

Migratory Birds Conservation and Indian Efforts

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ABSTRACT

There is always a dichotomy prevailing between development and conservation of environment. The conservation of migratory species is imperative because it connects the ecology thus, helps in maintaining stability. In the migration corridor the migratory species witness a broad spectrum of disturbances which is a consequence of human activities like habitat fragmentation, industrialization which creates an obstacle in the process of migration for the migratory birds. The magnitude of disturbance caused in the migration pathway by the human activities as enlisted and the benefits derived from causing disturbance needs to be analyzed in detail. The article encapsulates the need for conservation of migratory species and the efforts undertaken till time. It is imperative to note that the migratory species connect the whole planet and forms an intricate link for the stability of entire biological sphere. Therefore, considering their vital importance in all spheres it is worthwhile to understand how their activity of migration takes place, how the migratory species adapt themselves in circumstances where human activities emerge as a threat to their life cycle and the measures taken to protect them are implemented.

Keywords: Cultural; Migration; Birds

INTRODUCTION

Migratory animals provide a broad spectrum of spectacle consisting of cultural, economic and ecological importance [1]. However, a crucial point to be addressed in this sector is the fact that during migration, in the migration corridor the migratory species witness a broad spectrum of disturbances which is a consequence of human activities like habitat fragmentation, industrialisation which is creating an obstacle to the process of migration for the migratory birds. The history suggests that the biggest natural spectacle was created by the migratory birds on the planet earth like the flocks of migratory birds covered the entire sky [2]. Due to the abundance of some species, they have been constantly subjected to the formidable acts of hunting.

Birds are instrumental to showcase the status and the ongoing trends which affects biodiversity at a greater level. Since birds constitute an integral part of almost the entire ecosystem, they play a vital role to monitor the environment. According to UNEP-CMS numerous sites which are identified as at-risk areas and closing the migratory species have witnessed that the plants and animals surrounding the said species are also threatened.

Therefore, conservation of migratory species also proves to be a hotspot of the entire biodiversity. Throughout the year it has been seen that the migratory birds tend to travel from countries to countries, continents to continents, from tundra to tropics covering hundreds and thousands of miles of distance thus, linking different ecosystems at large. Therefore, the conservation of migratory species will eventually point to the fact that the biodiversity is also protected. In furtherance to this, the migratory pathway that is breeding areas, wintering areas and stopover areas are to be taken into consideration because a change in any one of the pathways would have a detrimental effect on the species concerned [3].

In this particular context, it has been observed that India plays a significant role in the terms of fly away, as it has been observed that it provides a crucial stopover to over approximately 90% of the bird species which are extensively known to use this particular route for migration [4]. The National Action Plan (hereinafter referred to as 'NAP') tends to provide a comprehensive framework for the preservation of migratory species and their concerned habitats through the process of infusing a national priority and specific actions to be taken so

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that the health of migratory species is maintained in India, within their range across flyovers.

LITERATURE REVIEW

Migration a well-defined fluxional process

Bats, fishes, dolphins, elephants are some of the taxonomic species which represent the behavior of migration [5]. Under the pretext of legal framework, policies and management strategies particular migration requires careful consideration because a wide variety of animals have distinctive characteristics of migration.

Tersely, migration can be defined as a process in which an organism moves from one particular place to another place depending on an annual or seasonal pattern. However, this simpler definition could not be adequate, scrutinization of definition should be made and it should consist of what does and what does not constitute of migration. In order to second this argument, reliance can be placed on the variety of plants or fungi which move from one place to another *via* dispersal of seeds therefore, the pertinent question arises whether this process is a migration or not. According to Lands borough Thomson, an ornithologist, 'true migration' were defined as variations of habitat, which are periodically recurring and alternating in direction, which tend to secure optimal environmental conditions at all times [6].

