

Resource dependency and attitude of local people towards Ekana Wetland

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ABSTRACT:

Wetlands are distinct type of ecosystem that are flooded by water either seasonally or permanently or are completely saturated with water. The study which is carried out in Ekana wetland on the basis of questionnaire about 75% people are in favour of wetland protection and 25% are not in favour of wetland protection. This wetland is used for Aquatic Food, Drinking, Irrigation, Fuel wood, Timber, Medicinal plants, Religious, Cultural Values and Construction material in moderate proportion. Excessive tourism is seen there in Ekana Wetland. Fishing is seen in lesser proportion. Mastemau village people need wetland for various purposes like 60% people considered wetland as a source of livelihood, 20% people considered wetland as satisfaction of aesthetic needs, 15% people considered wetland as satisfaction of social needs and 5% people considered wetland as satisfaction of psychological needs.

Key words: Wetland, Aesthetic needs, Social needs, Psychological needs, Satisfaction

INTRODUCTION:

Wetlands serve a variety of important purposes, including recycling nutrients, purifying water, reducing floods, preserving stream flow, replenishing groundwater, and providing drinking water, fish, fuel, fodder, and wildlife habitat. They also regulate the rate of runoff in urban areas, protect shorelines from erosion, and provide recreational opportunities (Prasad *et al.*, 2002). Wetlands are specialized ecosystems with numerous ecological, socioeconomic, and cultural assets that carry out crucial ecological tasks (Ambiya *et al.*, 2016). Wetlands have great nutritional production, a wide variety of water bird species can be found there. One of the planet's most common life forms, birds' variety contributes to its beauty and abundance of life (Ambiya *et al.*, 2016). Aside from this, people have always been captivated by birds because of their exquisite feathers, lovely songs, and artistic behaviors (Shreshtha, 2000). Humans can benefit from a wide variety of products and services that wetlands offer. Although these services result from ecosystem processes and functions, they should not be mistaken with them (Mace *et al.*, 2012). The ability of ecosystems to provide a service is represented by functions, which are dependent on ecological processes and structure (Groot *et al.*, 2026). The advantages of these services are numerous. For instance, food serves as a source of nourishment as well as enjoyment and occasionally even social identity; clean water may be utilized for drinking as well as swimming and other activities that fulfill needs and desires (Groot *et al.*, 2026). Writings from the Roman era on the rise in population and fall in what we now refer to as ecosystem services are part of the centuries-old understanding and study of the connections between the environment and human happiness (De Groot *et al.*, 2010). Urban planners might start by inventorying the city's resources (natural areas, lakes, rivers, etc.) and how they are arranged (corridors, distinctive buildings, etc.) and evaluating their distribution, abundance, and potential issues. Strategies for conserving and using resources may be developed once they have been recognized on a city-wide basis. Local resources and limitations should be taken into consideration in such plans. Local initiatives that target certain goals will emerge around such limitations or possibilities. For instance, planting trees in a residential area can enhance the amount of flora and, consequently, the diversity of insects and birds (Savard *et al.*, 2000).

Materials and Methods:



Ekana Wetland is situated in Lucknow which is the capital of Uttar Pradesh. Lucknow city is surrounded by rural towns and villages: the orchard town of Malihabad, Kakori, Mohanlalganj, Gosainganj, Chinhat and Itaunja. In contrast the CG city Ekana wetland is surrounded by Ahmamau, Chakganjaria, Bagiamau, Chandrawal, Golfcity, Malesmau, Sarsawan and Gomtinagar. The Geographic coordinates of Ekana Wetland are 26.8113°N 81.0154°E. Ekana is located behind the Atal Bihari Vajpayee Ekana Stadium. Ekana wetland is one of the small natural, perennial wetlands situated beside the Gomti River. The study area involves Ekana wetland and its associated areas up to 50 km. This study presents the waterbird diversity of Ekana wetland where surveys have been conducted for two years and studied on the basis of interaction with local people and questionnaire in favour of wetland or against. By observing wetland helps the researcher to gain first hand understanding of the ecosystems. Direct observation provides accurate & current information that secondary data alone can not give.

