



Climate Change in Saharsa District: A Geographical Study

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Abstract :

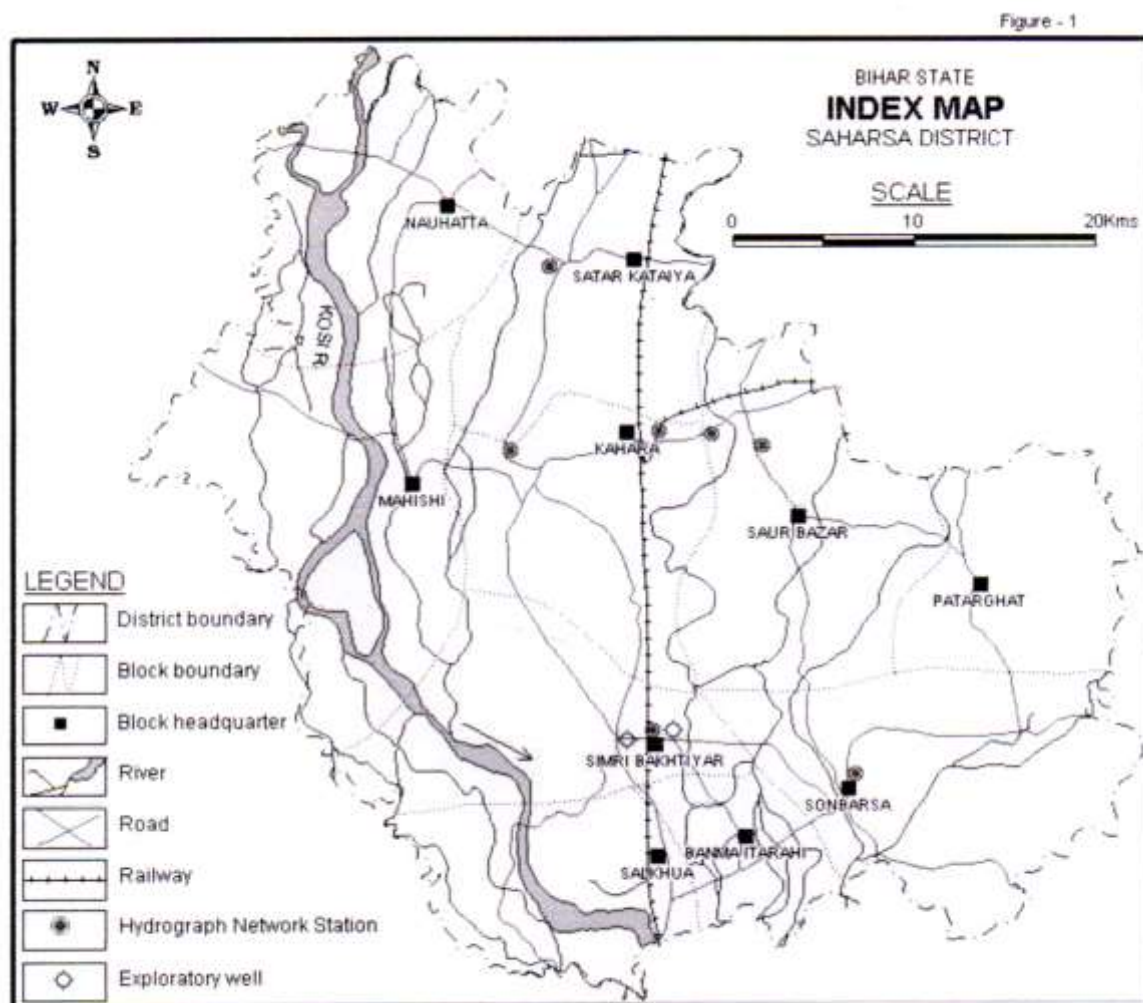
Nearly every ecosystem, tree and animal helps produce Earth's climate. Climate change is a change in the statistical distribution of weather patterns when that change lasts for an extended period of time (i.e., decades to millions of years). Climate change is caused by factors such as biotic processes, variations in solar radiation received by Earth, plate tectonics, and volcanic eruptions. Certain human activities have been identified as primary causes of ongoing climate change, often referred to as global warming. There is no general agreement in scientific, media or policy documents as to the precise term to be used to refer to anthropogenic forced change. There are two causes of climate change – natural causes and human activities. Natural causes have influenced the earth's climate such as volcanic eruptions, ocean currents, the earth's orbital changes and solar variations. The eruptions of volcanoes cause a cooling effect on the earth. When a volcano erupts it throws out large volumes of sulphur dioxide (SO₂), water vapor, dust, and ash into the atmosphere. The volcano eruptions will affect the climate pattern for years although the eruptions occur in a few days the sulphur dioxide gas will reach the upper level of the atmosphere. The tiny particles, dusts and ashes will block the incoming sun rays. This will lead to cooling at the atmosphere. This is because the blocking of sunlight to the space is cooling the atmosphere of the earth.

