

Situation of Environmental Policy, Legislation and Biological Diversity Conservation in Myanmar

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1.0 Environmental Policy Background

The Union of Myanmar took an active role in the United Nations Conference on Environment and Development (Rio, 3-14 June 1992). It signed the Framework Convention on Climate Change and the Convention on Biological Diversity (CBD). The political will expressed by Myanmar in this international gathering and its subsequent concern and commitment to environmental protection and conservation is noteworthy.

Myanmar ratified the CBD in 1994. Myanmar is committed to fulfilling the stipulations in the CBD. Myanmar is determined to preserve its natural environment not only for its own benefit, but also to contribute to regional and global biodiversity conservation for the benefit of all humankind.

2.0 The National Commission for Environmental Affairs and the National Environmental Policy

In February 1990, the Government established the National Commission for Environmental Affairs (NCEA). NCEA is the political body for environmental protection. NCEA also serves as the focal point and co-ordinating agency for environmental matters. The NCEA's objectives are to:

1. develop sound environmental policies for natural resources use in order to safeguard the environment and prevent its degradation;
2. set environmental standards, rules and regulations to control and prevent pollution;
3. lay down environment plans, policies and strategies; and
4. promote environmental awareness.

The NCEA initiated the formulation of the Myanmar National Environmental Policy. This was subsequently gazetted on 5 December 1994. The policy statement is as follows:

To establish sound environment policies in the utilisation of water, land, forests, marine resources and other natural resources in order to conserve the environment and prevent its degradation, the Government of the Union of Myanmar hereby adopts the following policy: The wealth of a nation is its people, its cultural heritage, its environment and its natural resources. The objective of Myanmar's environment policy is aimed at achieving harmony and balance between these through the integration of environmental considerations into the development process to enhance the quality of the life of all citizens. Every nation has the sovereign right to utilise its natural resources in accordance with its environmental policies, but great care must be taken not to exceed its jurisdiction or infringe upon the interests of other nations. It is the responsibility of the state and citizen to preserve its natural resources in the interest of present and future generations. Environmental protection should always be the primary objective in seeking development.

3.0 Constraints of Old Sectoral Legislation

Before World War II, Myanmar's concerned ministries formulated sectoral rules and regulations on environmental protection. Most laws were designed to protect natural resources for future use and their commercial value, rather than for their conservation and management value. Therefore, these laws do not reflect basic modern concepts of environmental management to not only control and regulate natural resource use, but ensure sustainable development and conservation practices to maintain ecological balance.

Fifty-six existing environmental laws have been identified and are listed in Box 7. The sectoral approach has meant that different ministries tackle individual environmental issues. For example, the Ministry of Forestry mainly addresses deforestation, while the Ministry of Agriculture and Irrigation tackles soil degradation.

In line with the objectives of the national environment policy, existing legislation must be reviewed and amended, or new laws must be enacted. New legislation must be targeted to prevent the prevailing causes of environmental impact and damage.

BOX 7: Existing Laws on Environmental Protection and Conservation in Myanmar

1. The Penal Code, 1961 Offences Affecting the Public Health, Safety Convenience, Decency and Morals
2. The Obstruction in Fairway Act, 1881
3. The Land Acquisition (Mines) Act, 1885
4. The Yangon Water-works Act, 1885
5. The Explosive Act, 1887
6. The Explosive Substances Act, 1989
7. The Yangon Police Act, 1899
8. The Police Act, 1945
9. The Yangon Port Act, 1905
10. The Canal Act, 1905
11. The Defile Traffic Act, 1907
12. The Highway Act, 1907
13. The Town Act, 1907
14. The Village Act, 1907
15. The Ports Act, 1908
16. The Embankment Act, 1909
17. The Inland Steam Vessels Act, 1917
18. The Oilfields Act, 1918
19. The Poison Act, 1919
20. The City of Yangon Municipal Act, 1922
(law amending the City of Yangon Municipal Act, 1991)
21. The Water Power Act, 1927
22. The Underground Water Act, 1930
23. The Petroleum Act, 1934
24. The Myanmar Aircraft Act, 1934
25. The Essential Supplies and Services Act, 1947
26. The Emergency Provision Act, 1950
27. The Factories Act, 1951
28. The Oilfield (Workers and Welfare) Act, 1951
29. The Motor Vehicles Law 1964
(The Law Amending the Motor Vehicles Law of 1964 enacted in 1989)
30. The Union of Myanmar Public Health Law, 1972
31. The Territorial Sea and Maritime Zone Law, 1977
32. The Law Relating to Aquaculture, 1989
33. The Law Relating to the Fishing Rights of Foreign Fishing Vessels, 1989
(The Law Amending the Law Relating to the Fishing Rights of Foreign Fishing Vessels, 1993)
34. The Myanmar Marine Fisheries Law, 1990
(The Law Amending the Myanmar Marine Fisheries Law, 1993)

