

# MOVING BEYOND THE CBD'S 2010 TARGET - A REVIEW ON THE EFFECTIVENESS OF FAUNA AND FLORA PROTECTION ORDINANCE IN PROTECTED AREA ESTABLISHMENT IN SRI LANKA

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## *Abstract*

The CBD target to protect at least 10 per cent of each of the world's ecological regions by 2010 has not been achieved globally, although good progress was reported by many countries. This paper presents the results of a comprehensive review undertaken with the objective of evaluating the effectiveness of the Fauna and Flora Protection Ordinance No 2 of 1937 (FFPO) and its amendments, as a framework legislation for Protected Area (PA) establishment in Sri Lanka. The FFPO was enacted aiming to protect indigenous fauna and flora, and over the years its emphasis has shifted from that of the preservation of wildlife to protection of biodiversity for the benefit of present and future generations. It has introduced eleven categories of PAs, of which five are in existence on ground. 93 PAs covering 943,595 ha has been established, representing 14% of land cover and 0.63% of the EEZ. 62% of the PAs are below 5,000 ha in size, an indication to increasing human-animal conflicts. FFPO is presently being supplemented by several other sectoral enactments in PA establishment. As the demand for development are underpinning the establishment of new PAs and maintaining the existing ones, it is now vital to look at the possibility of consolidating relevant enactments under single legislation, or to develop a coordination mechanism under one institution, which is specifically designed for PA establishment and management. Further a long-term scientific plan that includes a significant role for civil society and private sector is needed.

**Key words:** Protected Area, FFPO, CBD 2010 target, Sri Lanka

## 1. INTRODUCTION

The coverage of Protected Area (PA) indicator represents the degree to which components of biodiversity are formally protected as well as being a measure of political will of a country to protect its biodiversity (UNEP-WCMC, 2008). To track the progress of the 2010 target of achieving a significant reduction of the current rate of biodiversity loss, the Convention on Biological Diversity (CBD) adopted targets for terrestrial and marine PA coverage by 2010 and 2012 respectively and called for "at least 10% of each of the world's ecological regions to be effectively conserved". By the year 2009 there were more than 100,000 PAs worldwide, covering about 13.4% of the Earth's terrestrial surface. Yet the third edition of the Global Biodiversity Outlook confirms that the two subsidiary targets for PA set by the CBD have not been achieved globally, although good progress have been reported by many countries. It concludes that 44% the terrestrial eco-regions fall below the 10% protection and that the marine and freshwater ecosystems lack adequate protection (SCBD, 2010 and Coad *et al*, 2009).

Missing the 2010 target has serious implications for human societies, as biodiversity underpins services including food security and livelihood conditions (SCBD, 2010) and therefore the policy makers need to find the right balance between the desire to live harmoniously with nature and the need to exploit resources to develop economically (Dudley, 2008). Finding this right balance is highly significant in a developing country like Sri Lanka, which is together with the Western Ghats of India is considered as one of 34 biodiversity hotspots of the world (Mittermier *et al*, 2005), while 22.7% of its 19 million population lives below the national poverty line (UNDP, 2009). As the country is now geared towards achieving

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maximum development, it is vital to ensure that the biological diversity is conserved and used sustainably (Dela, 2009).

### **1.1 OBJECTIVES AND METHODOLOGY**

In Sri Lanka the umbrella legal framework enacted for conservation purposes is the Fauna and Flora Protection Ordinance No 2 of 1937 (FFPO) and its subsequent amendments, the latest being the Act No 22 of 2009. It provides for establishing PAs where all fauna and flora within the specified areas are free from detrimental human interference, and for listing of species within schedules that enjoy protection throughout the country. The principal objective of this study was to evaluate the effectiveness of the FFPO as a framework legislation in PA establishment and to provide recommendations for future policy development based on emerging national and international scenarios. The review is divided into three parts: the origin of FFPO emphasizing on why the FFPO was needed at that point of history; the growth and changing character of the PA system for the past 72 years in the light of changing political and socio-economic scenarios; and the conclusion and recommendation section based upon the findings of the two previous sections and also the present status of other sectoral legislations playing a role in PA establishment. The study was based upon reviewing the best available literature ranging from Gazette notifications, Administrative Reports (Forest and Wildlife), Sessional Papers and various other publications. The main approach used to measure the extent under formal protection is statistical information, using tabular data of the cumulative number and area of protected sites per given period as described in UNEP-WCMC, 2008.