Keywords :- Climate, Soil, Gases, Global Warming, Land use

Introduction

Saharsa is one of the thirty-eight districts of Bihar state. Saharsa town is the administrative headquarters of this district. The district is a part of a larger territory, the Kosi Division and it became a district on 1 April 1954 and subsequently has become smaller with other districts being carved from it, most notably Madhepura in 1981. The area of the district is 1,645 km. The Kosi River flows at the western boundary of the district. The district comprises two sub-divisions, namely Saharsa Sadar and Simri Bakhtiarpur, and ten blocks, namely Nauhatta, Simari, Bakhtiyarpur, Salkhua, Kahra, Mahishi, Sonbarsa, Saurbazar, Patarghat, Sattar,

Kateya and Banma Itahari, According to the 2011 census Saharsa district has a population of 1,900,661 (Female: 997, 174 and Male:- 903, 487)



The bulk of the population (1,744, 121) lives in rural areas and the urban population makes only 8-24% (156, 540). Population density of the district for 2011 is 1,127 people per sq. km. There was change of 26.02% in the population compared to population as per 2001. With regards to Sex Ratio in Saharsa, it stood at 906 per 1000 male compared to 2001 census figure of 910. Average literacy rate of Saharsa in 2011 were 53.20% compared to 39.08 of 2001. If things are looked out at gender wise, Male and female literacy were 63.56 and 41.68 respectively.

Aims and Objectives :-

Presents study has following aims and objectives

- (i) To study the climate change in saharasa district
- (ii) To find study the natural cause and human achvities of climte change in saharasa district
- (iii) To study the cause the climate change in saharasa district
- (iv) Examination of the land utililazation in saharasa district

Methodology :-

The present study based on secondary data collected from climate department of saharasa district Various statistical and cartographic methods has applied where ever needed. The present research study based on both primary and secondary data. The primary data collected through personal observation, interview, questionnaires schedule etc. while the secondary data collected from concerned district or block headquarters, Map and diagrams, graphs etc. have been widely used in this research papers.

Discussion and Analysis:-

The atmosphere is a thick gaseous envelope which surrounds the earth's surface by gravitational force. Besides providing all the necessary gases for the sustenance of life it is also helpful in the sense that it filters the incoming solar radiation waves to reach the earth's surface and thus protect the earth from becoming too hot. The height of the atmosphere is estimated between 16 to 29 thousand km from the sea level But 97% of the effective atmosphere is upto the height of 29 km The atmosphere is composed of (i) Gases, (ii) Water vapours, (iii) Particulate matters.

Gases – Nitrogen (78%) and oxygen (21%) are the chief components of the total gaseous composition of the atmosphere. The remaining 1% is represented by argon (0.93%), carbon dioxide (0.03%) neon (0.0018%), helium (0.0005%), ozone (0.00006%), hydrogen is the most important one because it is essential for Combustion of burning matter

Table

<u>Sl no</u>	<u>Gasses</u>	<u>Percentage</u>
<u>1</u>	<u>Nitrogen</u>	<u>78%</u>
<u>2</u>	<u>Oxygen</u>	<u>21%</u>
<u>3</u>	<u>Argon</u>	<u>0.93%</u>
<u>4</u>	<u>Carbon Dioxide</u>	<u>0.03%</u>
5	Neon	0.0018%
6	Helium	0.0005%
7	Ozone	0.00006%
8	Remaining	1%

Water Vapour – The vapour content in the atmospheric ranges between 0-5% by volume. The atmosphere vapour is received through the evaporation of moisture and water from the water bodies, vegetation and soil covers The content of vapour in the surface air in the moist tropical area, at 50 and 70 latitude are 2.6%, 0.9% and 0.2% but volume respectively. The content of vapour decreases upward more than 90% of the total atmosphere vapour is found upto the height of 5 km The moisture content in the atmosphere creates several forms of condensation and precipitation e.g. clouds fogs dew, rainfall, frost hail storm ice, snowfall etc. It also absorbs terrestrial radiation and thus helps in heating of earth's surface.

Particulate Matter- There include dust particles salt particles, pollen smoke, volcanic ashes etc. Most of these particles are kept in suspension in the atmosphere. These particulates help in the scattering of solar radiation which adds varied charming colour of red and orange at sunshine and sunset. The sky appears blue in colour due to selective scattering of the

solar radiation by dust particles. Salt particles become hygroscopic nuclei and thus help in the formation of water drops, clouds and various form of condensation and precipitation.

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