

### **FACTORS RESPONSIBLE FOR THE PLANT LOCATION CHOICES:**

The choices of the plant location is based on the following factors :-----

- **Availability of Raw material:** An ideal location is one where the main raw material required to manufacture the product is adequately available. This will ensure regular supply of the material and will reduce the transportation costs.
- **Nearness to the potential market:** marketing of finished goods efficiently is an important function of an enterprise. If the plant is located near the market, then the management can keep close touch with their changes in market environment and formulate its production policies accordingly. Moreover, the transportation and other overhead expenses are reduced.
- **Location should be near to source of operating power:** in some industries, continuous and adequate power supply is needed.  
There are certain industries for which cheap electricity may be very important. In such situation, location of the plant near to the hydel-power situation will provide cheap electricity.
- **Supply of labour:** labour is one of the most important inputs in any industrial enterprise. There should be regular and cheap supply of labour, specifically the unskilled labour. If there is adequate supply of local labour near the plant, then naturally it will be available at cheaper rates.

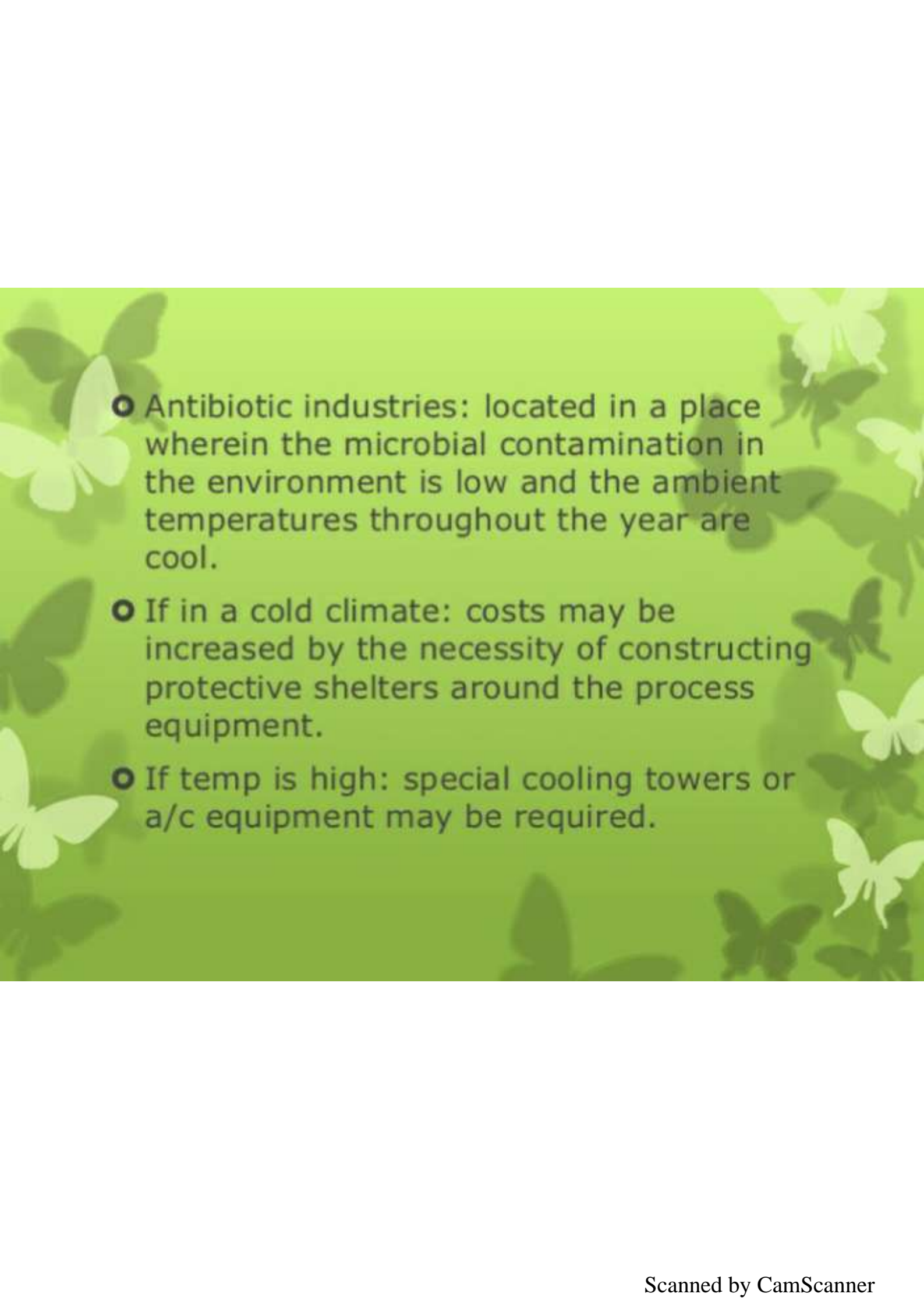
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PHARMAQUEST

