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Manufacturing Industries



Manufacturing Industries

A place where primary goods[raw materials are converted into finished products using machines are called Manufacturing Industries.

Example:



Cloth from cotton



Sugar from sugarcane



USES OF MANUFACTURING INDUSTRIES

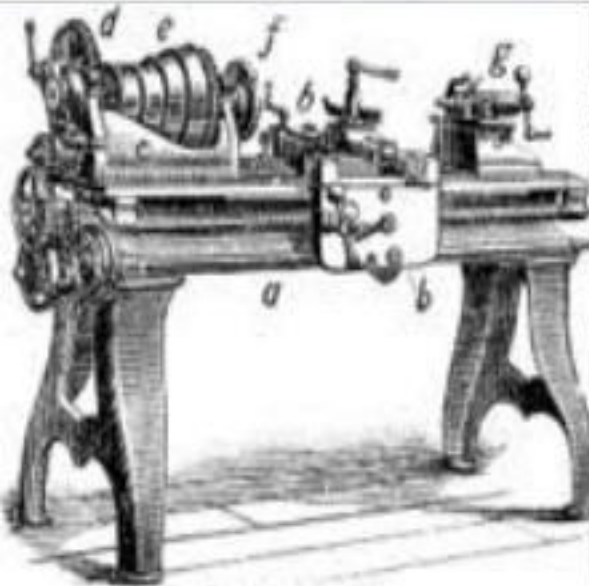
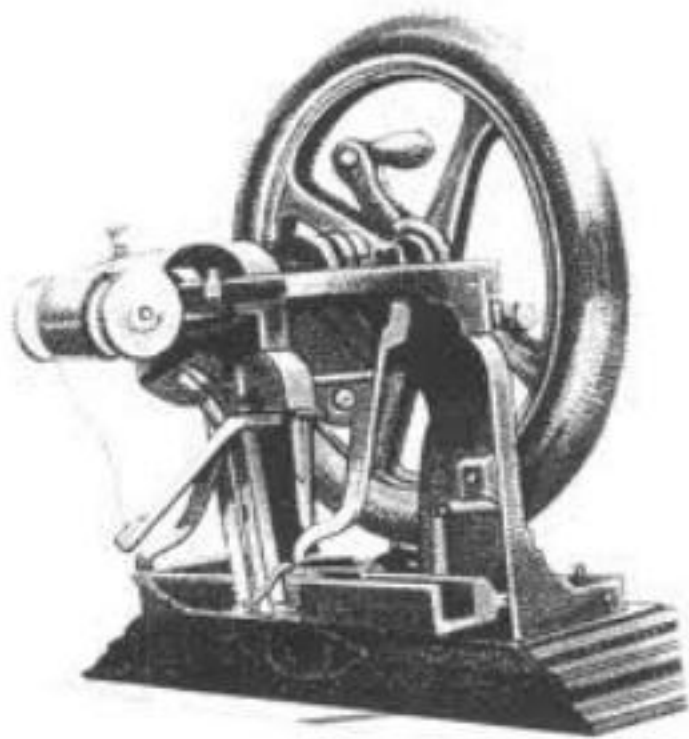
- **ECONOMIC STRENGTH OF A COUNTRY IS MEASURED FROM THE DEVELOPMENT OF MANUFACTURING INDUSTRIES.**
- **THEY REDUCE THE DEPENDENCE OF PEOPLE ON AGRICULTURE – PROVIDING JOBS**

FACTS:

1. INDUSTRIAL REVOLUTION IN EUROPE LED TO THE DEVELOPMENT OF MODERN FACTORIES ALL OVER THE WORLD.

2. SMELTING OF IRON WAS KNOWN TO THE INDIANS FOR SEVERAL CENTURIES

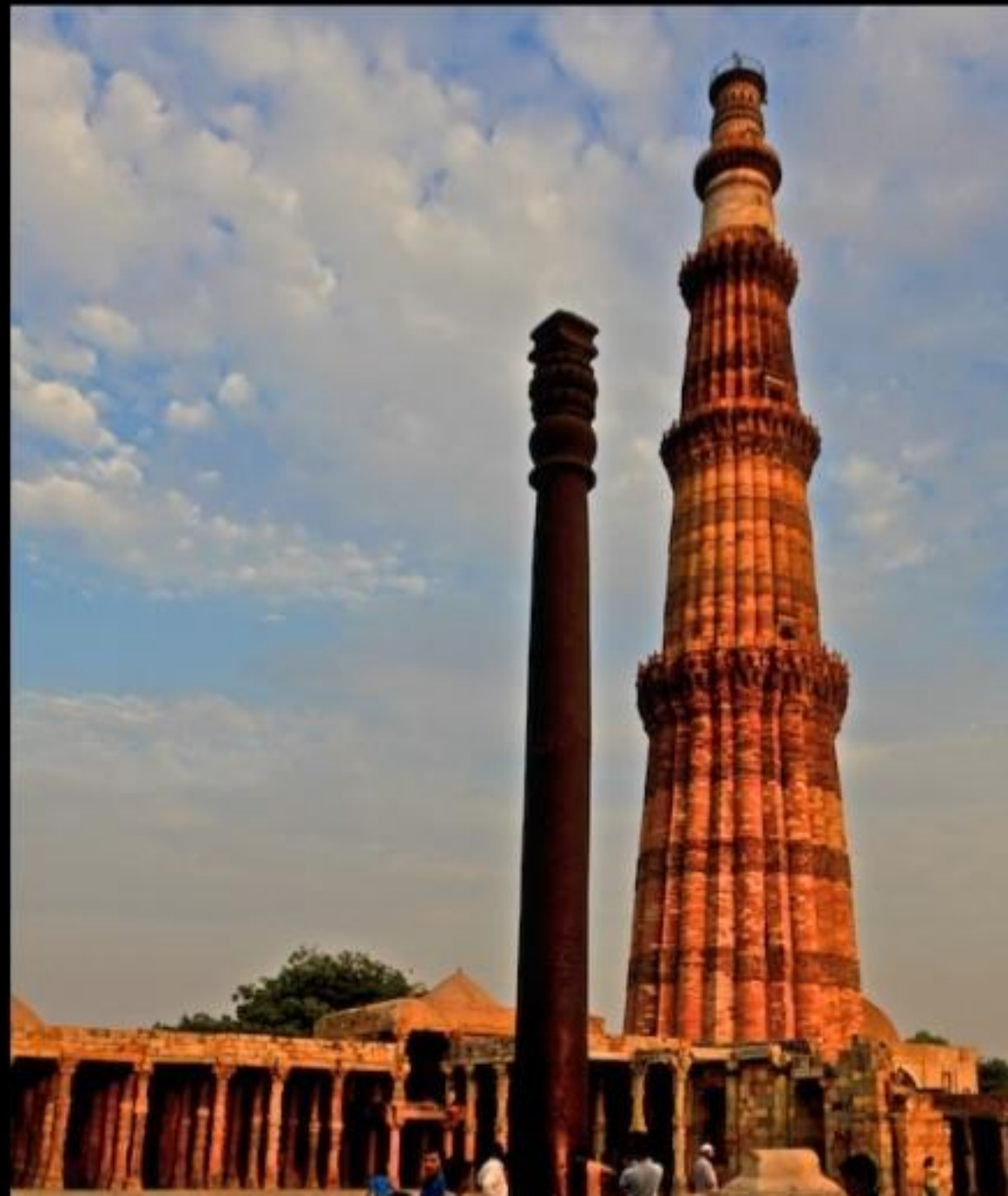
INDUSTRIAL REVOLUTION



Lathe, p. 1213.







