EXPERTS RECOMMEND SACEP AS SECRETARIAT FOR SAS ACTION PLAN

Following the Meeting of National Focal Points on the Development of an Action Plan for the Protection of the South Asian Seas held in March, 1984 at Bangkok, the marine member states of SACEP with assistance from South Asia Co-operative Environment Programme (SACEP) and UNEP prepared country reports reviewing environmental problems in the agreed “priority areas of regional concern”. Based on these reports UNEP, in co-operation with SACEP and other international organizations prepared a draft overview of the regions environmental problems and a preliminary action plan. These documents along with a document prepared by UNEP on the Legislative Aspects of the Action Plan was discussed at a Meeting of Experts held from 2nd—5th December, 1986 in Bangkok.

The meeting commenced with opening statements from Mr. Stjepan Kokes, Director of Oceans and Coastal Areas Programme Activity Centre of UNEP, on behalf of the Executive Director of UNEP, Mr. Prasanna Dias Abeyegunawardene on behalf of the Director of SACEP and Mr. Masahiro Ohnuma, on behalf of the Director of UNEP Regional Office for Asia and Pacific.

The meeting then unanimously elected Mr. K. H. J. Wijayadasa from the Government of Sri Lanka as Chairman for this meeting with Mr. R. Roy from the Government of India as Vice-Chairman, and Mr. G. S. Quraishie from the Government of Pakistan as rapporteur.

After the formal adoption of the provisional agenda, the five country reports on the environmental problems of the marine and coastal areas of the states in the South Asian Seas region were presented by the respective country experts.

The Secretariat then introduced the draft overview of the marine and coastal environmental problems of the South Asian Seas prepared on the basis of the country reports. This overview highlighted the environmental problems, which would be useful for consideration in the inclusion in the action plan, either because they require a solution at the regional level or because they are problems facing each of the countries of the region. Whilst the meeting expressed general satisfaction with the quality of the draft overview, on the basis of written comments received not later than 15th February 1987, the final text of the overview will be prepared and will be made available to the Governments of the region as background material for the formulation of the South Asian Seas regional action plan.

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The draft action plan for the protection and management of the marine and coastal environment of the South Asian Seas Region was then discussed and the Secretariat at the outset emphasized that the action plan, once adopted, is expected to provide a long term programme for co-operation.

The general goals of the action plan are:

(a) to promote policies and management practices, including appropriate legislation for the protection and development of the marine and coastal environment on a national and regional level;

(b) to prevent deterioration of the region’s marine and coastal environment originating from activities within the States of the region;

(c) to provide for the protection and rational development of the marine and coastal living resources of the region, which are a natural heritage with important economic and social values and potential, through the preservation of habitats, the protection of species, and the careful planning and management of human activities that affect them;

(d) to strengthen and encourage, through increased regional collaboration, the activities of institutions within the region involved in the study of marine and coastal resources and ecosystems;

(e) to improve training and technical assistance at all levels and in all fields relating to the protection and development of the marine and coastal environment; and

(f) to stimulate the growth of public awareness at all levels of society of the value, interest and vulnerability of the region’s marine and coastal environment.

Based on the comments and suggestions, the revised draft action plan will be prepared for consideration at a meeting of National Focal Points which will be convened towards the end of 1987.

The Secretariat also invited the meeting to identify and recommend, on the basis of the revised draft action plan, priority activities which may be initiated in 1987, subject to the availability of funds during the preparation phase leading to the formal adoption of the action plan by the Governments of the region. In this connection, six project activities, prepared during the meeting, by the organisations identified as having the major responsibility, were recommended to be initiated during the preparatory phase of the action plan.

The titles of the projects approved are:

1. Development of a System of Protected Areas in the South Asian Seas.
2. Formulation of Coastal Environmental Management Plan (CEMP) for Pakistan.
3. Assessment of Levels and Effects of Marine Pollution in the South Asian Seas Region.
6. Environmental Education and Promotion of Public Awareness for South Asian Countries in connection with the South Asian Regional Seas Programme.