## **2. RESULTS AND DISCUSSION**

### **2.1 THE ORIGIN OF THE FFPO**

Conservation of wildlife and natural resources in Sri Lanka dates back over two thousand three hundred years and it can boast the establishment of one of the world's oldest wildlife sanctuaries, the Mahamegha Vana dating back to the 3rd century BC. Major changes in attitudes towards animal protection and land-use practices began with the onset of the colonial period (1505 to 1948), which also had a significant influence on the country's legal system leading to the introduction of "modern" conservation laws. The events that lead to the origin of the FFPO can be traced back to 1870s, a time when wildlife, particularly big game animals were declining drastically as a result of conversion of forests into plantations, and due to popularity of hunting. As a mitigation measure an Ordinance to prevent wasteful destruction of buffaloes and game was introduced in 1872, which provided a close season of five months during which killing of deer, sambur, buffalo and peafowl was prohibited. In 1889, Colonel F.C.H. Clarke, the Acting Conservator of Forest, pointed the disastrous effects of commercial exploitation of the wildlife and stated that many elephants were unnecessarily killed by elephant catchers who shoot the mothers to get the calves, or drove a herd for weeks before kraaling them, where only 10 percent survived. His report paved the way to the introduction of an Ordinance to prevent wanton destruction of elephants, buffaloes and other game in 1891, while simultaneously a law was introduced for raising export duty on hides and horns (MENR, 2006; Guneratne, 2005; MAL&F, 1995; Walker, 1892 and Clarke, 1890).

A bill was enacted in 1894 to protect non-indigenous game species such as pheasants exported and released into the jungles for the benefit of British sportsmen. During the same year, a proclamation was issued by the Government prohibiting the export of horns, antlers and hides of sambur and deer for a period of five years, which was later extended for an indefinite period. In the beginning of the twentieth century several more legislations such as the Game Protection Act No 11 of 1902, the Fish (Dynamite) Act No 14 of 1905, Wild Bird Protection Act No 10 of 1906, and the Dried Meat Ordinance No 9 of 1908 were passed to mitigate the commercial exploitation and the dried meat trade. Although these early

ordinances were admittedly defective and sometimes inoperative, none the less they could be considered as the beginnings of modern wildlife conservation in Sri Lanka. The introduction of the Game Protection Ordinance No 1 in 1909 consolidated the existing game protection laws into one law (Saparamadu, 2006a; Spittel, 2003 reprint; Uragoda, 1994; and Government of Ceylon, 1959).

The Forest Ordinance No.10 of 1885 (FO), enacted primarily for sustained timber production was also the first legislation used to reserve specified areas for the protection of game animals. Two types of “PAs” were introduced under the FO: Game sanctuaries (GS) where shooting of wildlife was strictly prohibited; and the Resident Sportsmen’s Reserve (RSR), where shooting game were permitted under a licence during the open season. The first GS was established on 20<sup>th</sup> March 1900 at Yala while the Wilpattu GS was established in 1905. Steps were taken to demarcate and reserve “surrounds” to each of these two sanctuaries as RSRs. Veddikachchi RSR in the Polonnaruwa district was established in 1914, while the Yala RSR was extended to encircle the Sanctuary. All fauna and flora was considered “forest produce” and protected. A Conservator of Forests was appointed in 1887 and the Government Agents of the area, with the assistance of game watchers were in charge of protecting these GS and RSRs. The establishment of the Game Protection Society of Ceylon (now known as the Wildlife and Nature Protection Society) in 1884 played a pivotal role in the passage of these early laws and played a key role in protecting these reserved areas (Saparamadu, 2006a; Uragoda, 1994; Fernando, 1987; and Storey, 1921).

With the end of the first World War, cheap shot guns were imported in large numbers and therefore, by mid 1920s it became clear that the existing law for protecting game need to be amended. A Select Committee was appointed in 1926 with the instruction “to consider and report on the working of the restrictions imposed by or under the Game Protection Ordinance and to make any recommendations they may consider expedient for the alteration of such restrictions”. This Committee recommended the declaration of extra Sanctuaries, improved enforcement of regulations, and restricting the issue of licenses for guns and export of animals (Government of Ceylon, 1930). A new constitution was adopted by Sri Lanka in 1930 and it placed the administration of forests under the Ministry of Agriculture and Lands (MAL). MAL followed a policy of re-allotment of crown land to specific uses and therefore, a committee was appointed to make recommendations for the further protection of the indigenous fauna and flora. It made their recommendations based on the Sessional Paper of 1930, and proposed introduction of an entirely new legislation titled “An Ordinance for the Protection of Fauna and Flora of Ceylon”. The term “game” was taken out from the title as it emphasized on protecting all fauna and flora rather than preserving wild animals for sport. The report also recognized the importance of dedicating specific areas for wildlife, where they can exist and breed with minimum human interference (Government of Ceylon, 1934). The Fauna and Flora Protection Ordinance No. 2 (FFPO) was approved by the State Council in 1937 and came into force on first of March 1938. Its administration was vested in the Forest Department (FD) and the Conservator of Forests was also given the title of Warden, while Government Agents and Assistant Government Agents were appointed as District Wardens (Coomaraswamy, 1939 and Nicholas, 1952).

