

IMPACT OF HUMAN ACTIVITIES ON WETLAND: A STUDY FROM LAKHANI
VILLAGE, BHANDARA DISTRICT, M. S; INDIA.

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ABSTRACT

The investigation about the impact of human activities on Lakhani village area. The area is situated 21.4° N Latitude and 29.49° E Longitude. The total geographical area of Lakhani village is 09 Km² and the population density of the village has increased by 5.1 % in last 10 year. The main human activities are use of wetland area in surrounding ecosystem, so they came disturbances in physical, chemical and biological processes in our ecosystem and regulating climatic condition. The present study revealed on the impact of human activities on functioning purposes like construction of houses, roads, small drainage, uses of agricultural land etc. Due to the human encroachment, the area of wetland decreases day by day. This effect on disturbing landscape function, cycling of carbon, water, and nutrients, water purification, regulation of flow, supports for animal migration etc. and increasing the risk of extreme event like floods, drought etc.

KEY WORDS: Population, Density, Ecosystem, Wetland.**INTRODUCTION**

The wetland are sometime describe as "the kidneys of the landscape" for their function. They perform in hydrological and chemical cycles and as downstream receivers of wastes from both natural and human sources. (Mitch & Gosselink 1986). Presently Lakhani village has an estimated area 367.29 hectors under wetland. The geographical area is about 867.29 hector. Its population is about 13000, the area of Lakhani village is surrounded by small riverine stream on all sides, at west sides in center position the land of lake about 17000 sq. feet. Nearer to lake paddy field and wetland are situated. Several fish ponds and picnic spots name Oxigen Park is also near to lake. The annual rain fall recorded at said year is about 1500 mm. The lakhani village comprise large number of ponds, swamps, marshes, all water bodies comprise a waste sheet of water with varying shape size and depth with rich flora and fauna.

MATERIALS AND METHOD

The study is based on primary and secondary data collected from various sources visiting and collecting the information from village people and district division of numerical office. The wetland of Lakhani village selected due to the urbanization, to occupies the wetland area use for human welfare in different role in functioning of ecosystem.

OBSERVATION

Wetlands are the area of land where the water level remains near or above the surface of the ground for most of the year. Last 10 year ago the population of village is about 13000, but today riches nearer to 20000, so it is the biggest village by area of Bhandara District. Population density of the village is 1457 persons per Km². Population of the village has increased by 5.1 % in last 10 years. This is due to urbanization. It is observed that the wetland is encroached by different activities of human because of their settlement, for living purposes, for getting money human come from different places of district area of Bhandara, and live in proper place of Lakhani, that is why the geographical area of Lakhani is about 9Km² is decrease today. Hence the village area of Lakhani is come near to other village area near to Manegaon, Gadegaon and Kesalwada from west to east, also Seloti village toward North and Murmadi, Sawari village toward the south. Last 10 year ago the lake of Lakhani is the green beauty, but today, due to the increasing the population of this village by constructed houses, to developed transport system, road is also constructed in wetland area, this cause, wetland area of lake and agriculture decrease rapidly.

RESULT AND DISCUSSION

The human encroachment on wetland area will also be harmful in near future. If the encroachment will continue, then there will be disappear of wetland. It will create imbalance in the nature eg. Environment will be

