Boards whereas Chapter IV provides the powers, duties and functions of Boards.

❖ **Central Pollution Control Board:** The Water Act cast a duty on the Union government to constitute Central Pollution Control Board (CPCB). The Board has the features of a body corporate with perpetual succession, common seal, capacity to sue and be sued, power to acquire, hold and dispose of property, capacity to contract etc ^{xvii}.

❖ **Functions and Duties of CPCB**

- The primary function of CPCB is to promote cleanliness of streams and wells across the country. This apart, the Board has been mandated to perform the following functions.
- CPCB is to advise the Union government regarding matters concerning prevention and control of water pollution
- CPCB is required to co-ordinate the activities of State Boards and to resolve any disputes arising among them.
- CPCB is to provide technical assistance and guidance to State Boards and to sponsor investigation and research relating to problems concerning water pollution
- To plan and organize training of persons associated or likely to associated with programmes for prevention, control and eradication of water pollution
- To organize programmes through mass media campaigns for prevention and control of water pollution
- If the State Boards defaults in complying with the directions of the CPCB and consequently there arises grave emergency, then in public interest, CPCB can discharge the functions of State Boards.
- To collect, compile and publish technical and statistical data relating to water pollution, measures for preventing the same.
- To prepare material regarding treatment and disposal of sewage and trade effluents and to disseminate information regarding the same.

- To lay down standards for a stream or well and to modify or annul the same in consultation with State government.
- To plan and organize a national programme for the prevention, control and abatement of water pollution and cause the same to be executed.
- To establish or recognize laboratories for analysis of samples of water, sewage or trade effluents.
- To perform such other functions as may be prescribed from time to time ^{xxi}.

Thus, CPCB is entrusted with multifarious tasks concerning prevention, control and mitigation of water pollution and to co-ordinate the functioning of State Boards.

❖ **State Pollution Control Boards:** Water Act casts important and multifarious functions and duties upon State Pollution Control Boards. These State Pollution Control Boards are required to be constituted by State Governments. Like its National counterpart, these Boards have the attributes of a Body Corporate, capacity to sue and be sued, capacity to hold, acquire and dispose of property, perpetual succession, and common seal etc. ^{xxii}

❖ **Functions and Duties of State Boards:** State Pollution Control Boards are entrusted with variety of functions mainly with the implementation of the provisions of the Water Act and rules framed thereunder. Section 17 of the Water Act lays down the functions of State Boards.

- i) State Boards are to advise the State governments regarding matters concerning prevention, control and abatement of water pollution
- ii) State boards are to chalk out detailed and comprehensive plans for prevention and control of pollution in streams and wells within the State and to secure their execution.
- iii) State Boards are required to collect the information pertaining to water pollution, prevention and control mechanism and to disseminate the same at all levels within the State.
- iv) State Boards are mandated to encourage, conduct and participate in research regarding water pollution, prevention and control.

- v) State Boards are to co-ordinate and collaborate with CPCB regarding training of personnel and to organize mass education programmes relating to water pollution, prevention and control.
- vi) One of the most important functions of State Boards is to inspect sewage and trade effluents being discharged in the State and to inspect the works plants established for the treatment, purification and disposal of the same. State Boards are also to review and reformulate the plans for the same.
- vii) Under the Water Act, the establishments discharging sewage and trade effluents are required to obtain requisite permission or consent before establishment. The State Boards are vested with powers to inspect those establishments and grant necessary sanction subject to terms and conditions for the achievement of the objects of the Water Act.
- viii) To collect, compile and publish technical and statistical data relating to water pollution, measures for preventing the same.
- ix) To prepare material regarding treatment and disposal of sewage and trade effluents and to disseminate information regarding the same.
- x) To lay down standards and norms for the quality of receiving water within the State and to modify or annul the same.
- xi) On the basis of quality of water, the Boards are required to classify the streams or wells and their suitability for different purposes.
- xii) State Boards are required to find out the economical and reliable methods for treatment of sewage and trade effluents keeping in view various factors like soil conditions, climate and flow characteristics of streams or wells.
- xiii) To advise the State governments regarding the location of industries which are likely to pollute streams or wells.
- xiv) State Boards are required to set standards for treatment of sewage and trade effluents to be discharged into a particular stream keeping in view the fair weather dilution available in that stream and also the tolerance limits of pollution permissible in the water of the stream.
- xv) The State Boards are required to pass necessary orders for prevention, control or abatement of discharge of waste into streams or wells. The State Boards are empowered to amend, vary or revoke these orders from time to time.

- xvi) The State Boards are also empowered to direct any concerned person to construct, modify, extend or adapt system for systems for disposal of sewage and trade effluents as may be necessary for the prevention and control of water pollution.
- xvii) To plan and organize a national programme for the prevention, control and abatement of water pollution and cause the same to be executed.
- xviii) To establish or recognize laboratories for analysis of samples of water, sewage or trade effluents.
- xix) To devise methods for utilization of sewage and suitable trade effluents in agriculture.
- xx) To devise methods for disposal of sewage and trade effluents on land keeping in view various factors and prevalent conditions.
- xxi) To lay down effluent standards to be complied with by persons while causing discharge of sewage or sullage or both and to lay down, modify or annul effluent standards for the sewage and trade effluents.
- xxii) To establish or recognize laboratories for analysis of samples of water, sewage or trade effluents.
- xxiii) To perform such other functions as may be prescribed from time to time ^{xxiv}.

Unlike CPCB whose main functions are either advisory in nature or to lay down the standards and norms, the functions of State Boards are wider and more in the nature of execution of national and state plans. The State Boards are required to regulate the discharge of waste, sewage, trade effluents in the stream and wells within the State.

It is worth mentioning here that the State Boards are required to be constituted for States only. So far as Union Territories are concerned, even though Union Territories with legislature, the CPCB is empowered to exercise all the functions of State Boards. However, the CPCB has been empowered to delegate these functions with respect to Union Territories to a person or body of persons as may be specified by Union government.

❖ **Joint Boards:** Water Act empowers two or more states to enter into agreement for constitution of Joint Boards to discharge the functions of State Boards ^{xxv}. Agreement for constitution of Joint Boards can be entered into between

- (i) Two or more adjoining states or

(ii) Union government in respect of one or more Union Territories on one side and one or more states adjoining such UTs on the other side.

❖ Agreement for constitution of Joint Boards to perform the functions of State Boards may be renewed from time to time. Such agreement may also contain the following:

(i) Provisions for division/apportionment of expenditure between participating governments.

(ii) Provisions for distribution of powers and functions between participating governments.

(iii) Provisions for consultation on general or particular matters between participating governments

(iv) Other incidental and ancillary matters.

❖ **Prevention and Control of Water Pollution:** Water Act contains elaborate provisions for prevention and control of Water Pollution in Chapter V of the Act containing sections 19 to 33B. An analysis given hereunder:

i) Water Act bars any person from establishing any industry, process or operation or any treatment of disposal system which is likely to discharge sewage or trade effluent into a stream or well. Any person desirous of establishing any such industry, process etc. is required to obtain previous consent of the State Board ^{xxix}. Similarly no person can make any new discharge of sewage or trade effluent into a well or stream without the previous consent of the State Board. Any industry, process etc. already established before the commencement of Water Act is also required to apply for permission within three months from the date of implementation of Water Act.

ii) The State Board before granting such consent has the power to impose such conditions as may be required for the achieving the purposes of the Act. The Consent is valid only for the period specified in the order. If the establishment, industry etc. does not fulfil the required criteria, the Board may also refuse the application. However, Board is required to record reasons why it has not granted consent for the establishment or continuance of any industry ^{xxx}.

- iii) Even if the establishment or industry has not filed any application, the Board is competent to impose such conditions as may be required for the purposes of Water Act.
- iv) If the conditions imposed by the Board are not complied with, the consent may be withdrawn by the Board. State Board has the power to review the consent or to withdraw the consent already granted ^{xxx}i.
- v) Water Act bars not only establishment or continuance of an industry or establishment which is likely to discharge sewage or trade effluents but it also bars any other person from discharging or permitting any other person to discharge any poisonous, obnoxious or polluting matter into a stream or well.
- vi) If person is not satisfied with the orders regarding grant of permission or refusal to grant permission for starting a new establishment or for the continuance of the existing establishment or if any person is aggrieved by an order withdrawing the consent, he may file an appeal within 30 days from the date of the Order before an appellate authority constituted by the State government. State government may also revise any such order passed by State Board. However, if appeal is pending or no appeal has been filed, State government shall not revise the order.
- vii) Any person, who is dissatisfied with the order passed by the appellate authority or order passed by State government in Revision, can file a further appeal before National Green Tribunal established under National Green Tribunal Act, 2010.
- viii) Water Act bars a person from knowingly putting into a stream or permitting any person to put or allow entry of any matter into a stream or well which is likely to impede proper flow of water and consequently likely to aggravate water pollution ^{xxx}ii. However, it does not bar construction of dams, bridges, building, dock, drain or sewer which any person has right to construct. Similarly, the natural deposits, sand or gravel which have flown from the stream can be put back into the stream.
- ix) State Board or any person authorized by the State Board has the power to enter and inspect any place for the purpose of ascertaining whether the provisions of the Water Act or the conditions imposed are complied with or not. The person so authorized has the power to inspect plants established and all records, registers, documents etc. for the purpose of finding out whether any offence has been committed under the Water Act. The person so authorized also have the power to

search and seize any material which he believes can be useful in evidence to prove the commission of offence under the Water Act ^{xxxiii}.

- x) State Board has the power to require any person discharging sewage or trade effluents into a stream or well to furnish information as to such discharge ^{xxxiv}.
- xi) State Board can ask for information regarding the abstraction of water from any person, establishment or industry abstracting substantial water from any stream or well ^{xxxv}.
- xii) State Board can direct any person who is in-charge of any industry, establishment etc. to furnish information regarding the construction or establishment of industry, disposal systems etc.
- xiii) State Board or any officer authorized by the Board can make surveys regarding the flow of streams, rainfall etc and their measurement and may establish gauges and other apparatus for the purpose.
- xiv) State Boards and Central Board can establish or recognize a laboratory for analysis of samples ^{xxxvi}.
- xv) State Government and Central Government can also establish or recognized laboratories for the purposes of analysis of water and sewage samples ^{xxxvii}.
- xvi) State Board or any officer authorized by the Board have the power to take samples of water from the streams or wells or the samples of any sewage or trade effluent being discharged into stream or well. The following procedure is required to be followed while taking samples ^{xxxviii}.
 - a) The officer is required so serve immediate notice upon the occupier or his agent stating the intention to take sample and to get it analyzed.
 - b) After taking sample, officer is required to divide the sample into two parts in the presence of occupier or his agent, if such a request is made by them.
 - c) Each part is to put in a container which is required to be marked and sealed and is also required to be signed by the person taking the sample as well as by the occupier or his agent.
 - d) One container is required to be sent to laboratory established or recognized by the appropriate Board (i.e. Central Board, if sample is taken from a UT and State Board, if sample is taken from a place other than UT).

- e) If the occupier or his agent make a request then the second container is required to be sent to Central Water Laboratory (If sample is taken from a place falling within UT) or to State Water Laboratory (if sample is taken from other places).
 - f) If no request is made by occupier or his agent for dividing the sample, then the sample is required to be put in one container and that container is required to be marked, sealed and signed by the person taking the sample and the same is required to be sent to laboratory established or recognized by the appropriate Board.
 - g) If the occupier or his agent, willfully absent themselves from the place, then the officer after serving the notice shall take the sample and after the sample being marked, sealed and signed by the officer, the same is required to be sent to Central or State Water Laboratory. The officer shall also inform the Government Analyst about the absence of occupier or his agent.
 - h) The concerned laboratory is required to send the report in triplicate to the Central or State Board, as the case may be. The Central or State Board is required to send one copy to the Occupier or his agent. One copy is required to be preserved for the Court and the last copy to be kept in record.
 - i) If sample was divided into two parts and the same were sent to laboratories recognized by appropriate Board and also to Central/State Water Laboratories and there is any inconsistency in the reports of the laboratories, the report of Central or State Water Laboratory shall prevail ^{xxxix}.
- xvii) Where it is noticed by the State Board that any poisonous, noxious or polluting matter is present in the waters of a stream or well due to discharge of the same or due to any accident or other unforeseen event, the State Board may initiate emergency measures and it may remove that matter from the stream or well or may remedy the situation in any other manner. The State Board can also issue orders restraining any person from discharging the polluting matter into the stream or well.

Despite the above provisions, water in all major rivers of India is polluted. Recently, Uttarakhand High Court in *Lalit Miglani v. State of Uttarakhand* ^{xl} expressed gross dissatisfaction over the functioning of Uttarakhand Environment Protection and Pollution Control Board in curtailing, preventing and remedying water pollution in River

Ganga. The High Court after going through the reports of Central and State Pollution Boards expressed dissatisfaction over the role of Central Pollution Control Board also and called for saving river Ganga. The High Court issued directions to the Central Board, State Board and the appropriate governments in this regard. High Court directed Uttarakhand Board to take action against 180 industries and to close down 44 industries. High Court also Union government to constitute Inter State Council to deal with the issue and it also directed Director, National Mission for Clean Ganga to sanction Rs. 266.09 for the purpose.

❖ Offences and Penalties

Chapter VII of Water Act deals with Penalties and Procedure. Water Act Criminalizes various acts and prescribes punishments for the same. An analysis of the offences and punishment prescribed for them is made hereunder.

- 1) As stated earlier, State Board has the power to ask for information from any person who is abstracting water from any stream or well in substantial quantities or from a person who is discharging sewage for trade effluent into any stream or well. The Board can also issue directions in this regard. If any person fails to comply with these directions he can be punished with imprisonment upto 3 months or with fine which can extend upto 10000 (Ten thousand) Rupee. If the default continues, then fine upto Rs. 5000 per day during which default continues can be imposed. Any person who fails to submit information to the State Board regarding construction, installation or operation of any establishment or of disposal system shall also be punished in the like manner ^{xli}.
- 2) Any person who commits the following defaults shall be punished with minimum punishment of one and half year which may extend upto six years and fine. If the failure continues, then additional fine upto 5000 per day can be imposed. If the failure to comply with orders continues for more than one year, then the minimum mandatory punishment shall be two years which may extent upto 7 years. ^{xlii}
 - a) failing to comply with any order issued by State Board when emergency measures initiated under section 32 prohibiting any person from discharging any poisonous, noxious or polluting matter into a stream or well;

- b) failing to comply with the orders of Court prohibiting that person from disposal of any matter into a stream or well which is causing or likely to cause pollution, he can also be punished in the manner pointed out in point number 2 above.
 - c) Violating the directions of Central or State Board. Central. State Boards have the power to issue any directions to any person, officer or authority including the closure of any industry, stoppage or regulation of electricity or water supply etc.
- 3) Following persons shall be punished with minimum mandatory punishment of one and half years extendable upto six years and with fine:
- a) Who knowingly causes or permits any person poisonous, noxious or polluting matter to enter into any stream or well shall be punished with minimum mandatory punishment of one and half year which may extend upto six year s and with fine ^{xliii}.
 - b) Who causes or permit any person to put anything into a stream which directly or in combination with other matters impedes the proper flow of water causing aggravation of pollution ^{xliv}.
- 4) Following persons shall be punished with minimum mandatory imprisonment of two years extendable upto six years and with fine.
- c) Who establishes any industry, operation or process or treatment or disposal system without the consent of the State Board or continues with the already existing establishment without applying for and obtaining the consent ^{xliv}.
- 5) Any person who again commits the offences mentioned in point number 3 and 4 after first conviction, shall be liable for enhanced punishment which shall not be less than two years but which may extend upto seven years and fine ^{xlvi}.
- 6) Following violations shall be punishable with imprisonment which may extend to three months or with fine which may extend upto ten thousand rupees or with both ^{xlvi}.
- a) Any person who obstructs the officers of the Board or persons acting under the orders or directions of the Board
 - b) Any person who damages the property or any work of the Board

- c) Any person, who destroys, damages, defaces, pulls or injures any notice, pillar, post affixed, inscribed or placed by or under the authority of the Board. Any person who fails to furnish the information required by any officer or person authorized by the Board.
 - d) Any person who fails to intimate the Board about the occurrence of any accident causing or likely to pollute a stream or a well.
 - e) Any person who willingly or knowingly furnishes false particulars or statements.
 - f) Any person who knowingly or willingly alters or interferes with any monitoring device.
- 7) Any person who commits any other violation for which no penalty is prescribed under the Act, shall be punished with imprisonment may extend upto three months or with fine which may extend upto 10000 (ten thousand) or with both. In case of continuing violation he may be punished with additional fine which may extend upto Rs. 5000 for every day during with failure continues ^{xlviii}.
- 8) If any of the offences are committed by Companies, in such a scenario, every person who at that time was in charge of the Company or was responsible for the conduct of the business of the company, along with the Company shall be deemed to have committed the offence. However, if such person proves that he has exercise due diligence and taken reasonable steps to prevent the commission of the offences and that the offences were committed without his knowledge, then he shall not be deemed to be guilty of the offences. If the offences are committed by a company and it is proved that the offence was committed with the consent or connivance or due to the neglect of director, manager, secretary or other officer of the Company, such person shall also be deemed to have committed the offence.
- 9) Offences shall be triable by Court of Metropolitan Magistrate or a Judicial Magistrate of First Class.

11. 4 The Water Cess Act, 1977

Water (Prevention and Control of Pollution) Cess Act, 1977 here in after referred to as Cess Act was enacted by Parliament to augment the resources of the Central and State Pollution Control Boards established under the Water (Prevention and Control of Pollution) Act by imposition of Cess on water usage by specified persons and

authorities. Cess Act is complementary to Water Act as it generates revenue for the Boards so that they can function smoothly and achieve the objectives of Water Act. Like Water Act, Cess Act is also enacted by Union legislature i.e. by Parliament. The Cess Act came into force on 01st April 1978. Cess Act is relatively small enactment having only seventeen sections. Need for levy of cess was felt as there were inadequate funding of State Pollution Control Boards by the State governments i. At the outset, it is essential to differentiate briefly 'tax' from 'cess'. Though both are levied by the government and are compulsory exaction by the government yet there is difference between the two. Whereas tax is levied for general public purpose, Cess is levied for a particular purpose. It is ascribed the same meaning as is ascribed to fee which is charged for providing a service and has a correlation with the serviced rendered. Cess is levied for a specific purpose like Swatch Bharat Cess, Education Cess, and Secondary Higher Education Cess etc. Cess Act is applicable in all the States and Union territories where Water Act, 1974 applies except the State of Jammu & Kashmir.ⁱⁱ As stated above, Cess Act is complementary to Water Act, 1974. As such, Cess Act provides that words and phrases used in Cess Act and not defined in Cess Act shall have same meanings as are ascribed to them under the Water Act, 1974.ⁱⁱⁱ

Act levies cess for the purposes of Pollution Boards on industries and local authorities only. Water cess is levied only on industries and the local authorities. Therefore, it is expedient to define these two expressions. Act gives inclusive definition of word 'Industry'. Act provides, 'Industry' includes any operation or process, or treatment and disposal system, which consumes water or gives rise to sewage effluent or trade effluent but does not include any hydel power unit.^{iv} Thus, the industry means and includes industries using water or discharging sewage or trade effluent.

'Local Authority' means a municipal corporation or a municipal council or cantonment board or any other body, entrusted with the duty of supplying of water.^v Thus the municipal bodies (known by whatever name) which are entrusted with the duty of supplying water are included in the term 'Local Authority'.

❖ **Levy of Cess:** Water Cess is levied on two groups i.e. Industries and Local authorities. Upto 2003 i.e. before the enactment and enforcement of Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003, cess was levied only on specified industries. These industries were specified in the First Schedule of

the Act. These industries included Ferrous metallurgical industry, non-ferrous metallurgical industry, mining industry, Ore-processing, petroleum, Petro-Chemical, Chemical, Ceramic, Cement, Textile, Paper, Fertilizer, Coad, Power, Processing of animal or vegetable products including processing of milk, meat, hides and skins, agricultural products and Engineering industries. 2003 Amendment Act made Cess Act applicable to all industries and therefore Schedule I was deleted from the Statute Book with effect from 06th May 2003.

Local authorities are liable to pay cess on consumption as well as supply of water. However, where local authority supplies water to an industry liable to pay cess then local authority is not liable to pay cess. Similarly, when one local authority supplies water to another local authority which is liable to pay cess, the first local authority is not liable to pay cess. Cess payable under the Act is linked with water consumed. Maximum rate for payment of Cess is prescribed in Schedule II, column 2 of the Act. Rate of Cess is to be fixed by the Central government subject to the maximum rate specified in appropriate columns of Second Schedule.

Where any industry or local authority violates section 25 of Water Act, then Cess is payable at the enhanced rates. In other words, if any person or local authority establishes any industry, operation or process or any treatment or disposal system which is likely to discharge sewage or trade effluent into any stream or well, it is required to obtain previous consent of the State Board under the Water Act, 1974.

Similarly, existing industries which were discharging sewage or trade effluent into stream or well were also required to obtain consent of the State Board. State Boards are competent to impose such terms and conditions as they deem fit. If any person carrying on any industry or a local authority commits violation of these provisions, it is required to pay cess not exceeding the rates specified in the third column of the table. Similarly, any person committing violation of norms set up under Environment (Protection) Act, 1986 is also liable to pay cess at the enhanced rates.

Schedule II

| Purpose for which water is consumed | Maximum Rate | Maximum rate when any industry or local authority fails to comply with Section 25 of Water Act |
|--|--------------------------|--|
| 1. Industrial cooling, spraying in mine pits or boiler feeds | Five paise per kiloliter | Ten paise per kiloliter |

| | | |
|---|-----------------------------|----------------------------|
| 2. Domestic purpose | Two paise per kiloliter | Three paise per kiloliter |
| 3. Processing whereby water gets polluted and the pollutants are – (a) easily biodegradable ; or (b) non-toxic; or (c) both non-toxic and easily biodegradable | Ten paise per kiloliter | Twenty paise per kiloliter |
| 4. Processing whereby water gets polluted and the pollutants are – (a) not easily biodegradable ; or (b) toxic; or (c) both toxic and not easily biodegradable | Fifteen paise per kiloliter | Thirty paise per kiloliter |

❖ Collection of Cess and Assessment Procedure

As stated earlier, levy of water cess is linked to consumption of water for different purposes. As such, it required to measure the water consumed/supplied by local authorities and water consumed by any person carrying on any industry. For this purpose, Cess Act prescribes that Meter for measuring water consumption of prescribed standards and norms shall be affixed at the entrance of water supply connections vi. Act further provides that it shall be presumed that the reading/measurement indicated by the meter is correct unless it is proved otherwise. Where any person fails to install meter of prescribed standard, then the Central government can cause such meter to be installed and the cost of meter together with installation cost shall be recovered from the person. Any officer of the State government authorized by that government is empowered under the Cess Act to enter into any premises for checking the correctness of meters affixed and also for discharging other functions under the Cess Act vii.

Persons liable to pay cess are required to furnish the return in Form I giving details of water consumed during the month. The return is required to be filed before 05th of next Calendar month.viii The assessing officer is required to make an assessment of Cess payable after checking the return and after making such enquiry as he deems fit. If return has not been furnished, then the assessing officer is required to make an assessment of water consumed after making such enquiry as he deems fit and pass an order determining the amount of cess payable by that person ix. The copy of the order shall be served on the person liable to pay cess. The assessment order shall

specify the date before which Cess shall be paid by the person liable to pay. The Cess is required to be paid to the State government. The Cess collected by the State government is required to be remitted to the Central government before 10th of every month.

Cess is payable by industries being carried on by government also. In *Union of India v. Rajasthan State Board for Prevention and Control of Water Pollution* ^x. Cess was levied on Rajasthan Atomic Power Corporation owned by Union. The levy of cess under section 6 was challenged by Atomic Power Corporation on the ground that it is a central government owned corporation and that it is regulated by Atomic Energy Act, 1962. The Atomic Power Corporation claimed that under Article 285 of the Indian Constitution, they are exempt from levy of taxation by state government. Article 285 exempts union property from state taxation. However, these contentions of Atomic Power Corporation were rejected by the Rajasthan High Court. Rajasthan High Court declared that it is assessable to Water Cess under the Cess Act, 1977. The Court ruled that Cess is not on the property of the Union but on use of water and discharge of the same. High Court held that Atomic Energy Act was enacted for development, control and use of atomic energy, whereas Water Cess Act was enacted for levy and collection of cess for augmenting the resources of Pollution Control Boards and therefore, there is no conflict and both the laws operate in different fields. The High Court also observed that Rajasthan Atomic Energy Corporation consumed huge quantity of water to push water past nuclear core for carrying heat elsewhere and for condenser cooling thereby resulting in increase in the temperature of water. The court ruled that such increase in temperature is alteration of physical properties of water and hence is covered under the definition of water pollution.

An incentive has been provided in the Cess Act for installation of plant for treatment of sewage or trade effluent. If any person liable to pay cess, installs such plant for treatment of sewage or trade effluent, then he shall be entitled to 25% rebate on the amount of cess payable by him.^{xi} Rule 6 of Water Cess Rules 1978 read with Schedule I appended to the rules specify the maximum quantity of water to be used by prescribed industries. If any person uses water in excess of the prescribed norms or violates the provisions of section 25 of Water Act or commits a violation of norms laid down in Environment (Protection) Act, 1986, he shall not be entitled to rebate. Rebate

is admissible from the expiry of fifteen days from the date of successful commissioning of the plant and it is admissible till the time, the plant functions successfully.^{xii}

Cess payable under the Act including any other amount due under the Act can be recovered as arrears of land revenue.^{xiii}

❖ **Fines and Penalties:** Cess Act prescribes that the person liable to pay cess is required to pay the same within the time specified in the assessment order. If any person fails to pay the cess within the time specified in the assessment order, he will be liable to pay the cess together with interest. Interest is chargeable at the rate of two percent per month.^{xiv} Fraction of a month is treated as equivalent to a month. This apart, the Act prescribes following penalties

- i) If the amount of cess due under the Act is not paid within the period specified in the order, then the assessing authority can impose penalty upto the amount of cess due. However, before any penalty is imposed upon any person, he is required to be provided reasonable opportunity of being heard.^{xv} The penalty can be imposed only when the assessing authority is satisfied that there was no sufficient or reasonable cause for not depositing the Cess. Interest, penalty and any other amount payable under the Act can be recovered as arrears of land revenue.^{xvi}
- ii) If any person liable to file return under the Cess Act knowingly furnishes a false return, he can be punished with imprisonment upto six months or with fine which can extend upto one thousand rupees or with both.
- iii) Similarly, if any person wilfully or intentionally evades payment of cess or makes an attempt to evade the payment of tax, he shall also be punished with imprisonment upto six month or with fine which can extend upto one thousand rupees or with both.
- iv) If any of the offences are committed by Companies, in such a scenario, every person who at that time was in charge of the Company or was responsible for the conduct of the business of the company, alongwith the Company shall be deemed to have committed the offence. However, if such person proves that he has exercise due diligence and taken reasonable steps to prevent the commission of the offences and that the offences were committed without his knowledge, then he shall not be deemed to be guilty of the offences. If the

offences are committed by a company and it is proved that the offence was committed with the consent or connivance or due to the neglect of director, manager, secretary or other officer of the Company, such person shall also be deemed to have committed the offence.

❖ **Appeals:** Any person who is dissatisfied with the following may file an appeal

- Person dissatisfied with the assessment order passed under section 6 or
- Person aggrieved with the imposition of penalty under section 11 for non-payment of cess ^{xvii}.

Appeal lies to the appellate Committee consisting of three persons. Appellant is required to state the facts and the grounds of appeal. The appeal shall be accompanied by copy of assessment order or copy of order imposing penalty. Appeal shall be filed within 30 days from the date of the communication of the order complained ^{xviii}. If the appeal is filed after the lapse of time allowed but before 45 days from the date of communication of the order, the appeal can still be heard, if the appellant satisfies the appellate committee that there is good and sufficient reason for delay. The appellant is required to pay the requisite fee along with his memorandum of appeal. After the appeal is filed, it is required to be disposed of, as expeditiously as possible, after hearing the appellant.

If any person is dissatisfied with the order of the Appellate Committee, he can file appeal against the decision of the Appellate Committee. An appeal can be filed before the National Green Tribunal. National Green Tribunal has been constituted under National Green Tribunal Act, 2010.

❖ **Power of the Centre Government to Exempt and Frame Rules**

The Central government has been empowered to frame rules under the Water Cess Act. The Central government has also been empowered to exempt any industry consuming water below the specified quantity from the payment of water cess. However, before exempting any establishment, the government shall keep into mind the following factors:

- a) Nature of raw material used;
- b) Nature of manufacturing process employed;
- c) Nature of effluent generated;

- d) Source of water extraction;
- e) Nature of effluent receiving bodies; and
- f) Production data, including water consumption per unit production in the industry and the location of the industry ^{xix}.