FACTS:

- ❖ **SMELTING OF IRON ORE IN MODERN INDIA BEGAN IN 1830 IN TAMILNADU**
- ❖ **FIRST COTTON TEXTILE MILL WAS SET UP AT MUMBAI IN 1854**
- ❖ **FIRST JUTE MILL WAS ESTABLISHED AT RISHRA NEAR KOLKATA IN 1855**
- ❖ **INDUSTRIES EXPERIENCED UPS & DOWN DURING THE 1ST & 2ND WORLD**

FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Physical factors

- 1. Raw material- closeness to the source of bulky and perishable raw material .Ex: iron and steel industry

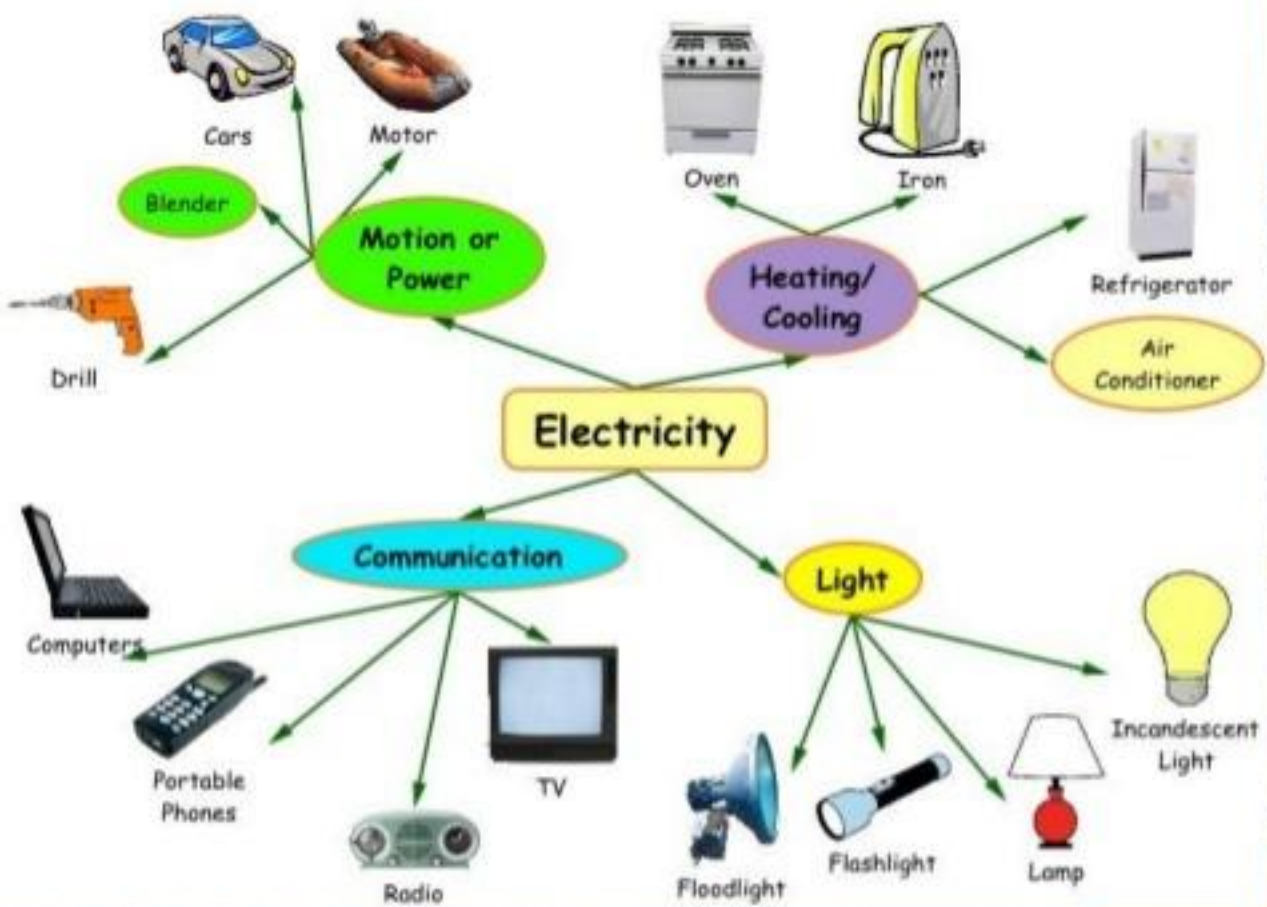


FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Physical factors

- 2. Power resources: - closeness to the source of economically viable power resources Ex: Aluminium

Uses Of Electricity In Our Daily Life



FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Physical factors

- **3. Water: - Availability of water in abundance for processing of the raw material. Ex: jute and coir industry**





FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Physical factors

- 4. Climate: - favorable climatic conditions for processing of raw material. Ex: cotton textile industry

FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Human factors

- 1. Labour: - cheap and skilled labour. Ex:Diamond cutting industry in Surat**





FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Human factors

2. **Transport:** any industry needs a well developed transport network for the movement of raw material and finished



FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Human factors

3. Capital: - Every industry need capital investment, which is available through banks.



FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Human factors

4. Market:-demand and supply play an important role in the economy of a country.



FACTORS THAT CONTRIBUTE TO THE LOCATION OF INDUSTRIES

Human factors

5. Government policies:

government policies are made to regulate the setting up and

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GOVERNMENT OF ANDHRA PRADESH
ABSTRACT

Industries and Commerce Department - Handlooms and Textiles - Providing of working capital to Handloom Weavers coop societies - Pavala Vaddi Scheme - Orders - Issued.

INDUSTRIES AND COMMERCE (TEX) DEPARTMENT

G.O.Ms. No.75

Dated 14 -3-2008.

Read:-

From the Director of Handlooms and Textiles and Development
Commissioner for Apparel Export Parks, Andhra Pradesh Hyderabad.,
Lr.Rc.No.17420/2006-C, dated 14.11.2007.

ORDER:-

Government is taking various steps for the promotion of the socio-economic well being of the Handloom Weavers. Most of the schemes intended for socio-economic development of weavers are being channeled through Handloom Weavers Cooperative Societies, as the schemes can be better monitored and implemented in a proper way. The cooperative societies enabled the Handloom Weavers to bargain for better wages. Field observation revealed that, the weavers in the area of operation of a good & strong Handloom Weavers Cooperative Society are in a better economic condition than the weavers of a weak / defunct cooperative society as there will be fair competition between the Good working society and the Master Weavers in payment of wages & providing work to the weavers. Hence, there is need to strengthen the Weavers Co-operative Society for achieving the goal of socio-economic well being of Weavers through Co-operative Societies.

2. The NABARD is providing credit limits to meet the working capital needs of weavers Co-operative societies through Andhra Pradesh State Co-operative Bank Ltd., (APCOB) and District Co-operative Central Banks (DCCBs) concerned. The NABARD has provided credit charging interest @ 6% per annum up to the year 2006-07. Credit is being provided @ 9% by the DCCBs, on account of administrative charges collected by DCCBs and APCOB. Government is providing interest subsidy/ rebate @ 3% and hence the credit is available to the societies @ 6% per annum i.e., at the rate being charged by NABARD.



MINISTRY OF PETROLEUM RESOURCES
OFFICE OF THE HONOURABLE MINISTER OF STATE

Federal Secretariat Complex,
Shehu Shagari Way
Maitama District, Abuja.
Tel: 523.....

Ref: Ref: HMSTP

Date: December 2 2

MALABU Oil and Gas Ltd
43 Kingsway Road
Ikoyi Lagos

For the kind attention of Chief (Dr.) D.I. Fiteh.

Dear Sir

**RE: MALABU OIL AND GAS LTD – OUT – OF – COURT SETTLEMENT IN
RESPECT OF OPL 245**

We refer to the above subject matter and are delighted to convey to you that the President of the Federal republic of Nigeria and Commander-in-Chief of the Armed Forces having concluded a review of your legal claims for the return of oil block 245 (OPL245) has graciously approved and directed as follows:

1. That the federal government of Nigeria is amenable to an out of court

CLASSIFICATION OF INDUSTRIES

-  **BASED ON RAW MATERIAL**
-  **BASED ON LABOUR**
-  **BASED ON OWNERSHIP**
-  **BASED ON SOURCE OF RAW**

CLASSIFICATION OF INDUSTRIES

BASED ON LABOUR

- ❖ **LARGE SCALE INDUSTRIES -**
Employ large number of labourers
.Eg.cotton textile industry







CLASSIFICATION OF INDUSTRIES

BASED ON RAW MATERIAL

- ❖ **Heavy industries use heavy & bulky raw materials & produce heavy materials. Eg Iron & steel Industry**

CLASSIFICATION OF INDUSTRIES

BASED ON OWNERSHIP

- ❖ Private – Bajaj Auto & Tata Iron & Steel
- ❖ Public – Bhilai Steel Plant & Bharat Heavy Electricals Ltd.
- ❖ Joint – Oil India Ltd. & Gas Authority of India Ltd. Maruthi Udyog Ltd.

