

Industrial Regions

- USA
- Ruhr
- Ukraine
- **Japan**

Industrial Regions of Japan

Geography

Location:

- An island nation
- Area: 3,77,801 sq. km (*11.5% of India*)
(*Rajasthan is 10.4% of India: 3,42,239 sq. km*)
- Consists of **6,852 islands**
- **Four** main island in **north to south** sequence is :
 1. **Hokkaido**
 2. **Honshu**
 3. **Kyushu**
 4. **Shikoku**
- It is surrounded by **Sea of Japan** (East Sea) in the **west**, **Sea of Okhotsk** in the **north-west** and **North Pacific Ocean** in the **south-east**.
- **Neighboring countries:** North & South Korea, China
- It is situated on the '**Pacific ring of fire**' with more than **50 active volcanoes**
- The country is prone to large number of **frequent earthquakes**





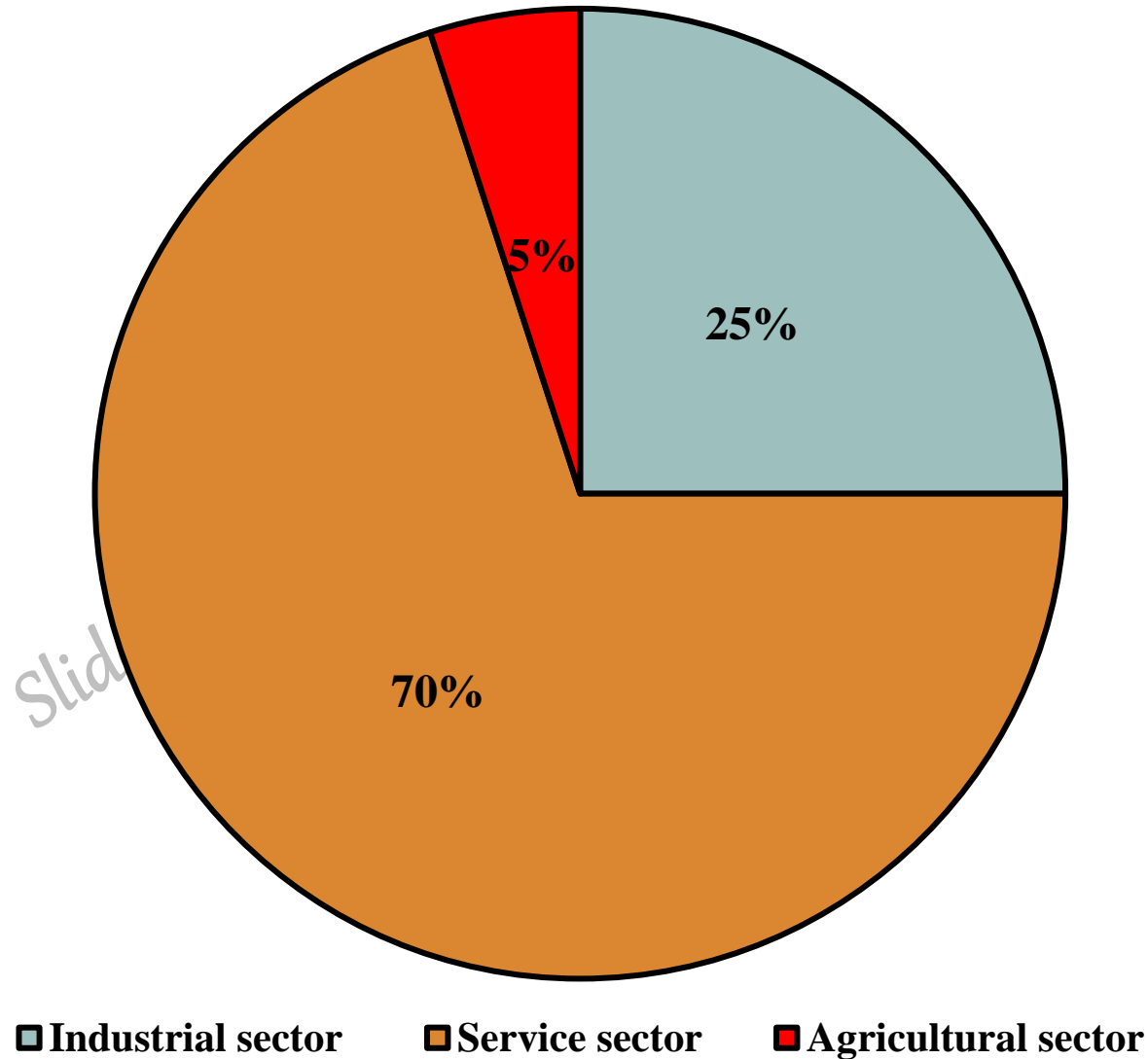
Topography:

- 75 % mountainous region
- 16 % plain area (mainly in the form of coastal plains)
- 70 % area of Japan is covered with **dense forest**

Population:

- 128 million (2010) (**8th most populous nation**)
- **Density: 340 persons per sq. km** (*India: 382 persons per sq. km*)
- **Urban** population: Japan has a high population concentration in urban areas (around **91%** of its total population lives in cities.) (*India: 31.16%*)
 - 25% population is engaged in **Industrial sector**
 - 70% in **Service sector**
 - Only **5% of labor force** working in **agricultural sector**

Percentage of Population Engaged in Various Economic Activities



Economic overview:

- It is world known as an **industrial** and **developed** country.
- The **first country of Asia** to develop to the **levels of European countries** in technological advancements.
- Th economy is mainly **market oriented** and **manufacturing** based. The industrial landscape has a long tradition of development in Japan.
- It is the **third-largest** in the world by nominal GDP

(USA > China > **Japan** > Germany > **India**) and the world's **second largest** developed economy (*after USA*). (source: IMF outlook October, 2018)

Economic overview...

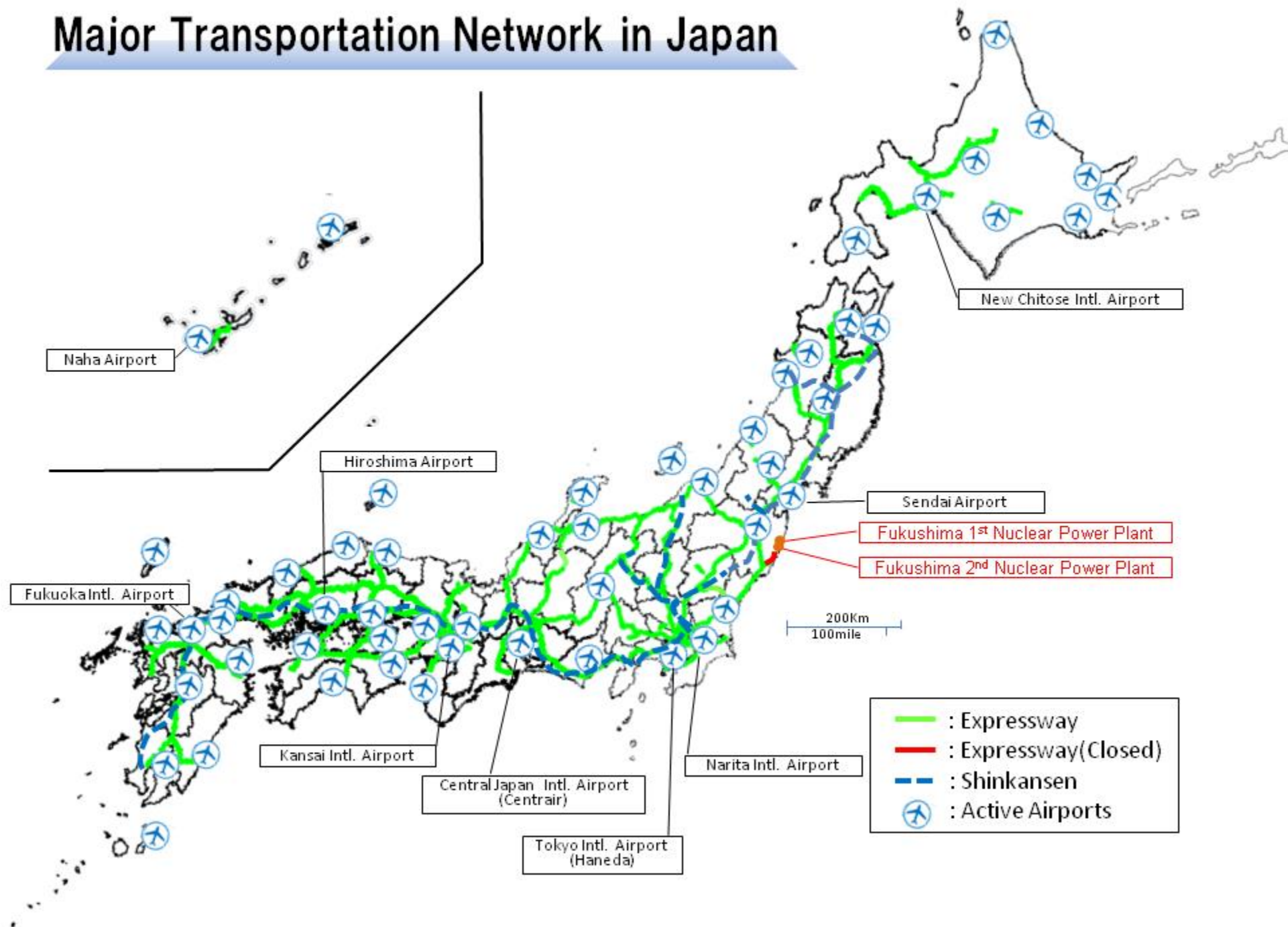
- The **traditional handicrafts** and **textile** industry marks the first industrial setup in Japan.
- The traditional handicraft (**silk clothes, clay utensils & toys,**) industry were in a well-developed status **became the base for the industrial development of Japan in 1870.**
- The **industrial output** when extended to **large scale production** were exported to the **international markets** and **traded for different products.**
- **Textile industry** mainly flourished on large scale with the establishments of the big textile mills.