11.5 The Air (Prevention and control of Pollution) Act 1981

Air, and in particular good quality air, is essential for the survival of mankind and other living organism on this planet earth. Air is a gift to all living organism by the mother-nature and is the mixture of gases forming earth's atmosphere.ⁱ Natural air in the earth's atmosphere contains molecules of different gases i.e. around 78% Nitrogen, 21% Oxygen and around 1% molecules of other gases like Carbon dioxide, argon and other components.ⁱⁱ It also includes water vapours. If this composition is disturbed by additional presence of carbon dioxide or ozone molecules or other gases, the air is said to be polluted. The entry of additional hazardous gases in disproportionate numbers in air or disturbance of the natural composition of air can have disastrous consequences. Various factors contributing to air pollution have been identified by environmentalists, scientists and experts including but not limited to, rapid industrialization, power plants, burning of fossil fuelsⁱⁱⁱ, dust and fumes emitted by vehicles, deforestation, mining, agricultural activities, stubble burning, burning of municipal solid waste, construction activities, emission from stone crushers and hot-mix plants, smoke, fire and other human and natural activities.

Air pollution has reached alarming proportions around the globe and India has also been severely afflicted by air pollution. Greenpeace India, in its report published in 2017 has reported that around 1.2 million people die in India annually on account of air pollution related diseases. As per the report, air pollution costs around 3% of India's Gross Domestic Product. Assessment by Greenpeace of India's 168 cities across 24 states shows that none of the cities in India can claim to have clean air by WHO standards.^{iv}

Constitution of India, as originally enacted did not contain any specific provision pertaining to environment protection, in general and prevention and control of air pollution, in particular.^v The United Nations Conference on Human Environment held at Stockholm in June 1972 decided to take appropriate steps for preservation and protection of natural resources of the earth including Air. India participated in this

conference. Stockholm conference is watershed in International Environmental law and it affected Indian nation also. The Constitution (Forty Second Amendment) Act, 1976 inserted Article 48A in the Indian Constitution which provides that State shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country. The amendment also included Fundamental duties in the Constitution.^{vi} Once, Indian nation decided to implement the decisions taken at Stockholm conference, it enacted Water Act, 1974 and *Air (Prevention and Control of Pollution) Act*, 1981 (hereinafter referred to as Air Act). Air Act was enacted under Article 253 of the Constitution.^{vii} The Act came into force on 16th May 1981 and it applies to whole of India

The objectives of the Air Act, as stated in the Preamble, are as follows:

- i) To provide for the prevention, control and abatement of air pollution;
- ii) To provide for the establishment of Central and State Pollution Boards for carrying out the purposes of the Act;
- iii) To confer powers upon Central and State Boards for carrying out the functions assigned by the Act and;
- iv) To preserve the quality of air.^{viii}

The Act defines air pollution as the presence in the atmosphere of air pollutant ^{ix}. Air pollutant is defined to mean any solid, liquid or gaseous substance including noise present in the air in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment ^x. Thus the definition of air pollutant is very wide to include the presence of any substance in the atmosphere which might be injurious to the plants, living creatures, human being or the environment. The Amendment Act of 1987^{xi} inserted words 'including noise' in the definition of air pollutant thereby further widening the definition of the term air pollutant. Thus, if the noise exceeds tolerance limits as to be injurious to human beings, living creatures, plants or environment, it comes within the meaning of air pollution. The Act defines various other terms such as approved fuel, approved appliance, automobile, chimney, emission, control equipment, occupier etc ^{xii}.

❖ **Implementation Mechanism:** Air Act contemplates establishment of Central and State Pollution Control Boards for carrying out the objectives of the Act.

- ❖ **Central Pollution Control Board (CPCB):** The Air Act adopts integrated and comprehensive approach to tackle environmental pollution ^{xiii} and accordingly, the Act provides that Central Board constituted under the Water Act, shall have the powers and shall perform the functions assigned to the Central Board under the Air Act also.^{xiv} Therefore, the Central Board constituted under the Water Act shall be the Central Board for the purposes of Air Act also and it shall perform functions of State Board in Union Territories apart from performing the functions of Central Board.^{xv}
- ❖ **Functions of CPCB:** As stated earlier, CPCB established under the Water Act is to perform functions and duties under the Air Act also with a view to have coordinated and integrated approach for the protection and prevention of environment. As such, CPCB, apart from performing functions under the Water Act, will discharge duties under the Air Act also. The functions are almost similar under both the Acts. The primary function of CPCB under the Air Act is to improve the quality of air and to prevent control and abate air pollution throughout the country. CPCB has been mandated to perform the following functions.
- i) CPCB is to advise the Union government regarding matters concerning improvement of quality of air and regarding prevention, control and abatement of air pollution;
 - ii) To plan and execute a national programme for the prevention, control and abatement of air pollution;
 - iii) CPCB is required to co-ordinate the activities of State Boards and to resolve any disputes arising among them;
 - iv) CPCB is to provide technical assistance and guidance to State Boards and to sponsor investigation and research relating to problems concerning air pollution;
 - v) To plan and organize training of persons associated or likely to be associated with programmes for prevention, control and eradication of air pollution;
 - vi) To organise programmes through mass media campaigns for prevention and control of air pollution;
 - vii) To lay down ambient air quality standards;^{xvi}

- viii) To collect, compile and publish technical and statistical data relating to air pollution, measures for prevention and abatement of the same;
- ix) To collect and disseminate information pertaining to air pollution;
- x) To perform such other functions as may be prescribed from time to time;^{xvii}
- xi) To issue directions to State Boards;^{xviii xix}
- xii) If the State Boards default in complying with the directions of the CPCB and consequently there arises grave emergency, then in public interest, CPCB can discharge the functions of State Boards.^{xx}

Central government is empowered to issue directions to CPCB and CPCB is bound by such directions. Therefore, under the Air Act, CPCB is to perform functions similar to functions assigned under the Water Act. CPCB has launched National Air Quality Monitoring Programme at 342 operating stations covering 127 cities in various States and UTs^{xxi} for monitoring four air pollutants i.e. Sulphur Dioxide, Oxides of Nitrogen, Suspended Particulate Matter (SPM) and Respirable Suspended Particulate Matter (RSPM/PM10).

- ❖ **State Pollution Control Boards:** Air Act provides that State Boards constituted under the Water Act shall be the State Boards for the purposes of Air Act also. It implies that if a State has adopted Water Act and has constituted State Board under the Water Act, it shall not be required to constitute another board for the purpose of implementation of Air Act and all powers and functions shall be carried out by that Board only.^{xxii}

However, if any State has not adopted the Water Act or has not constituted the State Pollution Control Board, then the State government is required to constitute State Pollution Control Board under the Air Act. Like Water Act, Air Act also casts various duties and confers multifarious powers under the State Pollution Control Boards. The State Boards have the task of implementing the provisions of the Air Act. Like Water Act, State Boards under the Air Act also have the attributes of a Body Corporate, capacity to sue and be sued, and capacity to hold, acquire and dispose of property, perpetual succession, and common seal etc.^{xxiii}

- ❖ **Functions of State Boards:** In addition to the functions under the Water Act, State Boards are required to perform the following functions;

- i) To collect and disseminate information pertaining to air pollution;
- ii) To plan and execute programme for the prevention, control, abatement and eradication of air pollution;
- iii) To advise the State government regarding matters pertaining to air pollution;
- iv) To inspect air control equipment manufacturing plants and to issue appropriate directions concerning prevention, control and abatement of air pollution;
- v) To co-ordinate and collaborate with CPCB in organizing training of persons engaged in connection with prevention, control and abatement of air pollution;
- vi) To inspect air pollution control areas, assess the quality of air and to take steps for prevention, control and abatement of air pollution;
- vii) To lay down, in consultation with CPCB and having regard to ambient air quality standards prescribed by CPCB, standards for emission of air pollutants into the atmosphere by industrial plants and vehicles;
- viii) To establish or recognize a laboratory in connection with functions under the Air Act;
- ix) To advise the government regarding suitability of any premises for the purposes of carrying on of any industry likely to cause air pollution;
- x) To perform such other functions as may be prescribed from time to time.xxviii

Perusal of the above shows that the State Boards are to perform multifarious functions under the Air Act also. Whenever, State government is of the opinion that the State Board has defaulted persistently in the performance of its functions under the Air Act, State government can supersede the State Board by notification in official gazette for a period of six month. Similarly, State Board can be superseded when State government is of the opinion that in public interest it is required. The period can be further extended by six months by the State government or State Government may reconstitute the State Board.xxix Where CPCB or the State Boards constituted under the Water Act are superseded by the Central or the State government under the Water Act, the functions under the Air Act shall also be performed by the authority or persons so authorised or by the Central or State government.xxx

❖ **Prevention and Control of Air Pollution:** Chapter IV of Air Act, containing sections 19-31, enacts provisions for prevention and control of air pollution. The Air

Act contains both remedial and preventive measures for prevention, control and abatement of air pollution. A brief detail of such provisions is given hereinafter.

- 1) For the purposes of the Air Act, State government, in consultation with State Board, can declare certain areas to be air pollution control areas by notification in the official gazette. It can also in the same manner alter such areas, add or extend that area and declare new area to be air pollution control area.^{.xxxix}
- 2) State government can also prohibit, after consultation with the State Board, use of any fuel which causes air pollution or is likely to cause air pollution, in the air pollution control area. The notification prohibiting use of any fuel shall give at least three months before prohibition becomes operational.^{.xxxix}
- 3) For control of air pollution in air pollution control areas, State government can prescribe and approve appliances for use in premises situated in air pollution control areas. Such notification shall be issued after consultation with the State Board.^{.xxxix}
- 4) For control of air pollution and to prevent the air pollution, State government after consultation with the State Board can ban/prohibit burning of any material in the air pollution control areas which in the opinion of the government is causing or likely to cause air pollution.^{.xxxix}
- 5) State government after consultation with the State Board can issue instructions to Vehicle Registration authorities under the Motor Vehicles Act, 1988 for ensuring compliance with the emission standards fixed and notified by the State Boards. Such authorities are bound by the directions/instructions issued under this Act.^{.xxxix} Section 110 of Motor Vehicles Act also empowers the Central government to issue directions regarding emission of smoke, visible vapour, sparks, ashes, reduction of noise caused by vehicles and standards of emission of air pollutants.
- 6) Air Act bars all persons operating any industrial plant in an air pollution control area from discharging or emitting air pollutants in excess of the prescribed limits.^{.xxxix} Before the amendments of 1987, the bar was only with respect to industries specified in the first schedule. The Amendment Act of 1987 extended the bar to all industrial plants and omitted First Schedule.

- 7) Air Act bars a person from operating any industrial plant in an air pollution control area except with the consent of State Board. Thus, Air Act requires the consent of the State Board before an industrial plant can be established in an air pollution control area. If the industrial plant was already established and working in an area which has been later declared as an air pollution control area, in such a case, it is required to file application for consent within three months. If such an application has been filed alongwith prescribed fee within three months, the industrial plant can continue its operations till the disposal of the application. The State Board is required to give decision on the application for grant of consent within four months. It may conduct its enquiry before decision is taken on the matter. State Board can also refuse the consent or may also cancel the consent already given. However, an opportunity of being heard must be given to applicant before consent is refused or cancelled. The order must be in writing and must contain the reasons. The State Board can grant consent subject to such terms and conditions as it deems fit^{xxxvii}. The person to whom consent has been granted is required to comply with the following conditions;
- a) Such person is required to install control equipment of the prescribed and approved specifications;
 - b) If control equipment has already been installed, it is required to be altered/replaced as per the directions of the State Board;
 - c) The control equipment is required to be made operational and kept in good running condition;
 - d) Wherever necessary, chimney of approved specifications is required to be erected in industrial plant;
 - e) Any other condition prescribed by the State Board.
 - f) After the installation/erection of control equipment or chimney, it is not to be altered or replaced except with the previous consent of the State Board.
- 8) Where in any area, there is an emission of air pollutants into the atmosphere and that emission is in excess of the prescribed standards of emission or where due to an accident or other unforeseen circumstances, there is apprehension of emission of air pollutants in excess of the prescribed

standards, the person incharge of the premises is required to intimate the same to the State Board and the State Board is required to take remedial actions when such an intimation is received. Even if no intimation is given by the person in charge of premises but the State Board gets the information regarding the same, it is required to initiate remedial measures. The cost of such remedial measures shall be recovered from the person concerned as arrears of land revenue or public demand.xxxviii

- 9) Where the State Board apprehends that there is likelihood of emission of air pollutants into the atmosphere in excess of the prescribed limits in an air pollution control area by an industrial plant or otherwise, it can file an application in court for injunction for restraining the person from discharging air pollutants. The court can pass an appropriate order and can authorise the State Board for implementation of the court orders.xxxix
- 10) The Board can authorise any person to enter upon and inspect any place at all reasonable hours. The person operating control equipment or an industrial plant is bound to render all necessary assistance. The power of entry and inspection is exercised for the following purposes:
 - a) To verify that the provisions of the Air Act are complied with;
 - b) For performance of functions entrusted to the Board under the Air Act;
 - c) For examining, testing, verifying any control equipment, industrial plant, records, registers etc;
 - d) For conducting search of any place where it is believed that an offence under the Air Act has been committed or is likely to be committed;
 - e) For seizure of any document, register, record, control equipment or other material object for the purposes of evidence.xl
- 11) State Board and its officers can call for the information from the occupier or person operating any control equipment or operating any industrial plant. Such information may pertain to level of emission of air pollutants emitted into the atmosphere and type of air pollutants emitted. State Board or its officers can enter into the premises and carry on the inspection for the purpose of verifying the information so supplied.xli

- 12) State Board has power to issue directions to any person or authority. While issuing directions, State Board shall be bound by the provisions of Air Act and directions issued by the Central government in writing. These directions may also include direction for closure, prohibition or regulation of any industry, operation/process or stoppage or regulation of electricity/water supply or other service.^{xlii} This provision was added by the amendment Act of 1987 with a view to empower the State Board to issue such directions because in *Chaitanya Pulverising Industry v. K.S.P.C. Board*^{xliii}, the Karnataka High Court held that State Boards do not have the power to order closure of industries.
- 13) State Board or any officer authorised by the Board have the power to take samples of air or emissions from chimney, flue or duct or other outlet for the purpose of analysis of the same. Following procedure is required to be followed while taking samples.^{xliv}
- a) The officer is required to serve immediate notice upon the occupier or his agent stating the intention to take sample and to get it analyzed.
 - b) Sample is required to be taken in the presence of occupier or his agent.
 - c) The container or containers in which sample is taken is required to be marked and sealed and is also required to be signed by the person taking the sample as well as by the occupier or his agent.
 - d) The container or containers are required to be sent to Board laboratory established or recognized by the State Board.
 - e) If the occupier or his agent makes a request then the container is required to be sent to State Air Laboratory.
 - f) If the occupier or his agent, wilfully absents themselves from the place, then the officer after serving the notice shall take the sample and after the sample being marked, sealed and signed by the officer, the same is required to be sent to State Air Laboratory. The officer shall also inform the Government Analyst about the absence of occupier or his agent. Similar procedure is required to be followed when the occupier or his agent is present but they refuse to sign the container. In such cases, the cost of analysing the sample shall be recovered from the occupier or his

agent and in case of default, the same can be recovered as arrears of land revenue or of public demand.^{xlvi}

- g) The concerned laboratory is required to send the report in triplicate to the State Board. The State Board is required to send one copy to the Occupier or his agent. One copy is required to be preserved for the Court and the last copy to be kept in record.^{xlvi}

❖ **Appeals:** Any person, who is dissatisfied with the decision/order of the State Board under the Air Act, can file an appeal before the designated appellate authority within 30 days of the date of the order. The appellate authority has the power to condone the delay and accept the appeal even after the lapse of 30 days, if it is satisfied that there was sufficient cause for the delay. Appeal shall be accompanied by prescribed fee. Appellate authority may be single member or three members and it is required to dispose of the appeal as expeditiously as possible.^{xlvi} Civil Courts jurisdiction to entertain any matter on which appeal can be filed before the appellate authority has been barred under the Air Act.^{xlvi}

National Green Tribunal Act, 2010 inserted section 31B in the Air Act. This provision provides for second appeal i.e. if a person is dissatisfied with the decision of the appellate authority, he can file an appeal before the National Green Tribunal in accordance with the provisions of National Green Tribunal Act, 2010.

Establishment of National Green Tribunal has been a landmark in prevention and control of pollution. NGT has given various landmark decisions and have issued directions for abatement and control of air pollution. In *Vikrant Kumar Tongad v. Environment Pollution (Prevention and Control) Authority & Ors*^{xlvi} where petition was filed regarding pollution caused by crop residue burning in the NCT and surrounding states viz., Rajasthan, Punjab, Haryana and U.P. The NGT issued detailed directions and guidelines while prohibiting crop residue burning in NCT and surrounding States. The judgment provided for punitive measures against persons found to be violating the prescribed norms and imposition of environment compensation cost. Court ordered State of Punjab to stop this menace immediately and to educate farmers and society regarding the same. Duty was cast upon State and District Magistrates to monitor the same. The State of Punjab

was directed to provide machinery, equipment free of cost to small farmers for collection and dispersal of crop residue.

In *Vardhman Kaushik v. Union of India* xcix, the Chairperson's Bench of NGT headed by Justice Swatanter Kumar called for emergency measures to cope up with hazardous air pollution in Delhi NCR post Diwali in 2016. NGT had issued orders concerning air pollution on 26th November, 2014, 04th December, 2014, 07th April, 2015, 10th April, 2015, 28th April, 2015, 18th May, 2015 and 11th December, 2015. However, despite various orders of NGT and of the Supreme Court, the situation had reached alarming level during first ten days of November calling for emergency measures. NGT observed that State owes a Constitutional Statutory and statutory duty to prevent the air pollution and provide clean air to its citizens and atleast breathable air if not absolute clean air to breathe. NGT issued detailed instructions for coping with environmental emergency including sprinkling of water by helicopters, stoppage of construction and demolition works temporarily, shutting down of power generation plants, hot mix plants etc. temporarily if they emit air pollutants in excess of the limits, shutting down of stone crusher units etc. In addition, NGT ordered setting up of Centralized Monitoring Committee and State Monitoring Committees. NGT ordered that when PM10 exceeds 431 and PM2.5 exceeds 251 Microgram per cubic meter, then it is a situation of 'severe pollution' and if these values reach 500 or 300 respectively, then it is a case of environmental emergency. In case of environmental emergency immediate steps are required to be taken.

Supreme Court of India has also been alive to the concerns of environmental pollution and in particular about worsening air quality and air pollution. In *M.C. Mehta v. Union of India* banned entry of heavy vehicles not bound for Delhi. The court directed that these vehicles be diverted to alternative routes. To prevent entry in Delhi of heavy duty commercial vehicles not bound for Delhi, the court levied Environment Compensation Charge (ECC) on heavy commercial vehicles of Rs. 700/- and 1300/- depending upon the category to which vehicles belongs.ci Again the Supreme Court in *M.C. Mehta v. Union of India*cii, directed that diesel vehicles registered prior to 2005 shall not be allowed to enter Delhi. Court also directed that taxis like Ola and Uber be directed to shift to CNG. Court further held

that for heavy commercial vehicles which are loaded double ECC shall be charged and any commercial vehicle not bound for Delhi shall not be allowed to enter Delhi even on payment of ECC.

❖ **Offences and Penalties:** Chapter VI of the Air Act, containing sections 37-46, deals with penalties and procedure. Offences and penalties prescribed under the Air Act are given hereinafter.

- 1) Punishment of mandatory imprisonment for a term of one and half years but which may extend upto six years and fine can be imposed for the following defaults.
 - a) If any person does not obtain the previous consent of the State Board before establishing any industrial plant in an air pollution control area or
 - b) In case of an industry already established in the area before declaration of that area as air pollution control area, does not apply for such consent within three months or
 - c) Any person operating an industrial plant in pollution control area and emitting air pollutants in excess of the standards laid down by the Board or
 - d) Any person violating directions of the State Board issued under section 31A

If the default continues, an additional fine which may extend upto 5000 per day for every day during which default continues after first conviction can also be imposed ^{ciii}. If the failure continues for a period exceeding one year from the date of first conviction, then the offence becomes punishable with enhanced punishment i.e. mandatory term of two years extendable upto seven years and fine.

- 2) Any person guilty of the following acts/defaults/failures shall be punished with imprisonment which may extend upto three months or with fine extendable upto 10000 Rupees or with both.
 - a) Destroying, pulling down, removing, injuring, defacing any pillar, post, notice etc. fixed in the ground or any other matter put up or inscribed etc by the State Board or under its authority or
 - b) Obstructing any person in the performance of his functions entrusted by the Board under the Air Act or
 - c) Damaging any work or property belonging to the Board or

- d) Failure to furnish information required by the Board or the officers/persons authorized by the Board or
 - e) Failure to intimate the Board about the emission of air pollutants in excess of the prescribed standards or failure to inform about the accident or unforeseen circumstances likely to cause emission of air pollutants in excess of the prescribed limits or
 - f) Making of false statement or
 - g) Contravention of any other provision of the Air Act for which no specific penalty has been prescribed.
- 3) If any of the offences under the Air Act are committed by Companies, in such a case, every person who at that time was in charge of the Company or was responsible for the conduct of the business of the company, along with the Company shall be deemed to have committed the offence. However, if such person proves that he has exercised due diligence and taken reasonable steps to prevent the commission of the offences and that the offences were committed without his knowledge, and then he shall not be deemed to be guilty of the offences. If the offences are committed by a company and it is proved that the offence was committed with the consent or connivance or due to the neglect of director, manager, secretary or other officer of the Company, such person shall also be deemed to have committed the offence.^{civ}
- 4) Similarly, if an offence under the Air Act is committed by a Government Department, then the Head of the Department shall be deemed to be guilty of the offence. However, if such person proves that he has exercised due diligence and taken reasonable steps to prevent the commission of the offences and that the offences were committed without his knowledge, and then he shall not be deemed to be guilty of the offences. Further, where offence is committed by Government Department and it is proved that the offence was committed with the consent or connivance or due to the neglect of the officer other than the Head of the Department, such officer shall also be deemed to have committed the offence.^{cv}

- 5) Offences shall be tried by Court of Metropolitan Magistrate or a Judicial Magistrate of First Class.^{cv} Criminal proceedings shall be initiated on a complaint filed by the Board or an officer authorized by the Board. Complaint can also be filed by any person but he is required to give at least sixty days notice of the offence alleged to have been committed and his intention to file complaint.

11.6 The Environment Protection Act, 1986

Environment Protection is a much discussed topic and has dominated the debates in the public *fora*, especially since the sixties. The quality of the environment has been degrading for centuries, ever since the mankind decided to exploit nature for its own good, but the degradation has escalated with the advent of the industrial revolution and the dawn of the era of machines.

Increased human population, increase in demand, decline in vegetation to accommodate the needs of the increased population, release of chemicals in the environment, disruption of food chains due to Activities like fishing are very few examples of how the environment is being exploited and abused. The result of all this is an increased concern over the health and safety of the environment, for which time to time numerous piece of legislations and treaties have resurfaced. In the Indian context, many legislations have emerged specifically focusing on the kinds of pollution, like The Air (Prevention and Control of Pollution) Act, 1981 or The Water Prevention and Control of Pollution) Act, 1974. But the Environment Protection Act, 1986 is one of the most exhaustive legislation for the protection for the environment. It is a general piece of legislation for the protection of environment. It was enacted under Article 253 of the Constitution. The world community's resolve to protect and enhance the environment quality found expression in the decisions taken at the United Nations Conference on the Human Environment held in Stockholm June, 1972. India participated in the conference and strongly voiced the environmental concerns. While several measures had been taken for environmental protection, both before and after the conference, the need for general legislation further to implement the decision of the Conference had become increasingly evident. Therefore the Environment (Protection) Act, 1986 [hereinafter referred to as The Act] was passed.

The Act came into force on November 19, 1986, the birth anniversary of our Late Prime Minister Indira Gandhi, who was a pioneer of environmental protection issues in

our country. The Act extends to whole of India. The Constitution of India clearly states that it is the duty of the state to 'protect and improve the environment and to safeguard the forests and wildlife of the country'.

As compared to all other previous laws on environment protection, the Environment (Protection) Act, 1986 is a more effective and comprehensive measure to fight the problem of pollution.

- i) The Environment Protection Act is a means to implement the decisions of the UN Conference on the Human Environment held in Stockholm (June 1972).
- ii) The Environment Protection Act also seeks to enact a general blanket law on environmental protection, dealing with all aspects of pollution and harm to the nature and not limiting its scope to just one type of pollution or pollutants.
- iii) The exhaustive nature of Environment Protection Act also ensures that no ambit of environmental protection is left and all hazards to the environment are absolutely covered and addressed under the Act.
- iv) The Act also provides punishment (deterrent in nature) to those responsible for causing harm to the environment or endangering it.
- v) The Act provides for a scheme and a mechanism of working of various already existing regulatory authorities and also creates more agencies for furtherance of environment protection.
- vi) The Act also aims at promoting sustainable development as a means to achieve the end of prosperity and opulence.

In the case of *N D Jayal v Union of India*, (2004) 9 SCC 362, it was held that If the Act is not armed with the powers to ensure sustainable development, then it will be a barren shell. Sustainable development is one of the means to obtain the object and purpose of The Act as well as the Protection of Life under "Article 21". Acknowledgment of this principle will breathe new life into our environmental jurisprudence and Constitutional resolve.

❖ **Important Definitions:** Section 2 of the Environment (Protection) Act, 1986 deals with definitions. Some of the important definitions are as under:

"Environment" includes water, air, and land and the interrelationship which exists among and between water, air and land and human beings, other living creatures, plants, microorganism and property [Section 2(a)].

“Environmental Pollutant” means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be injurious to environment [Section 2(b)].

“Environmental pollution” means presence in the environment of any environment pollutant [Section 2(c)]. It causes imbalance in environment. The materials or substances when after mixing in air, water or land alters their properties in such manner, that the very use of all or any of the air water and land by man and any other living organism becomes lethal and dangerous for health.

“Handling” In relation to any substance, it means the manufacturing, processing, treatment, packaging, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance [Section 2(d)].

“Hazardous Substance” means any substance or Environment Protection Act ration which, by reasons of its chemical or physic-chemical properties, is liable to cause harm to human beings or other living creatures, plants, micro-organism, property or the environment [Section 2(e)].

“Occupier” It means a person who has control over the affairs of the factory or the premises, and includes, in relation to any substance, the person in possession of the substance [Section 2 (f)].

❖ **Powers provided by the Act to Central Government:** The Act provides the Central Government with the power to take measures to protect and improve the environment. It endows the Central government the power to take all measures which it deems necessary to protect, preserve and improve the environment. It can take measures to curb activities causing harm to the environment it can control and bring a halt to activities discharging pollutants. In particular, and without prejudice to the generality of the provision such measures may include measures with respect to all or any of the following matters, namely:-

- i) Co-ordination of Actions by the State Governments, officers and other authorities--
 - a. under this Act, or the rules made there under, or
 - b. under any other law for the time being in force which is relatable to the objects of this Act;
- ii) Planning and execution of a nation-wide program for the prevention, control and abatement of environmental pollution;
- iii) Laying down standards for the quality of environment in its various aspects;

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- iv) Laying down standards for emission or discharge of environmental pollutants from various sources whatsoever: Provided that different standards for emission or discharge may be laid down under this clause from different sources having regard to the quality or composition of the emission or discharge of environmental pollutants from such sources;
 - v) Restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards;
 - vi) Laying down procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents;
 - vii) Laying down procedures and safeguards for the handling of hazardous substances;
 - viii) Examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution
 - ix) Carrying out and sponsoring investigations and research relating to problems of environmental pollution;
 - x) Inspection of any premises, plant, equipment, machinery, manufacturing or other processes, materials or substances and giving, by order, of such directions to such authorities, officers or persons as it may consider necessary to take steps for the prevention, control and abatement of environmental pollution;
 - xi) Establishment or recognition of environmental laboratories and institutes to carry out the functions entrusted to such environmental laboratories and institutes under this Act;
 - xii) Collection and dissemination of information in respect of matters relating to environmental pollution;
 - xiii) Preparation of manuals, codes or guides relating to the prevention, control and abatement of environmental pollution;
 - xiv) Such other matters as the Central Government deems necessary or expedient for the purpose of securing the effective implementation of the provisions of the Act as per Section 3(2) of the Act.

Section 3(3) gives power to the central government to constitute an “authority” or “authorities” to assist in its functions which is tied with the duty to constitute such an authority so as to provide a better mechanism. This was highlighted in various cases

such as *Lafarge Umiam Mining (P) Ltd. v. Union of India*, (2011) 7 SCC 338; *T.N. Godavaram Thirumulpad v. Union of India and Others*, (2014) 4 SCC 61.

