

The Impact of Industrilization and Globalization on Environment

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Abstract:

Industrilization and Globalization both are two eyes for a socio-economic growth of a country. Globalization is a concept by which the globe becomes one unified entity cutting across the political, economical and regional barriers. Industrialization includes a rapid transformation in the significance of manufacturing in relation to all other forms of production and work undertaken within national or regional economies. Other side of a coin, The impact of Industrilization and Globalization on Environment adheres severe damage. The word environment is the sum total of various abiotic and biotic forces that affect the existance of organisms in relation to man. This enviromment constitutes according to Indians perception, The basic elements or “PANCHA BHOOTAS” or the 5 , ingredients of nature namely. Prithvi(land),Apo(water),Teja(light),vayu(air),Akash(sky).These are the five basic ingredients of nature that are mainly responsible for regulation of human and other organisms life. This paper explores and investigates the rapid growth of globalization, industrialization and their bad effects on environment.

Keywords: Industrilization, Globalization, Socio-economic growth, Environment.

1. Introduction

Industrialization is the process of transforming the economy of a nation or region from a focus on agriculture to a reliance on manufacturing. Mechanized methods of mass production are an essential component of this transition.

Industrialization is a transformation away from an agricultural- or resource-based economy, toward an economy based on mechanized manufacturing.

Industrialization is usually associated with a greater average income and improved living standards.

Early industrialization occurred in Europe and North America during the 18th and 19th centuries, and later in other parts of the world.

Numerous strategies for industrialization have been pursued over time, with varying levels of success.

Industrialization can be driven by a combination of factors including government policy, labor-saving inventions, entrepreneurial ambitions, and a demand for goods and services. It has profound implications for the population, causing a wave of migration from small farms to cities and towns where jobs can be found.

1.2 Examples of Industrialization

Industrialization is dependent on growth and innovation in at least four industries.

Manufacturing

Industrialization began with the invention of machines that greatly increased the manufacture of goods.

Mining

Many of the great inventions of the 19th century were developed to serve the mining industry.

- The first working steam engine was devised to help remove flood water from coal and tin mines, where they often disrupted production.
- The first use for the steam-powered locomotive was to transport ore from mines.
- Dynamite was patented in 1867 and was first used to blow up rocks that obstructed mining activities

Transportation

The 19th century was a period of unparalleled innovation in ways to transport goods from and to marketplaces. Among them

Retailing

Before contactless payments and self-service checkouts, there were innovations in retailing that were designed to appeal to 19th century shoppers.

1.3 Globalization

Globalization is a concept by which the globe becomes one unified entity cutting across the political, economical and regional barriers.

Globalization Demands:

The product should also withstand competition with other firms in the national as well international market.

World trade is subjected to less restriction.

There is economic liberalization. The process of globalization in financial sector i.e the money and capital market operates globally.