CLASSIFICATION OF INDUSTRIES

BASED ON SOURCE OF RAW MATERIAL

- ❖ **Agro Based – Use Agricultural Raw Materials. Eg. Cotton Textile Industry, Sugar Industry, Silk Industry**



AGRO BASED INDUSTRIES

COTTON TEXTILE INDUSTRY

**FIRST COTTON TEXTILE MILL
ESTABLISHED [IN MUMBAI 1854]**

LARGEST INDUSTRY OF INDIA



**1600 COTTON & HUMAN MADE FIBER
TEXTILE MILLS**

**79% IN PRIVATE SECTOR & REST IN
PUBLIC AND COOPERATIVE
SOCIETIES.**

**90% OF COTTON TEXTILE PRODUCED
IN DECENTRALISED SECTOR.**

**AVAILABILITY OF COTTON, MARKET
TRANSPORTATION, HUMID CLIMATE**

FOUND AT

**MAHARASHTRA – MUMBAI,
SHOLAPUR, PUNE, WARDHA,
NAGPUR, AURANGABAD & JALGAON**

**GUJARAT – AHMEDABAD, VADODARA
SURAT, RAJKOT & PORBANDAR**

**UTTAR PRADESH – KANPUR,
MURADABAD, AGRA & MODINAGAR.**

**MADHYA PRADESH – GWALIOR,
UJJAIN, INDORE, & DEWAS.**

**TAMIL NADU – COIMBATORE,
MADRAS & CHENNAI.**

❖ FACTORS THAT CONTRIBUTED TOWARDS DECENTRALISATION OF COTTON TEXTILE INDUSTRY.

- 1. Wide market**
- 2. Transport**
- 3. Banking facilities &**

❖ BURNING PROBLEMS OF COTTON INDUSTRY –

1. Scarcity of good quality cotton
2. Obsolete machinery
3. Erratic power supply
4. Low productivity of labour
5. Stiff competition with synthetic

MAIN IMPORTERS OF
INDIAN COTTON GOODS:

**U.S.A., U.K., Russia,
France, East European
Countries, Nepal ,
Singapore, Africa**

JUTE TEXTILES INDUSTRIES.

- **LARGEST PRODUCERS OF RAW JUTE & JUTE GOODS.**
- **SECOND LARGEST EXPORTER IN THE WORLD.**
- **70% JUTE MILLS MOSTLY LOCATED IN WEST BENGAL**
- **80% JUTE PRODUCED IN WEST**





**IN WEST BENGAL JUTE MILLS
ALONG HUGLI RIVER**

**CONCENTRATION HERE IS DUE
TO LOCATION OF JUTE
PRODUCING AREAS CLOSE TO
THE JUTE MILLS & INEXPENSIVE**

AVAILABILITY OF ABUNDANT WATER IS
VERY IMPORTANT FOR PROCESSING
JUTE

CHEAP LABOUR

BANKING

INSURANCE FACILITIES &

MAIN MARKET IS

U.S.A

CANADA

RUSSIA

U.A.E.

U.K. &

AUSTRALIA.

CHALLENGES FACED BY THE INDUSTRY

**DEMAND FOR JUTE CARPETS &
PACKING MATERIALS NEEDS TO BE
PROMOTED**

HIGH PRODUCTION COST

**STIFF COMPETITION IN THE
INTERNATIONAL MARKET**

WOOLEN TEXTILE INDUSTRY:

- **Found at Punjab, Maharashtra, U.P., Gujarat, Haryana & Rajasthan**



**Punjab – Dhariwal, Ludhiana,
& Amritsar.**

Maharashtra – Mumbai

**Uttar Pradesh – Kanpur,
Shahjahanpur, Agra &
Mizapur**

Gujarat – Ahmedabad &

Haryana - Panipat & Gurgaon

Rajasthan - Bikaner & Jaipur

Jammu & Kashmir –Srinagar

Karnataka - Bangalore

➤ **Hosiery producing units are located primarily in Punjab, Haryana, & Tamil Nadu**

➤ **Good Quality raw – wool is imported from**

**Main Markets – U.S.A.,
Russia, U.K., Canada &
several European countries**

Problems – shortage of raw wool, lack of internal market low quality of woollen products.

SILK TEXTILE INDUSTRY

**Four well known varieties
of silk are produced –**

Mulberry

Tasar



Tasar Silk





Eri Silk



Muga Silk



**About 90 silk textile mills
are there in India.**

**India produces 8.5 lakh kg
of silk yarns**

More than 9/10 of production:

