

Geography Class 46

THE CLASS STARTED WITH A BRIEF REVIEW OF THE PREVIOUS CLASS:

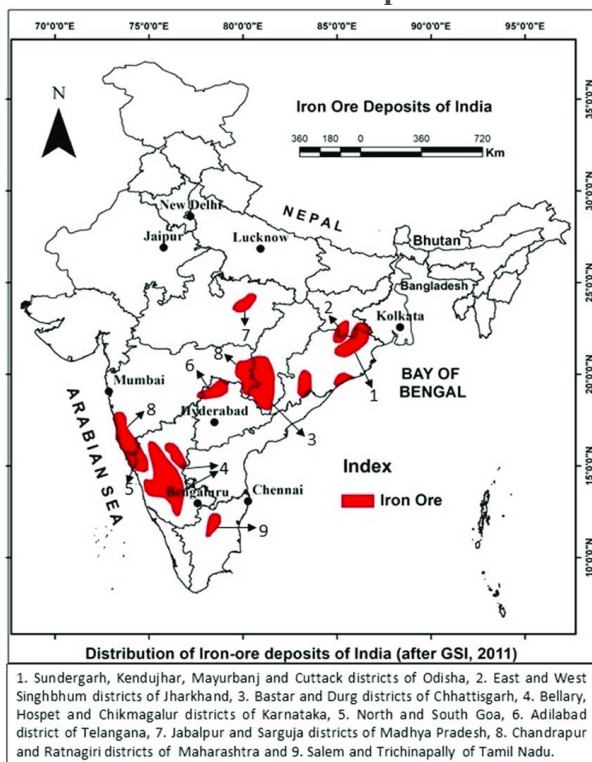
(01:12 PM):

SUGAR INDUSTRY: (01:17 PM):

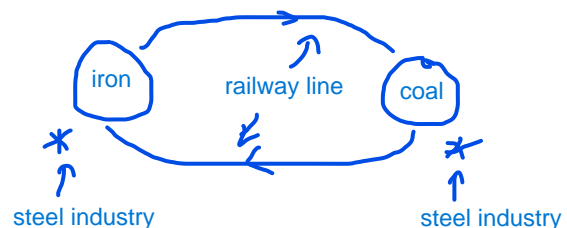
- **1) Significance:** Second largest agro-based industry after the cotton textile.
- a) Attracts the backward and forward linkages.
- b) Sugar is a commodity that is controlled. (i.e. its price is controlled by govt. on manufacturing basis)
- c) Less skilled labor can be useful. (It provides employment in rural areas bcz rural people makes jaggery out of it)
- **2) Locational Factors:** (in Locational factors only Raw Material, Capital, Technology (comes in infrastructure) is important)
- a) Moderate temperature.
- b) High rainfall (minimum 150 cm).
- c) Grows well in alluvial and black soil. (can be in Red soil also if we provide irrigation)
- d) Sugarcane is perishable (weight-losing raw material). (so have to process it faster)
- e) Sugarcane will lose its weight by 1/10th during the crushing while making sugar.
- While the other factors are not dominant the locational factor is crucial for the production.
- **Map Of Distribution Sugar Industries In India:**
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- Bihar, Champaran, Muzzafarpur.
- UP: Saharanpur, Muzzafarnagar.
- Haryana: Ambala, Karnal.
- Punjab: Bhatinda, Amritsar.
- In the South, sugarcane grows in Black Soil also and uses groundwater for irrigation.
- The Sucrose content is higher in south due to humidity and gives higher per-hectare productivity.
- Sugar mills were established through cooperatives. bcz of cooperatives sugar production is efficient there and more than 50% sugar comes from south that is why water scarcity there.
- In Maharashtra: Pune and Nasik are the major centres.
- Karnataka: Shimoga, Mandya.
- Tamilnadu: Salem, Trichuy. Andhra and Telangana Krishna Godavari belt
- **3) Challenges In Sugarcane Industries:**
- a) Low efficiency of industries due to obsolete technology.
- b) Low FRP given by the govt. (and govt. delays payment to mill owners and mill owners to farmers that is why farmers sell sugarcane to local people in low price and they make sugar and jaggery in very inefficient manner.)
- c) Excessive usage of chemical fertilizer.
- d) High requirement of water.
- e) Overall supply of the raw material(sugarcane) varies. (bcz of irrigation and monsoon)