Under the agenda item, "Review of the Legal Aspects of the Regional Programme", the Secretariat introduced the document on legal aspects of the South Asian Seas Regional Programme which analysed the relevant global, regional and national environmental legislation. The experience of the Regional Seas Programme has been that regional action plans develop much easier when supported by a legal framework which provides a political commitment to the action plan of the highest level by the governments concerned.

After reviewing this document, the meeting recommended that a Meeting of Legal and Technical Experts be convened by UNEP in order to examine the proposed legal arrangements and their suitability in the context of the action plan.

On the item of institutional and financial arrangements required for implementation of the regional programme, the meeting specifically made the following recommendations:

(a) SACEP to be considered as the Secretariat for the Action Plan, once it is adopted.

(b) Establishment of National Committees for the Action Plan.

(c) Creation of a Trust Fund supporting the Action Plan and SACEP should be entrusted with its management.

(d) SACEP, in close consultation with the states of the region and UNEP, should prepare the necessary background documentation for the forthcoming Meeting of National Focal Points on the South Asian Seas Action Plan.
The Governing Council of the South Asia Co-operative Environment Programme being its principal review and deliberative body and responsible for determining its policy and programmes, according to Article 4(c) of its Articles of Association unless otherwise agreed upon, meets once a year. The Governing Council consists of all members of SACEP and each member shall have one representative on the Council, who will normally be of Ministerial ranks.

The South Asia Co-operative Environment Programme since it became a legal entity in 1982 has had to date two meetings of its Governing Council. The first being in Colombo, Sri Lanka in January, 1983 whilst the second Governing Council was held in Dhaka, Bangladesh in April, 1985.

The Third Governing Council of SACEP is now scheduled to meet in New Delhi, India on the 12th and 13th of January 1987. The Government of India has very kindly consented to offer host facilities for this meeting. It is also a great source of encouragement to note that Hon. Rajiv Gandhi, Prime Minister of India has agreed to inaugurate this meeting.

The timing of this meeting is very vital especially with the recommendation made at the recently concluded Meeting of Experts on the South Asian Regional Seas Programme which unanimously agreed to designate SACEP to be the Secretariat of the Action Plan of the South Asian Seas Programme and to be in charge of its technical co-ordination. The Third Meeting of the Governing Council has in its agenda the important issues related to institutional and programming matters and is envisaged that this meeting will critically examine the requirements to strengthen this organisation in order that it may reap the full benefits of this co-operative effort.

MANGROVES – A MUCH MALIGNED AND THREATENED ECOSYSTEM

Mangroves are found in tropical areas on all continents and occur from the highest level of spring tide down almost to the mean sea level. They thrive in areas having high temperatures, high annual precipitation and varying salinity levels. Out of a total of 90 species, about 63 are found in Asia and the Pacific region. It is generally accepted that evolutionary adaptations gave rise to the mangroves occurring in the Indo Malaysia Region.

Mangroves have a physiological adaptation to their specific high salinity habitat. Two types of mechanisms have been evolved to overcome the problem of salinity. Firstly the development of special glands on the leaves for secreting salt, whilst the other is the development of special breathing roots which form a special aeration system conducive to an aerobic environment. Some species are also characterised by the property of viviparity, which is an adaptation to both the anaerobic property of the soil and the high chloride content of the water.

MANGROVES
abundant and in some areas are associated with snails. Various gastropods are found on tree trunks, often in clumps. A species of fish, the mud skippers also live in the mangroves. The Royal Bengal Tiger and its prey, the spotted deer are found in the Sunderbans in Bangladesh.

(c) *Freshwater Environment*: Heavy precipitation in the mangrove areas give rise to temporary fresh water pools, which form the habitat for larvae of many insect species especially the mosquitoes.

(d) *Branches and Aerial Roots at the Sea Front*: These are periodically submerged and serve as the habitat for filtrators such as oysters and barnacles.

