

Challenges given by Globalisation

→ Classification of Industries:

- On the basis of source of raw materials

* Agro Based → Sugarcane, Jute, Cotton, etc.

* Mineral Based → Iron & steel etc

- According to their main role :-

* Basic or key industries → Iron and Steel Industries

* Consumer Industries

- On the Basis of capital investment

* Small scale Industries → Below 1cr.

* Large scale Industries

- On the basis of ownerships-

* Public sector

* Private sector

* Joint Sector

* Cooperative sector

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- Based on the bulk & weight of raw material and finished goods.

* Heavy Industries

* Light Industries

→ Agm Based Industries:- Textile Industry

Industries Based on agricultural raw material

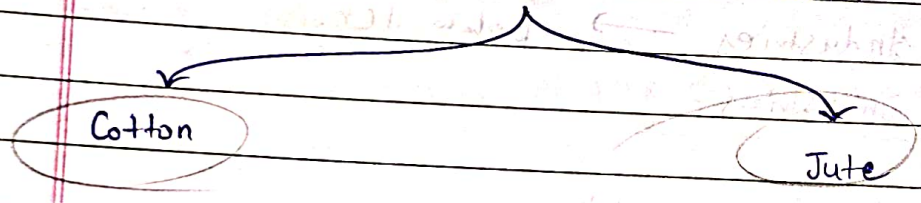
↓
Cotton, silk, Jute, Wollen textiles, sugar, etc.

• Textile Industry

* Contribution in industrial production & employment generation.

* Foreign exchange earnings.

* Only industry in the country, which is self-reliant and complete in the value chain.



⊖ Cotton Textile

• First successful cotton mill was established in Mumbai in 1854.

• Hand Spinning and hand looms weaving. After the 18th century, power looms came into use.

• Localisation of textile industries in Gujarat & Maharashtra.

Availability of raw cotton, market, transport (port), labour and climate.

- Association with others industries (chemical and dye, mill stone and packaging)

- Link with farmers and workers

↓
Spinning concentrated in Maharashtra, Gujarat and Tamil Nadu while weaving is decentralized to incorporate traditional skills.

{ Challenges to cotton textile industries }

- Irregular power supply.
- Upgradation of machinery.
- Low output of labour.
- Stiff competition with the synthetic fibre industries.

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• Jute textile:

- largest producer of raw jute and second largest exporter after Bangladesh.

↳ Problems after partition 1947.

Most of the Jute mills are located in west Bengal, near Hugli River.

For Jute

- 1) Proximity to Jute producing area
- 2) Inexpensive water transport.
- 3) Good network of railways.
- 4) Abundance of water for processing raw Jute.
- 5) Cheap labour from West Bengal & adjoining areas.
- 6) Kolkata - urban centre & urban facilities.

First Jute mill near Kolkata in 1859, at Pishra.

-o- Sugar Industry

India → Second largest producer of sugar
(largest producer of gur & khandsari)

Bulky raw material → In haulage its gross content reduces

∴ Industries should be situated near sugarcane producing area.
60% mill are situated in U.P. & Bihar

- Seasonal in nature, ideally suited to Cooperative Industry.
- Increase in number of mills in southern & western states because of favourable conditions.
 - ↓
 - The cane produced here has a higher sucrose content.
 - The cooler climate also ensures a longer crushing season.

- Moreover, the cooperatives are more successful in these states.

→ Mineral Based Industry 1. Iron & Steel Industry

• It is basic industry

• Dependence of other industries over it.

• Production & Consumption of steel is often regarded as the index of country's development.

• Iron ore, Cooking coal & lime stone are required in the ratio of approximately 4:2:1

• Chotanagpur plateau has the maximum concentration of iron and steel industries → Why?

1. Low cost iron ore

2. High grade raw material

3. Cheap labour

4. Market

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-0- Aluminium Smelting → second most important metallurgical industry.

• Light, resistant to corrosion, good conductor of heat, malleable and becomes strong when mixed with metal.

• It is used to manufacture aircraft, utensils and wires.

- It has gained popularity as a substitute of steel, copper, zinc, and lead in a number of industries.
- Aluminium smelting plants → Odisha, West Bengal, Kerala, Uttar Pradesh, Chattisgarh, Maharashtra & Tamil Nadu.

Process

4 to 6 tonnes Bauxite



2 tonnes of Alumina



1 tonnes of Aluminium

Challenges: Regular supply of electricity and assured source of raw material at minimum cost.

Chemical Industry

- Both Small & large scale industry.
- Rapid growth in organic and inorganic chemical industries.
- It's own largest consumer.