IRON AND STEEL INDUSTRY: (01:45 PM): (they make steel from iron)

- **Significance:**
- It is considered the foundation of every other type of industry.
- **Locational factors:**
- a) Requires highly skilled labor. (workers should be in large quantity and should be cheap)
- b) Availability of regular and cheap power for this the plants are located near thermal or hydel power plants.
- c) Transportation is key and logistics are managed largely by the railways (Bi-directional relationship of railways and coal). (they make railway line in their industry itself)
- d) Requires huge capital and has a high **gestation period**.
- **Raw materials:** Iron ore, limestone, and coal are required to make Pig Iron.
- In the pig iron manganese ^{is added} with other ingredients are added to make steel.
- This industry is a weight-losing industry. (final product is one third of original weight)
- **Distribution of Iron-Ore Deposits In India:**



Pig Iron + Manganese + Water = Steel



This is called bidirectional relationship of iron and coal.

- **Distribution of Steel Plants:**

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- **Integrated Steel Plants Of India:**
- Durgapur and Burnpur: West bengal.
- Jamshedpur & Bokaro: Jharkhand.
- Bhilai: Chattisgarh.
- Rourkela: Orissa.
- ~~Vizag~~ Vishakhapatnam: Andhra Pradesh. ✓
- Vijaynagar and **Bhadrwati**: Karnataka.
- Selam: Tamilnadu.
- Mini-steel Plants: Do not require iron ore as a raw material. (bz they depend on scrap iron and they are located in urban area)
- Low capital and has a shorter gestation period.
- **Near to market** and fulfills the local demand.
 - Problem-
 - > People in India do not sale scrap iron so they import scrap iron.
 - > They depend on govt. for power supply.
- **Challenges Of the Iron and Steel Industry:**
- a) Supply of coal and other raw materials is a huge issue.
- b) Requires huge capital and a long gestation period.
- c) Huge power consumption and results in air pollution.
- d) Requires highly skilled labor.

-> Competition with foreign steel industry.
-> Govt. policy is also an issue.

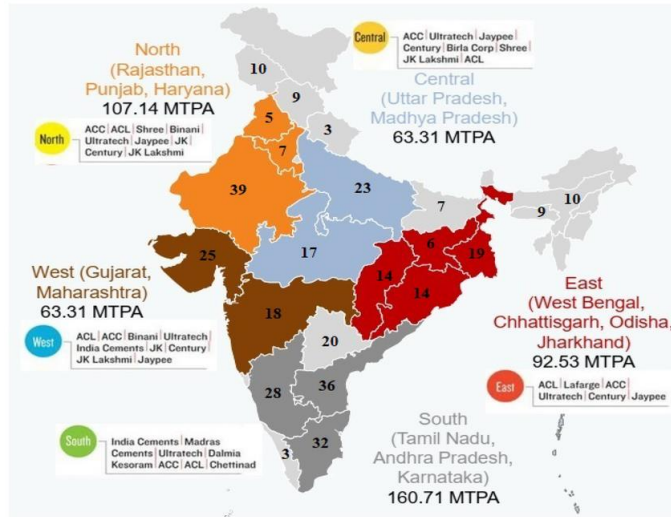
CEMENT INDUSTRY: (02:16 PM):

- **Significance:** Used in construction activities, in 8 core industries, and an important economic growth indicator.
- **Raw Material:** Limestone, gypsum. For processing coal is required.
- Low-skilled labor is required.

Cement industry can be established anywhere across India bz market is present everywhere bss transportation acha dedo toh raw material can be transport to anywhere.

-> Power intensive industry.