Karnataka – Bangalore, Kolar

Mysore & Belgaum

West Bengal – Murshidabad &

Bankura

**Tough competition with
China, Thailand & Italy.**

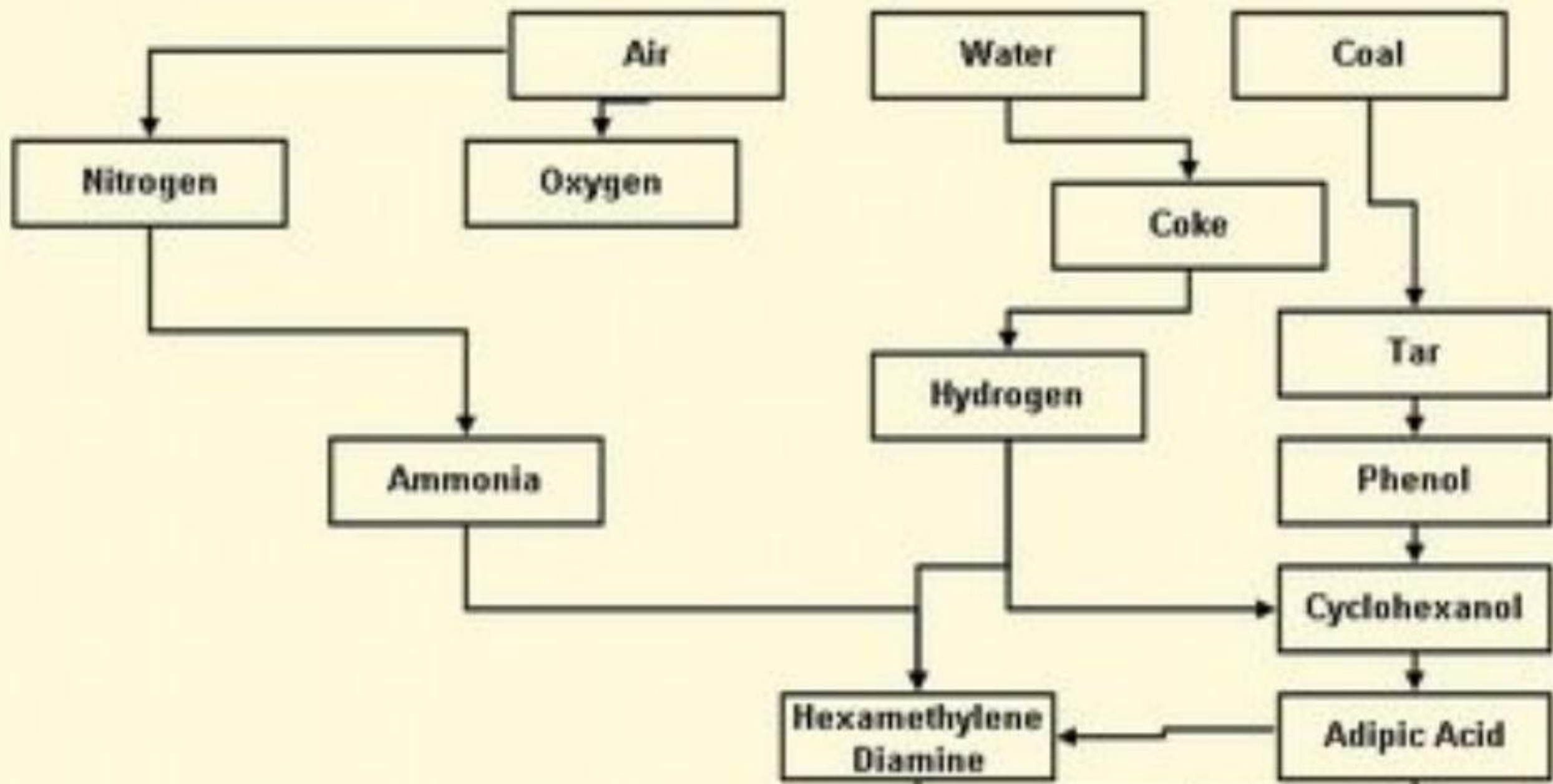
Markets – U.S.A., U.K.,

Russia, Saudi Arabia, Kuwait

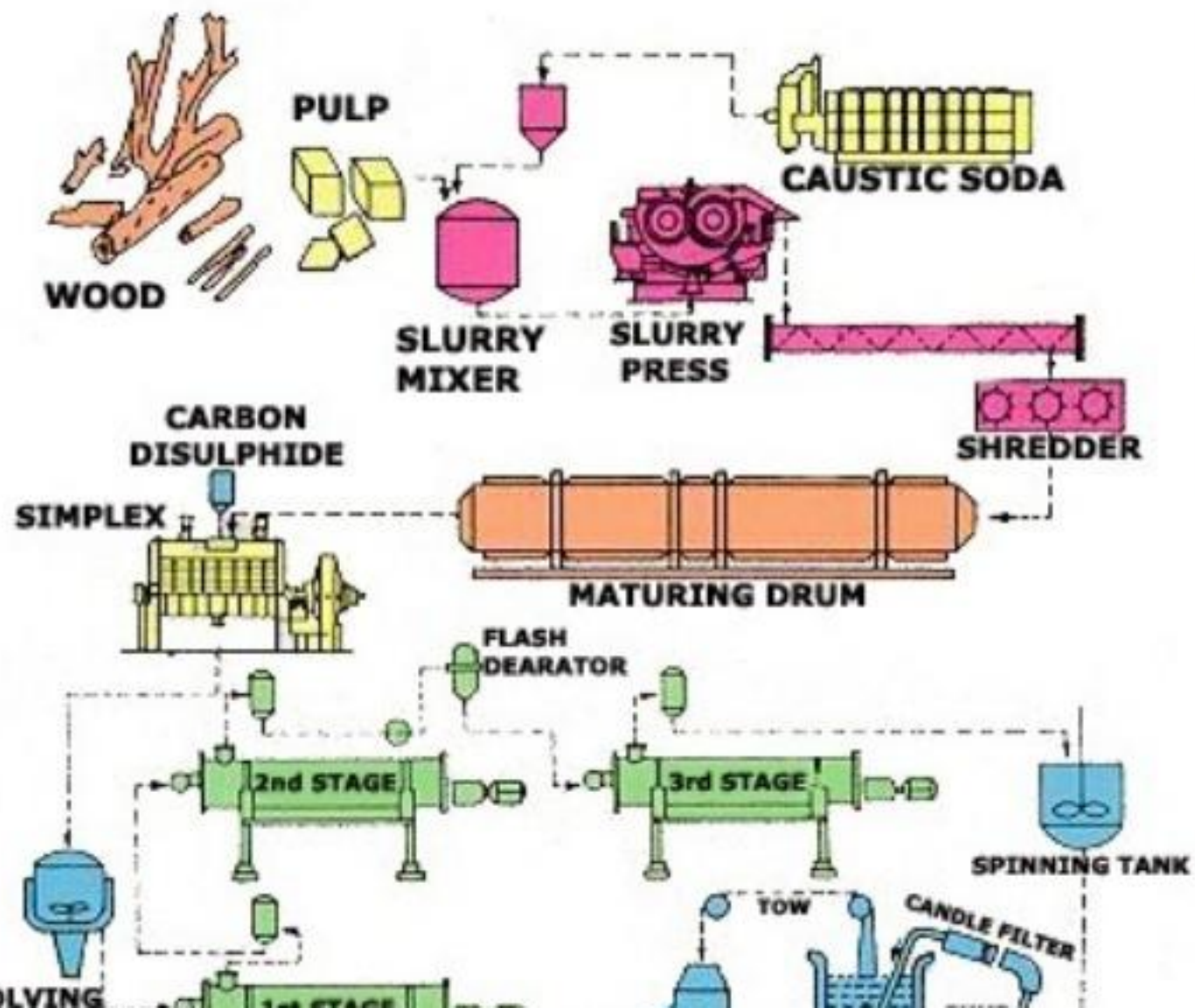
SYNTHETIC TEXTILE INDUSTRY:

- **IMPORTANT SEGMENT OF TEXTILE INDUSTRY – HUMAN MADE FIBRE**
- **SPECIAL QUALITIES – STRENGTH, DURABILITY, DYEABILITY & WORKABILITY**
- **4 WELL KNOWN FIBRE**