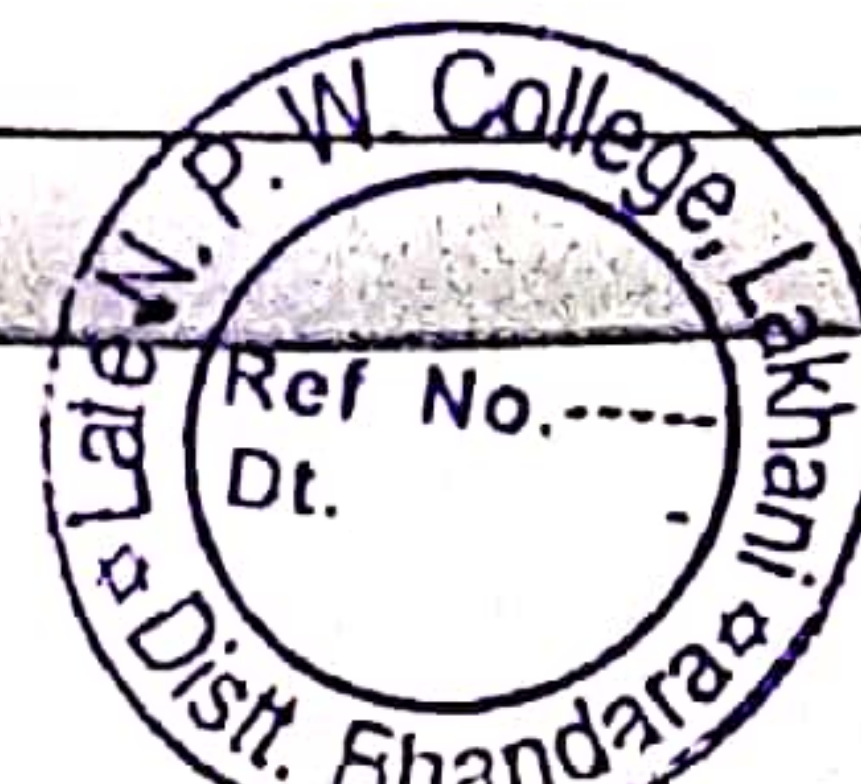
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more polluted because wetlands are working just like a filter for the environment. Carbon dioxide gas will increase and temperature of air will also increase. They will create several diseases like asthma, bronchitis, paralysis of brain, body aches etc. to human.

The life of home land aquatic birds like sparrow, crow will also affect. Today the bird like vulture- *Gyps bengalensis* and crane are not seen everywhere.

The plant of various family like Cyperaceae- the species of the genus *Carex* like, *Carex jackiana*, *C. leucantha*, *C. longicruris*, *C. baccanus*. Some species of the genus *Cyperus* like *C. scariosus*, *C. pulchellus*, *C. polyanthellus*. Some species of the genus *Eleocharis* like *E. dulci* today are rare in wetland of Lakhani village. The stem and tuber of *E. dulci* is eaten by tribal people, it's a staple food. The tribal people sold a tuber of *E. dulci* in the market to get money. The tuber of *E. dulci* locally called as kacharu.

The grasses of wetland plant like, *Glyceria canadensis*, *G. borealis* locally called as Jav, *G. grandis*, *G. striata* locally called as Parsodi. The grasses Cattail *Typha* family *Typhaeaceae* are totally vanished.

Use of chemical fertilizer and pesticide in the agricultural field around the wetland are also contributing water pollution and over fishing in less area occupying lake of village affecting the aquatic animal like fish *Clarius batrachus*, *Ophiocephalus*, *Lepidosteus* (Garpiki), *Anguilla*: Eel and *Viviparus* and various animal affected by encroaching the activities of human being. Similar studies are also put by different researcher are mentioned, through wetland contribute about 40% of global methane (CH_4) emissions they have the highest carbon density among the terrestrial ecosystem and relatively greater capacities to sequester additional CO_2 , (Pant et. al. 2003). Runoff from agricultural field is the major source of nonpoint pollution for the Indian River flowing through Indo-Gang etic plains (Jain et. al. 2007). Water in most Asian river, lakes, stream and wetlands has been heavily degraded, mainly due to agricultural runoff of pesticides and fertilizer, an industrial and municipal waste water discharges all of which causes widespread eutrophication (Liu & Diamond 2005). Due to human encroachment on land they disturb the ecosystem and decreased the wetland geographical area (Sarma P. 1993).

The present study is to investigate that human activities are using wetland area for different purposes, which make direct impact, result from disturbances that occur within the wetland. Common direct impact to wetland include filling, grading, removal of vegetation, road and building construction and also change in water levels and drainage patterns, overfishing, which decreases the total geographical area of wetland due to a human encroachment, which cannot control pollution of surrounding environment. These disturbances can be

controlled by state and federal wetland regulatory programs. Wetland protection can be provided by a water shade management plan under local implementation to stop such disturbances come out from human encroachment.

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