

A Review on the Assessment of the Fauna in the Wildlife Act, 1972

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ABSTRACT: *Gulf of Mannar and Palk Bay in Tamil Nadu; island territories of Andaman and Lakshadweep are found to be the major source for protected species. The present study finds that protected marine species are an integral part in the growing marine curio business. High market demand, coupled with a lack of awareness and an inadequate enforcement were found to be major driving forces for the illegal marine curio trade. Awareness campaigns, along with a promotion of viable and alternate sources of income for seashell/coral collectors and strengthening of law enforcement may curtail the illegal marine curio trade. In the curio trade, 16 protected molluscs, corals, and one sea horse species, along with other marine taxa, were found. *Pleuroploca trapezium* and *Trochus niloticus* are the most common protected mollusc species available on the market. Around 82 percent of the markets surveyed were curious about hard coral. On the curio sector, the average size of the covered molluscs was found to be smaller than their average wild size, suggesting potential over-exploitation. The Interviews of the local vendors have revealed that each vendor sells about 15% of the protected species annually, producing an annual turnover of about 1.5 lakhs (INR). The Gulf of Mannar and Palk Bay in Tamil Nadu; the primary source of endangered species is the island territories of Andaman and Lakshadweep. The present study finds that marine protected species are an important part of the growing business of marine curiosity. Strong consumer demand, combined with a lack of knowledge and poor regulation, has been described as a major driving force for the illicit trade in marine curiosities. The illicit marine curio trade can be curtailed by awareness campaigns, along with the promotion of viable and alternative sources of income for seashell/coral collectors and strengthening law enforcement.*

KEYWORDS: *Marine curios, Protected species, Illegal trade, Conservation, Mollusks and corals.*

INTRODUCTION

Trade of wildlife is a commercially viable practice that takes place at both domestic and international levels across the globe and is one of the key reasons for the loss of biodiversity that threatens millions of plants and animals[1]. The foreign trade in wildlife is not easy to mention because of a wide range of factors and current trade reports are highly inaccurate[2]. Global trade in wildlife is mostly carried out on informal roads, away from government authorities. More frequently, the domestic trade in wild life is rarely reported. The exchange of ornamental marine mollusks and corals along with other hard corals

Bodied aquatic vertebrates and invertebrates are becoming an important source of income for many of the coastal communities as curiosities[3]. These marine mollusks, corals, and other fauna have been used by humans for a wide range of purposes since prehistoric[4]. The meat of marine mollusks and crustaceans was considered a major cheap source of protein for coastal fishermen. Seashells were used as currency, jewellery, ornaments, toys, sports, medicine, and as talismans and amulets[5]. A number of mollusks, invertebrates, and some fish may be endangered by the current exploitation of these species for marine curiosities.

Typically, however, there is a lack of accepted knowledge about most of the organisms involved in the

During the year 2000, the Government of India (GoI) included 24 species of marine mollusks along with all reef-building hard corals under different schedules (Schedules I, II, III, and IV) of the Indian Wildlife (Protection) Act, 1972 (IWPA), depending on their conservation value, in order to minimize exploitation and protect the over-exploited marine fauna from unrestricted curio trade. While the law provides protection for these marine animals, their illicit trade provides the rural coastal communities with large-scale income for merchants, intermediaries, and livelihood opportunities.

The survey was performed through nine maritime states and two island territories (Figure 1). Yeah. Viz. Maharashtra, Goa, Karnataka, Kerala, and Lakshadweep islands of Gujarat (including Diu) on the West Coast; West Bengal, Orissa, Andhra Pradesh, Tamil Nadu (including Puducherry), and the East Coast Andaman and Nicobar Islands. For trade in protected marine fauna, coastal towns and villages, major and minor coastal tourist centers, and pilgrimage sites were surveyed as curiosities. For the same reason, fishermen and traders were also interviewed.

