

ESG

summary notes

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CHAPTER 13

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Ch 13 - Environment [0-3 mks]

1) Focusing on environment is essential as it helps in preserving human life and at the same time maintaining the biodiversity.

2) Following are focus points in regard to environment conservation:

a] Agriculture	e] Air quality
b] Fishing	f] Protect wildlife
c] Climate	g] Protect earth.
d] Water quality	

3) In India following are the 2 regulatory bodies entrusted with environmental related matters:

(a) The MOEF - (Ministry of Env & Forest)

It is the agency of central Govt. responsible for planning / promotion / coordination & overseeing the implementation of environmental programmes.

(b) The CPCB - (Central Pollution Control Board)

which is entrusted with the powers & functions under the Air Act / Water Act & Environment (Protection) Act.

4) The Environmental Safeguards includes the following three:

(a) To monitor the possible environmental risk.

(b) To define measures & processes to effectively manage and reduce the risk as well as its negative impact.

(c) To prevent & mitigate excessive burden on people and planet.

5) Following are certain policies promoted by India to deal with environmental issues:

- (a) National Environment Policy
- (b) National Population Policy
- (c) National Water Policy
- (d) National Forest Policy.

* 6) In 2015, India released its nationally determined contribution, the highlights of that are:

- (a) Raise its non-fossil energy capacity to 500 GW by 2030.
- (b) To meet its 50% of energy requirement from renewable sources.
- (c) Reduce carbon emission by 1 Billion tons
- (d) Reduce carbon intensity of its economy by more than 45%.
- (e) Achieve Net zero by 2070.

7) In all the above targets the focus has been on improving the share of renewable sources and for that many initiatives have been taken which amongst many includes the following:

- (a) PM UJJWALA Yojana - Scheme intends to provide free LPG to women which are below poverty line.
- (b) PM KUSUM Yojana - KUSUM here stands for Kisson Urja Suraksha Evam Utham Mahabhayan.

(c) PM - UJALA Yojana.

* Environmental Permits :

- 1) The ministry of Environment, Forest & Climate Change have adopted a new method of classifying each type of industry & based upon its type various exemptions are provided.
- 2) The classification is based on Pollution Index (PI) score, which is based upon the level of emission, utilization of resources & hazardous waste generated.
- 3) The categories are divided in the following four:
 - (a) Red Category - PI score being 60 and above
 - (b) Orange Category - PI 41 to 59
 - (c) Green Category - PI 21 to 40
 - (d) White category - PI upto 20

* Environmental Impacts :

- 1) Environmental Impacts are those which are concerned with the impacts upon the air, water, biodiversity.
- 2) Pollution, Contamination which occurs as a consequence of the actions taken by the corporates which sooner / later will have direct impact on quality of life.

3) A no. of treaties both national as well as international have been adopted to prevent these pollution releases.

4) To measure these environmental impacts the IPAT equation has been given, which is now considered as the master equation of Industrial ecology.

$$I = P \times A \times T$$

Where I happens to be Env Impact

P = Population

A = GDP/person → provides with consumption/ person.

T = Technology → Impact on environment on per unit consumption.

$$I = P \times \text{GDP/person} \times M \times D \times H$$

↓
Materials
Intensity

↓
Dissipation
Factors

↘
Hazards

→ In the above equation M is the material intensity which means the amount of material used to produce a unit.

Dissipation factor means the proportion of the material lost during its mfg.

H i.e. Hazards means the degree of Harm caused by the materials lost.

* Energy Consumption

Energy presents a very imp role in shaping the future of the country & further it can be classified into:

a) Primary & Secondary -

where primary sources are those which are found in nature - like coal / oil / natural gas. and other primary sources include nuclear energy & radioactive substances.

On the other hand secondary sources are those which are derived from primary sources - ex - electricity.

b) Commercial & Non-commercial energy -

The energy sources which are available in the market for a definite price are known as commercial energy like coal, electricity.

Whereas, non commercial energy is not available in the market at a price for buying selling, which may include agricultural wastes, they are also called as traditional fuels.

c) Renewable and Non Renewable energy.

* In India

* Awareness on Environment Protection:

(a) Getting the message right - The first choice is the theme or stories which will be more effective to communicate the issues & effective in getting the desired action.

2. Getting the message across:-

- (a) It can be by using impactful visuals to attract attention.
- (b) Create a dedicated website with catchy name which is easier to find.
- (c) Use social media to spread message more widely.

3. Combining message with behavioural insights-

It would not be effective to just present facts but rather it should be combined with behavioural signs so as to stimulate energy saving behaviour.

4. Following could be beneficial:

- (a) Appeal to people's emotion with stories & messages.
- (b) Bring all the energy efficiency programmes under one roof.
- (c) Real time information.

