

ENVIRONMENT & HUMAN DEVELOPMENT

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ABSTRACT: Environmental change is a natural phenomenon and always exists in human civilization. Climate and human are two dominant factor in nature. Both impact each-other very well. Climate change is essential need of earth. But human activities lead it toward environmental degradation, natural calamity like global warming ,ozone depletion, forest fire tsunami, landslide, cloud burst, earthquake, volcanoes, soil erosion, drought, flood, etc. The main objective of this research work is : (A) To make an intensive study of the present position of India and world. (B) To find out and analyze the cause of the present dwindling situation of natural environment. (C) To suggest possible measures towards the conservation of nature and increase in the number of the sustainable and inclusive development project . (D) Global community should take active participation towards nature conservation. (E) To discover holistic approach between human and nature relation. This research work is mainly confined to empirical studies. Environmental change observation is followed by extensive field study. Apart from primary data, some related literature and information have been gathered from secondary sources to accomplish the work. A database has been generated based on the field survey for further studies. All secondary data will collect from various govt. And non-govt. Institution. Magazine, journal, global climatic report, weather report, meteorological department report will reveal all changing trend of nature.

Climate change and some related environmental issue have been discussed with proper tabulation method, graph, charts And power point presentation. This intensive study reveals that about the climate of earth is changing rapidly. Human and nature are two complimentary elements in physical world. Human response comes thorough objective and subjective environment. Human is key figure in global climate change, so we should give serious attention towards climate change and other concern issue .earth is precious and gives us hefty natural resources, life, living space.in a nutshell, human and climate are equal driving force.

KEYWORDS: - Natural Phenomena, Human Development, Environment

INTRODUCTION:

Environment refers to the all surrounding which is included living & non-living things, which is very useful for human life & ecosystem. Environment plays a vital role in earth life & bio-diversity. Entire Human development is based on environmental activism & perception. Day by day we are creating new challenges & phenomena on earth. Men is destroying our nature & environment at the cost of development.

Environment can be divided into following ways: -

1. Natural Environment
2. Artificial Environment

Among all above-mentioned environments, natural environment is very crucial regarding human culture & civilization. Our cultural development totally depends upon natural environment. Language , dialects , religion , food habit, attire ,composite culture ,diversity identity &spatial differences are main factors to promote the prosperous human development. Environment & human development are complimentary &inter-dependent factors. Both are developed by good human initiatives. Climate is a prominent factor regarding global environmental issues e.g. global warming ,climate change , ozone depletion, pollution, genetic disorder ,natural threat like drought, tsunami, flood, cloud bursting, soil erosion, landslide, carbon emission etc. Process of environmental change nearly 4500 BC Since the earth first came into existence. The main component of change in history of environmental change- Volcanoes, Earthquake, Wind, Ice, Water, Plant & Animal. Human being who evolved 40-50 lac years ago.

2. STUDY AREA :- Whole earth is the study area of these research paper. The description and the discussion of all the countries as well as India where the effects of environment are become to see.

3. Aims :- The Aim of these research paper is that the description between the interrelationship of Environment and human development. I many countries we see. the effect of Environment on human being and human being is also suffers for this. In his own development, man destroy and harm to Environment and its results are in present by the imbalance of ecosystem, flood Earthquake etc.

4. Numerous aspects of Environment.

- The Human Is Not Only The Product Of Environmental But Also The Creator & Changer Of It.
- Contribution of CO₂ at Globe.

S. No.	Country	CO ₂ Emission
1	America	22%
2	China	17%
3	India	4.1%
4	Russia	6%
5	Japan	4.75
6	Austrelia	1.4%
7	Europe	17.2%

Source-Pratigyogita Darpa

- The Process Of Industrialization & Urbanization Has Numerous Problems :
- A. Change In Sea Level
- B. Acid Rain
- C. Salinity
- D. Ozone Depletion
- E. The Loss Of Biodiversity
- F. Ecological Imbalance
- G. Global Warming

The Murals of Paleolithic Period &Pre-Literate Age Show an Integral Relation between Men & Environment. The Main Cause Of Acid Rain :

- a. Excess Use Of Hydrocarbon
- b. Deforestation
- c. Increasing No. Of Vehicle
- d. Industrial Discharge

➤ Following are the Impacts Of Acid Rain also

- a. On Lithosphere
- b. On Hydrosphere
- c. On Atmosphere
- d. On Biosphere

There are some Internal & External Factor Of Climate Change:-

- A. Change in Solar Radiation- External Factor.
- B. The Adjustment between Atmospheric Circulation & Temperature in Earth.