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BOX 7: Existing Laws on Environmental Protection and Conservation in Myanmar

continued from preceding page

35. The Pesticide Law, 1990
36. The City of Yangon Development Law, 1990
(Amended in 1995 and again in 1996)
37. The Private Industrial Enterprise Law, 1991
38. The Freshwater Fisheries law, 1991
39. The Salt Enterprise Law, 1992
40. The National Drug Law, 1992
41. The Forest Law, 1992
42. The Mandalay City Development Law, 1992
43. The Narcotic Drugs and Psychotropic Substances Law, 1993
44. The Development Committees Law, 1993
45. The Plant Pest Quarantine Law, 1993
46. The Myanmar Insurance Law, 1993
47. The Myanmar Hotel and Tourism Law, 1993
48. The Animal Health and Development Law, 1994
49. The Science and Technology Development Law, 1994
50. The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, 1994
51. The Myanmar Mines Law, 1994
52. The Prevention and Control of Communicable Disease Law, 1995
53. Myanmar Pearl Law, 1995
54. The Myanmar Gemstone Law, 1995
55. The Traditional Drug Law, 1996
56. The National Food Law, 1994

4.0 New Forest Sector Legislation

The Government in 1992 enacted the new Forest Law. The Forest Act (1902) was subsequently repealed.

The new Forest Law is consistent with the 1995 Myanmar Forest Policy. It focuses on the balanced approach towards conservation and development issues implicit in the concept of sustainable forestry. Highlighting environmental and biodiversity conservation, the new law encourages community forestry and people's participation in environmental and forest management.

5.0 New Nature and Wildlife Conservation Legislation

The laws to protect wildlife that have been enforced for nearly hundred years were the Burma Game Rules and the Elephant Protection Act. The Burma Wildlife Act was only promulgated as separate legislation in 1936. However, it was not suited to achieve the present objectives of wildlife and biodiversity conservation. Therefore, new legislation was promulgated in 1994.

There are six objectives of the Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law (1994). In summary they are:

- (1) To implement the policy to protect wildlife and wild plants of the Government;
- (2) To implement the policy to conserve the natural areas of the Government;
- (3) To carry out international conventions adopted by the State relating to preserving wildlife and wild plants, living and non-living organisms and migratory birds;
- (4) To protect wildlife and wild plants in danger of extinction and their habitats;
- (5) To contribute to natural scientific research; and
- (6) To protect wildlife and wild plants by establishing zoological gardens and botanical gardens.

The new law focuses on species and gene conservation, in-situ and ex-situ conservation and ecosystem management for living and non-living organisms, and for all natural dynamic process in nature areas. It also provides the legal basis for joint ventures and private agencies to establish zoological and botanical gardens.

In accordance with Section 15(a) of the new law, on 26 October 1994, the Director General of the Forest Department in the Ministry of Forestry notified the species to be listed as protected. These are summarised in Table 1.

Table 1: Protected Species of Myanmar		
Category 1	Completely protected wildlife	Species
	Mammals	29
	Birds	50
	Reptiles	9
Category 2	Normally protected wildlife	Species
	Mammals	12
	Birds	43
	Reptiles	6
Category 3	Seasonally protected wildlife	Species
	Protected on June 15 to September 30	
	– Mammals	2
	Protected on March 15 to September 30	
	– Birds	13

6.0 Biodiversity Conservation in Myanmar

6.1 Geography background

In the Indo-Malayan biographical realm, Myanmar is one of the countries half covered with high forest stands. Forest covers some 49.32 million hectares of land area.