The ambit of powers given to the central government under this Act is very wide and under this section the central government also can implement the suggestions of the Supreme Court. The Supreme Court in various cases such as *F.B. Taraporawala v. Bayer India Ltd.*, (1996) 6 SCC 58, has directed the Central Government to constitute an authority under Section 3(3) of the Environment (Protection) Act, 1986. The Central government has constituted the **Loss of Ecology (Prevention and Payment of Compensation) Authority** for the state of Tamil Nadu on the instruction of the Supreme Court. In *Vellore Citizens' Welfare Forum v. Union of India* also known as T. N. Tanneries case, (1996) 5 SCC 647 where the Supreme Court observed: 8

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"It is thus obvious that the Environment Act contains useful provisions for controlling pollution. The main purpose of the Act is to create an authority or authorities under Section 3(3) of the Act with adequate powers to control pollution and protect the environment. It is a pity that till date no authority has been constituted by the Central Government. The work which is required to be done by an authority in terms of Section 3(3) read with other provisions of the Act is being done by this Court and the other courts in the country. It is high time that the Central Government realizes its responsibility and statutory duty to protect the degrading environment in the country. If the conditions in the five districts of Tamil Nadu, where tanneries are operating, are permitted to continue then in the near future all rivers/canals shall be polluted, underground waters contaminated, agricultural lands turned barren and the residents of the area exposed to serious diseases. It is, therefore, necessary for this Court to direct the Central Government to take immediate Action under the provisions of the Environment Act."

❖ **The court concludes as follows:** "Keeping in view the scenario discussed by us in this judgment, we order and direct as under:

- i) The Central Government shall constitute an authority under Section 3(3) of the Environment (Protection) Act, 1986 and shall confer on the said authority all

the powers necessary to deal with the situation created by the tanneries and other polluting industries in the State of Tamil Nadu.

- ii) The authority so constituted by the Central Government shall implement the “Precautionary Principle” and the “Polluter Pays Principle”.

In the case of *M.C. Mehta v. Union of India*, (1998) 2 SCC 435, the Supreme Court pointed out that the step taken by the government in constituting the Environment Pollution (Prevention and Control) Authority for the National Capital Region is appropriate and timely and the above authority will deal with entire matters relating to environmental pollution in the NCR. It was further pointed out that except for the chairman, central pollution control board being an ex-officio member of the authority the remaining member would be in the committee not merely by virtue of their office but because of their personal qualifications on account of which they were included in the committee.

In the case of *S. Jagannath v. Union of India*, (1997) 2 SCC 87 the court directed the government to constitute an authority and to “confer on the said authority all the powers necessary to protect the ecologically fragile coastal areas, seashore, waterfront and other coastal areas and specially to deal with the situation created by the shrimp culture industry in the coastal States/Union Territories. The Central Government shall confer on the said authority the powers to issue directions under Section 5 of the Act and for taking measures with respect to the matters referred to in clauses (v), (vi), (vii), (viii), (ix), (x) and (xii) of sub-section (2) of Section 3.” The court further directed that “The authority so constituted by the Central Government shall implement “the Precautionary Principle” and “the Polluter Pays Principle”

In the case of *Bittu Sehgal v. Union of India*, (2001) 9 SCC 181, it was held:

“We direct the Central Government to constitute an authority under Section 3(3) of the Environment (Protection) Act, 1986 and also confer on the said authority all the powers necessary to protect the ecologically-fragile Dahanu Taluka and to control pollution in the said area. The authority shall be headed by a retired Judge of the High Court and it may have other members with expertise in the field of hydrology, oceanography, terrestrial and aquatic ecology, environmental engineering, development and environmental planning and information technology, to be appointed by the Central Government. The Central Government shall confer on the

said authority the power to issue directions under Section 5 and for taking measures with respect to the matters referred to in clauses (v), (vi), (vii), (viii), (ix), (x) and (xii) of sub-section (2) of Section 3 of the Environment (Protection) Act, 1986.”

The court further pointed out that the authority so constituted by the Central Government shall consider and implement the “precautionary principle” and “the polluter pays” principle in its implementation and work towards conserving the ecologically fragile Dahanu Taluka.

The Central government also has the power to give directions under the Act. It can issue directions to any person or any officer or any authority to exercise its functions under the Act and such directions are mandatory and are bound to be complied with. Under this the Central government can direct closure, prohibition or regulation of any industry, operation or process which is harming the environment or introducing pollutants in the environment. The Central government can also, in furtherance of stopping the Activities causing harm to the environment, regulate the supply of services like water or electricity (Section 5).

In the case of *Vellore Citizens' Welfare Forum v. Union of India* Supreme Court held that the Central government should confer the above powers to the authorities constituted under the Act as well.

In the case of *Mahabir Soap and Guakhu Factory v. Union of India*, AIR 1995 Ori 218, the Government of India has issued directions to close down a factory which were accompanied with instructions to disconnect the water supply and electricity connections. Such measures were taken since the factory was situated in a thickly populated area and the untreated discharge was polluting the water reservoirs hence causing harm to the environment and jeopardizing the health of the people living in the local limits. The court established the basis of such orders in accordance with Section 5 of the Environment (Protection) Act, 1986.

The Gujarat High Court also dealt with a similar question in the case of *Narula Dyeing and Printing Works v. Union of India*, AIR 1995 Guj 185, where the Narula Dyeing and Printing Works were discharging their untreated trade effluents into the stream which was an irrigation canal. The state government as well as the Gujarat State Pollution Control Board to whom the powers were delegated by the Central Government in accordance with Section 3(3) issued directions under Section 5 of the Environment Protection Act to close down the factory. In this case also the Petitioner's challenged the powers of the State

Government on the ground that no personal hearing was provided to them. The court did not accept the plea of the petitioner and further observed that the government is fully empowered to dispense with the opportunity of hearing being given for filing objections against the proposed directions in such cases of grave injury to the environment. It is intended to safeguard the environment from any grave injury to any component of the environment.

The Central Government also has the power to make rules to regulate environment pollution. The Government in exercise of this power has already enacted "The Environment (Protection) Rules, 1986" which also came into force w.e f. 19 November, 1986. These rules, inter alia, provide for (i) the standards of quality of air, water or soil for various areas and purposes, (ii) the maximum allowable limits of concentration of various environmental pollutants (including noise) for different areas; (iii) the procedure and safeguards for the handling of hazardous substances; (iv) the prohibition and restrictions on the handling of hazardous substances in different areas (v) the prohibition and restriction on the location of industries in different areas (vi) the procedures and safeguards for the prevention of accidents which may cause environmental pollution and providing remedial measures for such accidents.

❖ **Prevention, Control and Abatement of Environmental Pollution**

Section 7 of the Act specifically provides that no person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or be emitted any environmental pollution in excess of the prescribed standards. Section 7 of the Environment Protection Act provides that certain standards have to be maintained and no person or an industry can be permitted to cause damage to the environment. If any person is found guilty of causing damage to the environment then by applying the "polluter pays principle" he can be asked to pay the exemplary damages for polluting the environment.

In *D.S. Rana v. Ahmedabad Municipal Corporation*, AIR 2000 Guj 45, the imposition of restrictions on the trade or operation of melting gold and silver which was causing public nuisance and a health hazard and damaging the environment was held to be proper.

Section 8 provides that persons handling hazardous substances are required to comply with procedural safeguards where the discharge of any environmental pollution in excess of prescribed standards occurs or is apprehended to occur due to accident or other unforeseen circumstances the people responsible for such discharge and the person in

charge of the place where the discharge occurs shall be bound to mitigate or reduce the pollution. He is required to give intimation and render all assistance to the concerned authorities.

Section 9 provides that on receipt of such intimation or otherwise the concerned authorities shall take steps to prevent or mitigate the environmental pollution. Section 10 provides that the Central government can give any person powers of entry, inspection of any place for the purpose of examining and testing equipment, industrial plant, record, register or document and make such seizures as is necessary to prevent or mitigate environmental pollution.

Power to take Samples and Procedure to be followed thereafter:

The Central government or any other officer empowered by it in this behalf has the power to take for the purpose of analysis, samples of –

- i. Air
- ii. Water
- iii. Soil, or
- iv. Other substance.

The Sample can be taken in prescribed manner from any-

- i. Factory
- ii. Premises, or
- iii. Other place.

In order to make the result of any sample admissible in the evidence in any legal proceedings the following procedure must be followed:-

- a. Notice must be served on the occupier or his agent or person in charge of the place.
The notice must indicate his intention to have the analysis of sample ;
- b. The Sample must be collected in the presence of the occupier or his agent or his agent;
- c. The sample to be placed in a container or containers which shall be marked and sealed and shall also be signed both by the person taking the sample and the occupier or his agent;
- d. Send without delay, the container or the containers to the laboratory established or recognized by the Central Government under section 12 [i.e. Environmental Laboratory].

In a case where the occupier, his agent or person willfully absents himself, the person taking the sample shall collect the sample for analysis to be placed in a container or

containers which shall be marked and sealed and shall also be signed by the person taking the sample, and in a case where the occupier or his agent or person present at the time of taking the sample refuses to sign the marked and sealed container or containers of the sample as required, the marked and sealed container or containers shall be signed by the person taking the samples, and the container or containers shall be sent without delay by the person taking the sample for analysis to the laboratory established or recognized and such person shall inform the Government Analyst in writing, about the willful absence of the occupier or his agent or person, or, as the case may be, his refusal to sign the container or containers (Section 11).

The Central Government or the officer empowered to take samples under Section 11 shall collect the sample in sufficient quantity to be divided into two uniform parts and effectively seal and suitably mark the same and permit the person from whom the sample is taken to add his own seal or mark to all or any of the portions so sealed and marked. In case where the sample is made up in containers or small volumes and is likely to deteriorate or be otherwise damaged if exposed, the Central Government or the officer empowered shall take two of the said samples without opening the containers and suitably seal and mark the same. The Central Government or the officer empowered shall dispose of the samples so collected as follows:-

- i) One portion shall be handed over to the person from whom the sample is taken under acknowledgement; and
- ii) The other portion shall be sent forthwith to the environmental laboratory or analysis.

The Act provides that any person who fails to comply or contravenes any of the provisions of the Act, or the rules made or orders or directions issued under the Act or rules, shall be punished with

- a. With imprisonment for a term which may extend to 5 years,
- b. With fine which may extend to one lakh rupees,
- c. With both.

In case the failure or contravention continues after the conviction for first failure or contravention, an additional fine which may extend to five thousand for every day can be imposed for a period during which failure or contravention continues. If the failure or

contravention continues beyond a period of one year after conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years (Section 15).

❖ **Offences by Companies and Government Departments:** The Act incorporates the principle of vicarious liability of the person in-charge, Director, Manager, Secretary or other officer for the offence if committed by the company. When any offence is committed by the company, the company as well as the person directly in-charge of and responsible for the conduct and business of company shall be deemed to be guilty and liable to punishment. However the person in-charge and responsible for the conduct and business of the company is not held liable if he proves (i) that the offence was committed without his knowledge; or (ii) that he exercised all due diligence/care to prevent the commission of such

If it is proved that the offence has been committed by a company with the consent, or connivance, or negligence of any director, manager, secretary other officer of the company then such persons are deemed to be guilty of the offence and liable for punishment (Section 16).

When an offence under this Act has been committed by any Government Department, the head of the department shall be deemed to be guilty and liable for punishment. However, there is no liability of the head of the department if he proves (a) that the offence was committed without his knowledge; or (b) that he exercised all due diligence/care to prevent the commission of such offence.

Section 17 states that if it is proved that the offence has been committed by a Government Department with the consent, or connivance or negligence of any officer be that the head of the department, then such a person shall be deemed to guilty and liable for punishment. However, the Act provides protection for Actions taken in good faith (Section 18). In U.P. Pollution Control Board v. Mohan Meakins Ltd, (2003) SCC 745, the Supreme Court made it clear that directors and managers who were responsible for causing the pollution would be liable under section 16 of the Environment Protection Act and there was inordinate delay in taking up the case. The court further observed that it couldn't afford to deal lightly with cases involving pollution of air and water.

In *Suo Motu v. Vatva Industries Asson*, AIR 2010 Guj 33, it was held that the pollution control board and its officers are free and competent to take Action against any person on violating any provision of the environmental laws. They need not to wait for the direction of the court for taking Action under the law. In fact such a course of seeking direction from the court would amount to dereliction of duty.

The Act further empowers the Central Government to make rules for the purpose of carrying out the purposes of this Act. The Central Government has enacted various rules in furtherance of section 3, 6, 8 read with section 25. Some of the important rules enacted under the Act are:-

- i. The Hazardous Waste (Management and Handling) Rules, 1989
- ii. Manufacture, Storage and Import of hazardous chemical Rules, 1989
- iii. Hazardous Microorganisms Rules, 1989
- iv. Bio- Medical Waste (Management and Handling) Rules, 1998
- v. Municipal Solid waste (Management and Handling) Rules , 2000
- vi. The Batteries (Management and Handling) Rules, 2001

Thus, the Act is a very important piece of legislation which is in the form of an umbrella legislation covering all forms of environmental pollution. However there are still many lacunas in the Act which remain such as no Minimum sentence is prescribed, thus diluting the deterrent effect of the Act. Also the Act emphasis on Criminal Liability rather than Civil Liability. It also lacks any incentive to the general public for taking steps to bring the culprit to books. The awareness towards improving the quality of environment has increased substantially and all efforts are being made at different levels to minimize environmental pollution and thus help in improving the quality of life. All in all it is a positive piece of legislation which is a way forward towards achieving sustainable development.

11.7 Hazardous Wastes (Management and Handling) Rules, 1989

Environmentally sound management of hazardous wastes a major concern in India. On the one hand, rapid industrialization in India has resulted in the generation of

increasing volume of hazardous wastes. On the other hand, little has been done to ensure its environmentally sound management.

The adverse environmental and health effects of hazardous wastes led to the adoption of the Hazardous Wastes (Management & Handling) Rules, 1989 by the MoEF under the Environment (Protection) Act, 1986. Their purpose was to ensure proper management and handling of hazardous wastes. These Rules were superseded by the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, which also bring another important issue under their purview, that is, the transboundary movement of hazardous wastes.

The Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 (hereafter HW Rules) define 'hazardous waste' as any waste which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances. Hazardous waste includes wastes specified in Schedule I or wastes having constituents specified in Schedule II, and wastes specified in Part A or Part B of Schedule III in respect of import or export of such wastes. The HW Rules deal with all hazardous wastes except wastewater, municipal solid wastes, radioactive wastes and bio wastes.

- ❖ **Occupier's responsibility:** According to the Hazardous Wastes Rules, an occupier is responsible for safe and environmentally sound handling of hazardous wastes generated in his establishment. It is the responsibility of an occupier to send or sell hazardous wastes generated in his establishment to a recycler or re-processor or re-user registered or authorized under the HW Rules. The disposal of hazardous waste can be done only through an authorized disposal facility. The responsibility of the occupier also includes a duty to take all adequate steps to prevent accidents and limit their consequences on human beings and the environment. It is also a responsibility of the occupier to provide persons working on the site with the training, equipment and information necessary to ensure their safety.
- ❖ **Monitoring:** The CPCB and the SPCB are the key agencies responsible for monitoring the implementation of the HW Rules. It is mandatory for everyone

dealing with hazardous wastes to obtain authorization from the SPCB. Every person authorized under these rules shall maintain the record of hazardous wastes handled by him and the same shall be submitted to the SPCB. Treatment, storage, packaging and labelling of hazardous waste are regulated through guidelines issued by the CPCB.

- ❖ **Recycling and reuse:** In the case of recycling or reprocessing of hazardous waste, an authorization is to be obtained from the CPCB. It is the duty of the CPCB to ensure that the facility is using environmentally sound technologies and possesses adequate technical capabilities, requisite facilities, and equipment to recycle, reprocess or reuse hazardous wastes. The units can utilize hazardous wastes as a supplementary resource or for energy recovery only after obtaining approval from the CPCB.
- ❖ **Transboundary movement of hazardous wastes:** The MoEFCC is the nodal ministry empowered to regulate transboundary movement of hazardous wastes and its permission is required for international transportation of hazardous wastes between countries. The Hazardous Wastes Rules prohibit import of hazardous wastes from any country to India for disposal. Import of hazardous waste is permitted only for recycling or recovery or reuse. Similarly, export of hazardous wastes from India is allowed only to an actual user of the waste or operator of a disposal facility. In such a situation, prior informed consent of the importing country is essential and the facility at the importing country should have the capacity for environmentally sound management of the hazardous waste in question. Import or export of hazardous waste without permission is illegal. In case of import to India without permission, the hazardous waste in question is liable to be re-exported.
- ❖ **Liability:** The occupier, importer, transporter and operator of the facility are liable for all damages caused to the environment or third party due to improper handling of the hazardous wastes or disposal of the hazardous wastes.
- ❖ **Environmentally sound management of hazardous waste: the judiciary's role:** The Indian judiciary has played an active role on issues relating to management of hazardous wastes. An important development triggered by the Supreme Court of India was the establishment of technical and monitoring bodies to assist the Court. In *Research Foundation for Science, Technology and Natural*

Resource Policy, Union of India, Writ Petition (Civil) No. 657 of 1995, on 14 October 2003, the Court directed the Central Government to constitute a monitoring committee to oversee timely compliance of its directions. Resultantly, the MoEF constituted the Supreme Court Monitoring Committee (SCMC) on 20 November 2003. Similarly, on 13 October 1997, a High Powered Committee was constituted to examine all matters relating to hazardous waste and to give a report and recommendations. The Supreme Court also constituted a Technical Expert Committee (TEC) through an order dated 6 September 2007.

The Supreme Court has used these institutions and assumed the role of a regulatory and monitoring agency in the context of hazardous wastes. For example, when the Court was faced with a question relating to dismantling of a ship in the *Blue Lady* case, it relied on the report of the TEC and granted permission to the recycler to dismantle the ship (see *Research Foundation for Science, Technology and Natural Resource Policy Union of India*, Writ Petition (Civil) No. 657 of 1995, Decided on 11 September 2007 (*Blue Lady* case)).

- ❖ **Shipbreaking:** The shipbreaking or dismantling industry is an important source of revenue for the Government of India. In addition, it provides steel to the Indian economy. It also provides direct and indirect employment to around 40,000 people. The biggest ship-recycling site in the world is situated in Alang in the State of Gujarat. However, the ship dismantling industry is also a source of pollution because dismantled ships contain a lot of hazardous wastes such as PCBs and asbestos. This poses risks to the health of the workers and the communities living around it.

In 1997, a public interest litigation was filed by an organisation called the Research Foundation for Science, Technology and Natural Resources concerning shipbreaking. Since then the matter is pending before the Supreme Court and the Court has been regulating and monitoring the industry using this case as a 'continuing mandamus'. Shipbreaking has been a contentious issue before the Court on various occasions.

- Blue Lady (2006)
- Clemenceau (2006)
- Exxon Valdez (2012)

- i) In 2006, issues related to dismantling of the ship Blue Lady were brought before the Supreme Court. In the Blue Lady case, the Supreme Court constituted a Committee of Technical Experts which recommended grant of permission for dismantling the ship. Even though NGOs highlighted several contrary facts regarding the safety of the ship, the Supreme Court followed the Committee's recommendations and allowed dismantling of Blue Lady. The Court also cited the economic advantage of its decision by highlighting the enormous quantity of steel that was going to be recovered from Blue Lady and the fact that dismantling would provide employment to 700 workmen.
- ii) The issue of dismantling of a French ship Clemenceau was brought before the Supreme Court in 2006. The Court followed its established practice and constituted a committee to examine and report back to the Court. As the Committee could not arrive at a unanimous conclusion, the Court appointed a new committee to investigate the matter. Meanwhile, the ship had to return to France pursuant to an order by a French Court (Pelsy, 2008).
- iii) In the Exxon Valdez case, the question was whether or not to give permission to dismantle the ship. The Court relied on the report of the Gujarat Pollution Control Board and the Gujarat Maritime Board and granted permission. In this case too, the Court noted the economic aspects albeit in a different manner as compared to the Blue Lady case. The Court considered the fact that the ship owner was incurring huge demurrage charges. In this case, the ship was brought to the Indian territorial waters without obtaining clearance from the Government of India. This was highlighted as being in contravention of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1989, to which India is a party. Written consent from the state of import is an essential condition prescribed under the Basel Convention for any country to send hazardous waste for environmentally sound disposal. The Court noted this fact and emphasized that authorities, in the future, should strictly comply with the norms laid down in the Basel Convention (see Research Foundation for Science, Technology and Natural Resources v. Union of India, Writ Petition No. 657 of 1995, Decided on 30 July 2012 (Exxon Valdez case)).

11.8 Bio-medical Waste (Management and Handling) Rules, 1998

Bio-medical waste means “any solid and/or liquid waste produced during diagnosis, treatment or vaccination of human beings or animals. Biomedical waste creates hazard due to two principal reasons: infectivity and toxicity. The source of biomedical waste is the place or the location at which biomedical waste has been generated. The source of biomedical waste is classified into two types based on the quantity of waste generated. They include major and minor source. Major source generates more amount of biomedical waste compared to minor source and also there is regular generation of biomedical waste in the major source which includes government hospitals, private hospitals, nursing home and dispensaries. Minor source includes physicians and dental clinics. Figure 2 shows the details of the various source of biomedical waste generation. Proper management of biomedical waste is highly essential since it induces various risks to the human health and to the surrounding ecosystem that leads to the ecological hazard, professional hazard and public hazard.

Therefore, in exercise of the powers conferred by section 6, 8 and 25 of the Environment (Protection) Act, 1986 the Central Government hereby notifies the rules for the management and handling of bio-medical waste called as Bio-Medical Waste (Management and Handling) Rules, 1998. These rules apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form.

- ❖ **Occupier:** In relation to any institution generating bio-medical waste, which includes a hospital, nursing home, clinic dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called, means a person who has control over that institution and/or its premises.
- ❖ **Duty Of Occupier:** It shall be the duty of every occupier of an institution generating bio-medical waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.

❖ Treatment and Disposal:

- Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V.
- Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

❖ Segregation, Packaging, Transportation and Storage

- i) Bio-medical waste shall not be mixed with other wastes.
- ii) Bio-medical waste shall be segregated into containers/bags at the point of generation in accordance with Schedule II prior to its storage, transportation, treatment and disposal. The containers shall be labeled according to Schedule III.
- iii) If a container is transported from the premises where bio-medical waste is generated to any waste treatment facility outside the premises, the container shall, apart from the label prescribed in Schedule III, also carry information prescribed in Schedule IV.
- iv) Notwithstanding anything contained in the Motor Vehicles Act, 1988, or rules there under, untreated biomedical waste shall be transported only in such vehicle as may be authorized for the purpose by the competent authority as specified by the government.
- v) No untreated bio-medical waste shall be kept stored beyond a period of 48 hours
- vi) Provided that if for any reason it becomes necessary to store the waste beyond such period, the authorized person must take permission of the prescribed authority and take measures to ensure that the waste does not adversely affect human health and the environment.
- vii) The Municipal body of the area shall continue to pick up and transport segregated non bio- medical solid waste generated in hospitals and nursing

homes, as well as duly treated bio- medical wastes for disposal at municipal dump site. Inserted by Rules 3 of the Bio-Medical Waste (Management & Handling) (Second Amendment) Rules, 2000 vide notification S.O.545 (E), dated 2-6-2000.

❖ **Monitoring of Implementation of the Rules in Armed Forces Health Care**

Establishments: The Central Pollution Control Board shall monitor the implementation of these rules in respect of all the Armed Forces health care establishments under the Ministry of Defense. After giving prior notice to the Director General Armed Forces Medical Services, the Central Pollution Control Board along with one or more representatives of the Advisory Committee constituted under sub-rule (2) of rule 9 may, if it considers it necessary, inspect any Armed Forces health care establishments.

❖ **Common Disposal / Incineration Sites:** Without prejudice to rule 5 of these rules, the Municipal Corporations, Municipal Boards or Urban Local Bodies, as the case may be, shall be responsible for providing suitable common disposal/incineration sites for the biomedical wastes generated in the area under their jurisdiction and in areas outside the jurisdiction of any municipal body, it shall be the responsibility of the occupier generating bio-medical waste/operator of a bio-medical waste treatment facility to arrange for suitable sites individually or in association, so as to comply with the provisions of these rules.

11.9 Noise Pollution (Regulation) 2000

The word noise comes from the Latin word nausea, meaning seasickness. Sound that is unwanted or that disrupt the activity or balance of human or animal life is called as noise. When there is lot of noise in the environment, it is termed as noise pollution. There are many sources of noise pollution which are associated with transportation, urban development, industrial and neighborhood and recreational noise. In recent years noise has emerged as one of the important pollutant of environment. In fact, it needs some legislation for its control like the Water Pollution and Air Pollution Act. The developed countries of world have already enacted specific laws to control the noise pollution. In England, there has been "Noise Abatement Act" 1960. According to Section 2 of this act, loudspeakers shall not operate- (a) between nine pm in evening

to 8 am of morning for any purpose; (b) at any other time for purpose of advertising any entertainment, trade or business. There have been some exceptions provided like the use of loudspeakers by the police, fire brigade, etc. in United States of America, there has been "Noise Pollution and Abatement Act" 1970 for regulating control and abatement of noise. Apart from this some specific legislation on noise control exist in the United States of America in the form of the Noise Control Code, 1972 (Federal), New York Noise Control Code, 1972 and Chicago Noise Control Regulations, 1971, in Great Britain, the Control of Pollution Act, 1974 (which covers noise within its Part-III); in Japan, Noise Control Laws of 1968, are the specific laws to control the growing problem of noise pollution.

In India many Acts at State level have been made like, The Bihar Control of the Use and Play of Loudspeaker Act, 1955 which provides restrictions against use and play of loudspeakers. In Section 3 of Act it reads: No person shall use and play a loudspeaker: (a) within such distance as may be prescribed from a hospital, a building in which there is telephone exchange. (b) Within such distance as may be prescribed from any educational institution established under law or hostel as is in the use of students. Section 6 of the Act provides that the cognizance of offence under the Act would be on a complaint made by or at the instance of, the person aggrieved by such offence or upon a report in writing made by any police officer.

Rule 21 of the Bihar and Orissa Motor Vehicle Rules, 1930 reads; (a) the driver of motor vehicle shall not sound the horn for any purpose other than that ensuring safety in traffic and shall not sound it continuously. (b) No cut-out exhaust whistles, sirens, klaxons, electric horn and similar appliance of any description shall be used on any motor vehicle in such areas within a district as may be notified by the District Magistrate in this behalf.

Rule 5.5 of Delhi Motor Vehicles Rules, 1940 reads: "No motor vehicles shall be fitted any multitone horn giving a succession of different tones or with any other sound producing devices giving an unduly harsh, shrill, loud or alarming noise". Rule 5.6 says that "Every motor vehicle shall be fitted with a device (hereinafter referred to as a silencer) which by means of an expansion chamber or otherwise reduces as far as reasonable and practicable the noise that would otherwise be made by an escape of exhaust gases from the engines". While Rule 5.9 states that: "Every motor vehicle shall

be so constructed and maintained as not to cause undue noise when in motion". Identical provisions to the Delhi Motor Vehicles Rules, 1940 have been incorporated in the Punjab Motor Vehicles Rules, 1940.

In national level noise have been included within Section 2 of the "The Air (Prevention and Control of Pollution) Act", 1981, and further under Section 6(b) of the "Environment (Protection) Act", 1986. As per "Environment (Protection) Act", 1986, like air water, noise has also been recognized as one of the pollutant in India, and appropriate steps are being taken to make rules and regulation to control the increasing menace of noise in the country. In 2000, Indian Government made Rules which cover only noise pollution, named as "The Noise Pollution (Regulation and Control) Rules, 2000".

❖ **Ambient air quality standards in respect of noise for different areas/ zones:**

To apply the rule government of India divided the area into four zones – Industrial, commercial, residential and silence zone. Ambient air quality standards in respect of Noise are given in Table 1. Day time shall mean 6.00 am to 10.00 pm, and Night time shall means 10.00 pm to 6.00 am. dB (A) Leq denotes the time weighted average of the level of sound in decibels on scale A which is related to human hearing A (decibel) is unit and A in dB (A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear. Silence zone in given area is the area comprising not less than 100 meters around hospital, educational institutions and courts.