- Capital-intensive industry.
- The cement industry is also present near to the coastal areas (cement from sea shells) (like in Gujarat and Tamil Nadu)
- Cement is also made from **sludge**, **fly ash**, and **slag**.
- **Distribution of the Cement Industry in India:**



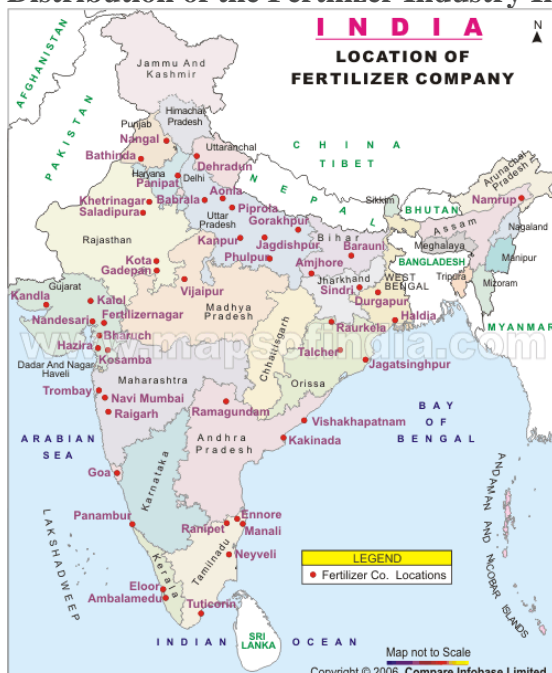
Limestone in India is present in Cuddapah rocks, Vindhya rocks, Doon valley, Shivaliks, Pir Pranjal so there cement industry is also present.

Gypsum se bhi cement bana sakte h and gypsum is present in Rajasthan.

Limestone cement is good.

- **FERTILIZER INDUSTRY: (02:26 PM):** (Supports agri. and it indicates the growth of agriculture)
- **Significance:** Supports agriculture and hence plays a significant role in food security.
- **Raw Materials:** **Naptha**, **Ammonium Sulphate**, **Rock Phosphate**, **Sulphuric Acid**. (Naptha is the liquid mixture of hydrocarbon i.e. it is byproduct of petroleum.)
- Market: Mainly used in agriculture so concentrated in rural areas.
- Capital and power-intensive industry. technology intensive also

- **Distribution of the Fertilizer Industry In India:**



Major types of fertilizer-

- > Nitrogenous fertilizer
- > Phosphatic fertilizer
- > Sulphurous fertilizer

RM is the deciding factor for its location so they mainly present where RM is present i.e. near petroleum industry since they get Naptha there.

Naptha from petroleum refinery is not sufficient so sometimes they import naptha that's why these industries found near coastal region also.

Fertilizer present near refinery-

-> Bhatinda, Gujarat, Assam, Mathura, Panipat

Cement from Ammonium sulphate is indigenous and in India it is found in-

-> Rajasthan, Gujarat, AP, TN

Rock Phosphate in India found in-

-> Rajasthan, AP and Jharkhand but it is not sufficient so we depend on import.

- **Challenges:** i.e. we are not sufficient in fertilizer production in India.
- a) Imbalances in the production and consumption pattern of the fertilizers.

-> We are import dependent.

-> Issue of power.

-> Issue of pollution.

-> Inequality in consumption.

- b) Requires updated technology.
- c) Skilled labor is required.
- d) largely depended upon the govt. policy. (bz subsidy of required)

TRANSPORTATION: (03:00 PM):

- **Four modes of transportation:**

- **1) Roadways:** NH comes under center. SH, District Highway and rural roads come under State. Rural roads have largest network.

- **Advantages:**

- a) Faster for short distances journeys. -> Ease of accessibility.
-> Better connectivity for remote areas.
- b) Rural connectivity. -> Loading and unloading is easy.
-> Allows private mode of transportation also.
- c) Provides last-mile connectivity. (i.e. door to door connectivity)
- d) Feeder for other transports.

- **Disadvantages:**

- a) High energy consumption. -> More frequent accidents.
-> Traffic congestion.
- b) Not comfortable for long-distance travel. -> Not good for large scale goods transportation.
- c) Biggest contributor to air pollution. -> Costly.
- d) High maintenance cost of roadways.