- The **industrial boost** was observed during the **2nd World War (1930)** where **heavy industries** in the industrial scenario of Japan evolved.
- Despite its **dependence on Iron and coal imports from outside world**, Japan accounted for **105.15 million metric tons of the global production of crude steel (2015)** in the world, **ranking second after China**.
- Production of **steel is mainly centralized around city ports** such as **Kobe-Osaka, Himeji and Tokyo-Yokohama** to facilitate **shipping of exports and importation of raw materials**.

Transportation:

- Japan's transport system is highly developed, with road and rail networks covering virtually every part of the country together with extensive air and sea services.
- **Shinkansen**, or **Bullet trains (250-300 km per hour)** are the **fastest and safest railroad systems in the world**.

Major Transportation Network in Japan



Major industries:

- Japan has the most **diversified manufacturing industry** sector with various advanced industries which are exceedingly successful.
- The **manufacturing** accounts for the **24% of the country's GDP**.
- It is the **third largest manufacturer of Automobile**. (Europe > Japan > USA)
- It has the **largest electronics and goods industries** where it has consistently ranked among the top countries.

Major export industries:

- **Automobiles** (Toyota, Honda, Nissan, Suzuki, Mazda, Mitsubishi, Isuzu, Yamaha, Kawasaki etc.)

Toyota is currently the world largest car maker

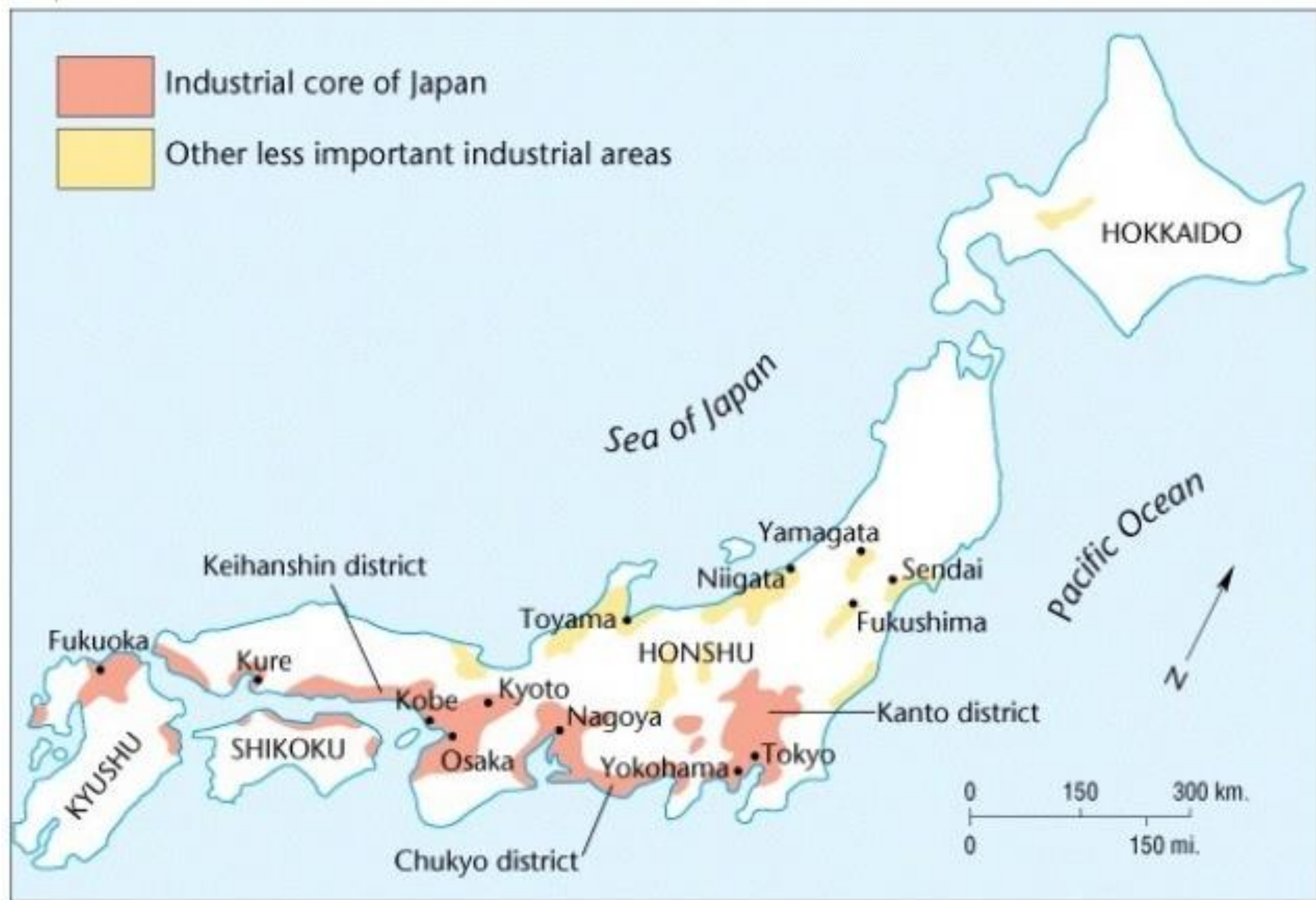
- **Consumer Electronics, Computers, Semiconductors, Copper, Iron and Steel.**
- Japan dominated **shipbuilding** for long earlier (replaced by South Korea in 2004)
- Other industries: **Petrochemicals, Biotechnology & Pharmaceuticals**

Industrial Region: Japan

There are four leading industrial regions of Japan:

1. **Kwantō region: Tokyo-Yokohama-Kawasaki**
2. **Kinky region or Osaka, Kobe and Kyoto Region**
3. **Nagoya region**
4. **Northern Kyushu Region**

Other: **Southern Hokkaido & Sendai region**





The reasons of rapid industrial growth in Japan are:

1. Availability of **hydroelectric power**.
2. **Coastal location** and **large ports** which helps in import of raw material and also in export.
3. **Proximity to mainland of Asia** providing a ready market. Japan also has a **worldwide market** for its products.
4. Country's large population provides a ready source of **skilled labour**.
5. **Technological development**
6. Government:

Since World War 2nd the state intervention and control over industries increased. The **iron & steel, petroleum refinery** and **ship building** were brought under strict control of the government.

