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FACULTY OF ENGINEERING AND  
TECHNOLOGY

## Lecture- 31

# Wasteland reclamation, Consumerism and waste products; Environmental Acts



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# Wasteland

- Economically unproductive lands suffering from environmental deterioration are known as wastelands.
- The wastelands include salt affected lands, sandy areas, undulating uplands, snow covered areas, glacial areas and areas become barren after Jhum cultivation.
- More than half of our country's geographical area (about 175 million ha) is estimated to be wasteland, indicating serious problem for a country like India that has to support 1/6th of the world's population.
- Wastelands are formed by natural processes or by anthropogenic (man-made) activities.
- The major anthropogenic activities leading to wasteland formation are deforestation, overgrazing, mining and agricultural practices.
- Natural process are major reason for forming deserts into wastelands, but several human activities accelerate the spreading of desert.

# Wasteland reclamation

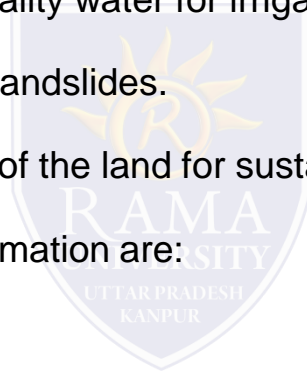
Wasteland reclamation means re-claiming or to use land for productive purpose. It is the process of converting barren or wasteland into fertile land that is suitable for habitation and cultivation.

The major objectives of wasteland reclamation are:

- To improve the physical structure and quality of the marginal soils.
- To improve the availability of good quality water for irrigating these lands.
- To prevent soil erosion, flooding and landslides.
- To conserve the biological resources of the land for sustainable use.

The methods involved in wasteland reclamation are:

- Afforestation
- Reforestation
- Providing surface cover
- Mulching
- Changing ground topography by adopting strip farming, terracing, etc.
- Leaching excess salt
- Adopting sustainable agricultural practices



# Consumerism and waste products

- Consumerism refers to the consumption of resources by the people.
- With the dawn of industrial era, population has been increased as well as life-style has been upgraded that resulted in exponential rise in consumerism.
- Consumerism interferes with the sustainable use of resources due to insatiable quest for unnecessary things.
- In many cases, products become obsolete before they actually wear out due to continuous development of technologies and increased advertising.
- Most human activities are related to production and consumption cycle which produce excessive amounts of waste in the form of solid, liquid and gaseous waste products around the world is now a serious environmental issue and create a problem of waste disposal.
- Excess generation of waste has disastrous effects on the environment besides the overexploitation of natural resources.

# Environment Protection Act, 1986

- In the wake of Bhopal Gas Tragedy, Government of India enacted a comprehensive environmental legislation, including rules relating to storing, handling and use of hazardous waste.
- On the basis of these rules, the Indian Parliament enacted the Environment Protection Act in 1986.
- This is an umbrella legislation that consolidated the provisions of the Water (Prevention and Control of Pollution) Act of 1974 and the Air (Prevention and Control of Pollution) Act of 1981.
- Within this framework of the legislations, the government established Pollution Control Boards (PCBs) in order to prevent, control, and abate environmental pollution.
- The objective of the Environment Protection Act is to protect and improve the environment in the country.

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

1. The act enacted for the prevention, control and abatement of air pollution.
2. Noise pollution has been included as pollution in the act in 1987.
3. Pollution control boards at the central or state level have the regulatory authority.
4. Provision for defining constitution, powers, function, funds, audit, penalties and procedures
5. Boards have to check whether the industries are following standards or not.
6. Provision for ensuring emission standards from automobiles.
7. In consultation with state pollution control board, the state government may declare an area as 'air pollution control area" and can prohibit the use of any fuel other than approved fuel in the area causing air pollution.
8. A provision for appeals has been made i.e., an Appellate authority.