The peculiarity of this particular definition is that it does not discriminate or specify the limits of distance travelled or the kind of organism which is indulged in the process of migration. However, reliance is placed on some of the important factors such as change in habitat, seasonal phenology and to and fro motion [7]. However, after taking into account this definition which was proposed by Thomson it would be qualified that in an open ocean; the squid, the plankton have their day-to-day movements which would qualify under the head of to and fro motion, satisfying the Thomson's definition from the point of view of conservation, law and policy this definition acquires a different position. However, as Prof. Fischman and Hyman discuss in their treatment of "migration as a phenomenon of abundance," it was contended that dispersals, to and fro motions, ranging may hold an equal importance for the process of conservation, which is directly based on the standards mainly on ecological, economical and the cultural value targeted by the futuristic efforts. Through the process of migration only a large number of viable and economic activities take place like the pollination and fertilization, which eventually leads to increase the fertility of crops to a great extent. It is right to state that migration is not just a greater wonder for natural world but biologically speaking, it is a process which is fluid and elusive in its nature [8,9].

DISCUSSION

CMS-COP 13 'Migratory species connect the planet and together we welcome them home'

The convention on Conservation of Migratory Species (hereinafter referred to as 'CMS') is fundamentally an environmental treaty which comes under the flagship programme of UNEP that resolve to provide a platform globally for the sustainable use and management of migratory birds and animals along with their respective habitats. The CMS convention is also known as Bonn convention that deals with taking or harvesting of species from the wild. The convention has two appendices; wherein appendix-I deals with the species that are endangered or threatened with extinction and in the similar vein, appendix-II lists down the migratory species that require international agreements for their conservation and management. The convention categorically defines migratory species as that species which cyclically and predictably crosses one national jurisdiction to another jurisdiction for the factors such as food, sunlight, climate, temperature. It imposes a duty on the state to protect the living species which are within or passing through their jurisdictions. The objective of CMS-COP 13 was to highlight the importance of ecological connectivity in order to better protect the migratory species and their habitats. With the help of national energy and climate policy actions, nations can integrate biodiversity and migratory species considerations.

Loss and fragmentation of habitats, habitat destruction and degradation as well as climate change was recognised as the fundamental factors for the threat to biodiversity under the CMS COP-13 convention. One of the interesting factors discussed in this agenda meet was the effect of light pollution increasing artificial light affecting many migratory species and insects.

Understanding the relationship of sustainable ecotourism and conservation of migratory species

The promotion of sustainable tourism, including eco-tourism and environmental protection was recognised as one of the objectives in COP 12. It was contended that sustainable ecotourism is a positive key factor towards environmental protection, ameliorating the life's quality and encouraging local communities the impact it has on the sustainable development goals, particularly in developing countries. It is an undeniable fact that ecotourism has a great potential in growing markets and can contribute to a large number of shares thus contributing significantly in the economy. In furtherance to this, it can be said that ecotourism interacts with a wide variety of terrestrial as well as migratory species. Therefore, in this particular context, ecotourism activities can significantly affect the conservation of wildlife species, including the paradigm of conservation of species and preserving their habitats hitherto. Further, value of migratory species while promoting ecotourism should be adopted in such a manner that various national policies and frameworks for protecting and managing the wildlife species along with promoting ecotourism.

CAF national action plan-revisiting Indian efforts

The fundamental objective of the NAP is to monitor the decline in population levels and to protect the habitats of migratory species. Some of the specific objectives of an action plan is flooded with the following points:

- Taking measures to halt and reverse the decline of the migratory birds.
- With the help of landscape approaches of the management reduce the pressure on critical habitat of the migratory birds.
- In order to anticipate and avoid the threats or long-term decline which migratory birds are facing, measures should be taken to structure a capital building at different levels.
- With the advancement in technology, improvement of databases and support system to underpin the scientific preservation and policies which are mainly managerial in nature.
- To conserve the migratory specie's habitats there should be sensitisation of the stakeholders for their collaborative actions.
- In this particular respect, the trans boundary cooperation of nations becomes a necessary ingredient in order to conserve the migratory species and their habitats.

Component-1: Species conservation

Migratory land birds include similar species that chose to breed in Asian continent and undertake long migrations to the areas which are mostly of wintering in nature in the country of India. A group of raptors which is mostly constituted by the bird of prey, form an important element of the land birds as they are positioned on the top of the food chain, they act in the capacity of 'sentinel species' in order to appropriate the levels of prey population and consequently, the net health of the ecosystem.

Due to the combining effect of some of the factors such as habitat loss and fragmentation, uncontrollable pollution levels, illegal shooting, electrocution of lines, erecting massive aerial structures such as wind turbines contribute to a great extent to have the strain effect on the migratory birds. During migration, particular migratory raptors make themselves extremely vulnerable because they gather to form major concentrations and move in massive groups along their flyways, at narrow land bridges or sea crossings, which increase potential impact of undergoing certain risks.