Major Ports in Japan



Koriyama pump place
Hydroelectric Power Plant



[City water]

Shinkarebushi Power Plant



[River water]

Momuradaini Power Plant



[Agricultural water]

Miyagawa Dam Power Plant



[River maintenance
Discharge water]

Seiwa Power Plant



[Check dam water]

Kachugawa Small Hydroelectric
Power Plant for residents



[Changeable velocity large-scale water
mill power generation system with
new dust removal device]

Saginuma Power Plant



[City water]

Examples of Small and Medium Hydroelectric Power Plants

1. **Kwanto region (Tokyo-Yokohama Region):**

- Situated on the *Honshu island*, Kwanto plains and the eastern coast of Japan comprises the **greatest industrial area**.
- The **raw material, coal and petroleum** for the industries are *imported from different countries*.

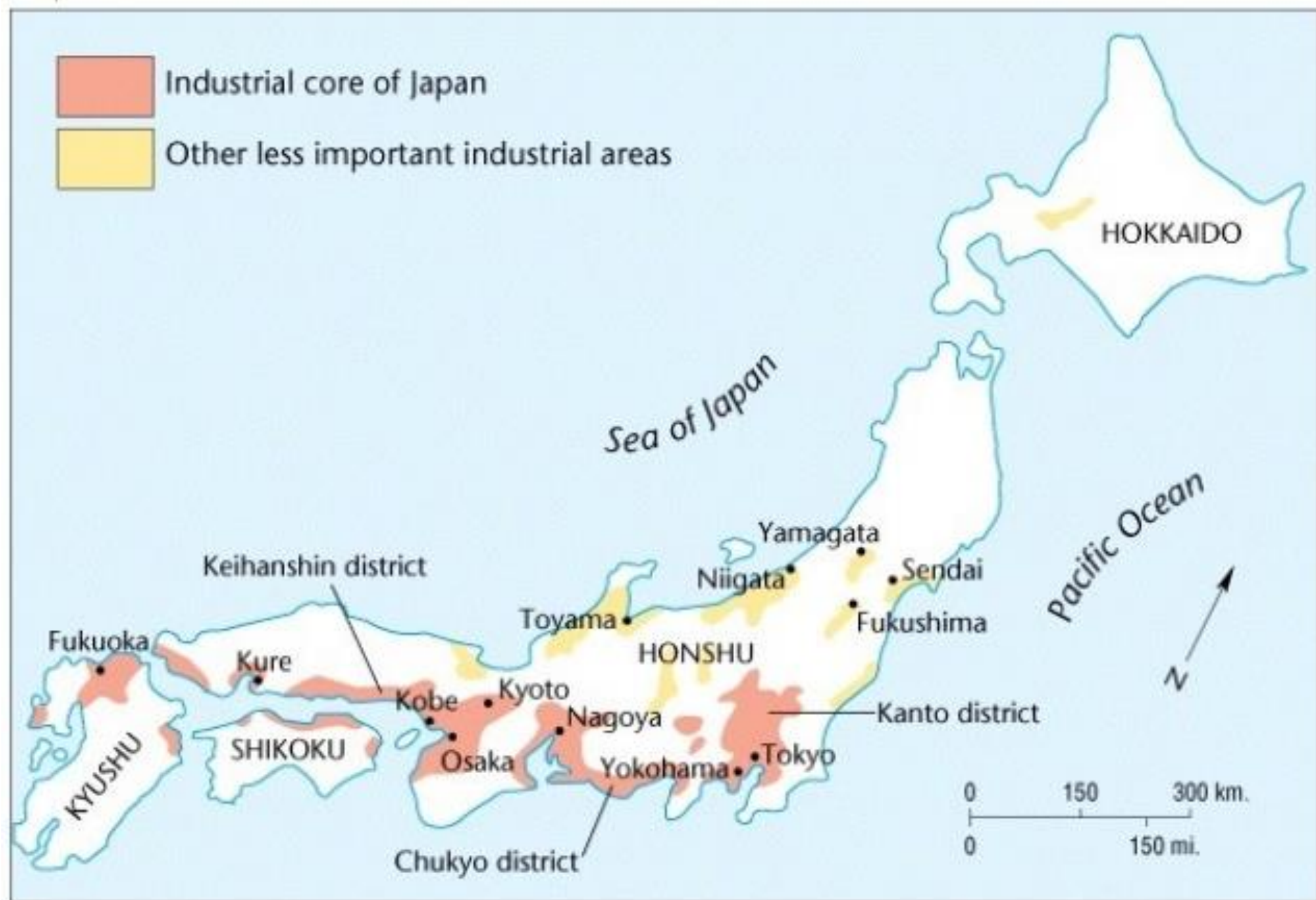
Iron-ore from: **Philippines, Malaysia, Indonesia, India & Australia**