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

1. It is an act to provide for the prevention and control of water pollution for maintaining and restoring clean water.
2. The act provides for the establishment of central and state pollution control boards and assigning powers and functions to these boards along with procedures and various penalties for defaulters.
3. The power and function of central boards include:
  - Will advice the government on matters concerning water pollution control
  - Provide guidance and advice to state boards
  - Will organize training and awareness programs
  - Will collect, compile and publish relevant technical data
  - May establish own laboratories for analysis of pollution
8. The power and function of state boards include:
  - Plan programs for pollution control
  - Advice the state government
  - Encourage research
  - Monitor effluent treatment plants
  - Prescribe or modify standards for release of pollutants
  - Maintain or modify sewage treatment and recycling plants

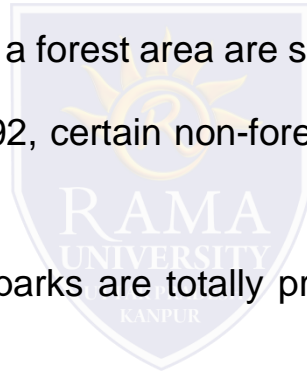


# Wildlife protection act, 1972

1. Wildlife protection act came into existence in 1972.
2. The major activities are as follows:
  - It provides for the appointment of wildlife advisory Board, their duties etc.
  - Comprehensive listing of endangered wildlife species was done and prohibition of hunting of the endangered species has been mentioned.
  - Protection to some endangered plants is also provided under the Act.
  - The Act provides for setting up of National Parks, Wildlife Sanctuaries, and several conservation projects for individual endangered species such as tiger, lion, etc.
  - The Act provides for the constitution of Central Zoo Authority.
  - It provides for captive breeding program for endangered species.
  - The Act imposes a ban on the trade or commerce in scheduled animals and also provide provision for trade and commerce in some wildlife species with license.
  - It provides for legal powers to officers and punishment to offenders.

# Forest Conservation Act, 1980

1. The act deals with the conservation of forests and related aspects.
2. The state government has the powers to use forests only for forestry purposes and for using forest for other purposes such as mining, etc., state government needs to take approval from central government.
3. Any illegal non-forest activity within a forest area are strictly prohibited.
4. After amendments in the act in 1992, certain non-forest activities such as limited cutting of trees, seismic surveys, etc. were allowed.
5. Wild life sanctuaries and national parks are totally prohibited for any non-forest activity such as cultivation of tea, coffee, etc.
6. Tussler cultivation in forest areas by tribals as a means of their livelihood is considered as forestry activity.
7. Any proposal sent to central government for non-forest activity must include cost benefit analysis and Environmental Impact Assessment.



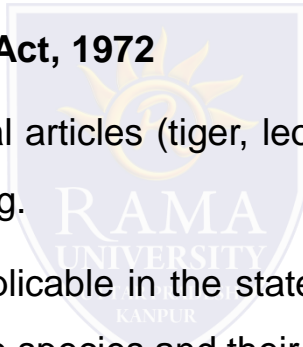
# Issues involved in enforcement of Environmental legislation

Despite of enforcement of several environmental laws, pollution and degradation of environment still a common problem in India.

These problems exist due to certain drawback and ineffective enforcement of these environmental legislation.

## **Drawbacks of the Wildlife Protection Act, 1972**

- The ownership certificates for animal articles (tiger, leopard skins etc.) are permissible which very often serve as a tool for illegal trading.
- The wildlife protection act is not applicable in the state Jammu and Kashmir that provide window for illegal hunting and trade in wildlife species and their articles.
- The offenders of the Act are not subject to very harsh penalties.



## **Drawbacks of the Forest Conservation Act, 1980**

- The Act has transferred the power from the state to the central government which means that the power is centralized at the top.
- The Act has also failed to attract public support because it has infringed the human rights of poor native people.
- Very less participation of the poor community leads to the ineffectiveness of this Act.
- Forest dwellers and tribal communities have rich knowledge about forest resources but their contribution is never acknowledged.



## **Drawbacks in effective enforcement of pollution related legislation**

- Less than required regulatory / enforcing manpower in regulatory agencies compared to the ever-increasing number of industries.
- Lack of adequate technical knowledge / skills required for enforcement of regulations.
- Resistance to change / attitudinal problems prevalent
- Lack of financial resources in general

# Public awareness

- Public awareness about environment is at a stage of infancy. Awareness related to environmental degradation, pollution etc., has been disseminated but incomplete knowledge and information and ignorance about many aspects has led to misconceptions.
- Therefore environmental awareness is required to be created through formal and informal education to all sections of the society.
- Everyone needs to understand it because environment belongs to all and every individual matters when it comes to conservation and protection of environment.
- Various stages and methods that can be useful for raising environmental awareness in different sections of the society are as follows:
  - (i) Awareness among students through education
  - (ii) Awareness among masses through media, awareness campaign, skits and plays, etc.
  - (iii) Among the planners, decision-makers and leaders that play important role in shaping the future of the society.