Component-2: Conservation of habitat and sustainable management

Under the criteria of Ramsar convention or that of MoEFCC the conservation of wetlands in India revolves around the networking of sites, which is considered to be of quintessential for the biodiversity and ecosystem service values. There is a need to adopt landscape approach for securing the habitats of migratory birds and also to facilitate the preservation and sustainable management of wetlands which needs to be implemented in participation with stakeholders and establishing their wide variety of spectrum and ecosystem service values in various developmental plans and programs. In order to bring it in force some blueprint actions are required like integrated management of priority wetlands wherein participation of all

stakeholders, particularly, local communities are taken into account because there is an integration of all the action plans such as traditional knowledge which is one of the crucial elements of this particular head. In order to regulate the development activities on the wetland, it is significant that the boundaries of wetlands are demarcated and the same is notified under the provisions of wetlands (conservation and management) rules, 2017, wherever relevant. In order to maintain a desired level of ecological health and functioning, wetlands require sufficient water of adequate quality, at the right time and in the right pattern. Therefore, in this light, allocation of water for ecological functioning is of utmost importance.

Component-3: Capacity building and development

The daunting task of managing wetlands demands capacities of diverse nature mainly beyond the realm of protected area management so as to communicate the wide-ranging ecosystem services and biodiversity values to the variety of stakeholders in the due process and coalesce their views, rights and capabilities in the process of management. The national plan encapsulates organizing a formal as well as ad-hoc capacity development programs for the site managers so as to make them all acquainted with all the requires skills which are crucial for the integrated wetland management. The capacity development needs an assessment to monitor and it shall form the foundation of the design of capacity development actions.

Component-4: Communication and outreach

The action plan which was formulated to advance the conservation of migratory birds and their habitats in India is basically the species for the genus of NWAP so as to synergize with the latter in order to attain its result in a more comprehensive way. In the process of conservation, it has been observed that the tools of communication, outreach and awareness activities are of utmost significance.

Component-5: Research and monitoring

In the era of advancement of technology, the process of conservation of migratory birds and preservation of their habitats needs to be dwelled upon the robust datasets and knowledgebase produced from the integrated and comprehensively computerized systems.

Component-6: International cooperation

Since it is an undisputed fact that the migratory species cross the national borders and therefore to have an effective conservation effort the nations need to resort to traverse the political boundaries. It is, therefore, contended that the international cooperation plays a pivotal role for facilitating the completion of the annual cycle of migratory birds which can have a positive reinforcement on the national plan.

The nature of an action plan is that of a technical document which is basically not supported by any intergovernmental instrument such as an agreement or MoU. As defined by the OECD, the range states are amongst the world's least developed countries and other low-income countries. Therefore, in the

light of this to make the action plan more effective securing funding to support the implementation in these countries particularly will be crucial.

Vedanthangal bird sanctuary case study, 2020

The dispute: The Tamil Nadu Forest Department had proposed to the State Wildlife Board to redefine the existing borders of the Vedanthangal Bird Sanctuary in Maduranthakam, paving the way for commercial expansion in the area. It said that the State Wildlife Board had approved this proposal and had subsequently moved it up to the approval of the National Board for Wildlife (NBW).

The Vedanthangal Bird Sanctuary, one of the oldest water bird sanctuaries in the country, is a lake spread on an area of 29.5 hectares, surrounded by a five-kilometre zone of revenue lands, which cannot be used for residential or industrial purpose. A Government Order, 1998 declared this lake area and a 5 kms radius surrounding it a wildlife sanctuary under the wildlife protection act, 1972. It is this radius area that has now come under the spotlight, following the Tamil Nadu Forest Department's proposal to de-notify the outer two-kilometre zone of the sanctuary, which make up its 'buffer zone'.