## ***2.2 EVOLUTION OF THE PROTECTED AREA SYSTEM UNDER THE FFPO***

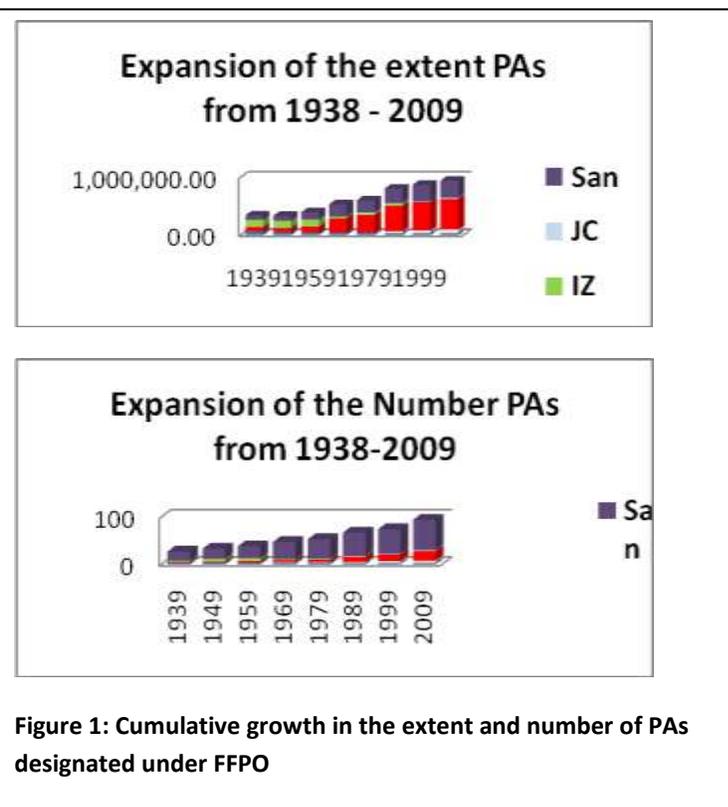
Section 2 of FFPO of 1937 provided the legal provisions for the proclamation by His Excellency the Governor (Later the Minister in charge of wildlife) of suitable areas of State land as National Reserves (Strict Natural Reserves: SNR, National Parks: NP and Intermediate Zones: IZ) and areas of land (Crown as well as private) as Sanctuaries. SNR were primarily intended for providing full protection to biodiversity and permission to enter is given only to scientist actively engaged in research. In a National Park (NP) public may admit to view wildlife on a payment of a prescribed fee without destructing plant and animal life. IZ, which can be considered as buffer zones between NPs and cultivations, shooting was

permitted during the open season (November to April) with a permit. In a Sanctuary human activities other than hunting and shooting were permitted (Wikramanayake, 1954; and Coomarswamy 1939).

### From 1938-1950

In line with the new policy directives, existing GS and RSRs were re-designated under the new PA categories introduced by the FFPO. For example, the Yala GS became a SNR, while the RSR covering Yala, Buttawa and Palatupana areas was declared as the Ruhuna NP (Uragoda, 1994). By the end of 1940s, the total extent of the area proclaimed under FFPO was 368,901ha representing around 5.2% of the land area of the country (Fig 1). Six IZs constituted 35% of PA while SNRs and NPs contributed to around 19 percent each. In contrast, out of the 36 PAs declared, 24 were Sanctuaries.

When FFPO was first drafted, it had a serious defect in that any one of them could be altered or alienated or even abolished (Norris, 1954). As a result, within a very short period three sanctuaries and part of



**Figure 1: Cumulative growth in the extent and number of PAs designated under FFPO**

Wilpattu North Sanctuary were de-gazetted, leading to loss of 10, 020 ha from the PA system. A separate Department for Wildlife (DWL) was established in October 1949, as it became apparent that FD was not adequately staffed for managing both wildlife and forestry issues. With the appointment of a Warden for Wildlife in 1950, the administration of PAs declared under the FFPO came under the purview of DWL (Nanayakkara, 1987; de Silva, 1951; Lushington, 1948; and Strong 1942).