Table 1 Ambient air quality standards in respect of Noise.

| Area Code | Categories of Area/Zone | Limits in dB(A) Leq | |
|-----------|-------------------------|---------------------|------------|
| | | Day Time | Night Time |
| A | Industrial area | 75 | 70 |
| B | Commercial area | 65 | 55 |
| C | Residential area | 55 | 45 |
| D | Silence zone | 50 | 40 |

❖ **Responsibility as to enforcement of noise pollution control measures and**

restrictions on loudspeakers: The noise level in any zone shall not exceed the standards given by rules. To play the loudspeaker in public address, individual should obtain the written permission from the authority. From 10.00 pm to 6.00 am loudspeaker shall not be used except in closed premises for communication within, e.g. auditoria, conference rooms, community halls and banquet halls. Whoever, in any place covered under the silence zone commits any offence like plays any music or rise

any sound amplifiers, beats drum, blows a horn, exhibits any mimetic, musical or performances of a nature to attract crowds, shall be liable for penalty under the provisions of the Act.

Table 2 Noise limits for domestic appliances

| Domestic appliances | Limits in dB (A) sound pressure level at 1 meter distance from the operating appliance |
|---|--|
| Window air conditioners of 1 to 1.5 ton | 68 |
| Air Coolers | 60 |
| Refrigerators | 46 |
| D | Silence zone |

- ❖ **Sources and impacts of noise pollution:** Apart from the above sources Table 2, crowding with the increase of population and urbanization, community activities such as political and public meetings religious functions, weddings, festivals, etc., have been contributory factors in rising environmental noise pollution.
- ❖ **Noise due to loud speakers-** Extensive and common use of loud speakers whether for political meetings, marriages, religious functions, musical nights, advertising, etc., are most disturbing source of noise to the urban dwellers in particular. Though the use of loud speakers is governed by administrative restrictions and laws are not seriously imposed. If loud horns are used near hospitals zones, they disturb the patients and also doctors at serious operations. Loud horn noises in school zones, create disturbance in teaching work. The permitted strength of the power amplifier should be adjusted to cover the audience, and noise level beyond the boundary limit of the noise source premises should not be increased by more than 5 dB above the ambient noise level.
- ❖ **Noise due to bursting of crackers-** Annual Report of Central Pollution Control Board (1989-90) states that – (a) manufacture and sale of crackers having an impulsive noise of more than 90dB at 5 meters distance from the site of bursting should be banned. (b) Manufacture and bursting of joined crackers should be banned, (c) bursting of crackers during 9.00 pm to 6.00 am should be banned and it should be permitted only during public festivals.
- ❖ **Noise due to vehicles-** The noise from individual vehicles includes- noise from engine, exhaust noise, noise due to slamming of car doors, and use of horns. The noise from engine and transmission depends upon the support used for moving parts. Good quality has more efficient and elaborates system for dementing noises.

Considerable improvements are being made to improve the mounting systems even in cheaper vehicle. Exhaust noise have been brought under control to maximum extent by using efficient silencing system, which also do not affect the power output of the engine. Prosecution, in Great for excessive noise from exhaust system does occur but seem somewhat illogical, as it being only the subjective judgment of the policeman. The noise due to closure of car doors is intense, but intermittent. This noise disturbs the sleep. This problem can only be solved at the design stage. This is only possible by enforcing legislation on motor manufactures to produce noiseless door shutting devices. The motor cars are fitted with horns, to attract the attention of the movers. These horns when not used in proper way produce appreciable nuisance. The Table 3 shows the relative noise of vehicle types. The tests are carried by the Motor Industry Research Association, using Test procedure as prescribed in BS 3425 (1965).

Table 3 Relative noise of different vehicle types

| Type of vehicle | dB (A) |
|-------------------------------------|--------|
| Luxary Limousine | 77 |
| Small passenger car | 79 |
| Miniature passenger car | 84 |
| Sports car | 91 |
| Motor-cycle (2 cylinder 4 stroke) | 94 |
| Motor scooter (1-cylinder-2-stroke) | 80 |

The difference between the noise level of a standard small passenger car and a sports car is no less than 12 dB, which means the sports car is roughly 15 times noisier than the saloon car. Motor cycles, with their exposed engines and inadequate silencing arrangements, are notorious noise procedures, with a sound level roughly 30 times higher than that of saloon car. Motor scooters, on the other hand, only produce the same noise as motor car.

- ❖ **Noise due to trains-** Noise from steam engines fast trains and railway operations has been a cause of great concern as the impact of the noise produced has been reported to be maximum in those areas where railway tracks pass through residential areas. Railway noise is less annoying than aircraft traffic noise of equivalent noise level at least an dB(A) Leq. 24 hr of 50-65 dB. Further, it is an annoyance to a given observer as an incident event and when the train has passed the point, the ambient sound level is restored.

- ❖ **Noise due to aircrafts and satellites** - This source of noise pollution has been increasing steadily during recent years and especially close to international airports, already constitutes a very serious problem. This problem has mainly arisen because of the widespread use of heavy long-range jet aircraft. The fast growth of air traffic, the invention of supersonic aircraft and devices employed to scare birds have contributed to the creation of aircraft noise. The launching of satellites, a regular space activity these days, has now come to be recognized as a new source of air and noise pollution. Lifting of satellite with aid of high explosive rockets produce deafening noise.
- ❖ **Noise from Construction and civil engineering works-** Noise from construction sites is generally far worse than noise originating from factories. There are two main reasons for this. One is that whether construction takes place like erection of roads, bridges, and buildings noise emission levels are higher. The other is that civil engineering equipment is inherently noisy. The worst of these pieces of equipment, from the noise generation point of view, are shown in Table 4.

Table4. Noise level generation by equipment using during construction and civil engineering

| Equipment | Noise level t 15m |
|---------------------------------|-------------------|
| Tractor-scraper | 93 dB |
| Rock drill | 87 dB |
| Unmuffled concrete breaker | 85 dB |
| Hand-held tree saw | 82 dB |
| Large rotary diesel compressor | 80 dB |
| 1 1/2 tonne dumper truck Diesel | 75 dB |
| Concrete mixer | 75 dB |

❖ **Precautions in Construction Activities-**

- Acoustic barriers should be placed near construction sites.
- The maximum noise levels near the construction site should be limited to 75 dB (A) Leg (5 min) in industrial area and to 65 dB (A) leg (5 min) in other areas.
- There should be fencing around the construction site to prevent people coming near site.

- Material need to be stockpiles and unused equipment to be placed between noisy operating equipment's and other areas.
- Constructing temporary earth and around the site using soil etc., which normally is hauled away from the construction site.

❖ **Noise from industries-** Noise in industry originates from processes causing impact, vibration or reciprocation movements, friction, and turbulence in air or gas streams. Impact and vibration noises are considerably reduced if machines are mounted on flexible supports. In addition, vibration noises can be reduced by the mass, careful design of shape and arrangement of parts of machines so that resonance is avoided. Nevertheless, certain machines will remain inherently noisy, and demand to the surrounded with absorbent or insulating screens. Noise caused by gas stream can be attenuated or even eliminates by the use of suitable ducts and by correct design and positioning of inlets and outlets.

The textile mills are some of the noisiest workplace in the country. There machinery in woolen and jute mills is even nosier than in cotton and silk. The noise level in a large weaving section ranges from 100 dB to 105 dB, and can cause permanent loss of hearing. In US, no textile mill is allowed to exceed 100 dB for more than two hours a day- but, Indian mills run three, eight hours shifts. The workers are most readily suffers to the noise hazards of industrial functioning. Industries located in the residential areas, particularly such as printing press agro-based industries, auto miles repairing, grinding mills, general engineering, etc., are the sources of community noise affecting the public continuously, living in the vicinity. There are permissible noise exposures for industrial workers are discussed in given Table 5.

Table 5 Permissible noise exposures for industrial workers.

| Exposure Time | Limit in dB (A) |
|------------------------------------|-----------------|
| 8 | 90 |
| 4 | 93 |
| 2 | 96 |
| 1 | 99 |
| $\frac{1}{2}$ | 102 |
| $\frac{1}{8}$ | 108 |
| $\frac{1}{6}$ | 111 |
| $\frac{1}{32}$ (2 minutes) or less | 114 |

Exposure to continuous or intermittent noise louder than 115 dB (A) should not be permitted. Exposure to pulse or impact noise should not exceed 140 dB (peak acoustic pressure).

❖ **Amendments in “The Noise Pollution (Regulation and Control) Rules, 2000”**

In 2006, Noise Pollution (Regulation and Control) Amendment Rules has been made by Central Government. According to this, in rule 4, after sub-rule (2), sub-rule have been inserted according to which the respective State pollution Control Board or pollution Control Committees in consultation with the Central Pollution Control Board shall collect, compile and publish technical and statistical data relating to noise pollution and measures devised for its effective prevention, control, and abatement. In rule 8, in sub-rule (1), after the words “received by him”, the words “including from the complainant” shall be inserted. In sub-rule (2), in the proviso, after the words “afford to the applicant”, the words “and to the original complainant, as the case may be”, shall be inserted.

Other amendment has been done and new Noise pollution (Regulation and Control) (Amendment) Rules, 2009 shall come into force. In the Noise Pollution (Regulation and Control) Rules, 2000, (here in after referred to as the said rules), in the opening portion, after the words “construction activity”, the words “fire crackers, sound producing instruments ” shall be inserted. In the said rules, in rule 2, after clause (h), “public place” means any place to which the public have access, whether as of right or not, and includes auditorium, hotels, public waiting rooms, conventions, libraries, open grounds and the like which are visited by general public. In rule 3, in sub-rule (3), after the words “noise emanating from vehicular movements”, the words “blowing of horns, bursting of sound emitting fire crackers, use of loud speakers or public address system and sound producing instruments” shall be inserted. After rule 3, “(3A) The State Government shall take measures to stop the blowing of horns at night in silence zones and residential area except during a public emergency”. In rule 5, in the heading, after the words “PUBLIC ADDRESS SYSTEM”, the words “AND SOUND PRODUCING INSTRUMENTS” shall be inserted. In (ii) for sub-rule (2), “A loud speaker or a public address system or any sound producing instrument or a musical instrument or a sound amplifier shall not be used at night time except in closed premises for communication with, like auditoria, conference room, community halls, banquet halls or during a public

emergency". In sub-rule 5 (3) for the words "public address systems during night hours", the words "public address system and the like during night hours" shall be substituted. After the words "a limited duration not exceeding fifteen days in all during a calendar year", the words "the concerned District Magistrate shall generally specify in advance, the number and particulars of the days on which such exemption should be operative" shall be inserted.

After sub-rule 3, two new sub-rules shall be inserted. In Sub- rule (4) the noise level at the boundary of the public place, where loudspeaker or public address system or any other noise sources is being used shall not exceed by more than 5 dB(A) above the ambient noise standards for the area or 75 dB (A) whichever is lower. In sub-rule 5, "the peripheral noise level of a privately owned sound system or a sound producing instrument shall not, at the boundary of the private place, exceed by more than 5 dB (A) the ambient noise standards specified for the area in which it is used". In 5(A) restrictions on the use of horn and bursting of fire cracker has been done, according to which-

- No horn shall be used at night time in silence zones and residential areas except during a public emergency.
- Sounds emitting fire crackers shall not be burst at night time.
- Notwithstanding anything contained in sub-rule (2), the State Government may subject to such terms and conditions as are necessary to reduce noise pollution, permit bursting of sound emitting fire crackers during night hours (Between 10.00 p. to 12.00 midnight) on or during not exceeding fifteen days in all during a calendar year.

Summary

Right to clean environment has been declared to be part of fundamental right to life and personal liberty enunciated in Article 21 of the Constitution of India. Parliament of India has also enacted Water Act, 1974 to prevent and curb water pollution in India. To achieve the purposes of the Act, Central and State Pollution Control Boards have been constituted so as to ensure the effective implementation of the Act. The industries have been mandated to get requisite permission before commencing their operations. However, despite legislative and executive measures and judicial concern, the industries are still polluting

water bodies as well as ground water table to a great extent and there is a need to regulate the provisions more effectively.

Water Cess Act has been enacted as supplementary legislation to generate revenues for ensuring effective implementation of Water Act, 1974 since it was found that State Pollution Control Boards were not having sufficient funds at their disposal to enable them to discharge their functions. In this backdrop, Water Cess Act provided for levy of cess on water used. The cess rates are dependent upon the purpose for which the water is used. Moreover, the Act has also given an incentive for those who establish water and sewage treatment plant so as to ensure that water bodies are not polluted and also to ensure effective utilization of scarce water resources.

From the foregoing discussion, it is clear that Union government has not only enacted a law to cope up with the increasing menace of air pollution but has also set up Pollution Control Boards to control, regulate and mitigate air pollution. CPCB has also issued National Ambient Air Quality Standards and have established mechanism for measuring the same. However, despite the legislative and executive measures, the air pollution is still on the rise. The menace of stubble burning curbed with unplanned industrial development leads to choking of various cities and the government has still not found any effective method to deal with this ever increasing menace. It is also true that no government efforts can succeed until and unless we, the people of India, unite and fight against this and also take measures at our end to reduce the air pollution.

References

The Wildlife Protection Act, 1972

- i) https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000033SO/P000296/M009125/ET/149605570125EnvironmentalLawsPartIIEvolutionofEnvironmentalRegulationsinIndia.pdf
- ii) <http://utrenvis.nic.in/data/hazardous%20waste%20rules%201989.pdf>

The Water (Prevention and control of pollution) Act, 1974

- i) Narmada Bachao Andolan v. Union of India, AIR 2000 SC 3751
- ii) State of M.P. v. Kedia Leather and Liquor Ltd, AIR 2003 SC 3236
- iii) The Shore Nuisance (Bombay and Kolaba) Act, 1853; Orient Gas Company Act, 1857; The Serais Act, 1867; North Indian Canal and Drainage Act, 1873; Indian Fisheries Act, 1897; Indian Ports Act, 1908; Indian Steam Vessels Act, 1917; Indian Forest Act, 1927 etc. For details see Myneni, S.R., Environmental Law, Hyderabad : Asia Law House (2008) : 463-465 iv Whoever voluntarily corrupts or fouls the water of any public spring or reservoir, so as to render it less fit for the purpose for which it is ordinarily used, shall be punished with imprisonment of either description for a term which may extend to three months, or with fine which may extend to five hundred rupees, or with both.

- iv) Entry 17, List II, Schedule VII
- v) Article 253
- vi) Article 252
- vii) Resolutions were passed by all legislatures of States of Assam, Bihar, Gujarat, Haryana, Himachal, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Rajasthan, Tripura and West Bengal.
- viii) Chapter II deals with Centre and State Boards for Prevention and Control of Pollution; Chapter III deals with the establishment of Joint Boards; Chapter IV deals with Powers and Functions of Boards; Chapter V lays down the provisions for Prevention and Control of Pollution; Chapter VI provides for the Funds, Accounts and Audit; Chapter VII make provisions for Penalties and Procedures and Last Chapter i.e. Chapter VIII enacts miscellaneous provisions.
- ix) Water (Prevention and Control of Pollution) Act, 1974 : Section 1(3)
- x) Water (Prevention and Control of Pollution) Act, 1974 : Section 2(e)
- xi) Water (Prevention and Control of Pollution) Act, 1974 : Section 2(g)
- xii) Water (Prevention and Control of Pollution) Act, 1974 : Section 2(gg)
- xiii) Water (Prevention and Control of Pollution) Act, 1974 : Section 2(k)
- xiv) Water (Prevention and Control of Pollution) Act, 1974 : Section 2(d)
- xv) Word "Stream" is defined in Section 2(j) to include River, Water course (Whether flowing or dry), inland water (natural or artificial), sub-terranean waters and sea or tidal waters
- xvi) Water (Prevention and Control of Pollution) Act, 1974 : Section 3(3)
- xvii) Water (Prevention and Control of Pollution) Act, 1974 : Section 3
- xviii) Water (Prevention and Control of Pollution) Act, 1974 : Section 5
- xix) Water (Prevention and Control of Pollution) Rules, 1975 : Rules 3-5
- xx) Id., Section 16
- xxi) Id., Section 4(3)
- xxii) Water (Prevention and Control of Pollution) Act, 1974 : Section 4
- xxiii) Id., Section 17
- xxiv) Id., Section 13
- xxv) Water (Prevention and Control of Pollution) Act, 1974 : Section 14(1)
- xxvi) Water (Prevention and Control of Pollution) Act, 1974 : Section 14(2)
- xxvii) Id., Section 15
- xxviii) Id., Section 25(1)
- xxix) Id., Section 25(4)
- xxx) Id., Section 27
- xxxi) Id., Section 24
- xxxii) Id., Section 23
- xxxiii) Id., Section 20
- xxxiv) Ibid
- xxxv) Id., Sections 16 & 17
- xxxvi) Sections 51 & 52
- xxxvii) Section 21
- xxxviii) Section 22
- xxxix) MANU/UC/0202/2016
- xl) Section 41(1)
- xli) Section 41(2)
- xlii) Section 43
- xliii) Section 43

- xliv) Section 44
- xliv) Section 45
- xlvi) Section 42
- xlvi) Section 45A

The Water Cess Act, 1977

Member Secretary, Kerala State Board for Prevention and Control of Water Pollution, Trivandrum v. Gwalior Rayon Silk Manufacturing (Weaving) Company Limited, AIR 1986 Ker. 256

- ii Section 1
- iii Water (Prevention and Control of Pollution) Cess Act, 1977; Section 2(d)
- iv Section 2(c)
- v Section 2(a)
- vi Section 4 and Rule 3 of Water (Prevention and Control of Pollution) Cess Rules , 1978
- vii Section 9
- viii Section 5 and Rule 4
- ix Section 6(1A)
- x 2016(1)RLW 537(Raj.)
- xi Section 7
- xii Rule 6 of Water Cess Rules, 1978. In Member Secretary, Kerala State Board for Prevention and Control of Water Pollution, Trivandrum v. Gwalior Rayon Silk Manufacturing (Weaving) Company Limited, AIR 1986 Ker. 256, Rule 6 was challenged on the ground that Central government does not have power to make such a rule under Section 17. However, the High Court rejected this contention.
- xiii *Revenue Recovery Act*, 1890 prescribe the procedure for recovery of arrears of land revenue. If any amount is recoverable as arrears of land revenue, collector can issue a proclamation prohibiting that person from transferring his immovable properties or from creating any interest in those immovable properties till proclamation remains in force. Such immovable properties can be sold for recovery of arrears of land revenue. If the person sells or creates any interest in those properties after the issuance of proclamation, such transaction shall be void.
- xiv Section 10
- xv Section 11
- xvi Section 12
- xvii Section 13
- xviii Rule 9
- xix Section 16

The Air (Prevention and control of Pollution) Act 1981

- i S.R. Myneni, *Environmental Law* (2008), Asia Law House, Hyderabad
- ii <https://www.grc.nasa.gov/www/k-12/airplane/airprop.html>
- iii Burning of fossil fuels adds oxides of carbon, nitrogen and sulphur and disturb the composition of air.
- iv <https://secured-static.greenpeace.org/india/Global/india/Airpocalypse--Not-just-Delhi--Air-in-most-Indian-cities-hazardous--Greenpeace-report.pdf>
- v Entry 6 of List II empowers the States to enact laws on Public Health and Sanitation which may cover Air pollution as affecting the public health.
- vi Article 51A(g) provides that It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for all living creatures .

vii Article 253 enables the Parliament to enact laws for the whole or any part of the country to give effect to any treaty, agreement or convention with any other country or countries and to give effect to decisions taken at international conferences. Accordingly, to give effect to decisions taken at Stockholm Conference, Air Act was enacted by Union Parliament.

viii Preamble of the Air (Prevention and Control of Pollution) Act, 1981

ix Air (Prevention and Control of Pollution) Act, 1981; Section 2(b)

x Section 2(a)

xi With effect from 01-04-1988

xii For details of definitions, see section 2 of Air (Prevention and Control of Pollution) Act, 1981

xiii Paramjit Singh Jaswal (et al.), Environmental Law, Allahabad Law Agency, Faridabad (2015), p. 254

xiv Section 3

xv Section 6

xvi CPCB issued National Ambient Air Quality Standards vide its notification dated 18th November, 2009 which laid down the standard of presence of pollutants in air (PM10, PM2.5, Sulphur Dioxide, Nitrogen Dioxide, Ozone, Nickel, Lead, Carbon Monoxide, Ammonia, Benzo(a) Pyrene, Benzene and Arsenic) in industrial, residential areas and in ecologically sensitive areas. For details visit http://cpcb.nic.in/National_Ambient_Air_Quality_Standards.php

xvii Section 16

xviii Section 18(1)(b)

xix The Central government and CPCB issued directions regarding prevention, control and abatement of pollution in Delhi airshed area vide notification dated 30th September 2015 to governments of Delhi, Rajasthan, Haryana and U.P. These directions pertain to vehicular emission, control of road dust, control of pollution from Bio-mass burning and industrial air pollution, control of air pollution from construction activities etc.

xx Section 18(2)

xxi <http://cpcb.nic.in/air.php>

xxii Section 4

xxiii Id., Section 5(3)

xxiv Section 5

xxv Section 49

xxvi Section 7

xxvii Section 8

xxviii Section 17

xxix Section 47

xxx Section 48

xxxi Section 19

xxxii Ibid

xxxiii Ibid

xxxiv Ibid

xxxv Section 20

xxxvi Section 22

xxxvii Section 21

xxxviii Section 23

xxxix Section 22A

xl Section 24
xli Section 25
xlii Section 31A
xliii AIR 1987 Kant. 82
xliv Section 26
xlv Section 27(4)
xlvi Section 27
xlvii Section 31
xlviii Section 46
xlix Application number 118/2013, Judgment dated 10th December 2015
l Original Application number 21 of 2014 and other applications, order dated 10th November 2016
li 2016(1) SCALE 271
lii M.C. Mehta v. Union of India (2016) 2 SCC 33
liii (2016) 4 SCC 271
liv Section 37
lv Section 40
lvi Section 41
lvii Section 43

The Environment Protection Act, 1986

EPG Pathshala: Paper No: 13 Environmental Law and Policies, Module: 12 The Environmental (Protection) Act, 1986.

Hazardous Wastes (Management and Handling) Rules, 1989

https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/law/06._environmental_law/19._waste_management/_et/5736_et_19_et.pdf

Bio-medical Waste (Management and Handling) Rules, 1998

- i. EPG Pathshala: Paper No: 11 Solid and Hazardous Waste Management Module: 22-23 Biomedical wastes: Definition, sources, classification, collection, segregation, Treatment and disposal.
- ii. [http://igims.org/DataFiles/CMS/file/waste%20management/BIO MEDICAL_WASTE__MANAGEMENT__HANDLING__RULE_-_1998.pdf](http://igims.org/DataFiles/CMS/file/waste%20management/BIO_MEDICAL_WASTE__MANAGEMENT__HANDLING__RULE_-_1998.pdf)

Noise Pollution (Regulation) 2000

- i. EPG Pathshala: Paper No : 09 Environmental Pollution I - Air and Noise Module : 40 Legal provisions and Act for Noise Pollution

Unit 12: Forest and Biodiversity Acts

Unit Structure

12.0 Objectives

12.1 Introduction

12.2 The Forest Act, 1927

12.3 The Forest Conservation Act, 1980

12.4 Biodiversity Act, 2002

12.5 The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act)

Summary

12.0 Objectives

After studying this unit you will be able to understand:

- Depth understanding of The Indian Forest Act, 1927
- Depth understanding of The Forest (Conservation) Act, 1980
- Depth understanding of The Biodiversity Act, 2002
- Depth understanding of The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act)

12.1 Introduction

The relationship between man and environment has varied from time to time. Man's ambition for limitless enjoyment and comfort has led him towards the exploitation of nature's wealth so indiscriminately and so brazenly as to abate nature's capacity for self-stabilization. Man's insatiable appetite for resources and his desires to vanquish nature has put him in collision course with the environment. The escalating demand for his explosive technological society imposes excessive strain on the state of equilibrium with the environment. Therefore, where environment degradation poses one of the biggest problem, environment protection policy has gained immense significance.

The preservation of ecology and environment has been prevalent in India since ancient times. The phases of environment protection has dated from the time of Vedas, Upanishads, Puranas and other scriptures of Hindu religion, to Emperor Ashoka and

Mughals. However, it was only during the reign of Britishers that several laws were enacted as a strong step towards the conservation of ecological system of India.

However be it, these legislations served only as a veil to conceal the imperialist policies under which the Britishers exploited the natural resources of its colonies, specifically the forest areas to draw timber for shipbuilding, iron-smelting and farming. In India, this process greatly intensified in the early years of the building of the railways network after about 1853. Various belts, for instance, the sub-Himalayan forests of Garhwal and Kumaon, were declared as 'Protected' forests under the proprietorship of the British government.

British interests in forest resources of India were dictated by imperialism. The imperial needs led to establishment of pervasive control of the colonialists over Indian forests. The ambition eclipsed, firstly, the well-established traditional systems of conservation and sustainable use, and secondly, the critical ecological and social role that forests played. The Protected Forests under British power was a means to expand state power and exploit Indian colony.

12.2 The Forest Act, 1927

Forest conservators were appointed in several provinces and Forest Department was established. In 1865, Forest Act was passed which was later revised in 1878. This legislation covered most of the Indian territories, and expanded the powers of the British government by providing for 'Reserved' forest. The forest administration was empowered by the legislation to impose huge penalties on transgressors.

On 19th October 1884, the British Government declared its first Forest Policy by a resolution, stating three prime objectives:

1. Promoting the general well-being of the people in the country;
2. Preserving climatic and physical condition in the country; and
3. Fulfilling the need of the people

This policy classified the forests into four categories:

1. Forests, the preservation of which was essential for climatic and physical grounds;
2. Forests which offered a supply a valuable timber for commercial purposes;
3. Minor forest which produced only the inferior sort of timber; and

4. Pastures, which were forest only in name.

In 1927, the Indian Forest Act was passed to implement this policy of 1884. This Act was very comprehensive in nature and replaced the Forest Act of 1878.

❖ **The Indian Forest Act, 1927: An Analysis**

• **Object and Scope of the Act**

The object of the Indian forest Act [hereinafter referred to as 'the Act'] was to consolidate and re-shape the law relating to forests in India. This was the first step towards codification of the various practices and activities of the forest officials. The Act further aimed towards regulating the rights of various groups of people over forest lands and the resources. Different classifications of forests were made and the scope of the provisions was elaborated to extend control of State over forests and resources. Unlike the 1878 Act, this Act did not refer to the community's right over the forest and people were expected to put in their claims over forest lands. Further, the act tried to govern the transit of forest produce and duties to be levied on forest products. Thus, the Act depicted the revenue yielding aspects of forests, in the mind of colonial rulers.

❖ **Salient features of the Act**

- The Act contains 86 sections and deals in four categories of forest which includes (i) Reserve Forest (ii) Village Forest (iii) Protected Forest (iv) Non-government Forest.
- Regulatory measures were introduced to prohibit/control quarrying of stones, burning of lime or charcoal, the collection of any manufacturing process, or removal of any forest produce in any such forest and the breaking up or clearing for cultivation, for building and for herding cattle.
- Inspectors were conferred with the power to arrest without warrant in cases of disobeying or violation of the provisions of this Act.
- Unlike the 1878 Act, the 1927 Act did not refer to rights of various communities over forests, rather the communities/individuals were expected to claim their right over the particular forest land before the Forest Settlement Officer. The officer may conduct appropriate enquiry against such claim.
- Special provisions have been included to control the shifting cultivation. The practice of shifting cultivation is subject to satisfaction of the Forest Settlement

Officer who upon recording the claims, informed the State Government regarding the permissibility of the same.

Further, Section 10 of the Act specifically mentions that the practice of shifting cultivation was in all cases deemed to be a privilege subject to control, restriction and abolition by the State Government.

❖ **Reserved Forest (Chapter II)**

The Act under Section 3 empowers the State Government to constitute/declare any forest land or wasteland as reserved forest by issuing notification in this regard. Once a forest is declared as a reserved forest, the state government has the proprietary right over that area and all individual or community rights on that area, which existed before such notification, shall be extinguished. In order to declare any area as reserved forest the State Government is bound to follow the following process:

- (a) State government shall issue a notification which shall declare the intention of government to constitute an area as reserved forest, specifying the limits of that area and appoint the Forest Settlement Officer (FSO) to redress to the queries of various persons.
- (b) FSO is obliged to inquire into the claims made by the individuals and if any claim exist in the government record, then such claims must be settled (Section 6 & 7).
- (c) The State Government shall specify the limits of the forest which is to be reserved in accordance with the boundary-marks erected or otherwise. Once a notification is published in the Official Gazette, the same is declared to be reserved from a date fixed by a notification in the Official Gazette, after satisfying all the conditions mentioned in Section 20.

In the case of *Ratan Singh v. State of UP*, 1980 (6) ALR 228, the Hon'ble Court held that the State government could issue notification under Section 4 only about the land described in Section 3. If the land described in the notification is not mentioned under Section 3, then no such power can be exercised by the State government on such land.