- **2) Railways:**

- **Advantages:**

- a) Cheaper for both passengers and goods.
- b) Comfortable for long journeys.
- c) ~~Faster mode~~ Faster mode for long distance in comparison to waterways and roadways.
- d) Supports the industrial growth. (for transfer of RM)
- e) Efficient for urban transport (Metro, Local)
- f) Energy efficient, less polluting.

- **Disadvantages:**

- a) High maintenance
- b) Requires high capital.
- c) Requires support of the ~~railways~~ roadways bz cannot provide door to door connectivity.
- d) Slower for a short distance. -> problem of guage.
- e) Difficult to establish in hilly terrain.

- **3) Airways:**

- **Advantages:**

- a) Supports economic growth. (bz supports tourism, rich or businessmen use.)
 - > Fastest of all.
 - > Used for high value product transportation.
 - > Used for disaster management.
 - > Used for medical emergencies.
 - > Used for border management security.
 - > Used for VIP people travel.

- b) Safe for high-value articles.
- c) Vital mode of transport in emergencies, disasters, VIP movement, etc.
- **Disadvantages:**
 - a) Costly mode of transport. -> Cost of investment and operation is also high.
 - b) Limited cargo movement. -> Highly polluting.
 - c) Highly energy intensive. -> Not for mass transportation.
-> Need for roadways also.
 - d) Requires huge investment for operations.
- **4) Inland Waterways:**
 - **Advantages:**
 - > Less Polluting.
 - > Less cost of infra. and maintenance.
 - a) Cheapest all mode. -> Labour intensive and generates employment.
 - b) Useful for bulk and non-perishable goods transportation.
 - c) Supports the industrial development. (for ex: western Europe)
 - **Disadvantages:**
 - a) Not all stretches are navigable. -> It is slow.
 - b) Not fit for perishable goods.
 - c) Seasonal variation in the amount of water. (ex: peninsular region)
 - d) Water diversion due to dams, and canals. -> Requirement of roadways.
 - e) Siltation which makes navigation difficult. -> Shifting of river course in Northern Himalayas.

SOCIAL GEOGRAPHY: (03:29 PM):

- **Population:** The number of particular species is known as the population of that species.
- Population Density is the Total Population/Total Area.
- Nutritional density: Population/Cultivable. **area**
- Agricultural Density: Agricultural population/Cultivable. **area**
- The growth of the population is measured by the Death Rate which is the Number of deaths/total population. *1000
- Birth rate: number of live births/total population*1000.
- The negative growth of the population could be measured by the Death Rate.
- Natural Growth Rate: $\frac{\text{No. of Birth Rate} - \text{No. of Death Rate}}{\text{Total population}} * 1000$
- Replacement Rate Fertility: It is the fertility rate required for the generation to replace itself without considering migration.
- It is the average number of children a woman would need to have to reproduce herself by bearing a daughter who survives to childbearing age so that each generation will replace exactly itself without considering migration.

Factors which influence the factors of distribution-

- > Fertile land, Climate, Water availability, Type of Topography, Ease of Transportation, Presence of Minerals, Employment.

- **Migration:** Changes in the place of residence for a substantial amount of time are defined as migration.

- a) **International Migration.**

Maternal Mortality Rate (MMR) is the no. of deaths happen during delivery. It is calculated as per 1 lakh lives birth.
IMR = infants/ lives birth.

- b) Internal Migration:

Fertility Rate = It is the no. of children that women give = no. of infant (1 to 4 age) / no. of women (15 to 49 age)

- **This is divided into 4 types:**

- b.1) Rural-Rural. (Agri. labours)
- b.2) Urban-Rural. (govt. job, seasonal farmers)
- b.3) Urban-Urban. (for better education.)
- b.4) Rural-Urban. (Movement of farmers from agri. to construction.)
- c) Froced Migration.

biggest migration is after wedding.