Coal: **Australia and USA**

Petroleum and **Natural Gas:** **South-west Asia and Indonesia**

Food demand of the region is also met by large **imports**.

- It is formed by the *conurbation of three chief cities*
 1. **Tokyo**
 2. **Kawasaki**
 3. **Yokohama**



Tokyo:

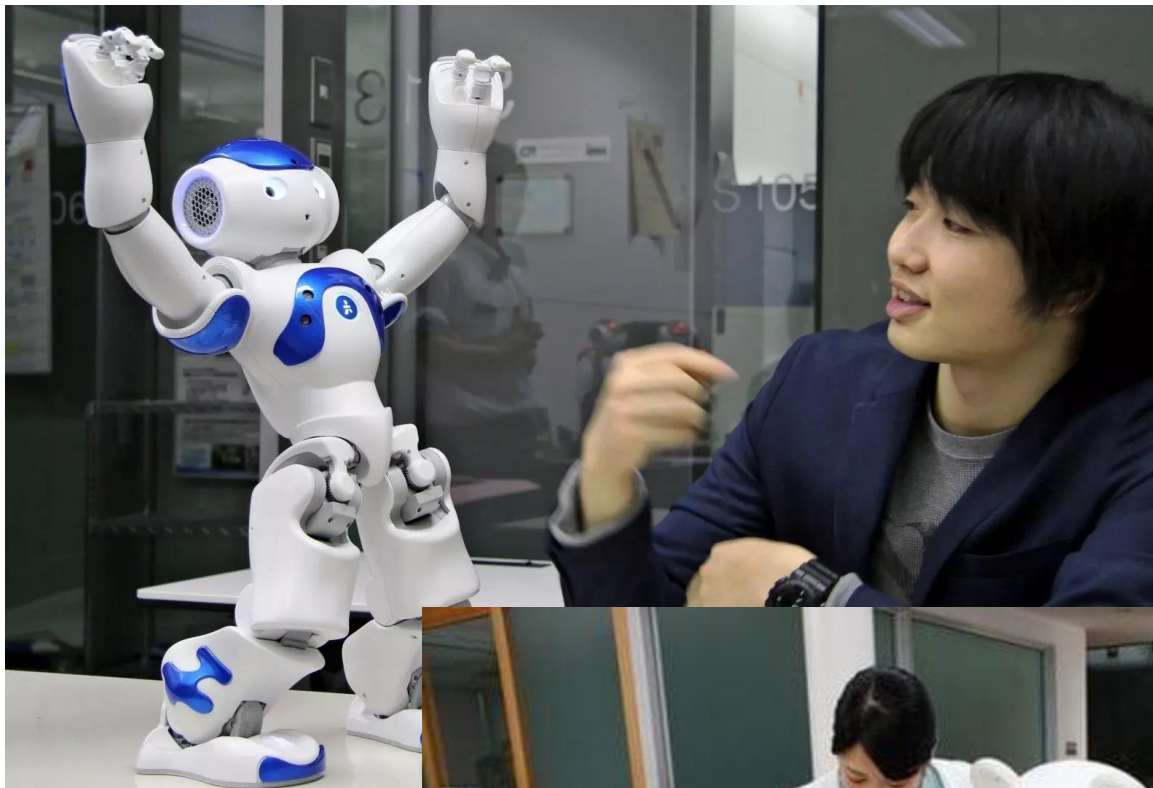
- The **capital** of the country and the **most urbanized city in the world (2019)(38 million) (Delhi NCR: 3rd Largest – 28 million)**
- It is favorably **situated in the middle of a small fertile plain known as *Kwanto plain***
- Carries on many artistic industries.
- It is noted **for *electrical engineering* such as transistors, radio television sets, washing machines, refrigerators and computers.**
- It also ranks high in **blast furnaces, steel mills, machines and tools, chemicals, refineries, shipbuilding, airplane, factories of consumer goods, electrical machinery, textile and canning industries, etc.**