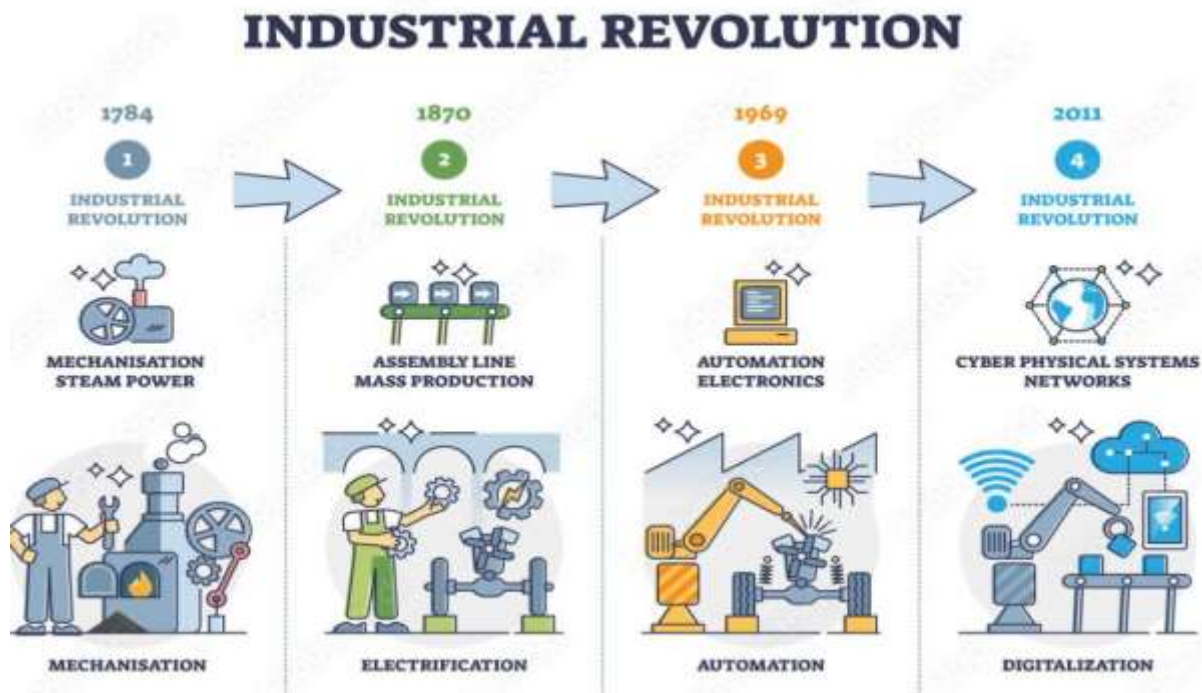
1.4 Environment;

The word environment is the sum total of various abiotic and biotic forces that affect the existence of organisms in relation to man. This environment constitutes according to Indians perception, The basic elements or “PANCHA BHOOTAS” or the 5 , ingredients of nature namely. Prithvi(land),Apo(water),Teja(light),vayu(air),Akash(sky).These are the five basic ingredients of nature that are mainly responsible for regulation of human and other organisms life.

2. Literature Survey

2.1 History and Development of Industrial Revolution

The industrial Revolution , was the result of continuous application of skill and invention for the increase in production. It took place in the period 1765-1785 in England.



2.2 Effects of Industrial Revolution: The industrial Revolution proved a mixed blessing:

Good Effects:

- Increase in volume of production.
- Better quality of production.
- Minimization of human efforts
- Specialization in manufacturing activities

Bad Effects:

- Unemployment: Human efforts were replaced by mechanical devices.
- Degradation of labour caused by the transfer of skill and intelligence from man to machine.
- Shift of production from rural to urban areas.

2.3 Environmental Issues Due to Industrial Pollution:

Types of Environment:

Natural Environment

Man-made Environment

Natural Environment consists of things which have been built by the forces of nature over hundreds of thousands of years. It includes both living things and non –living things. The living things include plants, animals, and humanbeings. The non living things include air,water,soil,heat, and light.

All these things interact among themselves to create different environments in different parts of the world.

Man –made Environment that has been influenced by human activities. We have built buildings ,dams,canals and roads, cut down the forest carelessly. Our industrial and domestic wastes pollute air,water and soil. New scientific technologies have led to a deteriorating environment..

3. Data Analysis

Industrial Pollution: All pollutions are not necessarily industrial pollution. The pollution caused by ind

ustries or industrial processes alone may be termed as industrial pollution.

It includes Air pollution, Water Pollution, Land pollution, Thermal Pollution and Noise pollution etc.

3.1 Major Type of Industries And Their Pollutants:

S.no	Type of Industry	Type of Pollutants Released
1.	Cement Factories	Mineral and Organic Particulates, Fly ash
2.	Petroleum Refining units	Organic Vapour, Oxides of Sulphur,
3.	Metallurgical Operations	Metal Fumes, Lead, arsenic and Zinc fluorides
4.	Paper and Pulp industries	Organic Phospates, Hydro Carbons
5.	Thermal power plants and Quarry	CO ₂ , SO ₂ , Fly ash, Particulates, smoke , soot
6	Asphalt plant	Fly ash, Mineral and Organic Particulates
7	Combustion of Fossile fuels	CO ₂ , SO ₂ , Fly ash, Particulates, smoke , soot
8	Gaseous emissions from Automobiles	CO ₂ , SO ₂ , smoke , soot, odour.
9.	Nuclear Power Plants	Uranium and dust beryllium., Radioactive materials