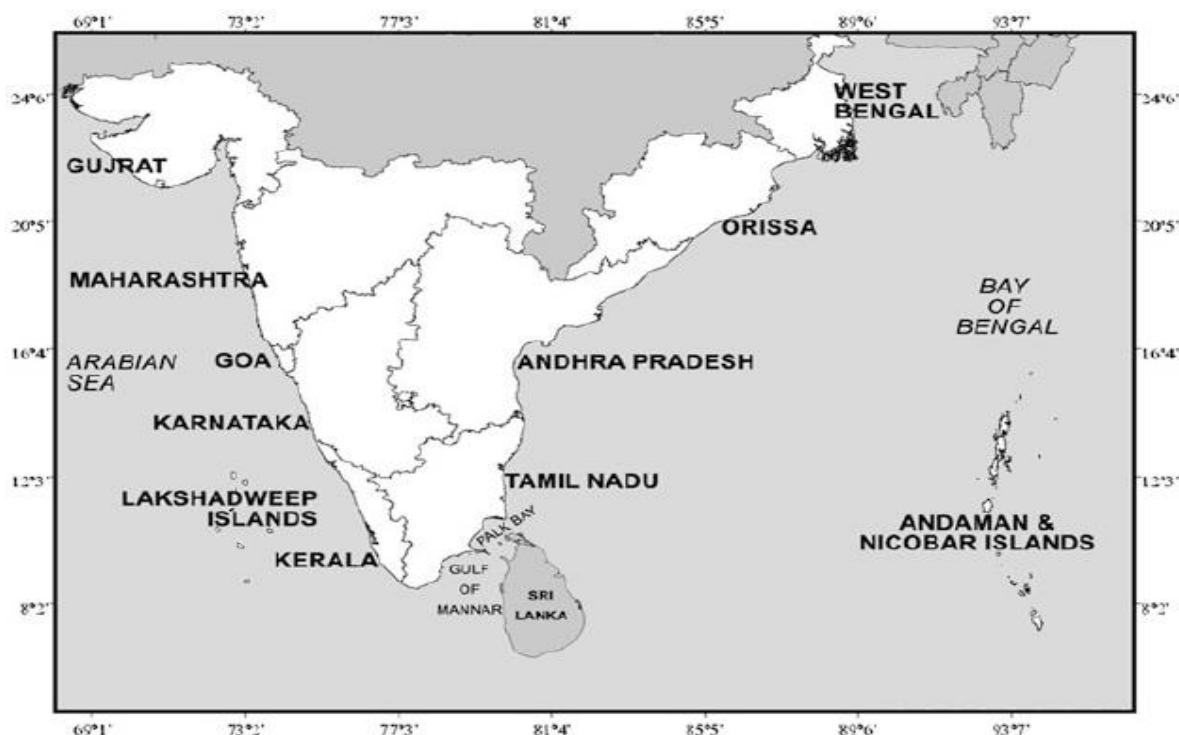


Figure 1: Map of India showing the surveyed coastal states and island territories

Significant tourist areas such as sea beaches, coastal pilgrimage centres, and major towns have been surveyed in order to determine the endangered species in the illegal curio trade. While unprotected molluscs, crustaceans, and echinoderms were also traded as curiosities, our emphasis was limited mainly to the marine fauna described by the IWPA. The

information needed was gathered from retail vendors ($n = 180$) through informal interviews. As most of the retail vendors interviewed (78%) showed knowledge of the IWPA and legal ramifications, the study's rationale was revealed in general as the "survey on seashells in curio trade". The interview was primarily performed in two time frames, one from 09.00 to 12.00 h and the other from 15.00 to 16.00 h (IST). Since most visitors choose to visit the beach to escape the heat during the morning and evening hours, maximum trade takes place during those hours (07.00 to 09.00 h and from 16.00 to 19.00 h IST). This method has also been implemented to eliminate tourist/customer intervention, which can interrupt the vendor during the interview. Information such as the amount of "protected" species traded, their average price (depending on size and perfection, the same species may have different price tags, so the lowest and highest price has been reported), average quantity (in number) sold annually, and the main source of this species (locally collected, other coastal states or other countries) have been recorded. Protected mollusk morphometrics, the average length of sea shells (length of the smallest shell and length of the largest shell of the same species) using a ruler were also taken to understand the size class common on the market and to know the degree of exploitation compared with the average wild size. Corals have been split into three major classes for easy documentation; Branching, Boulder, and Foliose. Corals in shallow depths appear to develop faster than corals found in deeper waters, according to Yap et al. (1998)[6]. Such as light, temperature, and depth, as various environmental conditions morphometric analysis of corals has been avoided, which can have a huge effect on coral growth rates (Buddemeier and Kinzie 1996).

CONCLUSION

Year after year, global coastal tourism is growing (Nasuchon 2009). That is the It is becoming clear that trade in marine curiosities is becoming an integral part of the India's rising coastal tourism. Trade of seashells as curiosities, other than those species described in the IWPA, may be allowed only if it is appropriate to maintain proper licenses and records. Molluscs and corals are mainly targeted and collected by traditional fishermen by domestic canoeing, diving, and hand picking during low tides. However, large numbers of endangered marine fauna have inadvertently landed in the mechanized fishing market[7]. The high value by-catch is endangered and protected species that are non-targeted but mistakenly landed, which get more values (HBV). Accidental landings of endangered species can be minimized by the formulation of national level by-catch reduction policies (BRPs) in the marine mechanized fishing sector and by the proper use of by-catch reduction devices (BRDs). Promotion of traditional crafts and natural products by market growth

Nationally and internationally as an alternative livelihood source for traders; commercial demand can be promoted for sea shell and coral collector aquaculture of both freshwater and marine indigenous fish species (food fish and ornamental fish). It can make a difference to build visibility for fishermen, merchants, and even consumers in the form of workshops, campaigns, posters, hoardings, and through the media. Overfishing is widespread worldwide and contributes to significant and ultimately irreversible shifts in marine environments[8].

Therefore, a potential solution to this is to declare marine biodiversity rich areas or sections of them as " No-take zones " with the participation of community involvement[9]. For more than two decades, experiences from Apo Island, Philippines indicate that these " No Take Zones " will increase the spillover-showing fish stock[9]. The marine fauna will thus recolonize the over-exploited waters by encouraging spill-over. Wildlife/forest officials can implement required laws along with educational and awareness programs to curb illicit trade in marine curiosities.

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