- **Causes of Migration are of Two types:**

- a) Push Factors. (Results in forced migration ex: bz of natural disasters, war etc.)
- b) Pull Factors. (Results in voluntary migration ex: bz of good quality of life, better education.)

- **Refer to the Settlements topic from the 12th Geography NCERT.**

SYLLABUS OF GEOGRAPHY IS COMPLETED.



Stage-1: Shows LDCs bz in LDCs health facility and economic condition is not good so population decreases as age increases.

-> After sometime expanding become stationary.

-> contracting: bz people prefer late marriage, want to live single, want to live without children.

Stage-1: ex: Somalia

Stage-2: ex: India as per 2011 but it can be in Stage-3 a/o to 2021 census.

Stage-3: ex: USA

Stage-4: ex: Japan and Scandinavian countries like Norway, Sweden etc.

Settlement-

-> Place of living.

Types of settlement-

1. Compact Settlement: for ex. rural areas of northern plain for conserving land for agriculture.
2. Dispersed settlement: ex. in mountain areas
3. Nucleated Settlement: where there is segregation may be bz of caste system.

See by yourself about settlement



India : Distribution of Sugar Industry



DISTRIBUTION -

| 165 Plant | Iron Ore | Coal | Water & Hydr | Water | Labor | Power |
|------------------------------------|---------------------|---|------------------|--------------------|-----------------|-------------------------|
| * Jamshedpur TISCO Jharkhand | Jharkhand Odisha | Jharia | Odisha | Subarnrekha | Bihar Odisha | Jharkhand |
| * Bumper WB | Jharkhand | Raniganj | Odisha | Damodar | Bihar | Damodar Valley Corp. |
| * Durgapur WB Help of UK | Jharkhand | Raniganj | Odisha | Damodar | Bihar | DVC |
| * Bokaro (Jharkhand) USSR | Jharkhand | Bokaro | Odisha | Local Reservoir | Bihar | DVC |
| * Rourkela (Odisha) Germany | Odisha | Bokaro | Odisha | Local River | Odisha | Hindustan Project |
| * Bhilai (Chhattisgarh) USSR | Chhattisgarh | Godawari Valley + Chhattisgarh | Maha. + MP | Local Stream | Chhattisgarh | Thermal Power Plant |

| 165 Plant | Iron Ore | Coal | Water & Hydr | Water | Labor | Power |
|--|--------------|-------------------------------|-------------------------|--|-------|------------------------------|
| * Bhadrachalam (Karnataka) VISC | Karnataka | Godavari Valley AP, Ch. | Karnataka | Bhadra River + Tungb River | Local | Shankavathi Power Project |
| Vizag (AP) | Chhattisgarh | Godavari | Karnataka + Local | | | |
| * Vijaynagar Steel Plant (Karn.) | Karnataka | AP | Karnataka | Tungbhadra | Local | Tungbhadra PP |
| * Salem (T Nadu) | Karnataka | Neyveli Coal | Karnataka | Caunary | Local | Mettur PP |

→ DISTRIBUTION -

| IS Plant | Iron Ore | Coal | Lime & Mag | Water | Labour | Power |
|------------------------------------|---------------------|---|------------------|--------------------|-----------------|-------------------------|
| • Jamshedpur TISCO Jharkhand | Jharkhand Odisha | Jharkhand | Odisha | Subarnrekha | Bihar Odisha | Jharkhand |
| • Bunker WB | Jharkhand | Raniganj | Odisha | Damodar | Bihar | Damodar Valley Corp. |
| • Durgapur WB Help of UK | Jharkhand | Raniganj | Odisha | Damodar | Bihar | bvc |
| • Bokaro (Jharkhand) USSR | Jharkhand | Bokaro | Odisha | Local Reservoir | Bihar | bvc |
| • Rourkela (Odisha) Germany | Odisha | Bokaro | Odisha | Local Reservoir | Odisha | Hirakud Project |
| • Bhilai (Chhattisgarh) USSR | Chhattisgarh | Godavari Valley + Chhattisgarh | Maha. + MP | Local Reservoir | Chhattisgarh | Thermal Power Plant |

