



## THE IMPACT OF CLIMATIC CHANGE ON NATURAL RESOURCES: A BRIEF STUDY

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### ABSTRACT

Resource, the starting material from the natural origin named as natural resources and transformed by various methods from biotic and abiotic components of the ecosystem that maintains the ecological homeostasis within the environment. Among climatic factors of the abiotic components affects the various components of the natural resources as in land, water and up to some extent biodiversity. With the global warming, the climatic change occurs consequently productivity decreases and flora fauna of the earth diminishes.

### KEYWORDS:

#### Introduction:

In today scenario, matter creates world and useful for man but that can be transformed naturally and man-made by the human for daily use. The transformation of new useful products from the existed products naturally referred as resources or "natural resources". Basically, natural resources obtained from two components of the environment biotic and abiotic and named as biotic resources and abiotic resources respectively. A biotic resource, i.e.; resource obtained from the producers(plants)by derivation whether directly or indirectly by photosynthesis. Such as food, wood, meat, dairy products, fibres, etc. are the biotic resources. In abiotic resources, resources are derived from biotic resources but without the biological activity during formation after sometimes such as millions of years as in fossil fuels, rock salts, chemicals and so on.<sup>1,2,3,4</sup>

Biotic and abiotic resources are derived from the source that supports and supply the chain within the ecological balance or ecological homeostasis. These sources acted as resources on the basis of their origin in physically as well as chemically. Chemically, resources are of organic (organisms and its products) and inorganic (minerals, water) as well as mixed (soil). Renewable (having a capacity to reappear or replenish themselves) and non-renewable (which lack the capacity to replenish and recycle itself) resources are based on its abundance and availability.<sup>5,6,7,8</sup>

Within the abiotic resources, factors such as temperature, rain, climatic change adversely affects the productivity and its abundance in environment. Climatic factors mainly affect the land, water and biodiversity which disturbs the ecological homeostasis and will create disturbances on the geographical origin which further creates a drastic condition for the ecosystem and hinders the natural resources as a result.

#### Land as a resource:

Land is the prerequisite condition for the development of commercial and industrial development.<sup>9</sup> With these development forest and arid areas shrinks which is unique and integral part for agricultural and productivity management whether by governmental and non-governmental organizations. Because of the reduction of forest and arid areas climatic variations occurs which affects the land productivity, species composition as well as disturbances created by the frequency and magnitude of horizons. With climatic change flora and fauna also affected physiologically which changes temperature, frequency and intensity of precipitation by affecting the organism. Climatic variations affect mainly in these ways:

- Soil fertility increases the wood productivity with increase in photosynthetic process due to rise in carbon dioxide levels.
- Trees mortality enhanced due to combined effects of high

temperature, pests, pathogens and droughts.

- In carbon cycle, carbon loss rises that shuffles soil erosion in arid areas.
- Exotic grass species and more frequently wildfires invasion occurs especially in arid areas with more intense thunderstorms.

#### Water as a resource:

Freshwater get affected due to the dependence of human and natural system directly on it. With slight climatic change water quality and storage affects with the rise in temperature mostly in drought areas which significantly affects the water management and futuristic approach in terms of planning and productivity. Climate affects water quality and quantity as given below;

- Stratification rises in water bodies with oxygen concentration abruptly diminishes in bottom by directly affecting habitat qualitatively.
- Stream temperature affecting the species of marine organism as a culture or aquatic ecosystem with temperature rise or climatic warms.
- In watersheds, migration of carbon and nitrogen enhanced with the shifting in land use.
- Annual run-off increase as per geographical differences.
- Average precipitation and stream flow increases and decreases in drought areas mostly seen.<sup>10</sup>

#### Conclusion:

Climatic change creates a situation as drought and stratification in some areas of forests and arid land and water that are resources of natural resources. Consequently, drastic changes occur and results in to global warming.

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