- C. Human Activities
- D. Green House Gases

1.4 – 1.5 Lac Years Ago Since Today, The Last Ice Cover Depleted from the Earth .Wide Spread Environmental Changes Took Place. Becoming Ice Depletion in Mid & High Latitude in Time of Civilization & Cultural Development. In Paleolithic Period, Humans Are The Integral Part Of Ecosystem. Nearly 1000 BC, In Neolithic Period, Started Rearing The Cattle & Plants. Discovering Of Fire, Wheel & Agriculture Changed All Physical And Cultural Landscape. Since 1850 To 1920, European Inhabited In North Africa, North American & Australian. Effects of Mining on Water, Land & Air Severely. Using Fossil Fuel, Green House Effects Are Increasing. Combustion Of Hydrocarbon And Industrial Chemical Are The Main Causes Of Environmental Pollution. Descriptions to all possible environmental issues are undernoted:- (A)Global warming refers to the rising average temperature of the earth’s atmosphere & its related efforts.

The earth is warming , from north pole to south pole .The earth’s average surface temperature increased by about 0.8 (1.4) .Climate model projections are summarized in 2007 fourth assessment report by the IPCC(Intergovernmental Panel on Climate Change). It is very dangerous that during the 21st century the global surface temperature is likely to a further 1.5 to 1.90 C Global warming is not only melting glaciers and sea ice but also shifting precipitation patterns &setting animals. There are so many changes between environment &human relationship :-

- Glaciers are melting worldwide. It includes pole ,mountain, ice sheets, in west Antarctica , Greenland &arctic sea ice.
- Reduce the no. of Adeline Penguins on Antarctic, where numbers have fallen from 32000 breeding pairs to 11000 in 30 years .
- Rise of sea level.
- Some butterflies , foxes and alpine plants have moved farther north or to higher latitude, cooler areas .
- The pattern of precipitation has changed worldwide.
- Anomaly in Geo-biochemical cycle, food chain &food web.
- No. of natural hazards & Disasters shall become more common e.g. Flood, hurricanes, droughts, tsunami, landslide & cloud bursting. 8.
- Scarcity of fresh water due to ice melting. 9.
- Extinction of plant & animal communities. 10.
- Disturbance in ecosystem worldwide.

CLIMATE CHANGE

Rising level of greenhouse gases :-

1. The earth’s atmospheric gases:-

- (A) Non greenhouse gases (>99%)
- (B) GREEN HOUSE GASES (<1%)

Main Green House Gases:-Carbon Dioxide, Methane, Nitrogen, So2, CFC, Water Vapor, SFC, Hcfc, O2, PFC.

G.H.G. is divided into two categories :-

(A) Natural G.H.G. – CO2, METHANE, N2O, OZONE, WATER VAPOR

(B) Manmade G.H.G.- Hydro fluorocarbon(HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride(SF6), CO2 & CFC etc.

Different G.H.G. Have very different heat-trapping abilities. Some of them can even trap more heat than CO2 e.g. methane, nitrous oxides, CFC etc.

Table 1. Emission By Five Top Ranking Countries

Rank	Country	Years			
		1980	1990	2000	2009
1.	China	14448.46	2269.71	2849.75	7710.5
2.	U.S.	4776.57	5041	5861.82	5424.53
3.	India	291.23	578.62	1002.95	1602.12
4.	Russia	Na	Na	1556.1	1572.07
5.	947.01	1046.98	1201.43	947.01	1097.96
	World	18433.92	21615.99	23803.63	30389.42

Table 2: Per Capital Emission of Select Countries

Rank	Country	Years				
		2005	2006	2007	2008	2009
1	China	4.25	4.46	4.78	5.17	5.83
2	U.S.	20.26	19.81	19.96	19.16	17.67
3	India	1.08	1.16	1.23	1.29	1.38
4	Russia	11.58	11.79	11.69	12.07	11.23
5	Japan	9.73	9.72	9.72	9.55	8.64
	World	4.38	4.42	4.5	4.51	4.49

Source: www.guardian.co.uk, data:vs energy information administration, 2011

➤ Main Sources Of Methane :

- a. Garbage
- b. Paddy Field
- c. Sea Water
- d. Glaciers
- e. Bacterial Decomposing
- f. Bacterial Process in Animal Intestine.