| IS Plant | Iron Ore | Coal | Lime & Mag | Water | Labour | Power |
|--|--------------|-------------------------------|-------------------------|---|--------|-----------------------------|
| • Bhadrachalam (Karnataka) VSL | Karnataka | Godavari Valley AP, Ch. | Karnataka | Chandri River + Tungb River | Local | Shakavathi Power Project |
| Vizag (AP) | Chhattisgarh | Odisha | Karnataka + Local | | | |
| • Vijayanagar Steel Plant (Kar.) | Karnataka | AP | Karnataka | Tungbhadra | Local | Tungbhadra PP |
| • Salem (+ Madu) | Karnataka | Neyveli Coal | Karnataka | Caunary | Local | mettar PP |

INDIA

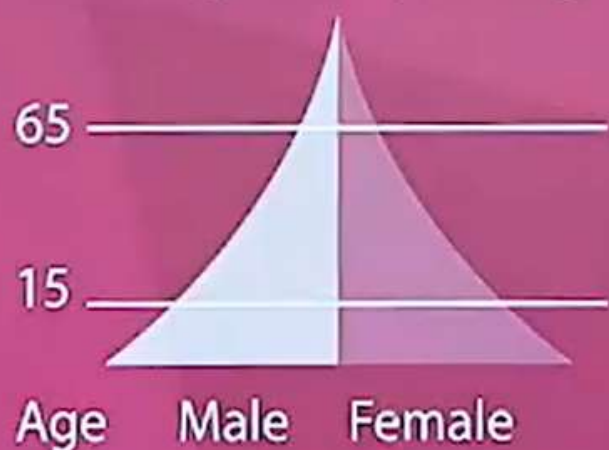
Iron and Steel Plants



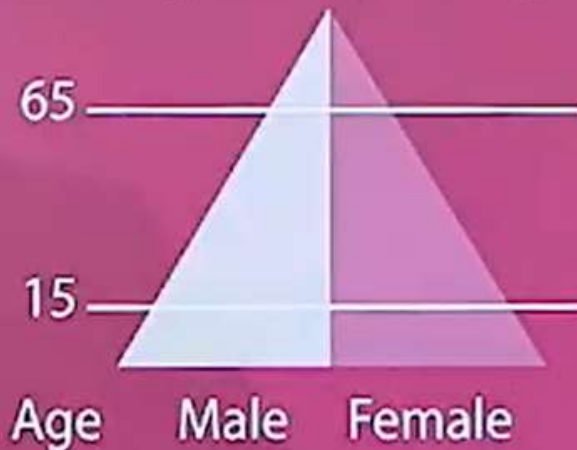
Metal Based Industries

POPULATION PYRAMID SHAPES

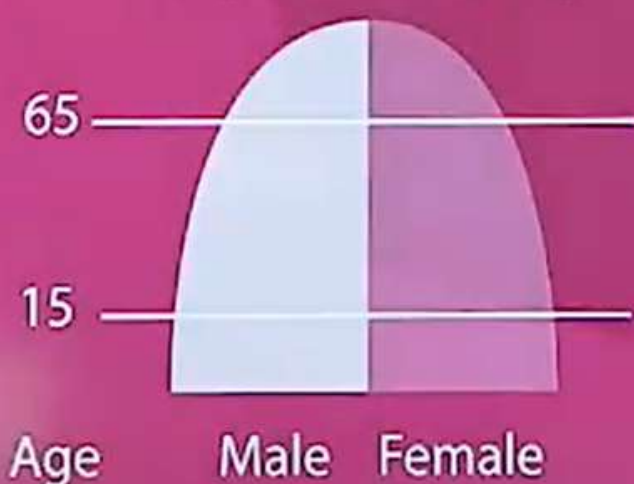
Stage 1 - expanding