Contrary to the state government's claim, activists pointed out that there is no directive issued by the central government to demarcate core, buffer and ESZ within sanctuaries. Such zones are meant to be demarcated only outside a sanctuary and not within its boundary. Sun Pharma, the pharmaceutical company that was reportedly looking to expand its operation claimed that it had no plans to expand its manufacturing operations inside the sanctuary. However, in this light the officials stated that since 2009, based on the Centre's directions, the 5 kms area of the sanctuary has been demarcated as core zones (one km), buffer zones and eco-sensitive zones (two kms each), respectively. For instance, for years the villages surrounding Sun Pharma factory have been moving complaints pertinent to reduced agricultural production with concerned authorities but to no avail. As per a villager, all his irrigation wells have become defunct due to pollution from the drug factory.

Analysis: The colonial waterbirds represent unique system of reproduction and survival strategies and heronries represent their spectacular grand scale of breeding events. The Vedanthangal Bird Sanctuary is one such grand old heronry that dates back to two centuries, where as many as 17 species of colonial waterbirds breed annually. This mass colonial breeding attracts lot of avian predators and so far as many as 11 species of raptors has been recorded at this site. As predators, they constitute the top link in the ecological chain and therefore could be indicators of the environment health. Being found in diverse habitats, they are among the first to be affected by disruption of the food chain, by chemical pollution, adverse exploitations and decline of their habitats.

Therefore, in this context since, the name Vedanthangal itself denotes the lake protected from hunters. It is a towering example of ecological conservation in India; the droppings of the bird provide enrichment and sufficient amount of nutrients to the agricultural field located thereby. An aquatic system is

connected to land and waterscape. When the inflowing water is disturbed, wetlands would degrade on their own. By regulating the activities, the ecological integrity in the sanctuary and its surrounding areas must be maintained.

CONCLUSION

No deviation can be made to the significance of migratory species in the realm of culture, legendary stories, customs and traditions. They are instrumental for the world to experience the changing seasons and measuring time on different occasions. In modern times they are being utilized in the field of recreational and educational purposes too by the humans. Being an intricate part of biological ecosystem, they are effective indicators of environmental changes at large which can have its impact on the entire ecosystem. They have substantial contribution in the area of food and income to the local as well as global economies where the migratory species are indulged in the activities of fishing and recreational purposes thus, reminding us of its aesthetic and ecological sanctity. In addendum, it has also become a prime attraction for capturing the minds of ecotourism.

While experiencing the process of migration, many species tend to cross the national borders, artificial structures which are evidently not recognized by animals. The function envisaged by borders is not only to divide the countries at large but it also separates national legislations, interests and political priorities making the migratory species more vulnerable to international waters. Therefore, considering this, the lack of jurisdiction in international waters makes it more imperative to protect the vulnerable migratory species through invoking the principles of shared responsibility of the nations in order to protect and preserve the common heritage.

Therefore, the case study of Vedanthangal Bird Sanctuary plays a predominately significant role which is inherently an ecosystem area and which is being disturbed at the cost of development. The question in this context again is to manage development aspect with environment. The fact that in the regions surrounding the Vedanthangal Bird sanctuary due to the setting of industries the local communities and villagers are unable to fetch their agricultural lands with water as water is also being depleted and polluted also it is imperative to note that the place near sanctuary provides a breeding ground or a ground for the migratory birds. The question now arose how much we are ready to let down the environment, social, cultural aesthetics in the name of development, the opportunity costs need to be calculated wisely and there is a need to strengthen the enforcement and implementation of environmental law.

REFERENCES

1. FAO of the United Nations. Statement on World migratory bird day-importance of migratory birds. 14 May, 2012.
2. Taylor A. The great variation begins: Settling the forest of Central New York. *New York History*. 1995;265:271-274.
3. India's National Action Plan for Conservation of Migratory Birds and their habitats along Central Asian Flyway (2018-2023). Ministry of Environment, Forests and Climate Change Wildlife Division. New Delhi, 2018.

4. Hoare B. Animal migration: Remarkable journeys in the wild. University of California Press. Nature. 2009.
5. Fischman RL, Hyman JB. The legal challenge of protecting animal migrations as phenomena of abundance. 2010;173-239.
6. The COP to the Convention on the Conservation of Migratory Species of Wild Animals. 2017.
7. Yong DL, Gurung H. Linking the Bird Life Asia partnership through migratory birds: The CAF. Hornbill, 2017.
8. CMS Working Group on Flyways, Review 1 – Existing CMS and non-CMS instruments. 2010.
9. Bais S. Migratory birds conservation and Indian efforts. National Law University, Nagpur, 2021.