Myanmar is situated at 935'N and 2825' N latitude and 9210' E to 10110' E longitude. The total land area is approximately 676,553 square kilometres. Seventy-five percent of the country lies within the tropics. In addition to its wide latitudinal range, the country also has a wide altitudinal range from sea level to over 5730 metres. Year round rainfall ranges from about 500-800mm to more than 5000 mm. It is distributed over an average period of five months. The temperature ranges between 25-35C during the rainy season; 10-25C during the cold season; 32-35C during the hot season. However the temperature can soar up to 43C during the hot season in the Central Dry Zone. (U, 1995).

6.2 Species richness in Myanmar

Wide-ranging biogeographic and climatic conditions have contributed to the great variety of fauna and flora in Myanmar. So far, two hundred and eighty-five

families of flora have been identified. About seven thousand species have been identified including trees, shrubs, bamboo, principal climbers, rattan and ferns. Of these, 28.4%, or about two thousand species, are trees and small trees (Mehm and Saw, 1995).

The varied forest types of Myanmar are habitat for nearly three hundred known mammal species, three hundred and sixty reptile species and one thousand bird species recorded so far (FAO, 1995). Myanmar's forests are generally classified as evergreen forests, mixed deciduous forest, deciduous dipterocarp or indaig forest, dry forest, hill and temperate evergreen forests and tidal, beach and dune and swamp forests (Mehm and Saw, 1995).

According to an appraisal of Myanmar's forest cover that used 1989 Landsat TM Images, forest area was 37.2% and degraded forest area was 6.1% of the country's total area (Kyaw, et al., 1991). From 1925 to 1989, the annual depletion rate of actual forests (closed and degraded forests) was 220,000 ha (Kyaw, et al., 1991).

The remaining forest cover and associated rich species diversity and distribution indicate that the Myanmar people are nature-lovers and within their means they have been preserving effectively their forest and wildlife for many centuries.

7.0 Responsibility for Biodiversity Conservation

The Ministry of Forestry and the Forest Department are mainly concerned with the environmental issues such as deforestation, habitat destruction, protection and land-use conflicts. The Nature and Wildlife Conservation Division of the Forest Department has direct management responsibility.

Like other developing countries, Myanmar is no exception in the environmental problems it faces such as population pressure, land use conflicts, poaching, deforestation and the illegal trade in wild plants, wildlife and their parts. Law enforcement, satisfactory in mainland Myanmar, is inadequate in transboundary areas where joint responsibility between Myanmar and other countries against illegal trade in timber, wild plants and animals and their parts and against poaching is an immediate task to be undertaken.

Additionally, there is an inadequate number of trained resource managers and other experts as well as inadequate funds. However, it is firmly believed that through international co-operation Myanmar will continue to be in a good position, in terms of forest cover, species richness and abundance of wildlife species. Consequently, Myanmar values its existing partnerships, and looks

forward to developing new partnerships, with such international organisations as UNDP, UNEP, FAO, UNESCO, GEF as well as partnerships with other non-governmental organisations such as IUCN, WWF, IUCN Asian Elephant Specialist Group (AESG), Smithsonian Institute, Wildlife Conservation Society and AWB.

8.0 The Status of Biodiversity in the Reserve Forest System

A primary objective of the Myanmar Forest Policy (1994) is to gazette thirty percent of the country's total land area as part of the Reserved Forest System (RFS) and five percent as part of the Protected Area system (PAS). At present, the RFS covers 14.8 percent of the country. Within the RFS, "Climate Reserves" have also been established. These are established in areas highly prone to land slides and erosion. No activities are permitted in these areas. Therefore they are totally protected areas (Tin, 1994).

One of the most important aspects of the RFS is the Timber Selection System that has been practised since 1920. Under this system, teak trees (*Tectona grandis*) and other commercially important hardwood species such as pyinkado (*Xylia dolabriformis*) and padauk (*Pterocarpus macrocarpus*) have been harvested only when their girth is seven feet, six inches as measured from the breast height (4 feet, 6 inches from the ground). A felling cycle of thirty years is practised. In Myanmar, elephants have been used to extract teak and hardwood logs. From a conservation point of view, using elephants instead of heavy machines causes the least environmental degradation. Therefore elephants can play an indispensable role in logging operations.