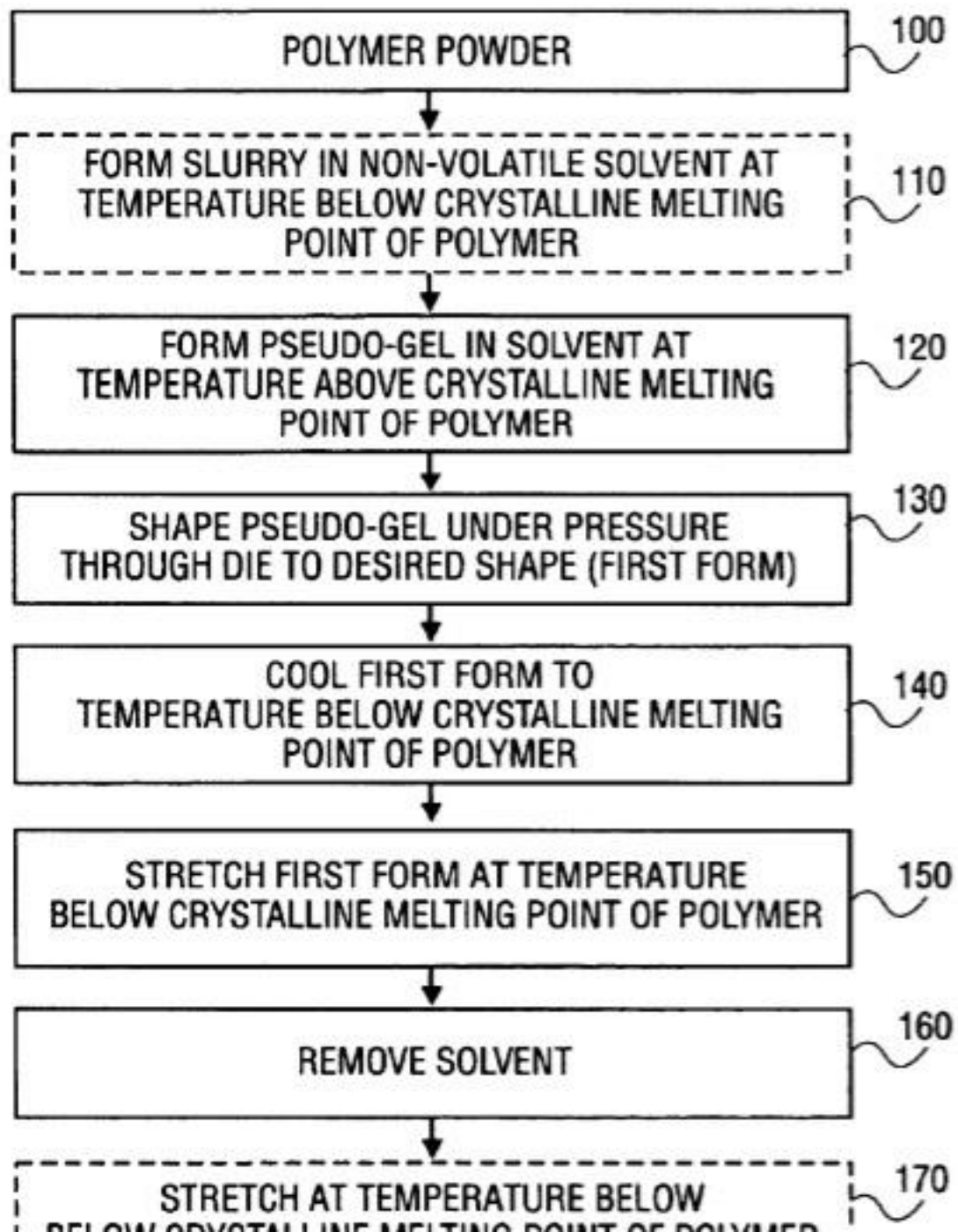




SCHEMATIC FLOW DIAGRAM



Textile Industry



**DERIVED FROM
WOOD PULP, COAL &
PETROLEUM
THROUGH CHEMICAL
PROCESS**

**FOR BETTER FINISH,
OFTEN MIXED WITH**

➤ **FOUND IN KERALA, TAMIL NADU, KARNATAKA, MAHARASHTRA, GUJARAT, RAJASTHAN & MADHYA PRADESH [BETTER FINISH]**

➤ **SYNTHETIC TEXTILES – MUMBAI, AHMEDABAD, SURAT, DELHI, AMRITSAR, GWALIOR & KARNATAKA**

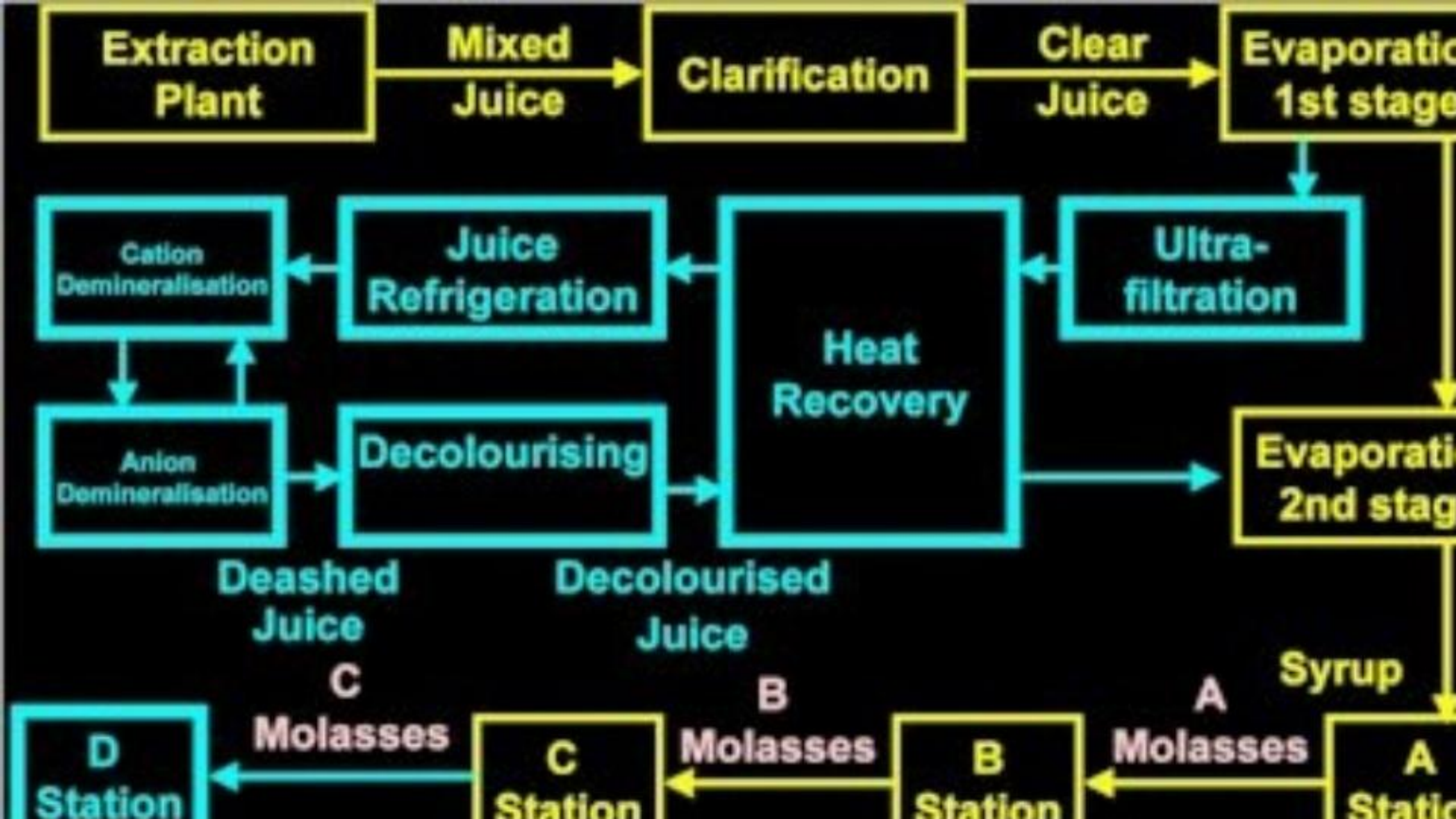
SUGAR INDUSTRY:

- **INDIA LARGEST PRODUCER OF SUGARCANE ALONG WITH GUR & KHANDSARI**
- **SURAGRCANE – HEAVY, WEIGHT LOSING & PERISHABLE, MILLS ARE LOCATED CLOSE TO THE PRODUCING AREAS**



SUGAR INDUSTRY





**Clear
Juice**

**Permeate
Juice**

**Deashed
Juice**

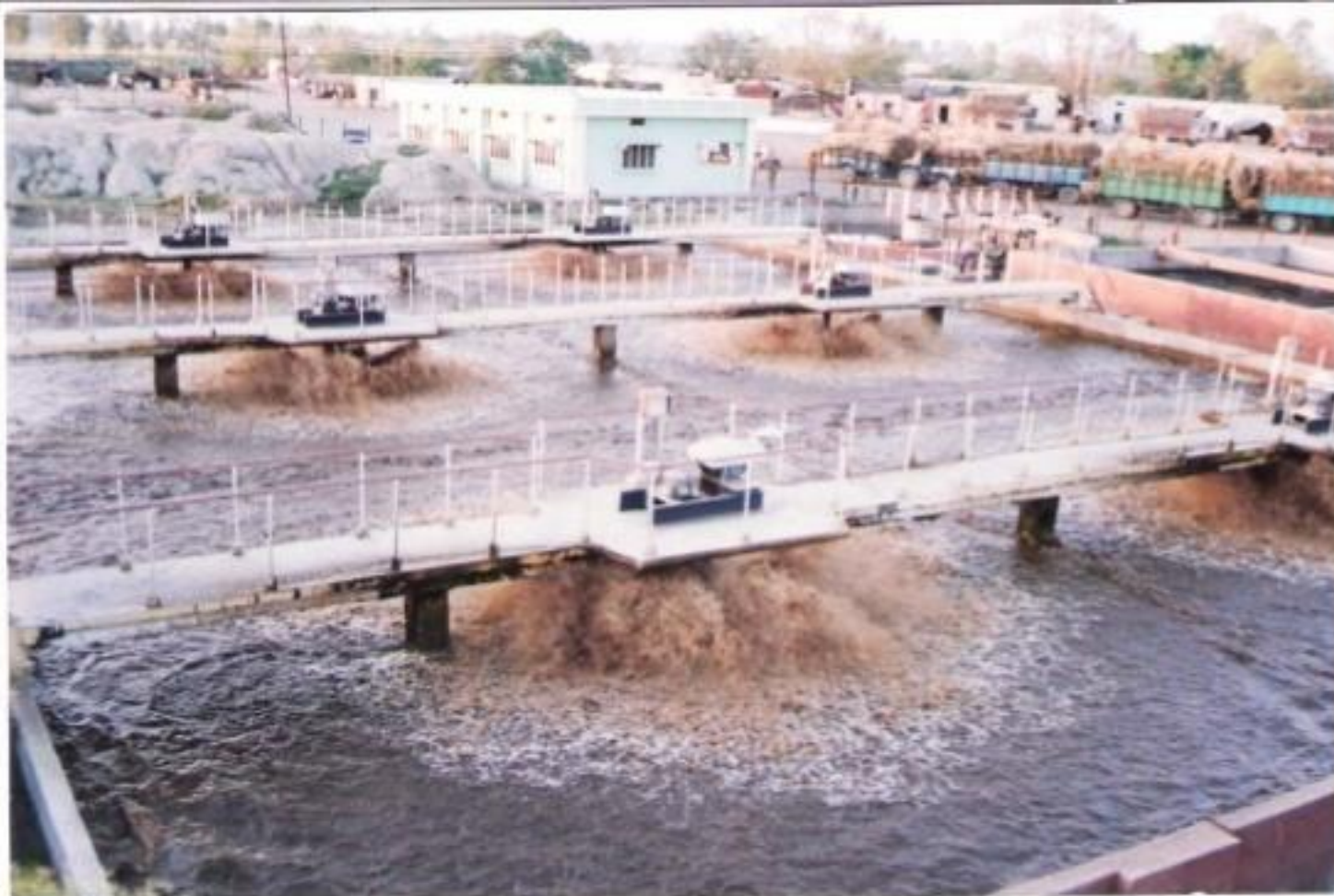
**White
Juice**





SUGAR INDUSTRY







- **SUGAR CONTENT IN THE SUGARCANE –HIGHER IN THE SOUTHERN STATES THAN THE NORTHERN STATES HENCE THE INDUSTRY HAS A TENDENCY TO MIGRATE TO THE SOUTH**

