

Man and Biosphere Reserves

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The need for an international network of protected representative areas or Biospheres of different ecosystems was recognized by the International Coordinating Council of UNESCO at its first meeting in 1971. Consequent to this decision, arose MAB Project No. 8, titled "The Conservation of natural areas and the genetic material they contain". The protected areas recognized under this MAB Project No. 8 are referred to as Man and Biosphere reserves.

After the second session of the International Coordinating Council of the UNESCO in 1973, a panel on Man and Biosphere Reserves was formed to devise criteria and guidelines for the selection of Man and Biosphere Reserves. The characteristics of the Man and Biosphere Reserves as summarized by the panel are as follows :-

1. Biosphere reserves will be protected areas of land and coastal environments. Together they will constitute a world-wide network linked by international understanding on purposes, standards and exchange of scientific information.
2. The network of Biosphere reserves will include significant examples of biomes throughout the world.
3. Each biosphere reserve will include one or more of the following categories,
 - (a) Representative examples of natural biomes
 - (b) Unique communities on areas with unusual natural features of exceptional interest
 - (c) Examples of harmonious landscapes resulting from traditional patterns of land-use
 - (d) Examples of modified or degraded ecosystem capable of being restored to more natural conditions.
4. Each biosphere reserve should be large enough to be an effective conservation unit, and to accommodate different uses without conflict.
5. Biosphere reserves should provide opportunity for ecological research education and training. They will have particular value as benchmarks or standards for measurement of long-term changes in the biosphere as a whole.

6. A biosphere reserve must have adequate long-term legal protection.
7. In some cases biosphere reserves will coincide with, or incorporate existing or proposed protected areas, such as national parks, sanctuaries or nature reserves.

There are a number of special features which make the Man and Biosphere reserves different to the other international programmes for protecting areas of land for various purposes such as archaeological or historical monuments, or sites of cultural landscapes. The emphasis in selection of some of these features is on representative samples of major ecosystems rather than on those that are exceptional.

- they form an international network in which the international character is ensured by an exchange of information and personnel through MAB Committees and MAB technical notes
- they provide for manipulative research in portions of the reserves
- they combine conservation, research education and training as major objectives
- they play an integrative role with local populations whose social and economic activities comprise a significant management input,
- they focus their efforts on the relationship between man and the biosphere.

The commencement of demarcating of Man and Biosphere reserves in Sri Lanka commenced in 1971 and to-date a total of thirty six Man and Biosphere reserves totalling 316,617 acres have been demarcated to represent the various ecosystems in the country. The areas have been selected from the different climatic zones namely montane, wet, intermediate and dry zones, and represent the different types of climax vegetation such as the tropical wet evergreen forests, dry mixed evergreen forests, patanas and savannah woodlands. The only forest type not covered by the biosphere reserves is Mangroves. The activities performed by the Forest Department in these man and biosphere reserves are purely protection and maintenance of poles that are fixed along the boundaries and the nameboards. It is regretted that no

research activity is performed by the Forest Department staff in any of these Man and Biosphere reserves. The constraints that hinder research studies in these biosphere reserves by the Forest Department are inadequate staff and lack of qualified personnel. Research on endemic tree species and growth rates are being carried out in the Sinharaja reserve by scientists from the University of Sri Lanka, Peradeniya.

The Sinharaja MAB reserves in the wet-zone which is 22,000 acres in extent and the Hurulu-Anaulundawa reserve which is 130,000 acres in extent, in the dry zone, have been granted international MAB standards by the UNESCO. Funds for the maintenance of the Man and Biosphere reserves are met from the National Science Council Grant.

Under the Man and Biosphere Programme, it is proposed to undertake the following activities during the next

year in addition to the present functions performed by the departmental staff, in these reserves.

- (1) opening of permanent growth or incremental plots in every biosphere to obtain quantitative data on growth of the various indigenous species.
- (2) identification and collection of herbarium specimens in the
 - (a) Sinharaja reserve
 - (b) Hurulu-Anaulundawa reserve and
 - (c) Nellikele biosphere reserve
- (3) opening of MAB reserves in the coastal region to cover the Mangrove forest type.