❖ **Village Forest**

State Government establishes Village Forests by assigning rights to a village community over any land constituting a reserved forest. The State Government may

make rules for regulating the management of village forests, prescribing the conditions under which the community to which any such assignment is made may be provided with timber or other forest-produce or pasture, and their duties for the protection and improvement of such forest. All the provisions of this Act relating to reserved forests shall, so far as they are not inconsistent with the rules so made apply to village-forests (Section 28).

❖ **Protected Forest**

The State Government is empowered to declare any forest-land or waste-land which is not included in a reserved forest but over which the Government has proprietary rights or has right over any part of forest produce, as protected forest. However, the government must survey about the rights and claims of private individuals in the forest area which is under consideration and only after the settlement of such claims an area can be declared as protected forest.

❖ **Non-government Forest (Chapter V)**

The Forest Act intended to be a piece of legislation not only in respect of government forest but also in respect of forests and land not belonging to government as held in the case of Kashi Prasad Sahu v. State of Orissa, AIR 1963 Ori 24. The Act authorizes the State Government, by notification, to regulate or prohibit breaking up or clearing of land for cultivation, pasturing of cattle and firing or clearing of the vegetation in any forest or waste land in order to achieve the following purpose:

1. for protection against storms, winds, rolling stones, floods and avalanches;
2. for the preservation of the soil on the ridges and slopes and in the valleys of hilly tracts, the prevention of landslips or of the formation of ravines, and torrents, or the protection of land against erosion, or the deposit thereon of sand, stones or gravel;
3. for the maintenance of a water-supply in springs, rivers and tanks;
4. for the protection of roads, bridges, railways and other lines of communication;
5. for the preservation of the public health

However before issuing such notification, the state government is bound to issue show cause notice to the owner of the forest or waste land asking him why such notice not be issued and to make his objections (Section 35).

❖ Control over timber and duty on transit

The Act under Section 39 authorizes the Central Government to levy a duty on all timber or other forest produce which is produced in the territorial jurisdiction of this act and in respect of which the Government has any right or which is brought from any place outside. The Government shall by notification specify the manner, place and rate of such duty.

Further, the Act empowers the state government to control all rivers and their banks as regards the floating of timber, as well as the control of all timber and other forest-produce in transit by land or water and makes rules and regulations in that regard (Section 41).

These rules may prescribe the routes for import, export or movement of forest produce, prohibit movement without pass issued by the specified authority, stoppage and examination of goods, establishment and regulations of depots, Regulate the use of property marks for timber and the registration of such marks, removal of obstructions from channels or banks of river used for transit and for other purposes specified under section 41(2) of the Act.

Section 42 of the Act empowers the State Government to make rules prescribing penalties for the contravention thereof. Such penalty may include imprisonment for a term extending to six months, or fine which may extend to five hundred rupees or both.

In the case of T.V. Balakrishnan v. State of Tamil Nadu, 1994 (2) SCALE 661, Supreme Court held that Timber Transit Rules are regulatory in nature and not prohibitive. Hence it does not violate freedom given under Article 19 (1) (g) nor Articles 301 and 304 of the Constitution of India. Thus, power to grant or refuse permit does not violate right to freedom of movement.

❖ Powers of Forest Officer

- Any Forest-officer or Police-officer without orders from a Magistrate and without a warrant, arrest any person against whom a reasonable suspicion exists of his having been concerned in any forest-offence punishable with imprisonment for one month or upwards (Section 64).
- Any Forest-officer of a rank not inferior to that of a Ranger, who, or who's subordinate, has arrested any person under the provisions of Section 64, may release such person on his executing a bond to appear (Section 65).

- Every Forest-officer and Police-officer shall prevent, and may interfere for the purpose of preventing, the commission of any forest-offence.
- Power to confiscate all timber or forest-produce or other equipment in respect of which a forest-offence has been committed.

❖ **Post-Colonial Forest Policies:** Salient features of important Forest Policies are discussed in brief as follows.

❖ **Forest Policy, 1952**

The Forest Policy of 1952 withdrew the concessions of release of forest land for cultivation. Moreover, the policy decided that there should be village forests, to cater to the needs of the villagers, as against the provisions under Forest Policy Resolution (1894) which allowed them only into outlying areas of reserved forests. The Policy further applied certain checks and controls on private land. Along with this, fee was imposed on grazing. This Policy laid six paramount needs of the country which included, among others, a system of balanced and complementary land use, to check denudation in mountain regions, need for establishing tree lands and sustained supply of timber and other forest produced.

❖ **Forest (Conservation) Act, 1980**

The Forest (Conservation) Act of 1980 was enacted to curb and control deforestation. The legislation thus enshrined various provisions which are applicable to all forests notwithstanding the classification. The power of State Government related to use of forest land and preservation of forest resources, has also been restricted by the Act. Section 2 provides that the State Government shall not make amendments except with the prior approval of the Central Government. The Act further directs cessation of all such non-forest activities within any forest which are ongoing without prior approval of the Central Government. Furthermore, an advisory committee shall be constituted under the Act to advise the Government with regard to the grant of approved by the Central Government (Section 2) or any other matter connected with conservation of forests which may be referred to it by the Central Government (Section 3).

❖ **Forest (Conservation) Act, as amended in 1988**

The Forest Conservation Act was amended in 1988 to strengthen the legislative framework required for conservation of forests and its resources. The amended Act provides that the aim of the Act is to ensure environmental stability and maintenance of

ecological balance. Thus, derivation of any economic benefit from the environment is ancillary in nature. The Act advocates Joint Forest Management by giving usufruct rights for protection of forests.

Contravention of the provisions of the Act is punishable by imprisonment which may extend to a period of 15 days as per Section 3A. The Act also enshrines offences by the authorities and Government departments (Section 3B).

Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006

This Act under Section 4 has recognized the failure of earlier forest policies in recognizing the rights of forest dwellers, due to which discrimination has been meted out against them. Thus, the legislation endeavors to reverse the historical injustice done to the forest dwellers and tribal people. It was for the first time that through this Act the rights of the forest dwelling people got recognized in the Indian forest policy formation. Traditionally the forest dwellers held only the right to collect and use the forest produce. However, the Act of 2006 now recognizes the rights of Scheduled Tribes and Forest Dwellers including right to forest land in terms of living, holding, occupying the forest land under (Section 3).

Along with various rights, the Act also provides for certain duties of the forest dwellers to protect the wildlife and diversity of the forests and to promote sustainability in the ecological areas. Furthermore, Section 6 of the Act empowers the Gram Sabha for deciding upon the community rights and that of the individuals in the areas that has been marked as forest areas. Hence, with the inclusion of forest communities in forest conservation policy, there is a radical shift in the governance and management of the forests.

❖ Forest Rights Act, Amendment Rules, 2012

To ensure that the intended benefits of this welfare legislation flow to the eligible forest dwellers and to strengthen Forest Rights Act, the Ministry has notified the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Amendment Rules, 2012 on 6.9.2012.

The quorum of the Gram Sabha shall be reduced from 2/3 to 1/2 of the members to ensure that at least fifty percent of the claimants are there. The resolution to pass any claims shall be held in the presence of these claimants so there was a majority present

between those voting for these rights. Rejection or modifications are to be communicated to the claimants and reasonable time shall be given to the claimant in case he decides to file a petition against the decision. Further, a procedure shall be laid down for identification of the village forests and similar laws shall be made for bringing them in to the main stream. The Scheduled Tribes in the Forest Rights Committee shall be represented by 2/3 rather than 1/3 as was earlier represented.

Furthermore, there shall be modification of the transit permits when there is transportation of the minor forest produce. Such modifications shall be done only by Committee constituted by Gram Sabha or a person authorized by the Gram Sabha. The royalties and other MFP related revenue shall be collected by these committees. The idea behind this is to recognize the rights of the forest dwellers and ensure sustainable development through localization of the laws. The rights of forest dwellers shall be recognized by all the villages

❖ **Role of Judiciary**

This 1927 Act has faced serious scrutiny by various judicial forums in the country. The Supreme Court and High Courts have made a serious effort to eliminate arbitrary powers from this Act in order to remove the colonial touch, which existed in the Act at the time of its enactment, and to secure the rights of various stakeholders in the contemporary democratic era.

❖ **Mehta Brothers v. State of Himachal Pradesh, 1980 Cri LJ 289**

It was contented that no appeal under Section 59 can be made by the person who was not the party before the Magistrate court. The Hon'ble Court while rejecting this argument observed that the principle of natural justice requires that a person cannot be adversely affected without affording him a reasonable opportunity to substantiate his cause. Under Section 59 no bar has been created that no person would be entitled to prefer an appeal who has not extended his claim before a Magistrate. The phrase "any person claiming to be interested in the property seized" is wide enough to include even a person who was not a party before the trial Court. Further it was held that under Section 55 of the Indian Forest Act the phrase "shall be liable for confiscation" does not mean that the property stands automatically confiscated. On the contrary, it is presupposed that an opportunity is to be given to the person affected before the property is actually ordered to be confiscated.

❖ Constitutional Validity of Section 52 of the Act

In the case of *Kailash Chand v. State of MP*, AIR 1995 MP 1, it was contented that Section 52 of Act encroaches upon the power of Magistrate under Sections 451 and 457 of CrPC by giving such parallel powers to Forest Officer. The Forest Act is certainly a special law within the meaning of Sec 5 of CrPC. Wherein the officer has power to initiate confiscation proceeding then it must follow that he has incidental and ancillary power of passing an order of temporary custody or possession of property. However, where no confiscation proceeding is initiated, the Magistrate himself can exercise the power vested in him under CrPC. Thus, the power of Magistrate to pass order regarding temporary custody or disposal of property is taken away in case where confiscation proceeding is initiated, followed by intimation. The ban on jurisdiction is partial and not absolute as highlighted in case of *D.Shantalakshmi v. State of Tamil Nadu*, AIR 1983 Mad 232. Merely because other forum is manned judicially by an executive officer, instead of judicial officer, it cannot be said that it results in violation of Article 14 of the Constitution. This was stated in the case of *Ashoka Marketing Ltd. and Anr. v. Punjab National Bank And Ors.*, 1990 SCR (3) 649. Therefore, Sec 52 of the Act does not violate Article 14, 19(1) (g) or 21 of the Constitution by empowering forest officer to confiscate. Further, The Magistrate has no power to release the vehicle, when confiscation proceedings initiated under Section 52 of the Act or any State Act.

❖ Forest conservation and preservation

The Hon'ble Apex Court has taken a firm view in disallowing non-forest activities and leasing the forest for this purpose. The court in the case of *Dhirendra Agrawal v. State of Bihar*, AIR 1993 Pat 109, considered the renewal of stone crushing lease without prior permission of the Central Government as a serious act of negligence and breach of duty. Also, the use of forest land for non-forest purpose was clearly denied by the court in the case of *State of Bihar v. Banshi Ram Modi*, AIR 1985 SC 814. Similarly, permissions for tourism in the forest have been denied by the court in the case of *Union of India v Kamath Holiday resorts Pvt. Ltd.* AIR 1996 SC 1040. The court has also criticized the idea of excavations of iron ore in forest in the case of *B V Joshi v State of Andhra Pradesh* AIR 1989 AP 122.

In the landmark judgment of *T.N. Godavarman Thirumulpad v. Union of India*, (2011) 14 SCC 387, the Supreme Court has touched wide range of issues related to forest

conservation through the different orders. Through this case, the court has addressed the issues like defining the term forest and implementation of Forest Conservation Act, 1980, Constitution of High Power Committee to oversee implementation of Court's orders in Northern Eastern States, encroachment of forest land, constitution of Arunachal Pradesh Forest Protection Authority, Formation of State and central level Authorities under the Environment (Protection) Act, constitution of Central Empowered Committee, Forest Advisory Committee, the issues related to regulation of non-forest use of forest land and protection of wild life and sanctuaries and national parks throughout the country.

Further, the Court issued sweeping directives to enforce the Forest Conservation Act, 1980 and it was categorically stated that the provisions of the Act must apply to all the forests irrespective of the ownership or classification thereof.

❖ Critical Analysis and Need For Reformation

As elucidated earlier, the British Government was the first one to formulate stringent policies regarding Forest resources. However, the analysis of the Forest Act of 1927 entails significant concerns. The legislation has been drafted and enacted by the Colonial Government with imperialistic ambition and is in force even today. Therefore, the issues that arise from the evaluation require immediate attention.

Provisions for declaring forests as reserved by extinguishing the rights of the local people, were contained in the Forest Act of 1865 and modified and re-enacted in 1878 and then in 1927. It was clear that, commercial interests were the primary consideration in declaring forests reserved in colonial era. Thus, the law which caters to voracious tendencies of the British has been continued by the Government. Modern legislations, such as Indian Wildlife (Protection) Act, 1972, Forest (Conservation) Act, 1980, Forest Rights Act, 2006 etc. have been enacted to ensure that forest policies cater to the need of contemporaneity. However, the Act of 1927, instead of serving as a catalyst, obstructs the attempt of newer legislations.

Moreover, the Courts of law have failed to interpret the language of the provisions within the legislation in a manner that makes it adaptable to the law in post-colonial period. They have resorted to various provisions under Indian Constitution and the international treaties to which India is a party. One reason behind it could be the limited scope of interpretation that the provisions have provided. The language of the Act has

become quite obsolete and that the language is not wide enough to incorporate the newer approaches to environment conservation and forest management. The classification of forests into reserved, protected and village forests according to their use and the rights that the people have over them have existed since the time the law was drafted. As discussed earlier, the concept of such classification has raised questions for the needs and aspects of environment conservation and protection have changed. For example, the concept of village forests provides for public participation. However, joint forest management which involves sustainable utilization of forest resources is not included in the scope of the 1927 Act. This has been provided by the Forest (Conservation) Act, as amended in 1988.

Thus, it is essential to consider that due to existence of contradictions and overlapping of the related forest legislations, the Act of 1927 is rendered ineffective. The need of the hour is to examine whether these legislations are required to be integrated in one statute. There is certainly a need for reformulation of the Forest Act, 1927 which should primarily aim at removal of imperialistic tendencies from the law. In order to ensure that the legislation serves as a catalyst in forest management and protection, integrated approach should be followed which would lead to formulation of a comprehensive statute, encompassing all the provisions related to the subject matter and thus, eliminating the scope of overlapping or obstruction. This shall further the purpose of the legislations, that is, protection of forests and protection of the rights of the forest dwellers leading to sustainable development.

12.3 The Forest Conservation Act, 1980

Forest is a valuable component of human environment and for subsistence of human beings one third of the area of the land should be under forests. A forest contains essential timber as well as non-timber products, provides a pool for biodiversity, acts as a catalyst to maintain global temperature and also serves as a habitat to forest dwelling scheduled tribes and other forest dwelling communities. Forests were in abundance in ancient India and the Indian culture, religion; traditions stressed the importance of preservation of forests. However, with the passage of time and with development in human technologies the forest cover started reducing. Apart from the developmental maladies, the colonial policies in India were purely exploitative and did not stress upon

conservation. The Britishers exploited the forests to protect their mercantile interest and also exploited it to meet the demands of their army and navy.

The forests in India were regulated through the Forests Act of 1865 and 1878. In 1927, the Britishers enacted the Indian Forests Act, 1927 to consolidate the law relating to forests, the transit of forest produce and the duty leviable on timber and other forest-produce. The Act imposes governmental control over forests by classifying them into reserved forests, protected forests and village forests. It is pertinent to note that this classification denotes the differential government control over forests and has no relevance as far as conservation of forests is concerned. The Act prescribes a maximum punishment of six months and fine of rupees 500 in case a person is found guilty of felling trees or clearing land in government forests. This punishment is too inadequate. However, this Act along with state Acts dominated the scenario of Indian forests till 1970's.

In 1972, United Nations's Conference of human Environment was held at Stockholm. It raised worldwide consciousness about environment. India too felt the need of preserving and conserving forests. In, 1976 the Indian Constitution was amended by virtue of Forty Second Amendment and Articles 48-A (Directive Principles of State Policy) and 51-A (g) (Fundamental Duty) was added. Article 48-A mandates that the State shall endeavor to protect and improve the environment and to safeguard the forests and wild life of the country. Article 51-A (g) imposes a fundamental duty on every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures. Thus, a need was felt to conserve forests. This led to the passage of the Forest (Conservation) Act, 1980.

❖ Objective of the Forest (Conservation) Act

The Act has been enacted with the object of conservation of the forests. This is evident from the statement of objects and reasons annexed to the Act. It reads as under:-

- Deforestation causes ecological imbalance and leads to environmental deterioration. Deforestation had been taking place on a large scale in the country and it had caused wide-spread concerned.
- With a view to checking further deforestation, the President promulgated on the 25th October, 1980, the Forest (Conservation) Ordinance, 1980

The Forest (Conservation) Act came into force on 25th October, 1980 and repealed the Forest (Conservation) Ordinance, 1980. It extends to the whole of India except the State of Jammu and Kashmir

❖ Overview of the Act

The Act is a small piece of legislation and contains five sections in total. The Act has been amended in 1988 and 2010. Section 1 of the Act talk about the title of the Act, the territorial applicability and the date of commencement of the Act. Section 2 talks about the restriction on the de-reservation of forests or use of forest land for non-forest purpose. Section 2 A provides for appeal to National Green Tribunal in case any person is aggrieved by an order or decision of the State Government or other authority made under section 2. Section 3 talks about constitution of Advisory Committee. Section 3 A prescribes penalty for contravening the provisions of the Act. Section 3 B prescribes punishment for offences committed by authorities and Government departments. Section 4 authorizes the Central Government to make rules for carrying out the provisions of the Act. Section 5 repeals the Forest (Conservation) Ordinance, 1980.

❖ Salient Features of the Act

The Act was enacted with the objective of conserving the forests. Therefore, the emphasis is on checking the conversion of forest lands for non-forest purposes. The salient features of the Act are:

- The State Government has been empowered under this Act to use the forests only for forestry purposes.
- If the State government wants to use it in any other way, then it has to take prior approval of Central Government.
- The Act talks about the constitution of an advisory committee to advice the Central Government in matter concerning the grant of an approval for de-reserving forests for non-forest purposes.
- Any illegal non-forest activity within a forest area can be immediately stopped under this Act.
- Forest officers and their staff administer the Forest Act.

- The Act deals with four categories of the forests, namely reserved forests, village forests, protected forests and private forests.
- The Act is supplemented by the Forest (Conservation) Rules, 2003. These Rules have superseded the Forest (Conservation) Rules, 1981 except as respects things done or omitted to be done before such supersession.
- The Act is also supplemented by a number of Guidelines issued by the Ministry of Environment, Forests and Climate Change.

❖ **Restriction on the de-reservation of forests or use of forest land for non-forest purpose:** In order to conserve forests, section 2 of the Act puts restriction on the power of state government as well as any other authority from de-reserving forests and use of the forest land for non-forest purposes. The provisions are:

- Restrictions on the use of forests for non-forest purposes;
- Restrictions on the de-reservation of reserve forests;
- Regulation concerning the diversion of forest lands by way of lease to or to any authority, corporation, agency or any other organization not owned, managed or controlled by Government; and
- Restriction on the clear felling of trees.

The term “non-forest purpose” means the breaking up or clearing of any forest land for the cultivation of tea, coffee, spices, rubber, palms, oil-bearing plants, horticulture crops, medicinal plants or any purpose other than re-afforestation. However, it does not include any work relating to conservation, development and management of forests and wild-life. For example, the establishment of check-posts, fire lines, wireless communications and construction of fencing, bridges and culverts, dams, waterholes, trench marks, boundary marks, pipelines or other like purposes are allowed.

However, the forests can be de-reserved forests and use of the forest land for non-forest purposes can be allowed with the prior approval of the Central Government.

❖ **Procedure for approval from Central Government**

Every user agency (person, organization, Company, Department of the Central or State Government) that wants to use any forest land for non-forest purposes shall make a proposal to the Nodal Officer of the concerned State Government or the Union territory Administration as the case may be along with requisite information and documents. If the Nodal Officer of the State Government or the Union territory

Administration (as the case may be) are satisfied that the proposal is complete in all respects then they shall send the proposal to the concerned Divisional Forest Officer and the District Collector within a period of ten days of the receipt of the proposal. If the Nodal Officer of the State Government or the Union territory Administration (as the case may be) finds that the proposal is incomplete, he shall return it to the User Agency within a period of ten days.

The Divisional Forest Officer shall examine the factual details and feasibility of the proposal, certify the maps, carry out site-inspection and enumeration of the trees and forward his findings to the Conservator of Forests. The Conservator of Forests shall examine the factual details and feasibility of the proposal, carry out site-inspection in case the area of forest land proposed to be diverted is more than forty hectares, and forward the proposal along with his recommendations to the Nodal Officer. The Nodal Officer, through the Principal Chief Conservator of Forest shall forward the proposal to the State Government or the Union territory Administration (as the case may be) along with his recommendations.

If the State Government or the Union territory Administration (as the case may be) decides not to de-reserve or divert for non-forest purpose or assign on lease the forest land indicated in the proposal, the same shall be intimated to the user agency within thirty days of the receipt of proposal from the Nodal officer. If the State Government or the Union territory Administration (as the case may be), agrees in-principle to de-reserve or divert for non-forest purpose or assign on lease the forest land indicated in the proposal, it shall forward the same to the central government within thirty days along with its recommendations. The Central Government shall refer every proposal to the advisory committee for its advice.

❖ **Constitution of the Advisory Committee**

The Central government shall grant approval on the advice of Advisory Committee. Section 3 of the Act talks empowers the Central Government to constitute an Advisory Committee. This committee is known as Forest Advisory Committee. The function of this committee is to advise the central government on:

- matters regarding grant of approval for converting a forest into non-forest purpose;

- Any other matter connected with the conservation of forests which may be referred to by the Central Government.
- Composition of the Committee
- The Committee shall be composed of the following members:
 - Director General of Forests, Ministry of Environment and Forests;
 - Additional Director General of Forests, Ministry of Environment and Forests
 - Additional Commissioner (Soil Conservation), Ministry of Agriculture
 - Three non-official members who shall be experts one each in Mining, Civil Engineering and Development
- Inspector General of Forests (Forest Conservation), Ministry of Environment and Forests

The Director General of Forests, Ministry of Environment and Forests shall be the chairperson of the committee and in his absence Additional Director General of Forests shall act as the Chairperson. The Inspector General of Forests (Forest Conservation), Ministry of Environment and Forests shall be the member secretary.

❖ Meetings of the Committee

The Chairperson shall call the meeting of the Committee whenever considered necessary but not less than once in a month. He shall preside over every meeting of the Committee at which he is present. Every question upon which the Central Government is required to be advised shall be considered in the meeting. In cases of urgency, if the meeting cannot be convened within a month then the Chairperson may direct that papers may be circulated and sent to the members for their opinion within the stipulated time. The quorum of the meeting of the Committee shall be three.

The meeting of the Committee shall be held at New Delhi. However, in cases where the Chairperson is satisfied that inspection of site or sites of forest land proposed to be used for non-forest purposes is necessary or expedient in connection with the consideration of the proposal or proposals then he may direct that the meetings of the Committee to be held at a place where such inspection of site or sites is necessary.

In addition to the Forest Advisory Committee, a Regional Empowered Committee shall also be constituted at each of the Regional Offices. The Regional Empowered Committee shall consist of (i) the Regional Principal Chief Conservator of Forests (Central); (ii) three non-official members who shall be experts one each in Mining, Civil

Engineering and Development Economics and (iii) the Conservator of Forests or the Deputy Conservator of Forests in the Regional Office. The Regional Principal Chief Conservator of Forests (Central) shall be the chairperson and the Conservator of Forests or the Deputy Conservator of Forests shall be the Member Secretary.

❖ **Factors to be kept in mind by the Committee**

The Act mandates that every proposal received by the central government for conversion of forest land into non-forest purpose has to be referred to the Committee for its advice. The Committee take into account the following factors while tendering advice:

- whether the forests land proposed to be used for non-forest purpose forms part of a nature reserve, national park wildlife sanctuary, biosphere reserve or forms part of the habitat or any endangered or threatened species of flora and fauna or of an area lying in severely eroded catchment;
- whether the use of any forest land is for agricultural purposes or for the rehabilitation of persons displaced from their residences by reason of any river valley or hydro-electric project ;
- whether the State Government or the Union territory Administration (as the case may be) has certified that it has considered all other alternatives and that no other alternatives in the circumstances are feasible and that the required area is the minimum needed for the purpose; and
- whether the State Government or the Union territory Administration (as the case may be) undertakes to provide at its cost for the acquisition of land of an equivalent area and afforestation thereof.
- whether the per unit requirement of forest land is significantly higher than the national average for similar projects; and
- whether the State Government or the Union territory Administration (as the case may be) before making their recommendation has considered all issues having direct and indirect impact of the diversion of forest land on forest, wildlife and environment.

The Committee may also suggest any conditions or restrictions on the use of any forest land for any non-forest purpose which in its opinion would minimize adverse environmental impact.

❖ Grant or refusal of Approval by the Central Government

The Central Government may grant approval to the proposal or may reject it. While doing so, it shall consider the advice given to it by the Committee and make such further enquiry as it may consider necessary. The approval may be granted in-principle approval subject to fulfillment of stipulated conditions.

❖ Appeal

Any person aggrieved by an order or decision of the State Government or other authority made under section 2 may file an appeal to the National Green Tribunal. The National Green Tribunal has been established under the National Green Tribunal Act, 2010. (Section 2A)

❖ Offences under the Act

Sections 3A and 3 B prescribe criminal penalty for violating the provisions of the Act. These sections were added by an amendment in 1988 to provide more teeth to the Act. The offences are:

- If a person contravenes or abets the contravention of any of the provisions of Section 2, then he shall be liable for punishment with simple imprisonment for a period which may extend to fifteen days. (Section 3A)
- Where any offence under this Act has been committed by any department of Government, then the head of the department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly. However, he will not be liable for any punishment if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence. Further, if the offence has been committed with the consent or connivance of or is attributable to any neglect on the part of any officer other than the head of the department, then such person shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly. (Section 3B)
- Where any offence under this Act has been committed by any authority, every person who at the time the offence was committed was directly in charge of and was responsible to the authority for the conduct of the business of the authority as well as the authority shall be deemed to be guilty of the offence and shall be liable

to be proceeded against and punished accordingly. However, if any person proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence, then he will not be liable for any punishment. Further, if the offence has been committed with the consent or connivance of or is attributable to any neglect on the part of any person other than the authority, then such person shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly. (Section 3B)

❖ Judiciary and Forest Conservation

The judiciary has played an important role in protecting forests. The most important word in the Forest Conservation Act is the word “forest” and “forest land”. The Court in the case of T.N. Godavarman Thirumulkpad vs. Union of India and Others, [(1997) 2 SCC 267] interpreted these words. The court said that the word “forest” must be understood according to its dictionary meaning. This description covers all statutorily recognized forests whether designated as reserved, protected or otherwise. The term “forest land” will not only include “forest” as understood in the dictionary sense but also any area recorded as forest in the Government record irrespective of the ownership. Therefore, the provisions made for the conservation of forests under the Forest Conservation Act, 1980 must apply to all forests irrespective of the nature of ownership or classification thereof.

The Court in this case further directed that in view of the meaning of the word “forest”, it is obvious that prior approval of the Central Government is required for any non-forest activity within the area of any “forest”. Accordingly, all on-going activity within any forest in any State throughout the country, without the prior approval of the Central Government, must cease forthwith. It is, therefore, clear that the running of saw mills of any kind including veneer or ply-wood mills and mining of any mineral are non-forest purposes and are not permissible without prior approval of the Central Government. Every State Government must promptly ensure total cessation of all such activities forthwith.

The thrust for economic development and the need for protection of forest resources have put a challenge for the developing country like India. The Forest Conservation Act, 1980 was enacted with a view to check further deforestation which ultimately results in ecological imbalance. There is need to follow the path of sustainable

development so that the country progresses along with maintainability of ecological balance.

12.4 Biodiversity Act, 2002

Biodiversity encompasses the variety of all life on earth. India is one of the 12-mega diverse countries of the world. With only 2.5% of the land area, India already accounts for 7.8% of the global recorded species. India is also rich in traditional and indigenous knowledge, both coded and informal.

India is a Party to the Convention on Biological Diversity, 1992. Recognizing the sovereign rights of States to use their own biological resources, the Convention expects the parties to facilitate access to genetic resources by other Parties subject to national legislation and on mutually agreed terms (Article 3 and 15 of CBD).

After an extensive and intensive consultation process involving the stakeholders, the Central Government has brought Biological Diversity Act which was enacted in the year 2002. The genesis of the law can be traced to the Convention on Biological Diversity (CBD), which was signed at the Rio Summit in 1992.

The Act prescribed an institutional framework in order to implement the three Convention objectives of conservation, sustainable use, and equitable sharing of benefits arising out of the use of biological resources and related knowledge.