### From 1951-1979

Sri Lanka gained independence from the British in 1948 and with rapid growth in human population more land was needed for agriculture and infrastructure development. To attract settlers to less populated dry zone initiatives such as restoration of ancient tanks and

construction of new irrigation works were undertaken. In the early 1950s the Gal Oya Development Board was established for constructing the Senanayake Reservoir (Government of Ceylon, 1968). Realizing the importance of keeping the forested areas of catchment intact to prevent siltation, the Gal Oya NP was declared in 1954, while the reservoir itself was declared as a Sanctuary (Nicholas, 1955). The operation and administration of the provisions of FFPO in the Gal Oya Valley were vested in the Gal Oya Board, until 1965 and thereafter the management of the PAs was handed back to DWLC (DWLC, 2004). A committee on preservation of wildlife was appointed by the Government in 1957, at a time when a large extent of land reserved under FFPO was excised for village expansion purposes. The report of this committee, provided various recommendations, amongst which corridors for elephant movement,

declaration of new national reserves and sanctuaries, the establishment of a wildlife preservation fund and a national trust or corporation for the administration of wildlife and promotion of tourism as an income earner were prominent (Government of Ceylon, 1959).

Appropriateness of game hunting as a sport became a huge public debate in late 1950s. To overcome an embarrassing situation where King Mahendra of Nepal, an invitee to Buddha Jayanthi celebrations in 1957 shot a sambour on a full moon day violating existing cultural values as well as game laws, the government had to ban game hunting for a year (Saparamadu, 2006a). Thereafter continuous pressure lead to complete termination in the issue of licences from 1st November 1964. With this policy directive, there was no rationale in maintaining IZs, and were incorporated into existing NPs. Amendments to the FFPO in 1964 introduced two new categories of PAs; Jungle Corridors (JC) and Nature Reserves (NR). The objective of JCs was to connect the remaining forest areas of the country with existing NPs to provide safe passage to elephants. NRs are areas where wildlife is fully protected, while existing rights of usage are allowed to continue (Uragoda, 1994; and Packeer 1974). A committee appointed in 1966 by the Minister of Lands, pointed out that the allocation of land for wildlife reserves in the past was made largely on 'ad hoc' manner with little or no reference to the nature of the soil and land (Government of Ceylon, 1968). Under Act No. 1 1970, the DWL was renamed as the Department of Wildlife Conservation (DWLC), while the Minister no longer could vary or alter the boundaries or extents of PAs designated without obtaining approval from the parliament (Hoffman, 1971). Further under this Act, the jurisdiction of the FFPO extended up to three miles of the territorial water of Sri Lanka (Uragoda, 1994). In the 1970, for the first time DWLC was removed from Ministry of Lands and came under the purview of Ministry of Shipping and Tourism. During the 1970-77 periods, the Government's economic policy was one of self sufficiency particularly in food and maximum use of available local resources and yet DWLC managed to declare the Uda Walawe NP and seven new sanctuaries (Saparamadu, 2006b). By the end of 1970's the total extent of PAs were 578,869 ha, of which the five NPs constituted 53 percent (Fig.1).

### **From 1980 to 2010**

Starting from late 1970s, the implementation of the Accelerated Mahaweli Programme (AMP) became high priority and Government looked at integrating conservation concerns with modern river basin development. As a result DWLC established a system of PAs around the AMP to providing substitute habitat for displaced wildlife, reduce crop damages from wildlife, protect watersheds and water quality, as well as to promote tourism (de Alwis, 1982; and Kotagama, 1992). The importance of taking all the necessary steps to protect and maintain already established PAs, was strongly recommended by the Committee Appointed in 1985 by Minister of State who was now in charge of the DWLC (Annon, 1985). Although the country was undergoing rapid socio-economic and political changes, especially with civil unrest starting from mid 1980s, it still managed to be in par with the changes happening in the global conservation arena. The Wildlife Conservation Policy of 1990 fully conformed with to this and was framed in accordance with the National Conservation Strategy prepared in 1988. This policy was revised in 2000 as a response to the additional mandates of the CBD, which Sri Lanka ratified in 1994 (DWLC,

2000). FFPO was yet again amended by the Act No, 40 of 1993, which provided for the establishment of three new categories of National Reserves: Refuge, Marine Reserve and Buffer Zone (MFE, 1997).