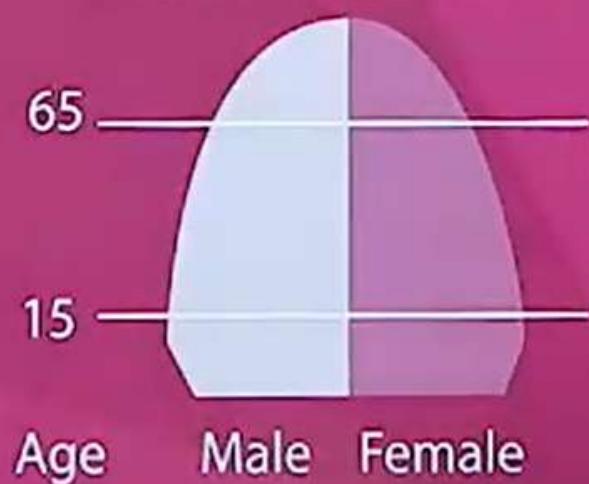
Stage 2 - expanding



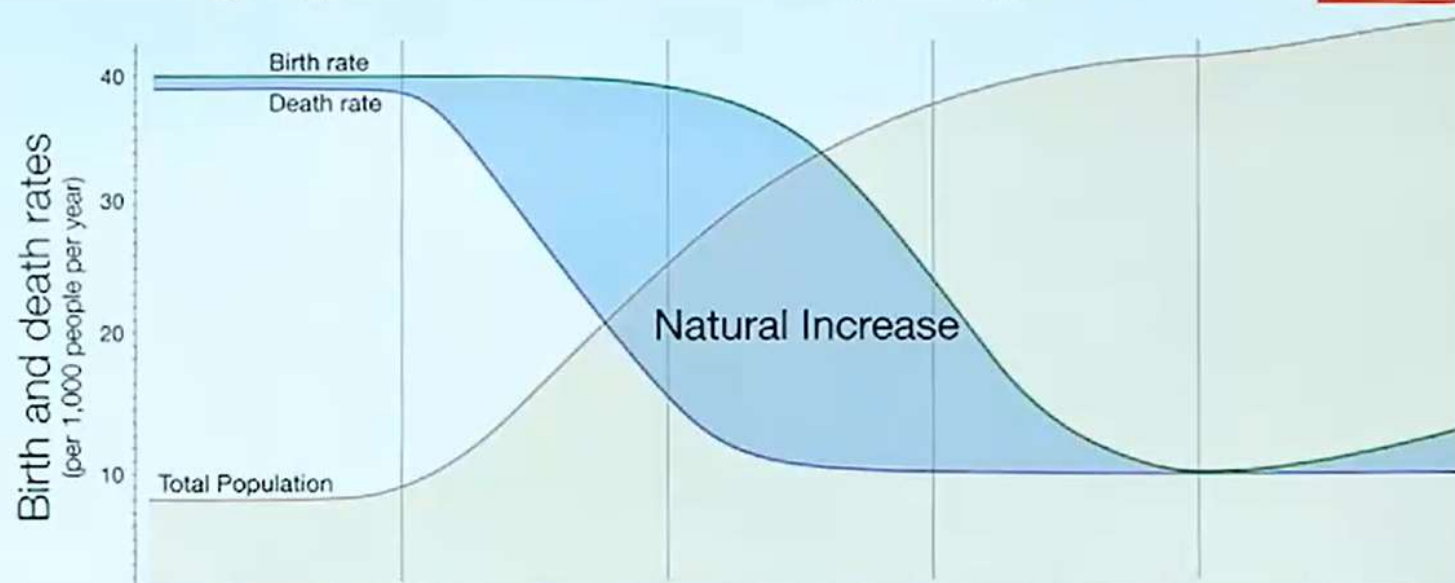
Stage 3 - stationary



Stage 4 - contracting



The demographic transition in 5 stages



| | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 |
|--------------------|-------------------------|---------------------|---------------------|-------------------------|-------------------------|
| Birth rate | High | High | Falling | Low | Rising again |
| Death rate | High | Falls rapidly | Falls more slowly | Low | Low |
| Natural increase | Stable or slow increase | Very rapid increase | Increase slows down | Falling and then stable | Stable or slow increase |
| Population Pyramid | | | | | |
| | Men Women | Men Women | Men Women | Men Women | Men Women |

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