3.2 Index of Emission Parameters From Major Industries:

S.no	Type of Industry	Emission Parameters(in mg/Nm ³)
1	Thermal power plant	1– 100 mg/Nm ³ 2003 to 2016 – 50 mg/Nm ³ After Jan 2017 – 30 mg/Nm ³
2	Cement Industry	30 mg/Nm ³
3	Iron & Steel	30 – 50 mg/Nm ³
4	Petroleum oil refinery Gas fuel,Oil fuel	10 – 5 mg/Nm ³ ,100 – 50 mg/Nm ³
5	Sponge iron Gas fuel, Dust Fuel	50 mg/Nm ³ ,100 mg/Nm ³
6	Diesel Engine	100 – 75 mg/Nm ³
7	Aluminium Industry	150 – 250 mg/Nm ³
8	Glass Industry	50 mg/Nm

3.3 Environmental Challenges & Issues Due to Globalization

Increased Pollution:

The increased production and transportation of goods globally contribute to air and water pollution, particularly in regions with weaker environmental regulations.

Deforestation:

The demand for resources like timber can drive deforestation in developing countries, impacting biodiversity and contributing to climate change.

Climate Change:

Increased greenhouse gas emissions from global industrial activities contribute significantly to climate change.

Resource Depletion:

Overconsumption of natural resources, particularly in developed countries, can lead to depletion of finite resources like water and minerals.

Loss of Biodiversity:

Habitat destruction due to urbanization and industrial expansion can lead to the decline of plant and animal species.

Waste Disposal Issues:

Improper waste disposal practices can lead to pollution in local environments, particularly in areas with limited waste management infrastructure.

4. Other Major Consequences of Rapid Industrialization and Globalization.

1. Climate Change
2. Global Warming
3. Acid Rains
4. Green house Effect.

4.1 Frequently Occurring Natural Disasters In India:

Type	Location/ Area	Affected Population(in millions)
Floods	8 major river valleys spread over 40 million hectares of area in the entire country.	260
Drought	Spread in 14 states of India . Total of 116 districts and 740 blocks.	86
Earthquake	Nearly 55% of the total area of the country falling in the seismic zone IV and V	400
Cyclones	Entire 5700km long coastline of southern .	10
Landslide	July 30, 2024, Wayanad in Kerala witnessed India's worst-ever landslide, devastating the villages of Punchirimattam, Chooralmala and Mundakkai	The scale of destruction was unimaginable, with over 231 people confirmed dead, while body parts of 218 others have been recovered

4.2 Various International , National Agencies and Boards For Environmental Protection and Monitoring.

S.no	Agency/ Board	Activity
1.	The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations Environment Programme (UNEP) & World Meteorological Organization (WMO) in 1988.	In 1990, the First IPCC Assessment Report (FAR) underlined the importance of climate change as a challenge with global consequences and requiring international cooperation. It played a decisive role in the creation of the UNFCCC, the key international treaty to reduce global warming and cope with the consequences of climate change.
2.	World Health Organisation (WHO)	Environmental pollution control, conservation and improvement of environment for promoting sustainable development
3.	Food and Agriculture Organisation (FAO)	To protect, analyze or monitor the environment against misuse or degradation.
4.	The Ministry of Environment and Forests (MoEF)	Environmental pollution control, conservation and improvement of environment for promoting sustainable development.
5.	Central Pollution Control Board	To protect, analyze or monitor the environment against misuse or degradation.
6.	Environmental Governance and State Pollution Control Board	Environmental pollution control, conservation and improvement of environment for promoting sustainable development.
7.	Indian Board for Wildlife (IBWL)	To protect, analyze or monitor the environment against misuse or degradation.

Conclusion:

The conclusion of this paper is to ,from the above data and observable things , The consequences of rapid industrialization and globalization and their impact on environment. It is clearly proposed that the importance of protecting environment, the need of industrialization , globalization and maintain sustainable development. From the above data of various international and national agencies recommended the importance of climate change as a challenge with global consequences and requiring international cooperation.

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