Yokohama:

- It is a **port city** where **manufacturing has been overshadowed by trade**.
- One reason for the slower development of industry has been **restricted area of level land** suitable for the expansion of factory sites.
- It has **Precision Engineering, Shipbuilding, Oil Refining, Petrochemicals and Port Industries**.

Kawasaki:

- Its **Heavy Industries Ltd.** is Japan's **top manufacturer of industrial robots**.
Though about 90 per cent of robots it makes at present are arc welders for sale to car manufacturers. It will be placing heavier emphasis from now on to the output of robots for other purposes, such as spray painting and assembling.





Shipbuilding

Oil Refining



2. Kinky region or Osaka, Kobe and Kyoto Region:

- In the **Hanshin or Kinki region** (*Honshu island*) are three of the Japan's six great cities – **Osaka, Kobe and Kyoto**.
- *Osaka* and *Kobe* are the **great deep-water ports**.
- The **manufacturing** structure of the Hanshin region is one of great **diversity**. (*Textiles & Shipbuilding*)
- Until recently at least, **textiles lead all other industries**.

The **cotton industry** is carried on chiefly at **Osaka** and other towns in the fertile plain that borders the northern shore of the inland sea.

- **Osaka** is the **greatest cotton-textile town** and is generally known as the **Manchester of Japan**.
- The naturally **dense population** makes **labour cheap**, and affords a **good market**.

- The Osaka-Kobe industrial region is as smoky, noisy and unattractive in appearance as are most regions of **heavy industry**.
- **Kobe** is the busiest port of Japan. It concentrates on **Shipbuilding, Oil Refining, Petrochemical Industries Including Synthetic Textile and Rubber Manufacture**.
- **Kyoto** is also known as the “*City of small workshops*”





3. The Nagoya Industrial Region:

- **Nagoya and Takayama** are the **major textile centres**.
- Nagoya also process local silk, imported cotton and **Synthetic Fibres; Engineering Industries**, including all kinds of **Machinery, Automobiles, Locomotives and Aircraft**.
- Textile, including silk reeling, cotton spinning, cotton weaving and wool weaving lead all other industries.
- Much of Nagoya's woolen industry is relatively new and Australian wool is chiefly used.
- It is also one of the **country's foremost aircraft manufacturing centres**.

4. Northern Kyushu Region:

- This industrial region is located close to the **south-western** limit of the general **manufacturing belt in northern Kyushu**.
- Credited with **50 % steel production** of Japan.

It the chief steel supply centre for industrial regions of Japan

- **Chikuho coalfield** is situated in close proximity of this heavy industrial centre.
- Textiles are not an important element of the industrial structure of this region; of first importance are the **heavy industries**, especially **iron and steel manufacturing**.
- Other industries: **Ship Building, Cement, Chemicals, Glass**, etc.
- **Yumata, Kokura, Moji, Fukuoka** are the industrial centre of this region.

- Outside the above four major industrial regions there are several scattered industrial towns-

Iron and steel: Muroran

Oil refining is important: Akita and Niigata

Engineering: Hiroshima

Shipbuilding: Kure

Textiles: Okayama

Hakodate and Sapporo in Hokkaido