- **Transport and communication facilities:** Transport is very important for bringing raw materials, fuel from different places, marketing of finished products etc. The region well connected with rail, road, water and air transport system is considered to be more appropriate for the location of the plants.  
Similarly good communication facilities, such as, postal and telecommunication links are of great significance towards the success of an enterprise. Regions with good communication system should be given priority for the selection of the sites.  
Similarly, industries producing goods for exports may be located near ports or airports.

## **1. Climate and Soil:**

- Important for agriculture based industries. E.g.: Ayurvedic drugs
- A location which is very hot during summers would not be suitable as it is subjected to dust storms and drying up of water supplies.
- Highly humid area will also not be suitable from the point of:
  - Cost,
  - Contamination,
  - Difficulties of maintaining laboratory animals in proper condition
  - Efficiency of labour

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- The background of the slide is a solid light green color. It is decorated with several white butterfly silhouettes of various sizes and orientations, scattered across the page. There are also some faint, stylized white flower shapes. The text is presented in a dark green, sans-serif font.
- Antibiotic industries: located in a place wherein the microbial contamination in the environment is low and the ambient temperatures throughout the year are cool.
  - If in a cold climate: costs may be increased by the necessity of constructing protective shelters around the process equipment.
  - If temp is high: special cooling towers or a/c equipment may be required.



### **3. Water supply**

- Large quantities of water required for cooling, washing, steam generation and also as raw material (liquid orals).
- Study should be conducted regarding the supply position of underground water and/or surface water and their seasonal variation.
- Quality of water also important.
- Temperature, mineral content, silt or sand content, bacteriological content, cost of supply and purification treatment must also be considered while choosing a water supply.
- Detailed estimate of water requirements for the present and the future must be made.

#### **4. Water Disposal:**

- Legal restrictions must be considered.
- Site selected should have adequate capacity and facilities for correct waste disposal.
- Attention should be given to potential requirements for additional waste treatment facilities.

## **5.Site Characteristics:**

- Topography of the land and soil should be considered since both may influence the construction cost.
- Cost of land, local building costs and living conditions are also important.
- Expansion of the plant in future should also be considered.

## **6. Flood and Fire protection:**

- A regional history of natural events like floods and hurricanes must be conducted if located near large bodies of water (river, sea, etc.).
- Assistance from fire deptt. should be easily available.
- Fire hazards in the immediate surrounding area of the plant site must not be overlooked.



## # Current scenario:

- The Indian pharmaceutical sized at USD 34 billion, including exports) in 2013-14, has remained on a strong growth trajectory over past few years
- The industry size is expected to increase to USD 48 billion by 2017-18 at a CAGR of 18%.
- Indian Pharma industry is ranked 3<sup>rd</sup> globally in terms of volume and 10<sup>th</sup> in terms of value supplying 10% of global production
- Of the USD 34 billion market, the domestic formulation market is about USD 10.9 billion and constituted around 1.1% of global pharmaceutical market in value terms.
- India spends only 3.5-4% of its total GDP on healthcare and hence ranks lowest in this respect globally
- The Indian Pharmaceutical industry is highly fragmented with over 15,000 players mostly in unorganized sector. Out of these, about 300-400 are classified as belonging to medium & large organized sector. However, organized players dominate formulation market in terms of sales. In 2013-14, top 10 formulation companies accounted for 42.3% of total formulation sales. MNCs enjoy a market share of 20-24%.



Key segment in Indian Pharmaceutical industry

① API manufacturer / Trader (Bulk drugs)

Bulk drugs exports, constituting about 80-90% of total bulk drugs production, accounted for about 33% of total sales in pharmaceutical industry in 2013-14

② Formulation manufacture : Due to introduction in DPCO 2013.

domestic formulation markets recorded lowest growth rate

③ Contract Research and manufacturing services

One of fastest growing segments : Pertains to outsourcing research services / manufacturing products to low cost providers world class standards. Since late 1990s, CRAMS has gained importance, as MNCs have been coming under intense pressure to cut costs to maintain

profitability

④ Biotechnology companies : Includes Biopharmaceuticals,

Bio services, Bioagriculture, Bioinformatics.

Growing at CAGR of 20%.

Market size at around USD 4 billion in 2013-14.

India : Top 12 biotech destination in world.

Ranks second in Asia after China