Myanmar's existing forest cover and the current sustained yields of teak and other hardwoods indicates that the Timber Selection System works well and, to a considerable extent, it sustains biodiversity within the RFS (U, 1995).

9.0 Protected Areas Management and Wildlife Conservation

9.1 Protected areas management

The Forest Department's Nature and Wildlife Conservation Division is carrying out protected areas and wildlife management. With the Government paying more and more attention to biodiversity conservation, it is important to strengthen the institutional capacity of the staff.

The Myanmar Forest Policy (1994) aims to enlarge the PAS to about five percent of the country's the total area. One commentator has strongly recommended raising this figure to about ten percent (Salter, 1994) because the smaller figure had not taken into account a large, densely forested, yet sparsely populated, area in Northern Myanmar. It is almost virgin and if added, the PAS would surely be more than ten percent. As circumstances permit, the target should be increased to ten percent as recommended.

At the moment, just two percent of the total area of the country has been covered under the PAS. It is known that the most suitable sites for biodiversity conservation are the totally protected areas.

So far sixteen wildlife sanctuaries, two national parks, one nature reserve and one wildlife park have been established. A PAS action plan has been drawn-up to cover the targeted five percent as soon as possible and without delay.

9.2 Species management programme

Species management programmes will address the Myanmar Elephant (*Elephas maximus*) and Thamin (*Cervus eldithamin*), if funds and expertise become available from an outside organisation. One Elephant Range was established in Gwa Township, in Rakhine State. The Wildlife Division and AESG are co-operating closely to conserve elephants throughout the country. The original habitats for Eldi Thamin, Shwesattaw and Chatthin Wildlife Sanctuaries are being protected with modern conservation measures.

A number of species have been listed for priority species management in the very near future: Sumatra Rhinoceros (*Didermocercus sumatranesis*), Bengal or Indian Tiger (*Panthera tigris tigris*), Indo-Chinese Tiger (*Panthera tigris corbetti*), Loggerhead Turtle (*Caretta caratta*), Green Turtle (*Chelonia mydas*), Hawksbill Turtle (*Eretmochelys imbricata*), Leathery Turtle (*Demochelys coriaccas*), Big-headed Turtle (*Platysternon megacephalum*), Estuarine or Saltwater Crocodiles (*Crocodylus species*), Irrawaddy (*Ayeyawaddy*) Dolphin (*Oracella brevirostris*) and Sarus Crane (*Sarus antigone*).

More species, including those that are rare or endangered, shall be added to the species management list depending on the availability of funds and expertise. To promote more effective species management the Forest Department is working closely with international scientific organisations such as the Wildlife Conservation Society, the Smithsonian Institute and the IUCN AESG.

9.3 Ameliorating the threats to biodiversity: people participation

Shifting cultivation currently threatens biodiversity. It is being practised in some hilly areas in Myanmar. At present, some measures are being taken to check its expansion through education. Farming techniques are also being improved. Alternatives to living in hilly areas are being provided as well.

Fuel wood is another problem that may lead to unsustainable over-cutting. The environment and biodiversity may be affected seriously. A multi-sectoral approach - involving governmental agencies, local and international organisations and local communities - may be able to stop or slow further destruction of trees, shrubs and herbs for fuel wood.

In the long run, biodiversity conservation programmes cannot be successful without the support and participation of the people. It is important to educate people of all walks of life including the rural people, the urban people, the school children and as well as the decision makers. However insufficient supplies of educational materials and the lack of trained staff have constrained efforts. Research facilities are limited and, at the moment, few trained researchers address biodiversity conservation.

10.0 Conclusion

Since ratifying the CBD, Myanmar has been active in conserving its biodiversity, including its genetic resources. Legislation, such as the new Forest Law and the Protection of Wildlife and Wild Plants and Conservation of Nature Areas Law, has contributed to these efforts. Educating the populace will enhance these efforts even more.

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