➤ Undergoes processing to further produced other chemicals.

-O- Fertilizer Industry:-

- Most of the industries are centred around the production of nitrogenous fertilizers (urea) phosphatic fertilizers and ammonium phosphate (D.A.P.).
- Potash is imported in our country.
- Industry ↑ After Green Revolution
- Prominent in the states of Gujarat, T.N., U.P. & Kerala.

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-O- Cement Industry:-

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 Essential for construction activity, building houses, factories, bridges etc.

Requirement

- This industry required bulky and heavy raw material like lime stone, silica etc.
- Coal & electric power along with transportation → (Railways)
- Situated in Gujarat & Coastal area because of accessibility to Coast countries.

-O- Automobile Industry:-

- The industry provide base for transport of goods & passengers

- e.g. Trucks, buses, Motorcycles etc.

- Liberalisation → Competition → Growth of industry.

- Foreign direct investment brought in new technology and aligned the industry with global developments.

- Industry is located in Delhi, Gurgaon, Chennai, Pune, Mumbai, Kolkata, Lucknow, Indore, Hyderabad, Jamshedpur & Bangalore.

○ Information Technology & Electronics Industry

- Wide range of products → Calculator to Computer.

- Bangalore → Electronic Capital of India → Why?



Concentration of
Industries

- Other centres are Delhi, Chennai, Pune, Mumbai, Kolkata, Lucknow & Coimbatore

- A major impact of this industry has been on employment generation.

- The continuing growth in the hardware & software

is the key to the success of IT industry in India.

→ Industrial Pollution & Environmental Degradation :-

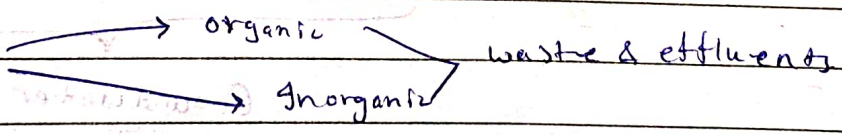
• Industries contribute development but also

- o- Air Pollution :-

- Caused by the presence of high proportion of undesirable gases such as sulphur dioxide & carbon monoxide.
- Airborne particulate materials contain both solid & liquid particles like dust, sprays mist & smoke.
- Chemical & paper factories burning fossil fuels, bricks kilns, refinery & smelting etc. leading to smoke.
- leads to pollution & hazardous to human, plants, animals & atmosphere.

- o- Water Pollution :-

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Caused by  organic & inorganic waste & effluents

- Main culprits: paper, pulp, chemical, textile and dyeing, petroleum refineries, tanneries and electroplating industries.
- These industries dump substance like dyes, detergent,

acids, salts and heavy metals like lead & mercury, pesticides & fertilizers, plastic & rubber.

- Fly-ash, phospho-gypsum, and iron and steel slags are the major solid waste.

-o- Thermal Pollution: It is not like Air Pollution.

- When hot water from factories and thermal plant is drained into rivers and ponds it causes water pollution.

* Impact:-

- Waste dumped is highly toxic (Nuclear power plant) led to concern.
- Birth defect and miscarriage.
- It harm the aquatic life.

* Relation between Water pollution & soil. → Rain water percolates
Groundwater gets Contaminated.

-Q- Noise Pollution:-

- Caused due to industrial and constructional activities.
- Machinery, factory equipment, generators, saw, pneumatic and electric drills.
- Hospitals and schools.

* Impact:-

- Results in irritation and anger, it can also cause hearing impairment, increased heart rate and BP.
- Unwanted sound is source of stress and reason for lack of concentration.

→ Control of Environmental Degradation

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Suggestions

- Minimising use of water for processing by reusing & recycling it. Rainwater harvesting to meet our requirement.
- Treating hot water and effluents before releasing them into water bodies.

Three ways:-

- * Primary by mechanical means.

* Secondary by biological process.

* Tertiary by biological, chemical & physical processes

• Using of ground water reserve by industries should be regulated legally.

• Using oil or gas instead of coal in factories to control smoke.

• Generators should be fitted with silence.

• Noising absorbing material may be used apart from personal use of ear plugs and ear phone.

➤ Particulate matter in air can be reduced by following methods:-

• Fitting smoke stacks in factories with

* Electrostatic precipitators :- Particles ko charge karke whi khtm!

* Fabric filters :- Filter using fibre

* Scrubbers :- Filter kiya jata hai aur uske baad gas ko separator

* Inertial separators :- Gas ko Tedhe medhe separator