➤ **50% IN UTTAR PRADESH AND MAHARASHTRA**

➤ **OTHER STATES ARE KARNATAKA, TAMIL NADU, ANDHRA PRADESH, GUJARAT, PUNJAB, HARYANA, MADHYA PRADESH & BIHAR**



MINERAL BASED INDUSTRY

IRON & STEEL INDUSTRY











IRON & STEEL INDUSTRY:

- **FIRST UNIT WAS ESTABLISHED IN 1830 AT PORTO NOVA IN TAMIL NADU BUT WAS CLOSED DOWN.**
- **MODERN STEEL INDUSTRY BEGAN AT KULTI IN WEST BENGAL IN 1864**
- **LARGE SCALE PRODUCTION**

**THERE ARE 10 PRIMARY IN
TEGRAATED IRON & STEEL PLANTS
EXAMPLE – BURNPUR IN WEST
BENGAL & BADRAVATI IN
KARNATAKA. THERE ARE ALSO 20
DECENTRALISED UNITS [MINI
STEEL PLANTS]**

IT IS A HEAVY INDUSTRY WHICH

LOCATION – CLOSE PROXIMITY TO RAW MATERIALS, FINISHED PRODUCTS ARE ALSO HEAVY AND BULKY HENCE NEED GOOD TRANSPORT SYSTEM FOR DISTRIBUTION.

THE STEEL AUTHORITY OF INDIA LTD. MAINTAINS THE PUBLIC SECTOR PLANTS OF INDIA.

PUBLIC SECTOR IRON & STEEL PLANTS IN INDIA ARE MANAGED BY STEEL AUTHORITY OF INDIA LIMITED.

VISHAKAPATNAM – STEEL PLANT WITH A COASTAL LOCATION.

ALL OTHER STEEL PLANTS ARE LOCATED IN THE MINERAL RICH

ALUMINIUM SMELTING

- **2ND IMPORTANT METALLURGICAL INDUSTRY OF INDIA.**
- **ALUMINIUM IS A UNIVERSALLY ACCEPTED MINERAL FOR A LARGE NUMBER OF INDUSTRIES DUE TO ITS PLentiful DEMAND AND GOOD**



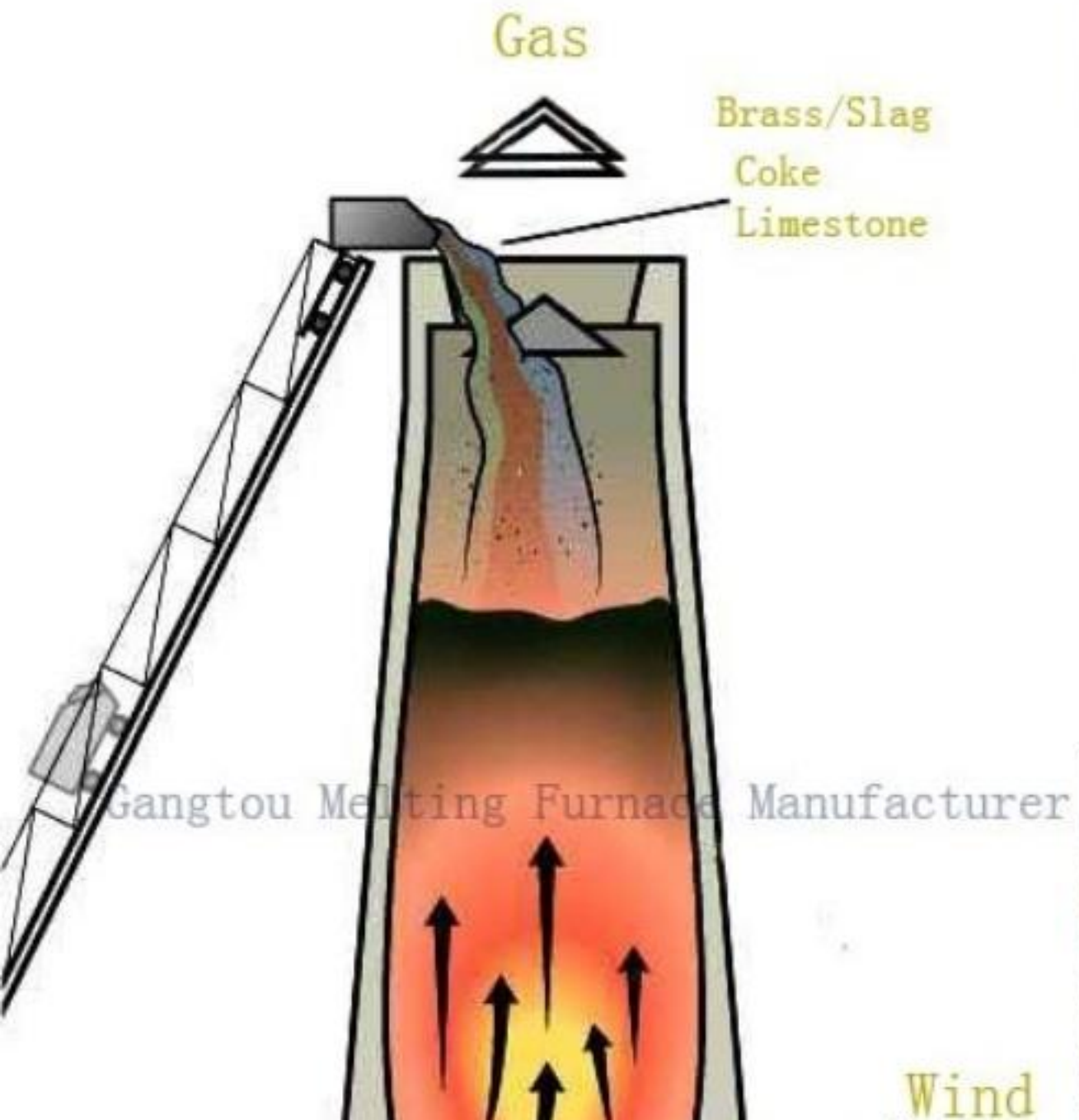


- **POPULAR SUBSTITUTES TO STEEL, COPPER, ZINC & LEAD IN A NUMBER OF INDUSTRIES.**
- **FOR PRODUCTION OF 1 TONNE OF ALUMINIUM, APPROXIMATELY 6 TONNES OF BAUXITE & 18600KWH OF**

- **LOCATION – AVAILABILITY OF BAUXITE, INEXPENSIVE ELECTRICITY**
- **THERE ARE 8 ALUMINIUM PLANTS IN THE COUNTRY**
- **LOCATED AT ORISSA, WEST BENGAL, KERALA, UTTAR PRADESH, CHHATTISGARH, MAHARASHTRA & TAMIL NADU.**

COPPER SMELTING:

- **IT WAS SET UP BY INDIAN COPPER CORPORATIONS AT GHATSHILA IN JHARKAND.**
- **THE HINDUSTAN COPPER LTD. TOOK OVER THE INDIAN COPPER CORPORATION IN 1972 SINCE THEN IT IS THE SOLE**







➤ **IT HAS 2 CENTERS – MAUBHANDAR NEAR GHATSHILA IN SINGHBHUM DISTRICT AND KHETRI IN JHUNJUNU OF RAJASTHAN.**

➤ **COPPER IS OBTAINED FROM THE MINES OF THOSE DISTRICTS WHERE THEIR SMELTING PLANTS ARE LOCATED**

➤ **INDIA PRODUCES 43 000 TONNES OF**

CHEMICAL INDUSTRIES:

- **HEAVY INORGANIC CHEMICALS INCLUDE :**
- ❖ **SULFURIC ACID – MANUFACTURING OF FERTILIZERS, PAINTS, DYESTUFFS, PLASTICS & SYNTHETIC FIBRES.**
- ❖ **NITRIC ACID & ALKALIES**
- ❖ **SODA ASH – MANUFACTURE OF GLASS, PAPER, SOAP &**





HEAVY ORGANIC CHEMICALS



THE INORGANIC CHEMICALS /PETROCHEMICAL PLANT



- **HEAVY ORGANIC CHEMICALS INCLUDE PETRO CHEMICALS, WHICH ARE USED FOR MANUFACTURING OF SYNTHETIC FIBRES, SYNTHETIC RUBBERS, PLASTICS, DYESTUFF & PHARMACEUTICALS.**
- **THE INORGANIC CHEMICALS INDUSTRIES ARE WIDELY SPREAD WHILE ORGANIC CHEMICAL INDUSTRIES ARE**