❖ Salient Features of the Act

1. To regulate access to biological resources of the country with the purpose of securing equitable share in benefits arising out of the use of biological resources; and associated knowledge relating to biological resources;
2. To conserve and sustainably use biological diversity;
3. To respect and protect knowledge of local communities related to biodiversity;
4. To secure sharing of benefits with local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources;
5. Conservation and development of areas of importance from the standpoint of biological diversity by declaring them as biological diversity heritage sites;
6. Protection and rehabilitation of threatened species; and

7. Involvement of institutions of state governments in the broad scheme of the implementation of the Biological Diversity Act through constitution of committees.

8. Important Definitions (Section 2)

- (a) "benefit claimers" means the conservers of biological resources, their byproducts, creators and holders of knowledge and information relating to the use of such biological resources, innovations and practices associated with such use and application;
- (b) "biological diversity" means the variability among living organisms from all sources and the ecological complexes of which they are part, and includes diversity within species or between species and of eco-systems;
- (c) "biological resources" means plants, animals and micro-organisms or parts thereof, their genetic material and by-products (excluding value added products) with actual or potential use or value, but does not include human genetic material;
- (d) "bio-survey and bio-utilization" means survey or collection of species, subspecies, genes, components and extracts of biological resource for any purpose and includes characterization, inventorisation and bioassay;
- (e) "Chairperson" means the Chairperson of the National Biodiversity Authority or, as the case may be, of the State Biodiversity Board;
- (f) "commercial utilization" means end uses of biological resources for commercial utilization such as drugs, industrial enzymes, food flavours, fragrance, cosmetics, emulsifiers, oleoresins, colours, extracts and genes used for improving crops and livestock through genetic intervention, but does not include conventional breeding or traditional practices in use in any agriculture, horticulture, poultry, dairy farming, animal husbandry or bee keeping;
- (g) "fair and equitable benefit sharing" means sharing of benefits as determined by the National Biodiversity Authority under section 21;
- (h) "local bodies" means Panchayats and Municipalities, by whatever name called, within the meaning of clause (1) of article 243B and clause (1) of article 243Q of the Constitution and in the absence of any Panchayats or

Municipalities, institutions of self-government constituted under any other provision of the Constitution or any Central Act or State Act;

- (i) "member" means a member of the National Biodiversity Authority or a State Biodiversity Board and includes the Chairperson;
- (j) "research" means study or systematic investigation of any biological resource or technological application, that uses biological systems, living organisms or derivatives thereof to make or modify products or processes for any use
- (k) "sustainable use" means the use of components of biological diversity in such manner and at such rate that does not lead to the long-term decline of the biological diversity thereby maintaining its potential to meet the needs and aspirations of present and future generations;
- (l) "value added products" means products which may contain portions or extracts of plants and animals in unrecognizable and physically inseparable form.

❖ Principles under the Biological Diversity Act, 2002

• Prior Informed Consent

Prior Informed Consent is the approval in advance for the use of country's biological resources. It is a norm under Prior Informed Consent that sufficient information should be provided to a community, either by intellectual property office or other regarding aims, risk or implication of using the resource including its commercial value.

Sections 3 and 4 of the Act provides for the access to biological resources of the country by non – individuals that is a body corporate, association or organisation and non – residents. In a nutshell, the provisions lay out the procedure for access to biological resources. Similarly, sections 6 and 7 of the Act stipulates the process for claiming intellectual property right over the invention created by using biological resource of India and access to biological resource by an Indian respectively. One of the common point in each of aforesaid sections being the principle of free and prior informed consent.

• Technology Transfer

The Act creates an exception to the general process laid down for access to biological resources. Section 5 exempts the requirement of any consent wherein the access and

usage to the biological resources is in pursuant to a collaborative research project. This plays a vital cog in balancing economic development while addressing the environmental concerns as biological resource rich countries starve for technology, the developed nations which control technology lack resources. Hence, to promote economic development and facilitate transfer of technology, section 5 was provided for in the Act.

The guidelines for International Collaborative Research Projects involving Transfer or Exchange of Biological Resources or Information have been notified by the Ministry of Environment and Forest, key features of which are provided as follows:

- a) Appointment of key investigators of the project who shall be responsible for all the compliances;
- b) Details of biological resources occurring in India
- c) Collaborators to abide with all the applicable existing national and international laws;
- d) The biological resource and the knowledge shall be used only for the intended purpose;
- e) In case of an IPR emerging out of the research, collaborators to execute a fresh agreement which has to include a provision for benefit sharing;
- f) Submission of specimen of biological resource obtained from India to be submitted to designated repository; and
- g) All studies and research to be strictly confidential and shall be transferred to schools or colleges or institutes and/ or third with prior approval of the Government.

- **Benefit Sharing**

The Act, according to Section 21 and Rule 20 of the Biodiversity Rules, 2004, insists upon including appropriate benefit sharing provisions in the access agreement and mutually agreed terms related to access and transfer of biological resources or knowledge occurring in or obtained from India for commercial use, bio-survey, bio-utilization or any other monetary purposes. The National Biodiversity Authority is in the process of developing a guideline based on the provision of the Biological Diversity Act and the same will be notified with the specific details of benefit sharing formula in an

official gazette on a case-to-case basis. While granting approvals for access, NBA will impose terms and conditions so as to secure equitable sharing of benefits. These benefits, inter alia include:

- a) grant of joint ownership of intellectual property rights to the NBA, or where benefit claimers are identified, to such benefit claimers;
- b) transfer of technology;
- c) location of production, research and development units in such areas which will facilitate better living standards to the benefit claimers;
- d) association of Indian scientists, benefit claimers and the local people with research and development in biological resources and bio-survey and bio-utilization;
- e) setting up of venture capital fund for aiding the cause of benefit claimers; and
- f) Payment of monetary compensation and other non-monetary benefits to the benefit claimers as the NBA may deem fit.

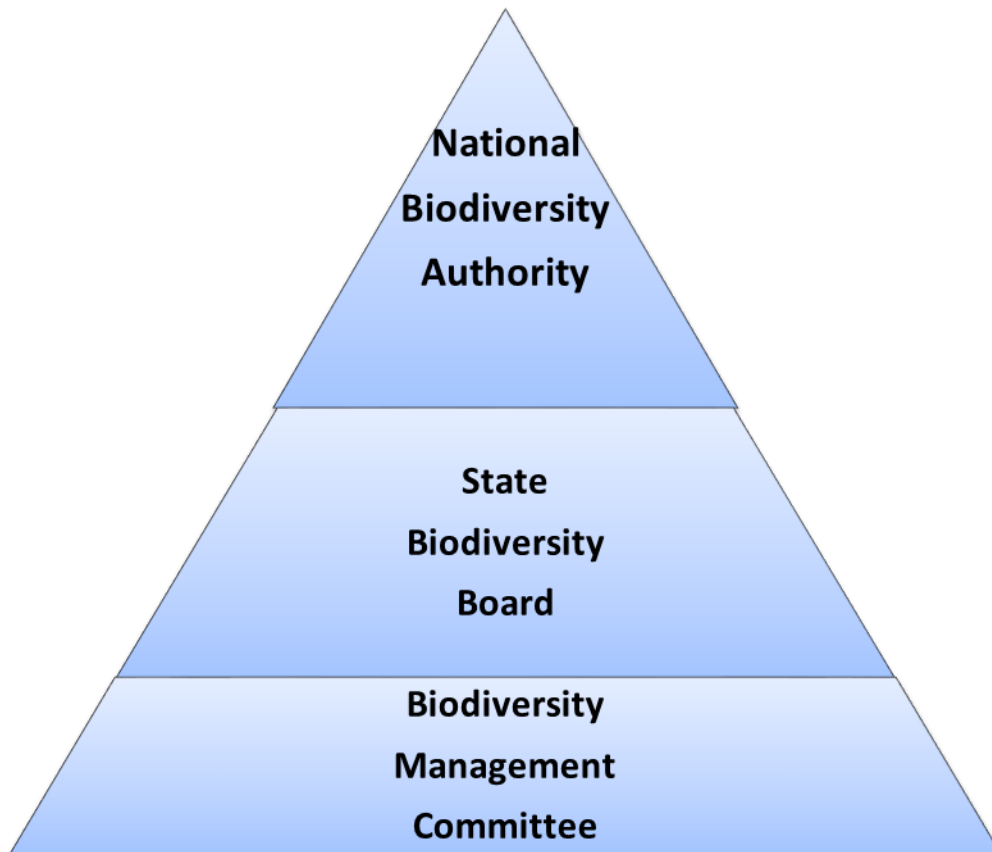
The Biological Diversity Act 2002 provides for setting up of Biodiversity funds at National Level (Section 27), State Level (Section 31) and Local Levels (Section 43). Benefits will be given directly to individuals or group of individuals only in cases where biological resources or associated knowledge are accessed directly through them. In all other cases, monetary benefits will be deposited in the Biodiversity Fund which in turn is used for the conservation and development of biological resources and socio-economic development of areas from where resources have been accessed. The time frame and quantum of benefits to be shared shall be decided on case-to-case based on mutually agreed terms between the applicant, authority, local bodies, and other relevant stakeholders, including local and indigenous communities.

One of the suggested mechanisms for benefit sharing includes direct payment to persons or group of individuals through district administration, if the biological material or knowledge is accessed from specific individuals or organizations. In cases where such individuals or organizations could not be identified, the monetary benefits shall be paid to the National Biodiversity Fund. Five percent of the benefits shall be earmarked for the Authority or State Biodiversity Board towards the administrative service charges.

The ABS procedures stipulated under the Act are in line with the provisions of international laws and policies, particularly CBD and the Bonn Guidelines. The entire

procedures as described in the Act can contribute substantially to facilitate an international regime of ABS on genetic resources and traditional knowledge.

Primary Authorities under the Act



❖ National Biodiversity Authority (Section 8)

The NBA shall be established by the central government. The National Biodiversity Authority shall be a body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold and dispose of property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

The National Biodiversity Authority shall consist of the following members,

- (a) a Chairperson, who shall be an eminent person having adequate knowledge and experience in the conservation and sustainable use of biological diversity and in matters relating to equitable sharing of benefits, to be appointed by the Central Government;

- (b) three ex officio members to be appointed by the Central Government, one representing the Ministry dealing with Tribal Affairs and two representing the Ministry dealing with Environment and Forests of whom one shall be the Additional Director General of Forests or the Director General of Forests;
- (c) seven ex officio members to be appointed by the Central Government to represent respectively the Ministries of the Central Government dealing with –
 - (i) Agricultural Research and Education;
 - (ii) Biotechnology;
 - (iii) Ocean Development;
 - (iv) Agriculture and Cooperation;
 - (v) Indian Systems of Medicine and Homoeopathy;
 - (vi) Science and Technology;
 - (vii) Scientific and Industrial Research;
- (d) five non-official members to be appointed from amongst specialists and scientists having special knowledge of, or experience in, matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources, representatives of industry, conservers, creators and knowledge-holders of biological resources.

❖ **The functions of the National Biodiversity Authority (Section 18)**

The Board shall advise the Central Government on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of the utilization of biological resources. It shall also advise the State Governments in the selection of areas of biodiversity importance. It is also authorized to take any measures necessary to oppose the grant of intellectual property rights in any country outside India.

Prior Approval of the NBA is necessary to obtain any biological resource occurring in India and to apply for intellectual property protection whether in India or outside India.

State Biodiversity Board (Section 22)

The State Government may, by notification in the Official Gazette, appoint for the purposes of this Act, a Board for the State to be known as the (name of the State)

Biodiversity Board. The Board shall be a body corporate by the name aforesaid, having perpetual succession and a common seal, with power to acquire, hold and dispose of property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

The Board shall consist of the following members, namely:

- (a) A Chairperson who shall be an eminent person having adequate knowledge and experience in the conservation and sustainable use of biological diversity and in matters relating to equitable sharing of benefits, to be appointed by the State Government;
- (b) Not more than five ex officio members to be appointed by the State Government to represent the concerned Departments of the State Government;
- (c) Not more than five members to be appointed from amongst experts in matters relating to conservation of biological diversity, sustainable use of biological resources and equitable sharing of benefits arising out of the use of biological resources.

❖ **The Functions of State Biodiversity Boards (Section 23)**

- a) Advise the State Government, subject to any guidelines issued by the Central Government, on matters relating to the conservation of biodiversity, sustainable use of its components and equitable sharing of the benefits arising out of the utilization of biological resources
- b) Regulate by granting of approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resource by Indians
- c) Perform such other functions as may be necessary to carry out the provisions of this Act.

Further one has to seek prior approval of the State Board to obtain Biological Resources for commercial utilization after giving prior intimation.

❖ **Biodiversity Management Committees (Section 41)**

Every local body shall constitute a Biodiversity Management Committee within its area for the purpose of promoting conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk

varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.

The National Biodiversity Authority and the State Biodiversity Boards shall consult the Biodiversity Management Committees while taking any decision relating to the use of biological resources and knowledge associated with such resources occurring within the territorial jurisdiction of the Biodiversity Management Committee.

The Biodiversity Management Committees may levy charges by way of collection fees from any person for accessing or collecting any biological resource for commercial purposes from areas falling within its territorial jurisdiction.

❖ Penalties (Section 55)

1. Whoever contravenes or attempts to or abets the contravention of the provisions of Section 3(to obtain Biological Resources with the permission of the National Board) or Section 4(results of research not to transferred to a foreigner or NRI without the permission of the National Board) or Section 6(application of Intellectual property right not to be made without the approval of National Board) shall be punishable with imprisonment for a term which may extend to five years, or with fine which may extend to ten lakh rupees and where the damage caused exceeds ten lakh rupees such fine may commensurate with the damage caused, or with both.
2. Whoever contravenes or attempts to contravene or abets the contravention of the provisions of section 7 (Prior intimation to State Biodiversity Board for obtaining biological resource for certain purposes)or any order made under sub-section (2) of Section 24(order, prohibiting or restricting any such activity which is detrimental or contrary to the objectives of conservation and sustainable use of biodiversity or equitable sharing of benefits) shall be punishable with imprisonment for a term which may extend to three years, or with fine which may extend to five lakh rupees, or with both.

India's National Biodiversity Act and Rules form the core of India's commitment to implementing the CBD. However, implementation of the Act requires human resource, institutional, financial capacities that still need to be strengthened along with much needed increase in awareness of public at local level in order to make the Act relevant and useful for conservation and development.

12.5 The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act)

The Protection of Plant Variety and Farmers Right Act, 2001 (PPVFR Act) is an Act of the Parliament of India that was enacted to provide for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders, and to encourage the development and cultivation of new varieties of plants. This act received the assent of the President of India on the 30 October 2001.

The PPV&FR Act, 2001 was enacted to grant intellectual property rights to plant breeders, researchers and farmers who have developed any new or extant plant varieties. The Intellectual Property Right granted under PPV & FR Act, 2001 is a dual right – one is for the variety and the other is for the denomination assigned to it by the breeder. The rights granted under this Act are heritable and assignable and only registration of a plant variety confers the right. Essentially Derived Varieties (EDV) can also be registered under this Act and it may be new or extant. Farmers are entitled to save, use, sow, re-sow, exchange or sell their farm produce including seed of a registered variety in an unbranded manner. Farmers' varieties are eligible for registration and farmers are totally exempted from payment of any fee in any proceedings under this Act. The period of protection for field crops is 15 years and for trees and vines is 18 years and for notified varieties it is 15 years from the date of notification under section 5 of Seeds Act, 1966. Annual fee has to be paid every year for maintaining the registration and renewal fee has to be paid for the extended period of registration.

Farmers can claim for compensation if the registered variety fails to provide expected performance under given conditions. The rights granted under this Act are exclusive right to produce, sell, market, distribute, import and export the variety. Civil and criminal remedies are provided for enforcement of breeders' rights and provisions relating to benefit sharing and compulsory license in case registered variety is not made available to the public at reasonable price are provided. Compensation is also provided for village or rural communities if any registered variety has been developed using any variety in whose evolution such village or local community has contributed significantly. The procedural details and modes of implementing this Act are provided in PPV&FR Rules, 2003.

According to sec 2(c), "breeder" means a person or group of persons or a farmer or group of farmers or any institution which has "bred, evolved or developed any variety." [1]

According to sec 2(k), "farmers" means any person who – "Cultivates crops by cultivating the land himself; or" "Cultivates crops by directly supervising the cultivation or land through any other person; or conserves and preserves, severally or jointly, with any other person any wild species or traditional varieties"; or "Adds value to such wild species or traditional varieties through selection and identification of their useful properties."

Genetic resources of economic plants and their wild relatives particularly in areas identified as agro-biodiversity hotspots are awarded annually from Gene Fund. The name of the award is Plant Genome Saviour Community Award and the amount is INR 10,00,000 for each community. A maximum of five awards are conferred in a year.

The Protection of Plant Varieties and Farmers' Rights Authority also confers Plant Genome Savior "Farmer Reward" and "Farmer Recognition" to the farmers engaged in the conservation of genetic resources of landraces and wild relatives of economic plants and their improvement through selection and preservation and the material so selected and preserved has been used as donors of gene in varieties registerable under the PPV&FR Act, 2001 (53 of 2001). [2] Up to 10 rewards and 20 recognitions (consisting of a citation, memento and cash prize) are conferred in a year.

Summary

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Unit 13: Environment Related acts

Unit Structure

13.0 Objectives

13.1 Introduction

13.2 The Atomic Energy Act, 1962

13.3 The Factories Act, 1948

13.4 The National Environmental Appellate Authority Act, 1997

13.5 The Public Liability Insurance Act, 1991

13.6 The National Environment Tribunal Act, 1995

13.7 The Mines and Minerals Act, 1957

Summary

13.0 Objectives

After studying this unit you will be able to

- Understand the complex scientific, historic, institutional and legal framework in respect to nuclear energy development and its use.
- Understand the objectives, scope and coverage of The Factories Act, 1948.
- Understand the depth knowledge of The National Environmental Appellate Authority Act, 1997;
- Understand the depth knowledge of The Public Liability Insurance Act, 1991;
- Understand the depth knowledge of The National Environment Tribunal Act, 1995
- Understand the depth knowledge of The Mines and Minerals Act, 1957

13.1 Introduction

The unit provides a board understanding of the Environment Related acts ie., The Atomic Energy Act, 1962; The Factories Act, 1948; The National Environmental Appellate Authority Act, 1997; The Public Liability Insurance Act, 1991; The National Environment Tribunal Act, 1995 and The Mines and Minerals Act, 1957.

13.2 The Atomic Energy Act, 1962

❖ Nuclear Program - Early Beginnings

The modern development of nuclear science had its beginnings as early as 1789 with the discovery of uranium by Martin Klaproth, a German chemist. Throughout the period from 1800-1900, efforts have been directed to find more about the nature, composition and use of uranium and its properties. Extraordinary works of Wilhelm Rontgen; Antoine Henri Becquerel; Pierre Curie and Marie Curie and many others in understanding the properties of uranium furthered the scientific progress. The British physicist Ernest Rutherford who is considered as the father of nuclear science for his contribution to the theory of atomic structure in 1904 wrote: If it were ever possible to control at will the rate of disintegration of the radio elements, an enormous amount of energy could be obtained from a small amount of matter (US DOE, 2006).

In 1938, Otto Hahn and Fritz Strassman through their experiments discovered the process of fission in uranium for the first time. Consequent to this, chain reaction became a possibility which subsequently made the work in developing an atomic bomb a step closer. The World War II (1939-1945) hastened the development of military application of nuclear science. On 2 December 1942, scientists led by Enrico Fermi achieved the first self-sustained nuclear chain reaction in Chicago. With the prospects of Germany acquiring the nuclear bomb seeming closer, Albert Einstein's letter to President Roosevelt informing how close are the Germans led to the formation of the Manhattan Project. The Manhattan Project was conceived in 1939 and led by the United States with participation from United Kingdom and Canada became the nerve centre in the development of atomic bomb during the years of 1942- 1945.

In July 1945, the United States tested its first atomic bomb in Los Alamos, New Mexico. Soon after, in August 1945, USA exploded two atomic bombs on Hiroshima (6 August 1945) and Nagasaki (9 August 1945), showing the world the destructive power of nuclear energy, i.e., human and environmental consequences from nuclear radiation exposure. It may be remembered that the action of bombing Japan took

place only few weeks after the Heads of States signed the United Nations Charter on 26 June 1945 in San Francisco. With the war ending, and knowing well that the United States and its allies may no longer hold monopoly in nuclear science, efforts were directed to control the spread of nuclear weapons. At the same time attention was also being directed for peaceful application of nuclear energy. The newly formed United Nations became the focal point in this effort.

These efforts led to the development of nuclear energy law as we know it today. As Werner Boulanger stated, the purpose and function of nuclear law is to promote and to protect: to promote the development of nuclear science and technology and to protect mankind against any hazards possibly connected with nuclear energy [1]. Nuclear energy law in effect had to confront or deal with multiple factors such as proliferation (diversion of civilian use to weapons program); protecting the industry and the public equally (from massive compensation claims and provision for the same); establishment of an effective and credible regulator (for ensuring that the operator and all others follow the strictest regulations for a safe program) and also making sure that the program does not have any unintended consequences for the environment and people (like waste management, public consultation, radiation risk etc.)

❖ Institutional Developments

- **Development of the United Nations Atomic Energy Commission**

The United Nations shouldered much of the responsibility to answer the nuclear question - its uses and concerns, since this topic is best discussed formally at a multi-lateral institutional level involving all the permanent five members of the UN Security Council (they include China, France, Russia, the United Kingdom, and the United States) and other countries. In 1945, there were extensive consultations in particular between the United States, the United Kingdom, Canada and later the USSR on “the need in an effort to reach agreement on the conditions under which international co-operation might replace rivalry in the field of atomic power” (Bathurst, 1947). Subsequently, on 15 November 1945, during a summit in Washington DC, the United

States, the United Kingdom and Canada issued the Agreed Declaration on Atomic Energy stating that: in order to attain the most effective means of eliminating entirely the use of atomic energy for destructive purposes and promoting its widest use for industrial and humanitarian purposes, a commission should be set up at the earliest practicable date, under the United Nations, to prepare recommendations for submission to that Organization. On 27 December 1945, at a meeting of the Council of Foreign Ministers in Moscow, the United States and the United Kingdom proposed, and the USSR agreed, to create the United Nations Atomic Energy Commission (UNAEC). On 24 January 1946, the United Nations General Assembly passed the 1st Resolution in its first Session creating the UNAEC with representatives from the United States, USSR, Canada, United Kingdom and others in an effort, "to consider problems arising from the discovery of atomic energy and related matters" (Fischer, 1947).

Though well intended in its efforts to establish an international oversight of the use of atomic energy with the hope of avoiding unchecked proliferation of nuclear power post-World War II, the working of the UNAEC has been contentious. The United States and the then USSR proposed different proposals, i.e. Baruch and Gromyko Plans at the UNAEC leading to non-acceptance of either proposal. After three years of deliberation and almost 200 meetings, the UNAEC failed to reach any major agreement. In September 1949, the USSR conducted its first nuclear weapons test followed by the United Kingdom in 1952. The Soviet nuclear test effectively ended the UNAEC's role and the UN General Assembly, by its resolution 502(VI) of January 1952, formally dissolved the UNAEC, creating in its place the United Nations Disarmament Commission under the Security Council with a general mandate on disarmament.

- **Towards peaceful uses of nuclear energy**

While negotiations were going on, countries continued their research to establish their technical superiority over nuclear energy. An important effort towards the production of electricity from atomic energy became successful in 1951 when electricity was first generated from a nuclear reactor, the EBR-I (Experimental Breeder Reactor-I) at the National Reactor Testing Station in Idaho, USA. Many countries initiated their

programs during this period. India was one of the early starters of the program, which is briefly discussed below. Immediately after World War II, in order to institutionalize the post-world war nuclear energy program, the United States government enacted the Atomic Energy Act, 1946 on 1 August 1946 (AE Act) emphasizing the need to harness atomic energy for peaceful purposes (section 1(a)). The AE Act created the United States Atomic Energy Commission (USAEC) as a civilian controlled authority. Acknowledging the importance of civilian applications, US Congress while enacting the AE Act stated: “atomic energy should be employed not only in the Nation’s defense, but also to promote world peace, improve the public welfare, and strengthen free competition in private enterprise” (Buck 1983). In parallel, throughout the 1940s, the USSR also directed much of its effort to the development of nuclear technology; including both for military and civilian purposes. In respect of the civilian power program, the 1940s saw giant strides at various centers in refining existing reactor designs and developing new ones. The Institute of Physics and Power Engineering (FEI) was set up in May 1946 at the then-closed city of Obninsk, 100 km southwest of Moscow, to develop nuclear power technology (WNA, 2014). Obninsk became one of the nerve centers of the Soviet nuclear energy program and became famous when on 27 June 1954, the world’s first nuclear power station at Obninsk with a capacity of 5MW was connected to the Moscow grid.

Dr. Morokhov, the First Deputy Chairman of the State Committee on the Utilization of Atomic Energy of the USSR in his speech to the IAEA in 1968 said that invaluable conclusions on the power program have been drawn from the operation of the Obninsk reactor, which are, (1) transformation of nuclear energy to electricity was proved to be practical; (2) atomic power was sufficiently reliable and flexible in operation and fulfilled the requirements for utilization in an electrical network; and (3) it was completely safe both for personnel in the plant as well as the surrounding population.

- **Creation of the International Atomic Energy Agency (IAEA)**

Once all the major powers of the day acquired atomic technology, international efforts were re-directed to arrive at a common ground on the use of nuclear technology for

peaceful applications. On 8 December 1953, the “Atoms for Peace” speech by US President Eisenhower before the UN General Assembly called for “the governments principally involved” (naming all the nuclear technology powers of the day) to make joint contributions from their stockpiles of normal uranium and fissionable materials to an international atomic energy agency set up under the UN.

Eisenhower spoke on the peaceful use of the proposed atomic energy agency:

- a) The more important responsibility of this atomic energy agency would be to devise methods whereby this fissionable material would be allocated to serve the peaceful pursuits of mankind. Experts would be mobilized to apply atomic energy to the needs of agriculture, medicine and other peaceful activities. A special purpose would be to provide abundant electrical energy in the power-starved areas of the world.
- b) Among the agency’s responsibilities would be to store and safeguard the material and to “devise methods” whereby it would be allocated to serve the “peaceful pursuits of mankind” (IAEA transcript 1953).
- c) Moving forward on peaceful application, in 1954, the United States provided a legal basis for “Atoms for Peace” by amending the AE Act to permit peaceful international nuclear cooperation, leading to bilateral agreements with a number of States (Fischer, 1997). The amended Atomic Energy Act, 1954 (amended AE Act) drastically altered the policy thereby facilitating participation of private enterprises in the development of atomic energy (section 3).
- d) The progress of power production from atomic energy thus became a reality in 1954 in Obninsk, USSR, and along with the leap of faith through the “Atoms for Peace” speech and the amended AE Act, nuclear energy had forever crossed the divide from military uses to civilian applications.

The UN General Assembly, in a plenary session in December 1954, unanimously adopted a resolution which provided for the establishment of the International Atomic Energy Agency (IAEA), and for the holding of an international technical conference of governments under the auspices of the United Nations. This international conference

was held from 8 to 25 August 1955 in the Palais des Nations, Geneva. The event was a landmark intergovernmental conference, which elucidated progress on a new technology, where international scientific community for the first time came out freely mingled and exchanged views, educated the world that peaceful applications of nuclear energy, in particular the generation of electricity, are now a reality.

The President of the Conference was India's Homi Bhabha. In the context of scientific and technological progress, he envisioned that, "during the next two decades" scientists would have found a way of "liberating [thermonuclear] fusion energy in a controlled manner... When that happens, the energy problems of the world will truly have been solved forever" (Fischer, 1997). Developing countries saw the progress and acquisition of nuclear technology as a means to give them access to unlimited energy source which can be used to develop their countries faster and catch up with the industrial world (Fischer, 1997).

For the international institutional initiative, the success of the international conference took the slow pace of negotiations to establish an international atomic nuclear agency to a level of urgency. Majority of the countries thought that the IAEA could be used to access nuclear technology in setting up nuclear power plants. The interest generated during the conference persuaded many nations to launch nuclear research and development programs and sharpened their interest in the proposed IAEA (Fischer, 1997). From 1955 to 1957, after a series of hard fought negotiations, 12 governmental representatives from Australia, Belgium, Brazil, Canada, Czechoslovakia France, India, Portugal, South Africa, the United Kingdom, the United States and the USSR concluded the drafting of the Statute of the IAEA. The Statute of the IAEA was approved on 23 October 1956 by the Conference on the Statute of the International Atomic Energy Agency, which was held at the Headquarters of the United Nations. It came into force on 29 July 1957.