RESULTS :

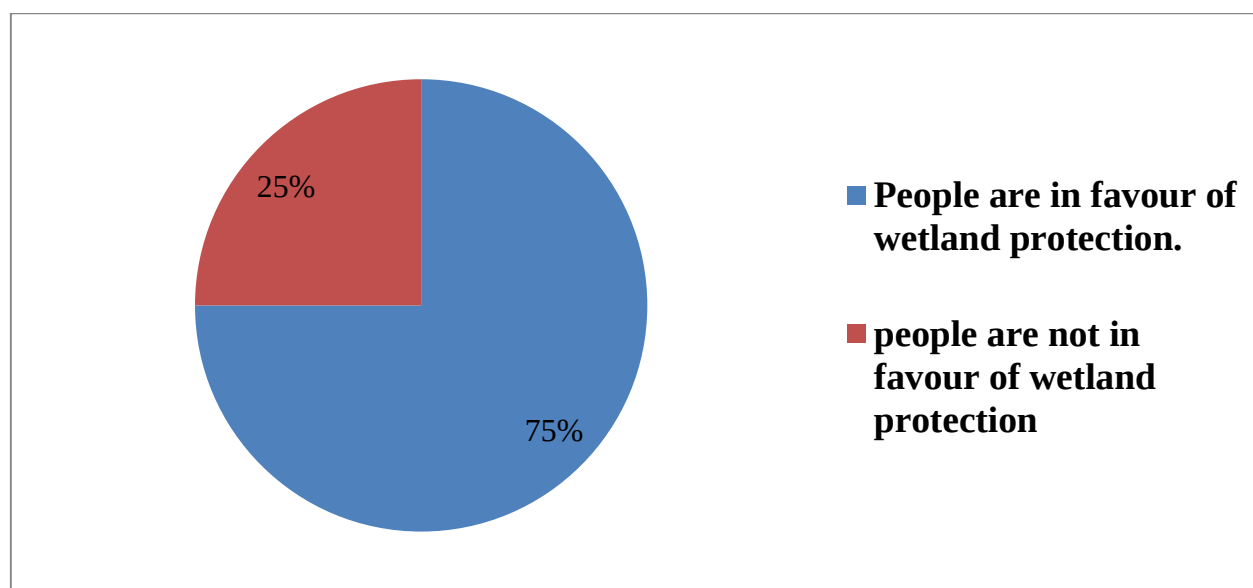


Figure 1: Attitude of local people towards wetland protection based on interaction and questionnaire survey

About 75% respondents were in favour of wetland protection. Local people of Mastemau village reported that Ekana Wetland is a good place for their pets where they use the wetland as a source of resources for their livestock. Village people also get fish there. They are aware of some of the functions of wetland and 25% respondents are not aware of the actual functions of Wetlands. They think that wetlands should be filled with soil. Companies and Industries should be built there so that their employment can continue

Table 1: Major uses of Wetland

S.No	WETLAND USES	HIGH	MEDIUM	LOW
1.	Aquatic food		✓	
2.	Drinking and irrigation		✓	
3.	Fuel wood, Timber, Medicinal plants		✓	
4.	Tourism	✓		
5.	Livestock feed		✓	
6.	Religious and cultural value		✓	
7.	Construction Material		✓	
8.	Fishing			✓

Among these uses, tourism was reported as high-level use, whereas aquatic food, drinking and irrigation, fuelwood, timber and medicinal plants, livestock feed, religious and cultural values, and construction materials were categorized as medium- level uses. Fishing was categorized as low -level use. These findings indicate that the wetland provides multiple resources and supports the livelihood and socio-cultural needs of the local community.