- **PRODUCTION OF PESTICIDES HAS CONTRIBUTED MUCH TO AGRICULTURE BY CONTROLLING HARMFUL INSECTS AND WEEDS.**
- **INDIA LEADS IN THE PRODUCTION OF PHARMACEUTICALS**
- **IT CONTRIBUTES 14% OF PRODUCTION OF ENTIRE**

FERTILISER INDUSTRIES:

- **1ST PLANT SET UP IN RANIPET IN TAMILNADU IN 1906**
- **ITS INCREASE IN DEMAND AS A RESULT OF GREEN REVOLUTION LED TO ITS SPREAD IN SEVERAL PARTS OF**



➤ **MORE THAN $\frac{1}{2}$ THE TOTAL PRODUCTION – GUJARAT, TAMIL NADU, UTTAR PRADESH, PUNJAB & KERALA.**

➤ **OTHER PRODUCERS ARE ANDHRA PRADESH, ORISSA, RAJASTHAN, BIHAR, GOA,**

➤ **WIDESPREAD DUE TO EASY AVAILABILITY OF NATURAL GAS.**

➤ **INDIA PRODUCES ABOUT 11 MILLION TONNES OF NITROGENOUS, 4 MILLION TONNES OF PHOSPHATIC & 1.7 MILLION TONNES OF POTASSIC**

CEMENT INDUSTRY:

- **IT IS ESSENTIAL FOR BUILDING HOUSES, FACTORIES, ROADS & DAMS.**
- **ITS MANUFACTURE REQUIRES HEAVY MATERIALS LIKE GYPSUM, SILICA, ALUMINIA, & LIMESTONE. HENCE IT IS A RAW-MATERIAL ORIENTED INDUSTRY.**











- **1ST PLANT – CHENNAI IN 1904**
- **THERE ARE 119 LARGE AND OVER 300 MINI PLANTS IN INDIA**
- **TOTAL INSTALLED CAPACITY – 1 MILLION TONNES PER ANNUM**
- **INDIA PRODUCES A VARIETY OF CEMENT – GOOD QUALITY & HENCE HAS A READY MARKET IN SOUTH AN**



TRANSPORT EQUIPMENT

INDUSTRIES

RAILWAYS:

- **THE TRAIN IS CLASSIFIED INTO 3 PARTS – RAILWAY ENGINES, WAGONS & COACHES.**
- **RAILWAY ENGINES ARE OF**





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इन्दिराजी



INDIAN RAILWAYS

31034

WAG9



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नरसापूर NARASAPUR



➤ **DIESEL AND ELECTRIC ENGINES NOW REPLACE THE STEAM ENGINES BECAUSE THERE ARE FUEL-EFFICIENT AND POLLUTION FREE.**

➤ **ENGINES ARE MANUFACTURED AT CHITTARANJAN IN WEST**



➤ **RAILS AND SLEEPER BARS ARE MANUFACTURED AT IRON & STEEL PLANTS.**

➤ **COACHES ARE MANUFACTURED AT PERAMBUR, BANGALORE, KAPURTHALA & KOLKOTA.**





WAGONS





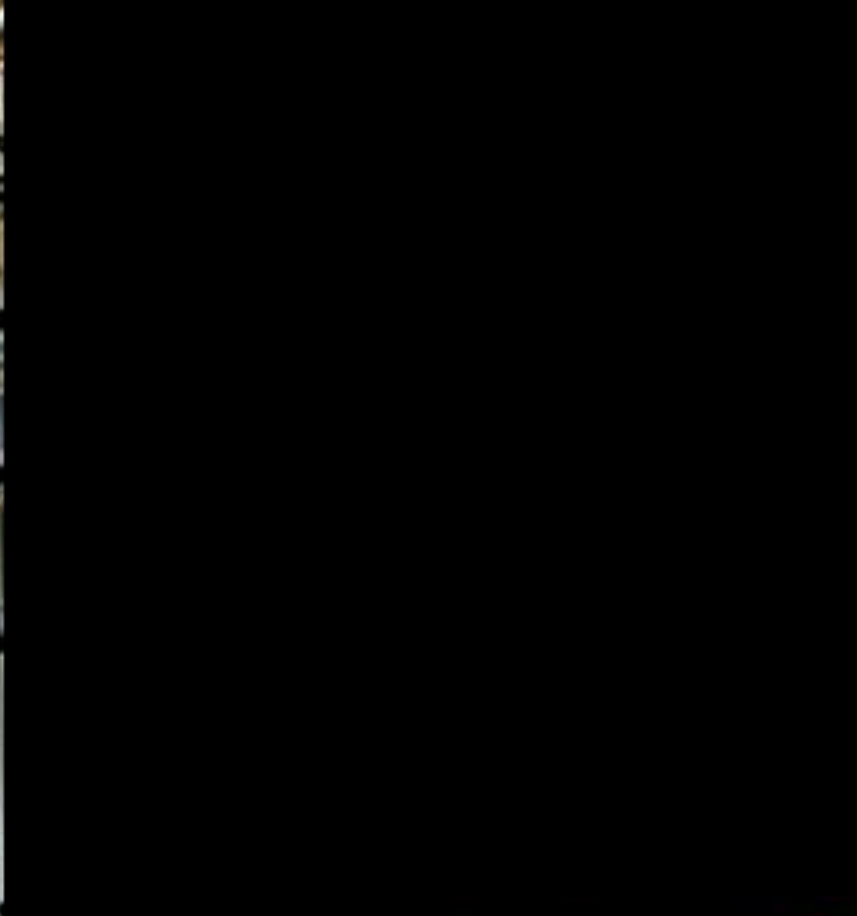


ROAD VEHICLES:

- **INDIA IS 2ND LARGEST PRODUCER OF WHEELERS.**
- **INDIA CURRENTLY PRODUCES 15 MILLION BICYCLES & 3.8 MILLION SCOOTERS & MOTOR CYCLES IN A YEAR**
- **WIDELY SPREAD AROUND DELHI, GURGAON, MUMBAI, CHENNAI, PUNE, KOLKOTA, LUCKNOW, INDORE,**









SHIPBUILDING:

- **REQUIRES HUGE CAPITAL**
- **5 MAJOR SHIPBUILDING CENTER**
– VISHAKAPATANAM, KOLKOTA,
KOCHI, MUMBAI, MARMAGAO – ALL
IN PUBLIC SECTOR.
- **PRIVATE SECTOR SHIPYARDS**
LOOK AFTER THE LOCAL NEEDS



安全第一

MARA COLOSSUS



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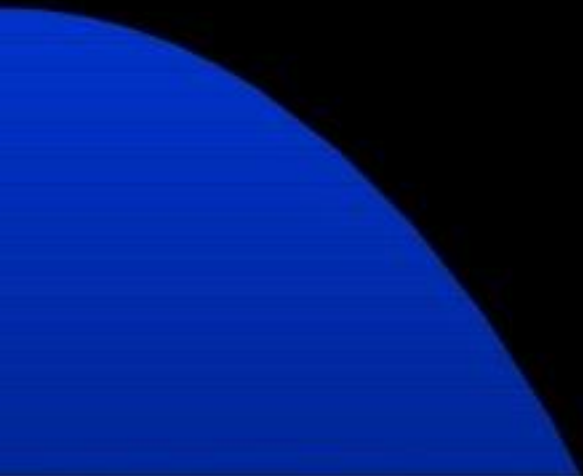




THE MAXIMUM SIZE OF THE SHIP THAT CAN BE CONSTRUCTED AT KOCHI & VISHAKAPATANAM ARE 100,000 DEAD WEIGHT TONNAGE [DWT] WEIGHT OF AN EMPTY SHIP] AND 50,000 DWT RESPECTIVELY.