SO₂ & NO₂ are important factors for acid rain which are produced by burning of fossil fuels. Acidity produce minimum amount in cloud .Minimum value of water is 2.6 Ph. Approximately 20% Savanna Grassland on earth. Main causes of climate change are as follow: Industrialization, Fossils Fuels, Deforestation, Fast Urbanization, Human Activities, Encroachment in ecosystem, ecological imbalance, lack of environmental sustainability, forest fire. According to World Commission On Environment And Development (WCED), approximate 18-35 % species of plant & animal will be extinct by 2030. Climate changes effects approximate 670 core populations which depends on

agriculture, directly or Indirectly. Major problems caused by climate change are as follow: Lack of quantity of food grain, Season Change in flowering, biodivertic change, shrinking Of Wet Land, change in reproduction cycle in livings, untimely Migration in bees, Genetic disorder in fishes, Regional And Periodic imbalance in rain, genetic & physical disorder in animals & plants. According to IPCC (Inter Governmental Panel On Climate Change) revelation the major glaciers across the world are melting gradually due to climate change. According to International Union of Conservation of Nature & Natural Resource (IUCN) is published that 16306 species are on the Berge of extinction. Due To Climate Change, Human Will Directly Be Effectd And Some Various Problems Will Occurs Like Drought, Flood, Landslide, Earthquake, Volcanic Eruption, Tsunami, Cloud Burst, Forest Fire, Epidemic, Diseases, Poverty, Unemployment, Illiteracy, Economic Imbalance, Cyclone, Malnutrition, Food Insecurity, Vicious Cycle Of Poverty, Imbalanced Development Etc. Due To The

- Degradation of Savanna Grassland:-
 - a. Over Grazing
 - b. Due To Forest Fire
 - c. Mismanagement Of Land
 - d. Social, Economic, Cultural, Historical Factors Also.

Main Disease Caused By Ozone Depletion: Skin Cancer, Cataract, Immune System, Infectious Disease (Communicable Disease). Supersonic Planes Release NO_2 In Atmosphere Which Causes Ozone Depletion.

- Main Attributes Of Ozone Depleting Gases
 - a. Non Toxic
 - b. Non Inflammable
 - c. Chemical Inactive
 - d. Absorption Of Ultra-Violet Rays

- Uses Of Ozone Depleting Gases :
 - a. Sankhiya
 - b. Refrigerator
 - c. Prop lent
 - d. Cleaning Of Electrical Equipment
 - e. Making Of Foam Plastic

Note: Particles Ozone Depleting Gases Are Insoluble In Atmosphere Till 100 Years.

Diseases Caused By Contaminated Water Are As Follow:-

- a. Typhoid
- b. Cholera
- c. Diarrhea
- d. Dysentery

One Major Health Problem Occurred in Indonesia, Malaysia, and Philip hens Caused by Sewage of Water Which Has Large Amount of Nitrate, Phosphate & Cadmium. Origin Of Hydrogen Sulphide & Methane Is Caused By Dumping Of Garbage In Various Cities Across The World. Components Of Industrial Garbage Are As Follow:

- a. Solid Garbage
- b. Chemical
- c. Synthetic Mixture
- d. Hot Water
- e. Detergent
- f. Radioactive Waste
- g. Heavy Metallic (Mercury, Nickel, Cadmium, Led, Etc.)

In Japan, Due To Leakage Of heavy metal (mercury) in ocean water led to major death of Marine Animals & Human Also. In Atomic Garbage, Radioactive Isotopes Are Present Which Produce Large Amount Of Heat & Sustain Thousand of Years. It Is a General Diseases like

Leukemia is found near Atomic Reactor Region. Pesticides And Chemical Fertilizers Are Dangerous To The Eco-System Which Is Used For Increasing Production Of Crops. Indians Council Of Research (ICMR) Proved That Due To Excess Use Of D.T.T. In Agriculture Fields, Lead, Copper, Zinc, Cadmium Etc Are Found In Cow Milk.