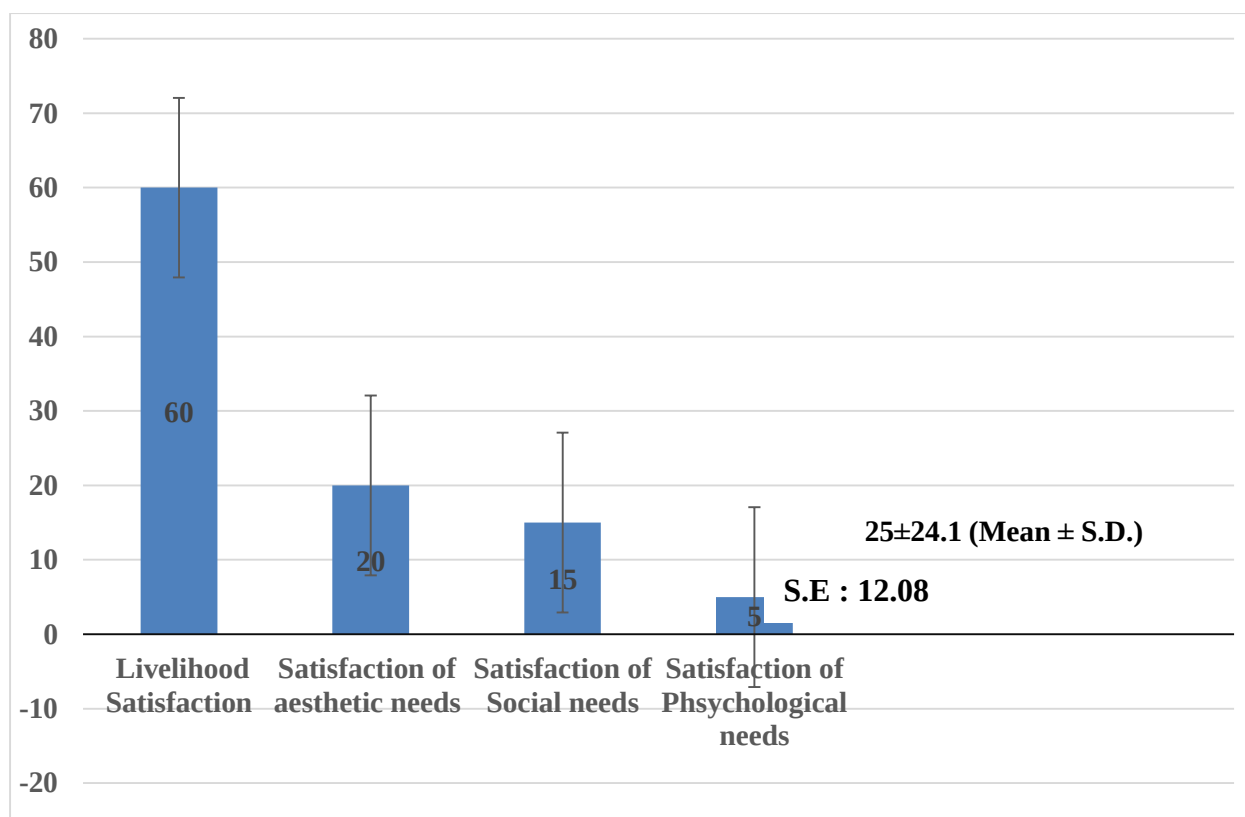


Fig 2: Mastemau village people need wetland for various purposes:

60% people considered Wetland as a livelihood satisfaction for Mastemau village people and Water Bird. This Wetland is used for the fulfillment of local inhabitants needs.

5% people considered Wetland as Satisfaction of Psychological needs. They need wetland to share love and feeling of belonging. Wetland reduces stress, lowers anxiety and instills a sense of calm by sitting near wetland. It is just like an aerobic exercise.

15% people considered Wetland as Social needs because they with their neighbour go to wetland and bring fuel and fodder from there. So, this Wetland serve as a need for social interaction.

20% People considered Wetland as a satisfaction of aesthetic needs because Wetland also become melodious with diverse call of Water Birds. Pleasure and enjoyment can be gained through taste of wild fruits, softness of moss and grass beds which help rejuvenate human beings to overcome stress and lead a healthy life.

Table 2:Types and quantities of wetland product harvested

S.No	On daily basis	Summer	Winter
1.	Fodder	15.1	24
2.	Fuel wood	8.1	21
3.	Construction material	10.5	17.7
4.	Quantity of fish caught	10	15

Paired T test value comes 0.007327 which is lesser than p value 0.05 and it is statistically significant.Mean value is calculated from raw data in which fodder is used in highest quantity followed by fuel wood, construction material and fish caught etc. It is done by the information collected by the people from Mastemau village near Ekana Wetland.

DISCUSSION:

Wetlands are highly productive and diversified, but vulnerable ecosystems. Wetlands and waterbirds are inextricably linked and hence comprise a diverse range of waterbird populations. Water birds are an important component of most of the wetland ecosystems as they occupy several trophic levels in the food web of wetland nutrient cycles. Rajpar *et al*; (2011) reported that vegetation composition influences the variety of food sources which increase the abundance of water bird species in the area. Water bird activity is a key measure of wetland ecosystem health. They are regarded as a resource because they produce useful goods like as peat and provide valuable activities such as water filtration, carbon storage etc.

CONCLUSION:

Services that may be performed by natural environments including wetlands. Wetlands provide four types of services such as Regulation, Carrier, Production and Informational services.

Regulation: Regulation services refer to ecosystems ability to govern vital ecological processes and life support systems on Earth. Examples include regulating the amounts of CO₂ and O₂ in the atmosphere.

Carrier: Carrier services refer to the space or substrate required for human activities including dwelling, gardening, recreation, and tourism.

Production: Production services refer to natural resources such as food, industrial raw materials, and genetic raw material. Examples include the production of clean drinking water and timber for construction.

Informational: Natural ecosystems contribute to cognitive growth and sustain mental wellness, according to informational services. Examples include aesthetic, spiritual, and religious knowledge, among others.

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