

# Radioactive pollution

Nuclear Energy was hailed as non-polluting way for generating electricity.

1<sup>st</sup> Radioactive  $\Rightarrow$  Three mile Island and Chernobyl incidents.

Ind  $\rightarrow$  Safe disposal of radioactive wastes.

~~NOTE~~ It has been recommended that storage of Nuclear waste after sufficient pretreatment  $\rightarrow$  Suitable shielded containers buried within the rocks about 500 m deep below the earth surface

① National Resources

$\Rightarrow$  Space Rays

Radium  $\Rightarrow$   $^{224}$  Uranium

$U = 235$

$U = 238$ ,  $Th = 232$  Radium  $^{222}$

②

Human formed Radiation  
\* ~~radioactive~~ Thorium, Radiation from plane

③ Nuclear Reactor's fuels  $\rightarrow$  Radioactive  $\rightarrow$  pollution  
"Thermal power plants"

# AGRO-CHEMICALS AND THEIR EFFECTS

Green revolution → Use of - inorganic crop production

- fertilisers
- pesticides
- herbicides
- fungicides

Important components of "The soil ecosystem"

↳ going being increasingly used

## Case Study of Organic Farming

Integrated organic farming is a cyclical zero-waste procedure

- "Maximum utilisation of Resources"
- increase the efficiency of production

Ramesh Chandra Dagar → a Farmer in Sonipat (Haryana)

- bee keeping, diary management, water harvesting from composting, agriculture
- cattle excreta (dung)

Dagar has created

- ↳ Natural gas
- ↳ "Haryana Kisan Welfare Club" membership = 5000 farmers

Deforestation  
Deformation in the conversion of forested area to nonforested ones.

ABLES® KOTA

Tropics rain forest      temperate region  
40% lost                  1%

National Forest policy (1988)

33% forest cover for the plains  
67% for the hills

Jhum cultivation / shifting cultivation

Slash and burn Agriculture  
↳ north eastern states of India

India → "land of cattle grazing" घने यन  
forest area → 0.06 H  
world → forest cover → 0.64 H      ↓  
12%

Result of deforestation ⇒ 1)  $\text{CO}_2 \uparrow\uparrow$  (one.

loss of Biodiversity due ⇒ habitat destruction,  
→ Hydrologic cycle  
⇒ soil erosion

## Case Study of people's participation in

conservation of forests

long history in india

1731) Jodhpur in Rajasthan → wood Required for constructing a new palace.

Amrita Devi →

"Amrita Devi Bishnoi Wildlife protection Award"

1974) CHIPKO MOVEMENT → Garhwal Himalayas

यमोली धजिले → गोपेश्वर गांव मार्च (March 1974)

प्राची → सुन्दरलाल बहुगुणा (टिहरी)

चंडी पुसाद

JFM → "Joint forest Management"

"1980" Fruit, Gum, Medicine

Rubber etc.

⇒ forest product → (Fruit, gum, rubber, medicine etc.)

## \* OTHER IMPORTANT INFORMATION

1) MIC (Methyl Isocyanate) Bhopal gas

"3 Dec. 1984"  $\Rightarrow$  MIC  $\rightarrow$  Savin  
 Insecticides  
 Union carb.

2)  $Pb(C_2H_5)_4$  (tetraethyl lead)

$Pb(CH_3)_4$  फेरामियाइलैट

plumbism  $\Rightarrow$  due  $Pb \rightarrow$  water

$Pb \rightarrow$  Air pollutant  $\Rightarrow$  (Nervousness)

$\hookrightarrow$  damage to kidney.

" $Pb \rightarrow$  Blood  $\Rightarrow$  10 mg/100 ml"

3) Pneumoconiosis  $\Rightarrow$  due - dust particle-dis

cloth mill  $\Rightarrow$  cotton dust  $\rightarrow$  workers

Anthracosis  $\Rightarrow$  कोयले की धूल  $\downarrow$  lungs fibrosis / Byssinosis

Kota  $\Rightarrow$  KOTA STONE  $\Rightarrow$  Stone govt \* Silicosis

4) Blue Baby disease Water  
↓  $\text{NO}_3^-$  (Nitrate)

↓  
Methaemoglobinemia  
or synosis

5) Livestock ⇒ चारा Toxic  
↳ As → Black foot

6) Cd ⇒ An: kidney / Kidney / Liver  
Japan ⇒ Bones ⇒ Itai-Itai

7) Fluorides ⇒ Human fluorides, Ounch-Ounch  
↓ leaves ⇒ Corp  
↳ chlorosis ⇒ Mo, S, N Mg, Mn, Zn, K Fe

Fluorosis  
↳ necrosis ⇒ Ca, Cu, K, Mg, etc.

8) El nino effect  
↳ 5 - 8 प्रशान्त महासागर

India ⇒ कठीं बाट जा कठीं सुआ  
जेरलेन ⇒ main point

Ganga Action ABLES® KOTA  
plan (1985)  
↳ Kolkata, Kanpur

- \* Green House gas ⇒ China
- \* cotton ⇒ Gud-Arak dust

ठंडी ⇒ २१-nina

CFC

plume  
flu gas ⇒