Sri Lanka also became signatory to other key Conventions concerned with area based protection such as the Ramsar and UNESCO World Heritage Conventions and listed several PAs under them. The Act No 22 of 2009 is the latest amendments to the FFPO, under which Marine National Park (MNP) has been introduced, while Refuge category has been omitted. Realizing the failure of JCs to mitigate the human – elephant conflict, a new category of PA called “Managed Elephant Reserves” that can also include private lands has been added to the list. The law has also made provisions for undertaking a study to investigate the ecological consequences before a change of boundaries or the distribution of PAs can occur. By the end of 2009 the number of NPs has increased to 20 while they contributed 56 percent of the total area reserved under the FFPO (Fig.1). Ussangoda was declared as the 21<sup>st</sup> NP in May 2010. Although both the wildlife and forestry sectors were placed under the Environment Ministry from 2000, as of April 2010, the DWLC was placed under the Ministry of Economic Development. It envisaged that this move will lead to the present PA network being utilized for the development of the tourist industry in the country.

### **3. CONCLUSIONS AND RECOMMENDATIONS**

With the enactment of FFPO in 1937, all previous legislation related to protection of indigenous fauna and flora as well as their habitats came under it and during the past 72 years, FFPO has been amended nine times and its emphasis has shifted to one of wildlife protection for the benefit of present and future generations. It can be concluded that this evolution of PA system was governed by a combination of factors such as keeping the “sportsmen’s” interest intact, providing good home range for displaced animals, protecting the watersheds, obtaining revenue from tourism and protecting charismatic species and habitats. Although the overall picture of the area under protection seems satisfactory, with over 14% of total land under protection (which is slightly higher than the global target), there are some serious shortcomings when one looks at them in detail as discussed below.

#### **3.1 BIOGEOGRAPHICAL COVERAGE**

The Biodiversity Conservation in Sri Lanka – A Framework for Action (BCAP) identifies 15 bioregions (MFE, 1999), and when the existing PA system is overlapped with these it becomes evident that majority fall within the dry zone, which is characterized by dry mixed evergreen forests. There is inadequacy of PAs in the wet zone and coastal as well as open oceans waters. The declaration of marine PAs under the FFPO had a later start and presently there are only four exclusively marine PAs covering 0.63 percent of the Exclusive Economic Zone (EEZ), while another 27 PA include coastal elements. This is well below the global average, where approximately 1.6 percent of the total marine area within EEZs is currently protected (Wood *et al*, 2008). These ecological gaps are being somewhat addressed by several new or amended enactments with provisions for PA establishment: Forest Ordinance (Reserve Forests, conservation Forests); Fisheries and Aquatic Resources Act (Marine Reserves, Fishery Management Areas); National Environmental Act (Environmental Sensitive Areas); National Heritage and Wilderness Act (National Heritage and Wilderness Area); The Antiquates Ordinance (Archeological Reserves and Protected Monuments); and the Coast Conservation Act (Special Area Management sites). Therefore, the

sectoral nature of the present administration structure had reduced the FFPO's role as the framework legislation for PA establishment. Further as increasing demand on land and marine resources for development and the lack of finances are hindering the establishment of new PAs as well as the management of existing ones, it is now vital to look at the possibility of consolidating all these sectoral enactments under one framework legislation, or the establishment of a coordinating authority specifically designed for PA establishment and management. In this regard various examples from other countries are available in literature (e.g. Tsioumani and Morgera, 2010). Most of existing PAs are too small in extent and are fragmented in location. The PA extent range from 131,715.5 ha Willpattu NP to 0.81 ha Maddinduwa, while 62 percent are below 5,000 ha. Therefore, whether they are adequate to maintain functional ecosystems and viable populations of fauna and flora represented in the different bio-regions as well as their adequacy to keep the animals within their boundaries are questionable and lead to accelerated human-animal conflicts. Therefore the possibility of forming networks to ensure ecological process as well as to protect species with a wider home range should be taken into consideration in future policy scenarios.

### **3.1 PROTECTED AREA CATEGORIES AND GOVERNANCE**

The FFPO introduced a new nomenclature for PA establishment by introducing eleven categories, of which nine can be declared only within State lands. Presently only five categories are in existence and out of this the validity of JC's is questionable as they were established within "state lands" not taking into account the nature of slash and burn cultivations. Two PA categories (IZ, Refuge) have been omitted from the Ordinance, while BZ, MR, MNP, and MERs are yet to be established. NPs are the most preferred PA

urgent need for expanding the definition of roles and responsibilities within the current legal and organizational framework for more involvement of the civil society in PA management. It is highly relevant to scientifically assess the exiting categories of PAs and re-define them to be in par with global trends. In this regard the IUCN introduced a management objective- based category system, which includes six PA categories (Dudley, 2008). Further it is also important to mainstream PAs into the broader landscape, seascape and sectoral plans and strategies. Successful integration can lead to an enabling environment where policymakers can combine the biodiversity conservation with poverty reduction.

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