AIRCRAFTS:

- **FOR DEFENCE REQUIREMENT, INDIA HAS DEVELOPED AIRCRAFT INDUSTRY AT BANGALORE, KORAPUT, NASHIK, HYDERABAD, KANPUR & LUCKNOW.**
- **EACH PLACE SPECIALIZES IN THE MANUFACTURE OF CERTAIN TYPES OF AIRCRAFT**







ELECTRONIC INDUSTRY

- **COVERS WIDE RANGE OF PRODUCTS – TRANSISTOR, TELEVISION, TELEPHONE EXCHANGES, CELLULAR TELECOMS PAGERS, COMPUTERS....**
- LOOKS AFTER THE NEEDS OF**





DPA-RJP-65722 - © - Dnoda



Ø REVOLUTIONIZED THE LIFE OF THE MASSES & CHANGED THE COUNTRY'S ECONOMY & QUALITY OF HUMAN LIFE.

Ø HAS DEVELOPED BOTH HARDWARE & SOFTWARE – FAST GROWING SECTOR OF INDIAN ECONOMY.

Ø CONTRIBUTED LOT TO THE

Ø MAJOR ELECTRONIC
GOODS PRODUCING CENTERS -
HYDERABAD, DELHI, MUMBAI,
CHENNAI, KOLKOTA, KANPUR,
PUNE, LUCKNOW, AND
COIMBATORE.

Ø SOFTWARE TECHNOLOGY
PARKS -18 CENTERS – PROVIDE
SINGLE WINDOW SERVICE AND

INDUSTRIAL POLLUTION & DEGRADATION OF ENVIRONMENT

**INDUSTRIES CREATE FOUR TYPE
OF POLLUTION:**

- ★ **Air pollution**
- ★ **Water pollution**
- ★ **Land pollution**

AIR POLLUTION

- **Caused by the Presence of a Higher Proportion of Undesirable Gases Like**
- **Carbon Monoxide & Sulphur Dioxide**
- **Air-borne Materials Consists of Both Solid & Liquid Particles.**
- **Dust, Fumes, Mist, Spray & Smoke**





Primary Pollutants

CO CO₂
SO₂ NO NO₂
Most hydrocarbons
Most suspended
particles

Secondary Pollutants

SO₃
HNO₃ H₂SO₄
H₂O₂ O₃ PANs
Most NO₃ and SO₄²⁻ salts



**acidic gases
(sulphur dioxide and
nitrogen oxides released
into atmosphere)**

**gases carried
by the wind**

**gases dissolve in
rainwater to form
acid rain**

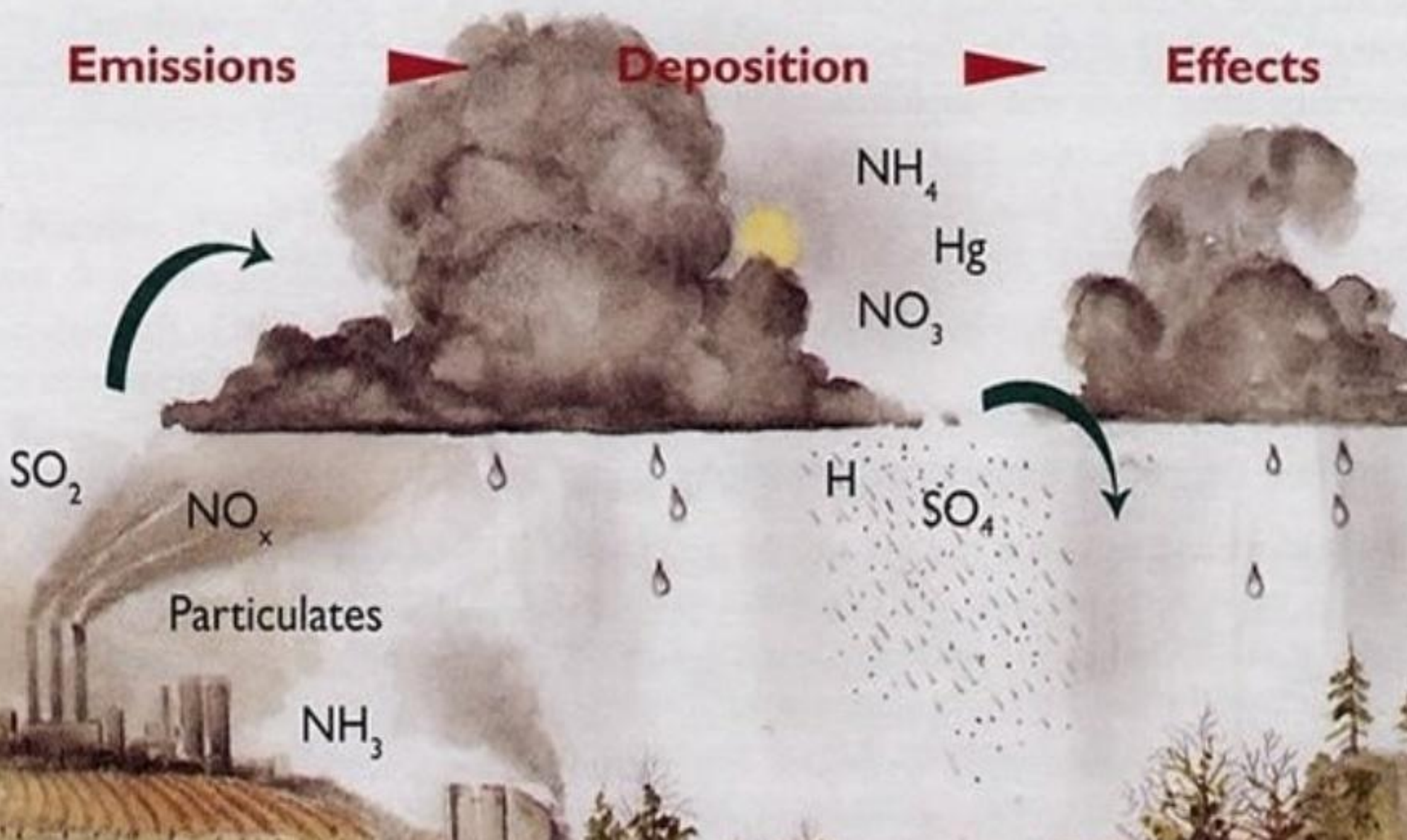
**acid rain kills plantlife,
pollutes rivers and streams,
and erodes stonework**



Emissions

Deposition

Effects



Water pollution

- **Industrial Effluents Are Discharged In the Rivers.**
- **Organic & Inorganic Materials Pollute Water.**
- **Some Common Pollutants of Water Are**
 - **Coal, Dyes, Soaps, Pesticides, Fertilisers, Plastics & Rubber**



**INDUSTRIAL WASTES
CONTAINING TOXIC METALS
POLLUTE LAND AND WATER**

NOISE POLLUTION

- **ARISES PRIMARILY FROM INDUSTRY & MEANS OF TRANSPORT**
- **CAUSED BY INDUSTRIAL NOISE FROM**
- **MECHANICAL SAWS & PNEUMATIC DRILLS**

MEASURE TO CONTROL ENVIRONMENTAL DEGRADATION

- POLLUTION CAN BE PREVENTED BY
- 1. CAREFUL PLANNING OF INDUSTRIES
- 2. SITING [LOCATION] OF INDUSTRIES

MEASURE TO CONTROL ENVIRONMENTAL DEGRADATION

MAJOR MEANS OF CONTROLLING AIR POLLUTION

- ◆ FUEL SELECTION & UTILISATION
- ◆ SMOKE MAY BE PREVENTED BY USE OF OIL INSTEAD OF COAL IN INDUSTRIES
- ◆ USE EQUIPMENTS TO CONTROL

MEASURE TO CONTROL ENVIRONMENTAL DEGRADATION

- **MEANS OF CONTROLLING WATER POLLUTION BY INDUSTRIES**
 - ◆ **TREATMENT OF WASTES BEFORE DISCHARGING INTO RIVERS**
- **THIS CAN BE DONE IN 3 PHASES**
 - ◆ **PRIMARY TREATMENT BY MECHANICAL PROCESS**

TREATMENT OF WATER POLLUTANTS BY INDUSTRIES

PRIMARY TREATMENT INCLUDES

- SCREENING
- GRINDING
- FLOCCULATION
- SEDIMENTATION

TREATMENT OF WATER POLLUTANTS BY INDUSTRIES

- **SECONDARY TREATMENT INVOLVES**
 - ◆ **USE OF BIOLOGICAL METHODS**
- **TERTIARY TREATMENT INCLUDES**
 - ▲ **RECYCLING OF WASTE WATER**

CONTROL OF SOIL & LAND POLLUTION

- **COLLECTION OF WASTES FROM DIFFERENT PLACES**
- **DUMPING & DISPOSING THE WASTES BY LAND FILLING**