*1. India needs to sensitize amongst all the ~~ener~~ Energy Conservation Act, 2001.

2. Key Objectives of Act are as follows:

- (a) Act provides a framework for formulating policies for national energy conservation.
- (b) It helps in developing policies & programmes to all the stakeholders for efficient use of energy.

(c) Once the policies are in place the next objective is to measure and monitor the energy performance. So the BEE sets procedures & standards for measuring and monitoring the initiatives.

(d) Another objective is to encourage the involvement of private sector in supporting the implementation of energy conservation.

(e) Lastly, it aims to promote the culture of energy efficiency & conservation of energy.

* Key features of the Act :-

(a) The Act grants the power to the Central as well as State Govt to establish energy standards for specific appliances and equipments.

(b) The Act mandates the display of labels on specific equipments and appliances indicating their energy performance and efficiency.

(c) Act requires energy intensive industries and designated consumers to be informed about energy conservation measures.

(d) The Act authorises the Govt to recommend energy utilization standards for designated consumers.

(e) It provides for energy conservation fund which can be used to promote conservation measures & awareness programmes.

* Significant addition in Energy Conservation (Amendment) Act, 2022

- (a) The amendment act provides for a mechanism of carbon credit trading, under this scheme the central Govt specifies a permit certificate which allows emission of CO₂ & GHG upto a certain limit & also allows its trading.
- (b) The amendment act provides for a new code in the name of energy conservation & sustainable building code which provides for standards for energy efficiency as well as the use of renewable energy.
- (c) The amendment focuses on promoting the use of renewable energy which can help in combating climate change.
- (d) It empowers the government to specify a minimum share of consumption of non fossil fuel.
- (e) Penalty for non-compliance -
If above is not complied with penalty of ₹10 lakh per failure & an additional penalty of 2x price of the fuel used in excess shall be charged.

(f) The BEE i.e. the Bureau of Energy Efficiency is a statutory body responsible for formulating & implementing policies to improve energy efficiency.

(g) The objectives of BEE are as follows:

i] It is tasked with advising stakeholders as to how to develop policies related to energy efficiency.

ii] The BEE establishes framework & procedure to monitor & verify the efficient use of electricity at individual as well as national level.

iii] It seeks support from multiple sectors including Govt & private sectors to implement the energy conservation act.

iv] The body is responsible for managing and implementing the act.

* Powers and functions of BEE:

1) It recommends the energy consumption standards to promote energy efficiency in various sectors to the central Govt which in turn notifies the same.

2) It creates a list of designated consumers which includes industries which are high energy consumers.

3) It promotes innovative financing mechanism for energy efficient projects.

4) It develops standards and labels for appliances so the consumers can make energy efficient choice.

* wayforward for India's Environmental Improvement:

1) Energy Transition:

- India's coal has high ash content & is extremely polluting and inefficient to burn which requires almost twice of the coal which can be generated from imported coal.

- So, with the falling prices of renewables the coal mines may become stranded in future as well as it is heavily polluting in present time, India tries to make a transition by providing subsidies for both fossil fuels & renewable energy.

2) Carbon Sink:

- India has been planning to increase its forest & tree covers under several programs like Green India mission, Green Highway policy.

• India has made a commitment to restore 26 million hectares of deforested & degraded land.

3) Adaptation:

India has set up a national adaptation fund to combat adaptation needs in crucial sectors further assisting national & state level adaptation measures financially.

4) Climate Investments:

India has introduced Green Bonds to invest money in cleaner energy.

* Main Environmental & Social Goals in 2028: Budget Allocation: US\$122 Bn.

- 1) Affordable Housing
- 2) Employment Generation
- 3) Affordable basic infrastructure
- 3) Access to essential services: Health & Edu.
- 4) Renewable energy
- 5) Clean Transportation
- 6) Sustainable water and wastewater mgmt.

* ICMA Green Project Categories:

(a) Renewable Energy -

The next target is a transition towards net zero objective which involves green hydrogen which has a low carbon intensity to reduce the dependence on fossil fuel imports.

(b) Circular Economy-

In this the ICMA aims to make an economy which works towards sustainability under which one such initiative is GOBARdhan (Galvanising Organic Bio Agro Resources) scheme, the objective of which is ~~do~~ to create 500 new 'waste to wealth' plants to promote a circular economy with total investment of 100 bn.

(c) Clean Transportation-

Custom duties will be exempted for ^{importing} those machines required to mfg lithium iron batteries which are used in EVs.

(d) Sustainable Water & Waste Water mgmt-

India is taking a transition from man-made holes to machine-made holes to enable cities to undertake 100% de-sludging of septic tanks and sewers.