The main functions of the IAEA (Article III.A) are:

1. Take any action needed to promote research on, development of, and practical applications of nuclear energy for peaceful purposes;

2. Provide materials, services, equipment and facilities for such research and development, and for practical applications of atomic energy “with due consideration for the needs of the under- developed areas of the world”;
3. Foster the exchange of scientific and technical information;
4. Encourage the exchange of training of scientists and experts in the field of peaceful uses of atomic energy;
5. Establish and apply safeguards to ensure that any nuclear assistance or supplies with which the IAEA was associated should not be used to further any military purposes — and apply such safeguards, if so requested, to any bilateral or multilateral arrangement;
6. Establish or adopt nuclear safety standards;
7. Acquire or establish any facilities, plant and equipment useful in carrying out its authorized functions.

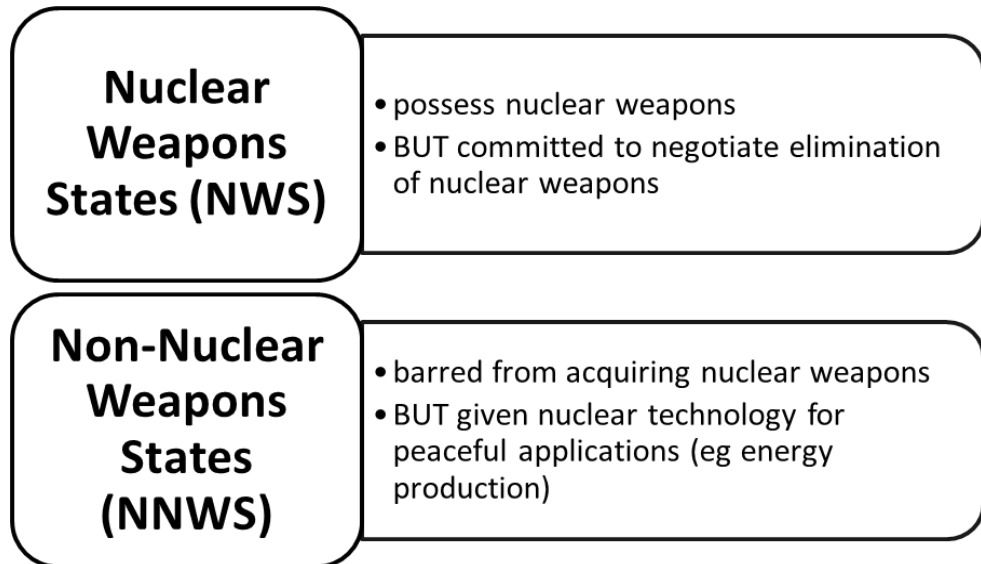
India is one the architects of the Statute of the IAEA and it played an instrument role in shaping the working of the IAEA. Particularly, on the constitution of the Governing Board of the IAEA, Fisher (1997) explains “in the twelve-nation group the Indian delegation came up with a complex but ingenious formula that has stood the test of time”.

- **Nuclear Non-Proliferation Treaty**

Along with the institutional developments in the form of the IAEA, the progress of nuclear technology in particular the development of nuclear weapons during the 1960s was viewed with alarm that there exists a possibility that nuclear weapons technology could become widespread. Many governments came together to reduce or eliminate such a possibility. The Nuclear Non-Proliferation Treaty (NPT) was an agreement signed in 1968 by both major nuclear and non-nuclear countries pledging their cooperation in stemming the spread of nuclear technology. 188 states are party to the NPT; only India, Pakistan, and Israel are outside the treaty regime and North Korea withdrew in 2003. Adherence to the treaty by 188 states, including five nuclear-

weapon states, renders the treaty the most widely adhered to multilateral disarmament agreement.

The treaty classifies nations into two categories.



Today although many of the provisions of the treaty remain unfulfilled, there can be no doubt about the importance of the treaty towards global nuclear disarmament and promotion of nuclear energy for peaceful purposes.

- **India and Nuclear Energy**

India initiated its nuclear program as early as in 1945, with the establishment of the Tata Institute of Fundamental Research in Bombay. The Atomic Energy Act was passed in Parliament soon after the country gained independence in 1948, and set forth India's objective for the development and utilization of atomic energy solely for peaceful purposes. In 1954, the Government established a Department of Atomic Energy charged with the sole responsibility for all nuclear activities in the country.

The Indian Atomic Energy Act, 1948 is the principal legislation that deals with all aspects of atomic energy production and its associated activities in India. The Atomic Energy Act, 1962 gives the Central Government monopoly over production, development, usage, and disposal of atomic energy. Under the provisions of the law, the Central Government undertakes the above activities either by itself or through any

authority or corporation established by it or through a government company. Towards the production of nuclear energy, India follows an unconventional path that no other country follows. Realizing that India does not have major uranium reserves but has one of the largest reserves of thorium in the world, the country, from the beginning, conceived a three-stage nuclear fuel cycle strategy. The reactor programme that was conceived was with the installation of natural uranium reactors in the first phase, followed by fast breeder reactors in the second phase, using plutonium from the first generation reactors with either uranium-238 or thorium in the blanket, followed eventually by reactors based on the self-sustaining thorium uranium-233 cycle (Sethna IAEA).

Today, India has many nuclear reactors spread across the country producing electricity which is operated by Nuclear Power Corporation of India Limited (NPCIL). The current status and future plans are detailed in Table 1.

Table 1: Operational, under-construction and proposed sites

| States | Site | Capacity (MW) | | |
|----------------|---------------------|-----------------|--------------------|---------------------------------------|
| | | Operational | Under construction | Proposed (initial clearance received) |
| Maharashtra | Tarapur | 2x160 + 2x540 | — | — |
| | Jaitapur* | — | — | 2x1650 |
| Rajasthan | Rawatbhata | 100+200+(4x220) | 2x700 | — |
| | Mahi, Banswara* | — | — | 2x700 |
| Tami Nadu | Kalpakkam | 2x220 | 1x500 | 2x500 |
| | Kudankulam | 1 x 1000 | 1x1000 | 2x1000 |
| Uttar Pradesh | Narora | 2x220 | — | — |
| Gujarat | Kakrapar | 2x220 | 2x700 | — |
| | Chhaya Mithi Virdi* | — | — | 2x1100 |
| Karnataka | Kaiga | 4x220 | — | 2x700 |
| Haryana | Gorakhpur * | — | — | 2x700 |
| Madhya Pradesh | Chutka * | — | — | 2x 700 |
| | Bhimpur * | — | — | Pre-project activities |
| Andhra Pradesh | Kovvada * | — | — | 2x1500 |
| West Bengal | Haripur * | — | — | Pre-project Activities |

*New sites

Source: Rajya Sabha, 2012 and updated by the author

Government of India seems determined that the nuclear energy forms an indispensable form of energy for India towards industrialization and providing electricity access to large number of population. The advantage of nuclear energy is been stated that on small fuel and limited land there could be high output. For example, from the Jaitapur and Kudankulam projects alone, there are possibilities of having close 10000MW and 9000 MW power respectively. However, to have a successful program public acceptance will be crucial; engagement and consultation with communities living close by would greatly benefit the overall program. The Government ought to allay any fears through a sustained education program backed by clear legal regime that benefits all the parties.

❖ Legal & Regulatory Framework concerning Nuclear Energy

- **Liability and Compensation Laws**

Having experienced the consequences of the horrific bombings in Japan and knowing well that the traditional principles of state responsibility and liability may not suffice in respect to a nuclear accident, the Organization for Economic Cooperation and Development (OECD) established the Convention on Third Party Liability in the Field of Nuclear Energy, 1960 (Paris Convention), a nuclear liability regime for most of Western Europe. Supplementing the Paris Convention, the 1963 Convention Supplementary to the Paris Convention of 29 July 1960 (Brussels Supplementary Convention) was established to provide for enhanced compensation. The International Atomic Energy Agency (IAEA) sponsored an international regime in 1963 - the Vienna Convention on Civil Liability for Nuclear Damage (Vienna Convention), largely on the principles laid down in the Paris Convention.

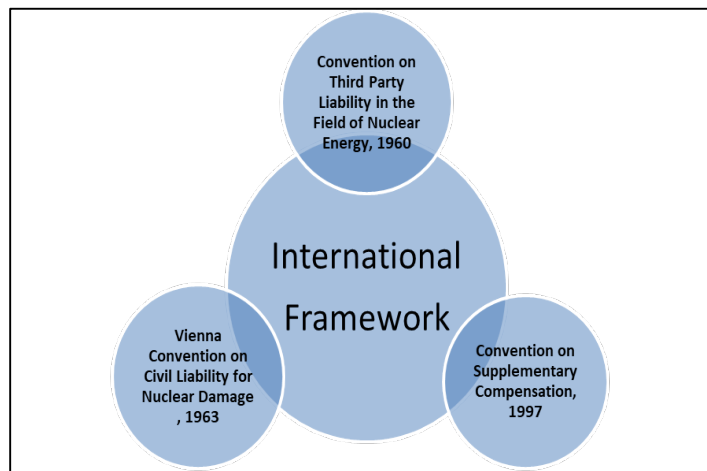
The principles, detailed below, remain the bed rock of state responsibility and liability.

- a) First: no-fault liability (absolute liability);
- b) Second: liability is channeled exclusively to the operator of the nuclear installation (legal channeling);
- c) Third: only courts of the State in which the nuclear accident occurs have jurisdiction (exclusive jurisdiction);

- d) Fourth: limitation of the amount of liability and the time for claiming damages (limited liability)
- e) Fifth: limitation of time for claiming damages (limitation in time); and
- f) Sixth: the operator must secure insurance or financial guarantee to the extent of his liability amount.

With both these conventions being independent of each other, it was open to States to adopt either of these conventions. This raised the issue of coordination and harmonization between the two conventions. After the Chernobyl nuclear accident in 1986, to rectify this problem, the two conventions were linked by the Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention (1988 Joint Protocol), which came into force in 1992.

Along with this, there was a complete revision of the Paris and Brussels conventions. The 2004 Protocol to Amend the Paris Convention on Third Party Liability in the Field of Nuclear



Energy of 29 July 1960 (2004 Protocol) that amended both the Paris and Brussels Conventions is the most important of these revisions. The Vienna Convention has also undergone significant changes. In 1997, over 80 States adopted a Protocol to amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage (1997 Protocol), which came into force in 2003.

In addition to the Paris and Vienna conventions, at the instance of the United States, the IAEA sponsored another international nuclear liability regime – the Convention on Supplementary Compensation (Compensation Convention) in 1997. It is structured as umbrella legislation. The Compensation Convention provides additional amounts to

be offered through contributions by the State parties on the basis of installed nuclear capacity. The convention is still not in force.

In India, the Civil Liability for Nuclear Damage Bill was passed by the Parliament and received Presidential assent on 21 September 2010 (Act No 38 of 2010). After a year and two months, the Act was notified, coming into force on 11 November 2011. The Civil Liability for Nuclear Damage Rules, 2011 have also been framed in respect of a few provisions, and were notified on the same day along with the Act. The Indian law retains most of the established international principles, but it is argued that it deviates on two major contentious points: one is the right of recourse against suppliers, in respect of who are covered and the extent of liability, and second is the right of citizens under tort laws to approach courts for claiming more compensation. These are yet to be settled.

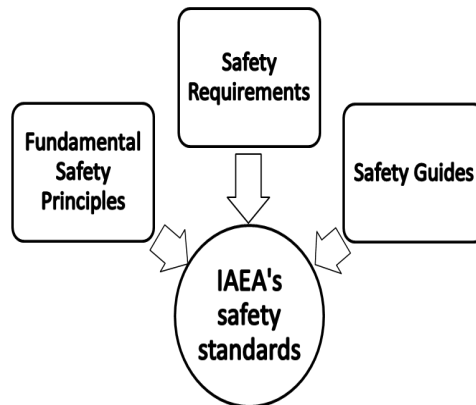
- **Nuclear Regulatory Regime**

From the very beginning of nuclear energy development, countries were fully aware of the dangers associated with this form of energy and sought to create safety parameters as necessary conditions for further development. The IAEA summarizes and states, "Safety was an important concern and "prevention" was also identified as an important and effective safety factor".

In order to do this, countries established nuclear regulatory institutions. Many institutions like the United States Nuclear Regulatory Commission (NRC) started with promotional and regulatory duties together, but later changed to perform specific regulatory roles. Today, the NRC's regulatory activities are focused on reactor safety oversight and reactor license renewal of existing plants, materials safety oversight and materials licensing for a variety of purposes, and waste management of both high-level waste and low-level waste. In addition, the NRC is preparing to evaluate new applications for nuclear plants.

The IAEA on its part, taking forward the obligation under the Statute, has been at the forefront of framing, collaborating and disseminating standards of safety through its program - Fundamental Safety Principles, Safety Requirements and Safety Guides.

- a) As the primary publication in the IAEA Safety Standards Series, Fundamental Safety Principles establishes the fundamental safety objectives and principles of protection and safety. They convey the basis and rationale for the safety standards for persons at senior levels in government and regulatory bodies.
- b) The Safety Requirements establish the requirements that must be met to ensure the protection of people and the environment, both now and in the future. The requirements are governed by the objective and principles of the Safety



Fundamentals. The format and style of the requirements facilitate their use by Member States for the establishment, in a harmonized manner, of their national regulatory framework.

- c) The Safety Guides provide recommendations and guidance on how to comply with the safety requirements, indicating an international consensus on the recommended measures. The Safety Guides present international good practices, and increasingly they reflect best practices, to help users striving to achieve high levels of safety.

These reflect an international consensus on what constitutes a high level of safety for protecting people and the environment from harmful effects of ionizing radiation. The IAEA safety standards are applicable throughout the entire lifetime of facilities and activities – existing and new – utilized for peaceful purposes, and to protective actions to reduce existing radiation risks.

In India, the Atomic Energy Regulatory Board (AERB) is the regulatory body that lays down safety standards and frames rules and regulations in regard to the regulatory and safety requirements envisaged under the Atomic Energy Act, 1962. The AERB

was constituted on 15 November 1983 by the President of India by exercising the powers conferred by the Atomic Energy Act to carry out certain regulatory and safety functions under the Act. The regulatory authority of AERB is derived from the rules and notifications promulgated under the Atomic Energy Act and the Environment (Protection) Act, 1986. AERB is currently structured under the Atomic Energy Commission (AEC) reporting to the Chairman of the AEC. In order to provide independent legal status the government has tabled a legislation called Nuclear Safety Regulatory Authority Bill 2010 (NSRA Bill). When the bill becomes a law there will be structural changes in the current AERB and the bill says AERB may be subsumed under the NSRA Bill.

- **Addressing security and safety through national and international legal frameworks**

There are a host of national and international legal and institutional instruments in respect to nuclear energy production, its use and safe disposal of waste. The list covers terrorism, securing safety of the facilities, transboundary issues, transportation of nuclear materials, personnel working on the facilities their safety and security, export and import of nuclear materials, safe disposal of nuclear waste and its management, decommissioning, etc.

Governments, nationally and at the international level, from the beginning of the program itself have made great effort towards creating a robust safety and security system. The Three-Mile Island nuclear accident in the United States (1979), Chernobyl in the former Soviet Union (USSR) (1986), and the nuclear fallout subsequent to the earthquake and tsunami in Japan (2011) exposed the nature of nuclear accidents and their possible impacts on humans and the environment. In the post-9/11 attacks in the United States, there has been heightened concern regarding the possibility of nuclear materials getting into the hands of terrorists. Governments world over have taken a series of measures to counter this possibility.

In order to share valuable regulatory experience on safety, the Convention on Nuclear Safety was adopted in Vienna on 17 June 1994 under the auspices of the IAEA. Its aim

is to legally commit participating States operating land-based nuclear power plants to maintain a high level of safety by setting international benchmarks to which States would subscribe. The obligations of the Parties are based to a large extent on the principles contained in the IAEA Safety Fundamentals document *Fundamental Safety Principles (SF-1)*. These obligations cover for instance, siting, design, construction, operation, the availability of adequate financial and human resources, the assessment and verification of safety, quality assurance and emergency preparedness.

Nuclear energy development has had a history both as technological sensation and risks. The energy it can produce is enormous and has many medical and agriculture benefits. At the same time, a probable accident could lead to human and environmental devastation. Nuclear law as a discipline as we have observed covers legal instruments and institutions governing the production and use of nuclear energy.

World over many countries could power their economies towards industrialization based on the strength of nuclear power. They equally sought to allay any fears through establishment of robust laws and institutions for regulation and protection. The accidents in Chernobyl and now in Fukushima shows even the most technologically advanced countries still carry the risk. Further, the legal instruments that were in existence still may require more acceptances.

13.3 The Factories Act, 1948

The Act, which came into force with effect from 1st April, 1949, contains elaborate provisions regarding health, safety and welfare of workers in factories where manufacturing process is carried on. The objective is to provide for satisfactory working conditions as well as for health, safety and welfare of factory workers. Towards the same end, the Act includes restrictive provisions regarding the working hours for adults, women and young persons, and has provided for annual leave with wages for workers in factories. As per Section 2(m) of the Act, a factory means any premises where 10 or more workers are engaged and in any part of which a manufacturing process is carried on with the aid of power, or a premises where 20 or more persons

are engaged and a manufacturing process is carried on without the aid of power. A manufacturing process is also defined as any process for making, altering, repairing, ornamenting, finishing, packing, oiling, washing, cleaning, breaking up, demolishing, or otherwise treating or adapting any article or substance with a view to its use, sale, transport, delivery or disposal. It may also include pumping oil, water or sewage, or generation and transmission of power, constructing, repairing, refitting, or braking up of ships or vessels, preservation or storage of articles in cold storage, etc.

Provisions relating to health of employees: Under Sections! 1-20, the Act has laid down necessary steps to be taken for

- Cleanliness in the factory
- Disposal of wastes and effluents; m= providing adequate ventilation and such temperature in work rooms as will secure reasonable comfort to workers and prevent injury to health
- Prevention of inhalation and accumulation of dust or fume or other impurity in work room which may be injurious or offensive to the workers
- Prescribing standards and regulating the humidity in the air where it is artificially increased in the factory; prevention of overcrowding in any workroom
- Maintaining sufficient and suitable lighting
- Arranging and maintaining at suitable points sufficient supply of wholesome drinking water
- Providing latrines and urinals of prescribed types separately for male and female workers
- Arranging sufficient number of spittoons to be placed at convenient places which are to be maintained in a clean and hygienic condition.

❖ **Safety provisions**

The safety provisions are mostly in the nature of precautions and due safeguards in connection with the machinery used in the factory. Fencing of certain types of

machinery is a very important requirement as also the dangerous parts of machinery. Precautions are required to be taken as regards work on or near machinery in motion. Where, necessary, suitable striking gear or other mechanical appliance, and suitable devices for cutting off power must be provided along with arrangement for locking the device to prevent accidental starting of transmission or other machinery. Employment of young person's on dangerous machines is prohibited unless they have been fully instructed and sufficiently trained. Likewise, employment of women and children is prohibited near cotton openers. The Act requires every hoist way and lift way to be sufficiently protected by an enclosure fitted with gates, maximum safe working load must be marked on the lift or hoist, and devices must be there to support the cage if there is breakage of ropes or chains. Precautions and safeguards are also required to be provided in the case of lifting machines, chains, ropes and lifting tackles, revolving machinery and pressure plant, against dangerous fumes, regarding the use of portable light, against explosive or inflammable dust, gas, etc. In case a manufacturing process involves risks of injury to the eyes from particles or fragments thrown off or exposure to excessive light, the state government may by rules requires require that effective screens or suitable goggles by provided for the protection of persons employed on, or in the vicinity of, the process. Certain other requirements of the Act in relation to safety are:

- (a) In every factory, all floors, steps, stairs, passages, gangways and means of access must be of sound construction, properly maintained and kept free from obstructions and substances likely to cause persons to slip, and where necessary, must be provided with handrails
- (b) If there are pits, sumps or tank in the ground or opening in floors which is a source of danger, the same must be securely covered or fenced
- (c) No person should be employed in factory to lift, carry or move any load so heavy as to be likely to cause him injury
- (d) Safeguards against results of fire are laid down in detail which includes provision of means of escape, nature of fire-fighting apparatus to be maintained, etc.

❖ Provisions relating to labor welfare

Under Section 42-49 of the Act, certain facilities are required to be provided in all factories irrespective of the number of workers employed, such as:

- (a) Separate and adequately screened washing facilities for male and female workers
 - (b) Facilities for storing and drying wet clothing
 - (c) Facilities for sitting for workers. Obligated to work in a standing position in order that they may take advantage of any opportunities for rest, and for workers who may be able to do their work efficiently in a sitting position
 - (d) First-aid appliances kept in first-aid box or cupboard which should be readily accessible during working hours. In addition the following facilities are required to be provided in specified factories:
 - (ii) One or more canteens where more than 250 workers are ordinarily employed
 - (iii) Shelters, rest rooms and lunch rooms where more than 150 workers are employed
 - (iv) Crèches under the charge of trained women for the use of children under six years in factories where more than 30 women workers are employed.
- The Act also requires factories where more than 500 workers are employed to employ one or more welfare officers to take care of welfare facilities with duties prescribed by the State Government.

❖ Working hours for adults

Provisions in the Factories Act regulating the hours of work of adults consist of a number of rules. A summary of the rules is given below.

- i) The maximum number of hours of work that an adult worker may be required to do is 48 hours in any week, but not exceeding 9 hours in any day with a provision for at least half an hour rest after five hours of work.
- ii) Every worker must have a weekly holiday.

- iii) Where a worker is deprived of any of the weekly holidays, he is to be allowed compensatory holiday within the months in which the holidays were due to him, or within two months immediately following that month.
- iv) When a worker is on shift duty which extends beyond midnight, the weekly holiday will be for a period of twenty four consecutive hours beginning when his shift ends. Also overlapping shifts are prohibited.
- v) Workers are to be paid for overtime work (in excess of nine hours in a day or 48 hours in a week) at twice the ordinary rate of wages,
- vi) Women workers shall not be employed except between the hours of 6 a.m. and 7 p.m.
- vii) An advance notice must be displayed and correctly maintained showing clearly for every day the periods during which adult workers may be required to work.
- viii) The manager of every factory is required to maintain a register of adult workers with the name, nature of work, and other particulars about each adult worker, complete in itself and up to date.

❖ **Employment of children**

There is absolute prohibition of employment in a factory of any child who has not completed his fourteenth year age and it is the duty of the employees to ascertain the age of children and not depend on their application. For a child who has completed his fourteenth year or is an adolescent, if employed, must be granted a certificate of fitness, and he must carry a token while at work giving reference to such certificate granted. He shall not be employed or permitted to work during the night, i.e., between 10 p.m. and 6a.m., and for more than four and a half hours in any day. The period of work must be limited to two shifts only and these shall not overlap.

❖ **Annual leave with wages**

According to Section 79 (1), where a worker has worked for a minimum period of 240 days or more in a factory during any calendar year, he is entitled to leave with wages on the following basis:

- (a) For adults - one day for every 20 days of work

(b) For children — one day for every 15 days of work

If a worker does not commence his services from 1st January, he is entitled to these leaves at the above mentioned rates provided he has worked for 2/3rd of the total number of days in the remaining part of the calendar year. If any worker does not avail the earned leave entitled to him during the calendar year, it can be carried forward to the next calendar year subject to the maximum of 30 days for an adult worker and 40 days for a child worker.

❖ Administrative set-up

The State Government is responsible for the administration of the Act and the implementation of various provisions thereof in its state through the inspectorate headed by a Chief Inspector. The Chief Inspector is assisted by Additional Chief Inspectors, Joint Chief Inspectors, Inspectors and other officers as may be appointed by the State Government. The State Government has the powers to

- a. Apply all or any of the provisions of the Act even to a factory employing less than 10 workers if working with power and less than 20 workers if working without power
- b. Exempt in case of public emergency any factory or a class of factories from all or any of the provisions of the Act except Section 67 (prohibiting employment of children) for not more than 3 months at a time.
- c. Make rules for enforcement of the Act, registration and licensing of factories, and collection of license fee.

13.4 The National Environmental Appellate Authority Act, 1997

National Environment Appellate Authority Act, 1997 comprised of 23 Sections in brief which deals with the Constitution of Appellate Authority and matters relating to the powers functions of members, Central Government to perform the functions established a body under Section 3 of the Act called as National Environment Appellate Authority.

An Act to provide for the establishment of a National Environment Appellate Authority to hear appeals with respect to restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act, 1986 and for matters connected therewith or incidental thereto.

Be it enacted by Parliament in the Forty-eighth Year of the Republic of India as follows:—

❖ **Short title and commencement:**

- (i) This Act may be called the National Environment Appellate Authority Act, 1997.
- (ii) It shall be deemed to have come into force on the 30th day of January, 1997.

❖ **Definitions:**

In this Act, unless the context otherwise requires:

- (a) “Act” means the Environment (Protection) Act, 1986 (29 of 1986).
- (b) “Authority” means the National Environment Appellate Authority established under sub-section (1) of section 3.
- (c) “Chairperson” means the Chairperson of the Authority.
- (d) “Member” means a Member of the Authority.
- (e) “Prescribed” means prescribed by rules made under this Act.
- (f) “Vice-Chairperson” means the Vice-Chairperson of the Authority.

❖ **Establishment of Authority:**

- (i) The Central Government shall, by notification in the Official Gazette, establish a body to be known as the National Environment Appellate Authority to exercise the powers conferred upon, and to perform the functions assigned to, it under this Act.
- (ii) The head office of the Authority shall be at Delhi.

❖ Composition of Authority

The Authority shall consist of a Chairperson, a Vice-Chairperson and such other Members not exceeding three, as the Central Government may deem fit.

❖ Appeals to Authority:

- Any person aggrieved by an order granting environmental clearance in the areas in which any industries, operations or processes or class of industries, operations and processes shall not be carried out or shall be carried out subject to certain safeguards may, within thirty days from the date of such order, prefer an appeal to the Authority in such form as may be prescribed: Provided that the Authority may entertain any appeal after the expiry of the said period of thirty days but not after ninety days from the date aforesaid if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.
- For the purposes of sub-section:
 - (i) “person” means—
 - (a) Any person who is likely to be affected by the grant of environmental clearance
 - (b) Any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance
 - (c) Any association of persons (whether incorporated or not) likely to be affected by such order and functioning in the field of environment
 - (d) The Central Government, where the environmental clearance is granted by the State Government and the State Government, where the environmental clearance is granted by the Central Government; or
 - (e) Any local authority, any part of whose local limits is within the neighborhood of the area wherein the project is proposed to be located.

- (ii) On receipt of an appeal preferred under sub-section (1), the Authority shall, after giving the appellant an opportunity of being heard, pass such orders, as it thinks fit.
- (iii) The Authority shall dispose of the appeal within ninety days from the date of filing the appeal: Provided that the Authority may for reasons to be recorded in writing, dispose of the appeal within a further period of thirty days.

❖ **Procedure and powers of Authority:**

- (1) The Authority shall not be bound by the procedure laid down in the Code of Civil Procedure, 1908 (5 of 1908) but shall be guided by the principles of natural justice and subject to the other provisions of this Act and of any rules made by the Central Government, the Authority shall have power to regulate its own procedure including the fixing of places and times of its inquiry and deciding whether to sit in public or in private.
- (2) The Authority shall have, for the purposes of discharging its functions under this Act, the same powers as are vested in a civil court under the Code of Civil Procedure, 1908 (5 of 1908), while trying a suit, in respect of the following matters, namely:—
 - (a) Summoning and enforcing the attendance of any person and examining him on oath
 - (b) Requiring the discovery and production of documents; (c) receiving evidence on affidavits
 - (c) Subject to the provisions of sections 123 and 124 of the Indian Evidence Act, 1872 (1 of 1872), requisitioning any public record or document or copy of such record or document from any office
 - (d) Issuing commissions for the examination of witnesses or documents; (f) reviewing its decisions
 - (g) Dismissing a representation for default or deciding it, ex parte

- (e) Setting aside any order of dismissal of any representation for default or any order passed by it ex parte
- (f) Any other matter which is required to be, or may be, prescribed by the Central Government.

❖ **Financial and administrative powers:**

The Chairperson shall exercise such financial and administrative powers as may be vested in him under the rules: Provided that the Chairperson shall have authority to delegate such of his financial and administrative powers as he may think fit to the Vice-Chairperson or any other officer subject to the condition that the Vice-Chairperson or such other officer shall, while exercising such delegated powers, continue to act under the direction, control and supervision of the Chairperson.

- **Staff of Authority**

- (1) The Central Government shall determine the nature and categories of the officers and other employees required to assist the Authority in the discharge of its functions and provide the Authority with such officers and other employees as it may think fit.
- (2) The officers and other employees of the Authority shall discharge their functions under the general superintendence of the Chairperson.
- (3) The salaries and allowances and conditions of service of the officers and other employees shall be such as may be prescribed.

- **Bar of jurisdiction:** With effect from the date of establishment of the Authority, no civil court or other authority shall have jurisdiction to entertain any appeal in respect of any matter with which the Authority is so empowered by or under this Act.