- Impact of Climate Change
 1. On Forest
 2. On Biodiversity
 3. On Agriculture
 4. On Coastline
- Climate Change Impact in India :-
 1. RAJASTHAN- DROUGHT,
 2. RANN OF KACHCHH-SEA LEVEL RISE,
 3. MUMBAI-SALT WATER INTRUSION,
 4. KERALA-PRODUCTIVITY OF FOREST,
 5. TAMILNADU- CORAL BLEACHING,
 6. GANGA- SEDIMENTARY PROBLEMS,
 7. SUNDERBAN-SEA LEVEL RAISE,
 8. NORTH-WEST INDIA-REDUCTION IN RICE YIELD,
 9. KULLU VALLEY (H.P.)-Experienced a number of crop failures in last 15 years. Apple belt has moved 30 km. (northwards).
 10. FOREST RESOURCES WERE REMOVED,
 11. Source of various rivers in India in danger of losing existence,
 12. According to a U.N. CLIMATE REPORT, the shrinking glaciers also threaten Asia's supply of fresh water.

Global Impact of Climate Change:-

1. The largest glacier on mt. Kenya has lost 92 its mass,
2. Sea levels have risen by 10-25 c.m.,
3. The thickness of sea ice in the arctic has decreased by 40,
4. The common Murre has advanced breeding by 24 days per decade over the last 50 years in response to higher temperature,
5. The Baltimore oriole is shifting northward and may soon disappear entirely from Baltimore area, Polar bear population are coming under threat as food becomes harder to hunt, The impact of climate change are not evenly distributed- Every place & people will suffer in future, so we are forced to look a long way ahead . The impact of climate change is not evenly distributed Every place & people will suffer in future, so we are forced to look a long way ahead. Climate change is expected to particularly affect certain ecosystem, including tundra, mangroves & coral reefs. Overall, it is expected that

climate change will result into the extinction of many species:-

Social System:-

1. Adverse effects on Small Island.
2. Adverse effects on indigenous population in high latitude areas.
3. Small but discernable effects on human population.
4. Over the 21st century, climates change is likely to Adversely affect hundreds of millions of people through Increased coastal flooding, reductions in water supplies, Increased malnutrition and increased health impacts.
5. Economic (market sector) effects. (Burden on common people).
6. Cultural effects (language, dialect, religion, attira, ethnic Group.)
7. Solar activity may be slowing, and that the next solar Cycle could be delayed.

India, Initiative:-

8. Signed Unfcc On 10thjune 1992.
9. India Ratified The Kyoto Protocol.
10. India Has A National Action Plan On Climate Change.
11. A. National Solar Mission
12. B. National Mission For Enhanced Energy Efficiency
13. C. National Mission For Sustainable Habitat.
14. D. National Water Mission
15. E. National Mission For Sustaining The Himalaya Ecosystem.
16. F. National Mission For Green India
17. G. National Mission For Sustainable Agriculture.
18. H. National Mission On Strategic Mission On Climate Change.
19. I. India Has A Well Developed Policy, Legislative Regulatory & Programmatic Regime.
20. J. G. For Promotion Of Energy Efficiency

CONCLUSION:-

Environment can determine the growth & development of human civilization & culture . It decides the economic growth & govt. Policy. Nature gifts huge resources for human. But human being is destroying our resource by excessive exploitation. Man is approaching towards cut-throat competition at any cost for development. So we

must protect our natural as well as human resources . To save the earth, ought to be our prime aim. To imagine the environment, without plant & animal community , is very impossible . So we should change our attitude towards nature & maintain ecological balance. Otherwise our whole environment will collapse within blinking.

REFERENCES:

1. Costanza,R...et. al. (eds) (2000): Institution, Ecosystem and Sustainability, London, Routledge Publisher (U.K.).
2. Burroughs, W.J. (2007) Climate change: A multidisciplinary Approach (Iled.),Cambridge University Press,Cambridge.
3. Sen,A. 1999: Poverty & famines,Oxford University Press Delhi, India.
4. Burroughs,W.J. (2007)climate change: A multidisciplinary Approach (Iled.),Cambridge University Press, Cambridge.
5. Panwar, Mohan Singh, 2007: Environmental Change and sustainable development in New Millennium, Delhi.
6. Intergovernmental Panel on Climate change,2007: The Physical Science Basic,p.13,Delhi 7. Singh, Arvind, 2006: Global Warming, Yojana,pp.45-47,New Delhi 8 Pratiyogita Darpan, 2011-12 :All issue related to environment, Agra, U.P.