- **Proceedings before the Authority to be judicial proceedings:** All proceedings before the Authority shall be deemed to be judicial proceedings within the meaning of sections 193, 219 and 228 of the Indian Penal Code (45 of 1860).

- **Members and staff of Authority to be public servants:** The Chairperson, the Vice-Chairperson and the Members and the officers and other employees of the Authority shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code (45 of 1860).
- **Protection of action taken in good faith:** No suit, prosecution or other legal proceeding shall lie against the Central Government or against the Chairperson, the Vice-Chairperson or a Member of the Authority or any other person authorized by the Chairperson, the Vice-Chairperson or a Member for anything which is in good faith done or intended to be done in pursuance of this Act or any rule or order made there under.

❖ **Penalty for failure to comply with orders of Authority:**

Whoever fails to comply with any order made by the Authority, he shall be punishable with imprisonment for a term which may extend to seven years, or with fine which may extend to one lakh rupees, or with both.

- **Offences by companies**

- (i) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly: Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he has exercised all due diligence to prevent the commission of such offence.
- (ii) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be

deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

- **Explanation:** For the purposes of this section:
 - (a) “Company” means anybody corporate and includes a firm or other association of individuals
 - (b) “Director”, in relation to a firm, means a partner in the firm.
- **Power to remove difficulties:**
 - (i) If any difficulty arises in giving effect to the Provisions of this Act, the Central Government may, by order published in the Official Gazette, make such provisions, not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient for removing the difficulty: Provided that no such order shall be made after the expiry of the period of three years from the date on which this Act receives the assent of the President.
 - (ii) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament.
- **Power to make rules**
 - (i) The Central Government may, by notification, make rules for carrying out the provisions of this Act.
 - (ii) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:
 - (a) The procedure under sub-section (4) of section 8 for the investigation of misbehavior or incapacity of the Chairperson, the Vice-Chairperson or a Member
 - (b) The salaries and allowances payable to and the other terms and conditions of service of the Chairperson, the Vice-Chairperson and the Members under section 9
 - (c) The form which an appeal shall contain under sub-section (1) of section 11
 - (d) Financial and administrative powers of the Chairperson under section 13

- (e) The salaries and allowances and conditions of service of the officers and other employees of the Authority
- (f) Any other matter which is required to be, or may be, prescribed.
- (iii) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

- **Repeal and saving:**

- (i) The National Environment Appellate Authority Ordinance, 1997 (Ord. 12 of 1997) is hereby repealed.
- (ii) Notwithstanding such repeal, anything done or any action taken under the said Ordinance shall be deemed to have been done or taken under the corresponding provisions of this Act.

13.5 The Public Liability Insurance Act, 1991

An Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.

BE it enacted by Parliament in the Forty-first Year of The Republic of India as follows:

- ❖ **Short title and commencement:**

- (1) This Act may be called the Public Liability Insurance Act, 1991.
- (2) It shall come into force on such date¹ as the Central Government may, by notification, appoint.

❖ **Definitions:** In this Act, unless the context otherwise requires,—

- (a) “Accident” means an accident involving a fortuitous or sudden or unintended occurrence while handling any hazardous substance resulting in continuous or intermittent or repeated exposure to death of, or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;]
- (b) “Collector” means the Collector having jurisdiction over the area in which the accident occurs;
- (c) “Handling”, in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;
- (d) “Hazardous substance” means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986 (29 of 1986), and exceeding such quantity as may be specified, by notification, by the Central Government;
- (e) “Insurance” means insurance against liability under sub-section (1) of section 3;
- (f) “Notification” means a notification published in the official Gazette;
- (g) “Owner” means a person who owns, or has control over handling, any hazardous substance at the time of accident and includes,—
 - (i) in the case of firm, any of its partners;
 - (ii) in the case of an association, any of its members; and
 - (iii) in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of, and is responsible to, the company for the conduct of the business of the company;]
- (h) “Prescribed” means prescribed by rules made under this Act;
- (i) “Relief Fund” means the Environmental Relief Fund established under section 7A];

- (j) "rules" means rules made under this Act;
- (k) "Vehicle" means any mode of surface transport other than railways.

❖ **Liability to give relief in certain cases on principle of no fault:**

- (1) Where death or injury to any person (other than a workman) or damage to any property has resulted from an accident, the owner shall be liable to give such relief as is specified in the Schedule for such death, injury or damage.
- (2) In any claim for relief under sub-section (1) (hereinafter referred to in this Act as claim for relief), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person.

❖ **Duty of owner to take out insurance policies:**

- (1) Every owner shall take out, before he starts handling any hazardous substance, one or more insurance policies providing for contracts of insurance whereby he is insured against liability to give relief under sub-section (1) of section 3 provided that any owner handling any hazardous substance immediately before the commencement of this Act shall take out such insurance policy or policies as soon as may be and in any case within a period of one year from such commencement.
- (2) Every owner shall get the insurance policy, referred to in sub-section (1), renewed from time to time before the expiry of the period of validity thereof so that the insurance policies may remain in force throughout the period during which such handling is continued.

¹[(2A) No insurance policy taken out or renewed by an owner shall be for an amount less than the amount of the paid-up capital of the undertaking handling any hazardous substance and owned or controlled by that owner, and more than the amount, not exceeding fifty crore rupees, as may be prescribed.

Explanation.— For the purposes of this sub-section, "paid-up capital" means, in the case of an owner not being a company, the market value of all assets and stocks of the undertaking on the date of contract of insurance.

(2B) The liability of the insurer under one assurance policy shall not exceed the amount specified in the terms of the contract of insurance in that insurance policy.

(2C) Every owner shall also, together with the amount of premium, pay to the insurer, for being credited to the Relief Fund established under section 7A, such further amount, not exceeding the sum equivalent to the amount of premium, as may be prescribed.

(2D) The insurer shall remit to the authority specified in sub-section (3) of section 7A the amount received from the owner under sub-section (2C) for being credited to the Relief Fund in such manner and within such period as may be prescribed and where the insurer fails to so remit the amount, it shall be recoverable from insurer as arrears of land revenue or of public demand.]

(3) The Central Government may, by notification, exempt from the operation of sub-section (1) any owner, namely:—

- (a) the Central Government;
- (b) any State Government;
- (c) any corporation owned or controlled by the Central Government or a State Government; or
- (d) any local authority:

Provided that no such order shall be made in relation to such owner unless a fund has been established and is maintained by that owner in accordance with the rules made in this behalf for meeting any liability under sub-section (1) of section 3.

❖ **Verification and publication of accident by Collector:** Whenever it comes to the notice of the Collector that an accident has occurred at any place within his jurisdiction, he shall verify the occurrence of such accident and cause publicity to be given in such manner as he deems fit for inviting applications under sub-section (1) of section 6.

❖ Application for claim for relief:

- (1) An application for claim for relief may be made—
 - (a) by the person who has sustained the injury;
 - (b) by the owner of the property to which the damage has been caused;
 - (c) where death has resulted from the accident, by all or any of the legal representatives of the deceased; or
 - (d) by any agent duly authorized by such person or owner of such property or all or any of the legal representatives of the deceased, as the case may be:

Provided that where all the legal representatives of the deceased have not joined in any such application for relief, the application shall be made on behalf of or for the benefit of all the legal representatives of the deceased and the legal representatives who have not so joined shall be impleaded as respondents to the application.

- (2) Every application under sub-section (1) shall be made to the Collector and shall be in such form, contain such particulars and shall be accompanied by such documents as may be prescribed.
- (3) No application for relief shall be entertained unless it is made within five years of the occurrence of the accident.

❖ Award of relief:

- (1) On receipt of an application under sub-section (1) of section 6, the Collector shall, after giving notice of the application to the owner and after giving the parties an opportunity of being heard, hold an inquiry into the claim or, each of the claims, and may make an award determining the amount of relief which appears to him to be just and specifying the person or persons to whom such amount of relief shall be paid.
- (2) The Collector shall arrange to deliver copies of the award to the parties concerned expeditiously and in any case within a period of fifteen days from the date of the award.

- (3) When an award is made under this section,—
- (a) the insurer, who is required to pay any amount in terms of such award and to the extent specified in sub-section (2B) of section 4, shall, within a period of thirty days of the date of announcement of the award, deposit that amount in such manner as the Collector may direct;
 - (b) the Collector shall arrange to pay from the Relief Fund, in terms of such award and in accordance with the scheme made under section 7A, to the person or persons referred to in sub-section (1) such amount as may be specified in that scheme;
 - (c) the owner shall, within such period, deposit such amount in such manner as the Collector may direct.
- (4) In holding any inquiry under sub-section (1), the Collector may, subject to any rules made in this behalf, follow such summary procedure as he thinks fit.
- (5) The Collector shall have all the powers of Civil Court for the purpose of taking evidence on oath and of enforcing the attendance of witnesses and of compelling the discovery and production of documents and material objects and for such other purposes as may be prescribed; and the Collector shall be deemed to be a Civil Court for all the purposes of section 195 and Chapter XXVI of the Code of Criminal Procedure, 1973 (2 of 1974).
- (6) Where the insurer or the owner against whom the award is made under sub-section (1) fails to deposit the amount of such award within the period specified under sub-section (3), such amount shall be recoverable from the owner, or as the case may be, the insurer as arrears of land revenue or of public demand.
- (7) A claim for relief in respect of death of, or injury to, any person or damage to any property shall be disposed of as expeditiously as possible and every endeavor shall be made to dispose of such claim within three months of the receipt of the application for relief under sub-section (1) of section 6.
- 1[(8) Where an owner is likely to remove or dispose of his property with the object of evading payment by him of any amount of award, the Collector may,

in accordance with the provisions of rules 1 to 4 of Order XXXIX of the First Schedule to the Code of Civil Procedure, 1908 (5 of 1908), grant a temporary injunction to restrain such act.]

❖ **Establishment of Environmental Relief Fund:**

- (1) The Central Government may, by notification, establish a fund to be known as the Environmental Relief Fund.
- (2) The Relief Fund shall be utilised for paying, in accordance with the provisions of this Act and the scheme made under sub-section (3), relief under the award made by the Collector under section 7.
- (3) The Central Government may, by notification, make a scheme specifying the authority in which the Relief Fund shall vest, the manner in which the Relief Fund shall be administered, the form and the manner in which money shall be drawn from the Relief Fund and for all other matters connected with or incidental to the administration of the Relief Fund and the payment of relief therefrom.]

❖ **Provisions as to other right to claim compensation for death, etc:**

- (i) The right to claim relief under sub-section (1) of section 3 in respect of death of, or injury to, any person or damage to any property shall be in addition to any other right to claim compensation in respect thereof under any other law for the time being in force.
- (ii) Notwithstanding anything contained in sub-section (1), where in respect of death of, or injury to, any person or damage to any property, the owner, liable to give claim for relief, is also liable to pay compensation under any other law, the amount of such compensation shall be reduced by the amount of relief paid under this Act.

❖ **Power to call for information:** Any person authorized by the Central Government may, for the purposes of ascertaining whether any requirements of this Act or of any rule or of any direction given under this Act have been complied with, require any owner to submit to that person such information as that person may reasonably think necessary.

- ❖ **Power of entry and inspection:** Any person, authorized by the Central Government in this behalf, shall have a right to enter, at all reasonable times with such assistance as he considers necessary, any place, premises or vehicle, where hazardous substance is handled for the purpose of determining whether any provisions of this Act or of any rule or of any direction given under this Act is being or has been complied with and such owner is bound to render all assistance to such person.
- ❖ **Power of search and seizure:**
 - (1) If a person, authorized by the Central Government in this behalf, has reason to believe that handling of any hazardous substance is taking place in any place, premises or vehicle, in contravention of sub-section (1) of section 4, he may enter into and search such place, premises or vehicle for such handling of hazardous substance.
 - (2) Where, as a result of any search under sub-section (1) any handling of hazardous substance has been found in relation to which contravention of sub-section (1) of section 4 has taken place, he may seize such hazardous substance and other things which, in his opinion, will be useful for, or relevant to, any proceeding under this Act:

Provided that where it is not practicable to seize any such substance or thing, he may serve on the owner an order that the owner shall not remove, part with, or otherwise deal with, the hazardous substance and such other things except with the previous permission of that person.
 - (3) He may, if he has reason to believe that it is expedient so to do to prevent an accident dispose of the hazardous substance seized under sub-section (2) immediately in such manner as he may deem fit.
 - (4) All expenses incurred by him in the disposal of hazardous substances under sub-section (3) shall be recoverable from the owner as arrears of land revenue or of public demand.
- ❖ **Power to give directions:** Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in exercise of its powers and performance of its functions under this Act, issue such directions

in writing as it may deem fit for the purposes of this Act to any owner or any person, officer, authority or agency and such owner, person, officer, authority or agency shall be bound to comply with such directions.

For the removal of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct—

- (a) Prohibition or regulation of the handling of any hazardous substance; or
- (b) Stoppage or regulation of the supply of electricity, water or any other service.

❖ **Power to make application to Courts for restraining owner from handling hazardous substances:**

- (1) If the Central Government or any person authorized by that Government in this behalf has reason to believe that any owner has been handling any hazardous substance in contravention of any of the provisions of this Act, that Government or, as the case may be, that person may make an application to a Court, not inferior to that of a Metropolitan Magistrate or a Judicial Magistrate first class for restraining such owner from such handling.
- (2) On receipt of the application under sub-section (1), the Court may make such order as it deems fit.
- (3) Where under sub-section (2), the Court makes an order restraining any owner from handling hazardous substance, it may, in that order—
 - (a) direct such owner to desist from such handling;
 - (b) authorize the Central Government or, as the case may be, the person referred to in sub-section(1), if the direction under clause (a) is not complied with by the owner to whom such direction is issued, to implement the direction in such manner as may be specified by the Court.
- (4) All expenses incurred by the Central Government, or as the case may be, the person in implementing the directions of Court under clause (b) of sub-section (3), shall be recoverable from the owner as arrears of land revenue or of public demand.

❖ **Penalty for contravention of sub-section (1) or sub-section (2) of section 4 or failure to comply with directions under section 12:**

- (1) Whoever contravenes any of the provisions of 1[sub- section (1) or sub-section (2) or sub-section (2A) or sub-section (2C)] of section 4 or fails to comply with any direction issued under section 12, he shall be punishable with imprisonment for a term which shall not be less than one year and six months but which may extend to six years, or with fine which shall not be less than one lakh rupees, or with both.
- (2) Whoever, having already been convicted of an offence under sub-section (1), is convicted for the second offence or any offence subsequent to the second offence, he shall be punishable with imprisonment for a term which shall not be less than two years but which may extend to seven years and with fine which shall not be less than one lakh rupees.
- (3) Nothing contained in section 360 of the Code of Criminal Procedure, 1973 (2 of 1974), or in the Probation of Offenders Act, 1958 (20 of 1958), shall apply to a person convicted of an offence under this Act unless such person is under eighteen years of age.

❖ **Penalty for failure to comply with direction under section 9 or order under section 11 or obstructing any person in discharge of his functions under section 10 or 11:**

If any owner fails to comply with direction issued under section 9 or fails to comply with order issued under sub-section (2) of section 11, or obstructs any person in discharge of his functions under section 10 or sub-section (1) or sub-section (3) of section 11, he shall be punishable with imprisonment which may extend to three months, or with fine which may extend to ten thousand rupees, or with both.

❖ **Offences by companies:**

- (i) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

- (ii) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

For the purposes of this section,—

- (a) “Company” means anybody corporate and includes a firm or other association of individuals;
- (b) “Director,” in relation to a firm, means a partner in the firm.

- ❖ **Offences by Government Departments.**—Where an offence under this Act has been committed by any Department of Government, the Head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this section shall render such Head of the Department liable to any punishment if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

- ❖ **Cognizance of offences.**—No court shall take cognizance of any offence under this Act except on a complaint made by—

- (a) The Central Government or any authority or officer authorized in this behalf by that Government; or
- (b) Any person who has given notice of not less than sixty days in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorized as aforesaid.

- ❖ **Power to delegate:** The Central Government may, by notification, delegate, subject to such conditions and limitations as may be specified in the notification, such of its powers and functions under this Act (except the power under section 23) as it may deem necessary or expedient to any person (including any officer, authority or other agency).
- ❖ **Protection of action taken in good faith.**—No suit, prosecution or other legal proceeding shall lie against the Government or the person, officer, authority or other agency in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made or orders or directions issued thereunder.
- ❖ **Advisory Committee:**
 - (1) The Central Government may, from time to time, constitute an Advisory Committee on the matters relating to the insurance policy under this Act.
 - (2) The Advisory Committee shall consist of—
 - (a) Three officers representing the Central Government;
 - (b) Two persons representing the insurers;
 - (c) Two persons representing the owners; and
 - (d) Two persons from amongst the experts of insurance or hazardous substances. to be appointed by the Central Government.
 - (3) The Chairman of the Advisory Committee shall be one of the members representing the Central Government, nominated in this behalf by that Government.
 - (4) Effect of other laws: The provisions of this Act and any rules made thereunder shall have effect notwithstanding anything inconsistent therewith contained in any other law.
- ❖ **Power to make rules:**
 - (1) The Central Government may, by notification, make rules for carrying out the purposes of this Act.
 - (2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely—

- a. The maximum amount for which an insurance policy may be taken out by an owner undersub-section (2A) of section 4;
 - (i) The amount required to be paid by every owner for being credited to the Relief Fund undersub-section (2C) of section 4;
 - (ii) The manner in which and the period within which the amount received from the owner is required to be remitted by the insurer under sub-section (2D) of section 4;
 - (iii) Establishment and maintenance of fund under sub-section (3) of section 4;
- (3) The form of application and the particulars to be given therein and the documents to accompany such application under sub-section (2) of section 6;
- (4) The procedure for holding an inquiry under sub-section (4) of section 7;
- (5) The purposes for which the Collector shall have powers of a Civil Court under sub-section (5) of section 7;
- (6) The manner in which notice of the offence and of the intention to make a complaint to the Central Government shall be given under clause (b) of section 18;
- (7) Any other matter which is required to be, or may be, prescribed.

Every ³[rule or scheme] made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the ³[rule or scheme] or both Houses agree that the ³[rule or scheme] should not be made, the ³[rule or scheme] shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that ³[rule or scheme].

13.6 The National Environment Tribunal Act, 1995

The objective of the NGT Act is to provide effective and expeditious disposal of cases relating to the protection of the environment including the enforcement of any legal

right relating to the environment. The Tribunal is a multi-disciplinary body, with judicial and non-judicial/expert members, which hears and decides cases before it. The need to set up special environmental courts, such as the National Green Tribunal, was highlighted by the Supreme Court of India in a series of cases, 1 and by the Law Commission of India in its 186th report in 2003. The Court was of the opinion that environmental cases raised issues which required technical knowledge and expertise, speedy disposal, and continuous monitoring, and therefore they should be adjudicated upon by dedicated courts with adequate expertise and technical assistance. The National Environmental Tribunal Act 1995 was passed by the Parliament but never implemented. Subsequently, the National Environment Appellate Authority Act 1997 was enacted under which the National Environment Appellate Authority was set up in 1997. There were several problems in the functioning of this Authority; including its limited mandate (only persons wishing to challenge environmental clearances could approach the Authority). When the National Green Tribunal was set up in 2010, it replaced the Authority. The Tribunal can be approached with cases pertaining to any of the following seven environmental laws: The Water (Prevention and Control of Pollution) Act, 1974 [Water Act], The Water (Prevention and Control of Pollution) Cess Act, 1977, The Forest (Conservation) Act, 1980, The Air (Prevention and Control of Pollution) Act, 1981 [Air Act], The Environment (Protection) Act, 1986, The Public Liability Insurance Act, 1991 and The Biological Diversity Act, 2002

According to the NGT Act, an aggrieved person can file a case before the Tribunal – could be an individual, a company, a firm, an association of person (like a NGO) - even if not registered or incorporated, a trustee, a local authority (like a municipal corporation), a government body (like the SPCB) etc. The person need not be directly affected by the project or development in question, but could be any person who is interested in protecting and preserving the environment.

13.7 The Mines and Minerals Act, 1957

The Mines and Minerals Development and Regulation Act, 1957, ('MMDR') and the Mines Act, 1952, organized with the rules and regulations framed under them,

establish the basic laws governing mineral and mining sector in India. MMDR Act-1957 applied to all minerals except petroleum. The MMDR Act was revised on numerous occasions to deliver a fair concession regime to invite private sector investments into exploration and mining sector. Government control over mining was further expended by amending the MMDR Act in 1972. In 1986 more stringent amendments were made by increasing the First Schedule minerals from 27 to 38 and also making mining plan approval compulsory. MMDR Amendment Act, 2015, substituted the first-come-first served/discretionary process for grant of mineral resources by a transparent and competitive auction process. The most recent amendment in the MMDR Act was carried out by the Mineral Laws (Amendment) Act, 2020 to ease out business and opening commercial mining and allowing domestic as well as global investors to invest. Important mining regulations enacted by the Government of India as summarized in Table 1.

Table 1 List of important mining regulations in India

| ACT | Mining Regulation | Basic Provision |
|---|---|---|
| Mineral and Mining (Regulation and Development) Act, 1957 | Mineral Concession Rules (MCR), 1960 | Defines the process and timelines of the grant of mineral concessions as per the provisions of Section 13 of The MMDR Act, 1957. |
| | Mineral Conservation and Development Rules (MCDR), 2017 | Prescribes guidelines for the conservation and development of minerals as per the provisions of Section 18 of the MMDR Act, 1957. The rules cover procedures for carrying out prospecting and mining operations. It covers requirement related to the preparation of mining and prospecting plans, filing of notices and returns, and guidelines for the protection of the environment. |
| | State Minor Mineral Concession Rules | Various State Governments have prescribed rules for the grant of mineral concessions with respect to minerals classified as minor minerals under the MMDR Act, 1957. |
| Mines Act, 1952 | Mines Rules, 1955 Indian Coal Mines Regulation, 1957 Indian Metalliferous | Prescribes the laws related to the regulation of health, sanitation safety and welfare for miners and their families. Regulations for carrying out mining operations, management and inspection of mines and procedure of reporting to be followed are part of this. |

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| | Mines Regulation, 1957 Oil Mines Regulations, 1963 | |
| Coal Mines (Conservation and Safety) Act, 1952 | Coal Mines (Conservation & Safety) Rules, 1952 | The main function is to look after thestowing needs of mines in the interest of conservation. |
| Atomic Energy Act, 1962 | | It provides wide powers to Central Government for the regulation of prospecting and mining of mineralsused in the production of atomic energy. |
| Oil Field (Regulation and Development) Act, 1948 | Petroleum Concession Rules 1949 | It deals with the procedure and rules regarding grant of exploration license and mining lease. |
| Offshore Areas Mineral (Development and Regulation) Act, 2002 | Offshore Areas Mineral Concession Rules, 2006 | Provides for the development and regulation of mineral resources in the territorial sea, continental shelf, EEZ, and other maritime zones of India. |
| Mineral Laws (Amendment) Act, 2020 | | The amendment is carried out to take forward the agenda of ease of doing business & opening in the mining sector and allowing domestic as well as global investors to invest. |

❖ Mineral Concession System

In the above section we have read about important mining regulations in India. Now, let us discuss the mineral concession system of India. In the national structure of India, the State Governments are the owner of the minerals located within the boundaries of the State concerned. As per Article 297 of the Constitution of India, the Central Government is the owner of the minerals underlying the ocean within the territorial waters or the Exclusive Economic Zone of India. The State Governments grant the mineral concessions for all the minerals located within the boundary of the State under the provisions of the Mines and Minerals (Development and Regulation) Act, 1957 (MMDR) and Mineral Concession Rules, 1960 (MCR). Prior approval of the Central Government however is required in some cases.

There are three kinds of mineral concessions:

- Reconnaissance Permit,
- Prospecting License, and
- Mining Lease.

(i) **Reconnaissance Permit (RP):** This permit is approved for preliminary prospecting of a mineral through regional, aerial, geochemical or geophysical surveys and geological mapping. The reconnaissance permit for any mineral or related minerals is granted for 3 years and a maximum area of 5,000 sq. km, to be abandoned progressively. After 2 years, the area should be reduced to 1,000 sq. km or 50% of the area granted, whichever is less. At the end of third year, the area held under a reconnaissance permit should be reduced to 25 sq km. A reconnaissance permit holder must have a preferential right to obtain PL(s) in the area concerned.

(ii) **Prospecting License (PL):** This permit is granted to undertake exploration operations to locate and to prove mineral deposits. A PL for any mineral or associated minerals is granted for a maximum period of 3 years. A PL can be renewed for the total period for which a PL is granted that does not exceed 5 years. In a State, a person can be granted a maximum area of 25 sq. km in one or more PL's. But if the Central Government believes that in the interest of the development of any mineral it is necessary to do so, the maximum area limit can be relaxed.

(iii) **Mining Lease (ML):** This lease is granted to undertake mineral winning operations of minerals. A ML for any mineral or associated minerals is granted for a minimum period of 20 years and a maximum period of 30 years. The ML can be renewed for a period not exceeding 20 years each. In a State, a person can be granted a maximum area of 10 sq. km in one or more MLs. But if the Central Government believes that in the interest of the development of any mineral it is necessary to do so, the maximum area limit can be relaxed.

The Mineral Concession Rules, 1960 outline the procedures and conditions to obtain a Prospecting License or Mining Lease. The Mineral Conservation and Development Rules, 2017 lays down guidelines to ensure mining on a scientific basis, whereas at the same time, conserving the environment. The provisions of MCR and MCDR, but are not applicable to coal, atomic minerals and minor minerals. The minor minerals that come under the purview of the State Governments are separately notified. In the next section, we will discuss in detail the Mineral Conservation and Development Rules.

❖ **Mineral Conservation and Development Rules- 2017**

The Mineral Conservation and Development Rules (MCDR) were enforced for the first time in 1955 to lay adequate emphasis on the systematic development of mines, leading to the conservation of mineral resources. These rules derive power from the MMRD Act 1948. Later with the adoption of MMRD Act 1957, the MCDR were also changed and modified to MCDR 1958. The MCDR apply to all minerals except for (i) petroleum and natural gas; (ii) coal, lignite and sand for stowing; and (iii) minor minerals. The MCDR-1958 was repealed in 1988 and was replaced by MCDR-1988. Further, in supersession of the Mineral Conservation and Development Rules, 1988, the Central Government replaced it with the Mineral Conservation and Development Rules, 2017 by exercising the powers conferred to section 18 of the MMRD Act, 1957. As discussed in previous sections, the Mineral Conservation and Development Rules (MCDR) provide guidelines to ensure mining operation including mine closer on a scientific basis. The rules also define sustainable mining. The MCDR-2017 defines various rules divided into 12 chapters. The rules, concerning with the Reconnaissance and Prospecting Operations having 6 rules regarding the scheme of Reconnaissance or Prospecting Operations, its inspection by the competent authority and reports to be submitted by PL holder.

❖ **Rules for Mining Operations:**

Rules for Mining Operations of MCDR-2017 comprises of 21 rules related to Mining plan, operations in Open Cast mines, Underground mining operations, stacking of different grade of ores/non-salable minerals, beneficiation studies, maintenance of

records for machinery and plants, opening and closure plans of mines, abandonment of mines, responsibilities of Mining Leaseholder etc. Type of plans and sections and their preparation details defined in the rules are also given in MCDR-2017. While conducting prospecting, mining, beneficiation or metallurgical operations in the area, every holder of a mining lease is bound to take all possible precautions to undertake sustainable mining. The other environmental aspects of mining and related operations are also covered under these rules.

Every RP/PL/ML holder is bound to the MCDR-2017 to appoint geologists and mining engineers (whole time/part-time depending on the type of lease and type of mines) for scientific operations.

For these rules, the mines are divided into two types as “Category – A” mines and “Category- B” mines.

- **The category 'A' mines:** These mines are fully mechanized. The work is being carried out for deep whole drilling, excavation, loading and transport. by deployment of heavy mining machinery.
- **Category 'B' mines** mean mines other than category 'A' mines.

Overall the Mines and Minerals (Regulation and Development) Act (1957) is an Act of the Parliament of India enacted to regulate the mining sector in India. It was amended in 2015 and 2016. This act forms the basic framework of mining regulation in India.

This act is applicable to all mineral except minor minerals and atomic minerals. It details the process and conditions for acquiring a mining or prospecting license in India. Mining minor minerals comes under the purview of state governments. River sand is considered a minor mineral. For mining and prospecting in forest land, prior permission is needed from the Ministry of Environment and Forests.

Rules regarding all other aspects of the mining operations such as submission of annual and monthly returns, examination of mineral deposits and sampling, preservation of cores, geological reports, revision, penalties and maintenance of mining regulation portal etc. are also defined in the Mineral Conservation and Development Rules – 2017.

Summary

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