The economic significance of mangroves is multi faceted. Considering its commercial importance, mangrove forests have many uses for man. In general, it is the wood from the trees, associated fauna for direct consumption and cleared areas for cultivation or land reclamation. The main uses from mangrove forests is timber, charcoal, firewood, production of Tannin and in some countries the production of pulp for the manufacture of chipboard.

Mangroves offers protection to the coasts from erosion and flooding. Mangroves have been commonly used to protect embankments, and causeways. Areas of high accretion are also stabilised by mangrove populations, and they may be considered as effective land builders in such areas.

The most important role for the mangroves is probably as a link between the terrestrial and marine ecosystems. By far the most important group of organisms which are dependent on the mangroves for food and shelter during the larval and juvenile stages in their life cycle are the penaeid shrimps. The shrimps spawn in near-shore waters and the newly hatched larvae stay along the coasts using the mangroves as a refuge area and migrate to offshore waters where they reach juvenility. Fishing is also an important occupation in and around the mangrove areas.

Coastal Aquaiculture, open-water aqua culture and pond culture are other major users of the mangrove ecosystem. Aside from commercial exploitation of mangroves, they have continuously been threatened by other natural causes and human activities.

Studies on the effects of stress on the mangrove ecosystem in particular noted the harmful effects of man induced stresses because of their greater intensity, random nature and the inability of the ecosystem to adapt to them in contrast to natural stresses.

Man induced changes in the landscape have proved to be controversial. It has been reported that large scale manipulation of the hydrology of coastal areas posed a major threat to estuarine fish resources. It has also been reported that channelization and drainage change circulation and tidal flushing patterns which in turn may bring about alterations in salinity regions. In a normal situation, siltation or sedimentation process is slow enough to allow several changes in Mangrove ecosystem. Any interference resulting in rapid accretion may cause large mortality rates and also invasion by species better adapted to such conditions.

Hurricanes and storms have often caused damage to Mangroves. The devastation effects of hurricanes depend on several factors such as direction and velocity or wind, local topography, the vegetation and the susceptibility or tolerance of different species.

Since mangroves occupy coastal zones between the high and low tide marks, they are particularly exposed to oil pollution, especially near shipping lanes. It is obvious that oil spills cause serious effects, particularly the smothering of pneumatophores resulting in oxygen starvation. Moreover, aromatic fractions of oils, which are photo toxic can have adverse effects.

Mangroves are reported to be more susceptible than other forest species to herbicides. The major effect is defoliation but regeneration could be affected because of interferences with seedling growth and high mortality.

Stresses caused by natural phenomena are far outweighed by destruction of mangrove swamps by human activities. Land reclamation for construction of housing facilities, roads, harbours etc. have been carried in almost all mangrove areas all over the region. Land reclamation has not always been successful and some of the cleared swamplands have become non-vegetated barren saline areas.

It is evident that mangroves constitute one of the most valuable coastal resources in the tropical region. Though of low diversity in plant species and vertebrate life, the mangrove ecosystem in fact play a key role in the marine production processes. They also play an important role in coastline protection and accretion of land and also provides the ecological basis for the spawning and breeding of commercially important coastal organisms. This ecosystem has traditionally supplied a range of products to rural coastal population in terms of sustenance and cash. In view of the multiple role that mangroves play in the economy of coastal areas, it would be a prudent policy to consider them as valuable natural resources to be utilized on a sustainable basis.
WORKSHOP ON INTEGRATED MOSQUITO CONTROL USING COMMUNITY PARTICIPATION AND ENVIRONMENTALLY ACCEPTABLE TECHNIQUES FOR SOUTH ASIAN COUNTRIES
5TH – 11TH NOVEMBER, 1986
COLOMBO, SRI LANKA

The South Asia Co-operative Environment Programme (SACEP) since its formation in 1982, has been active in the field of promoting community based integrated mosquito control programmes using non-toxic methods. In this connection, SACEP has had close contact with the Wolfson Mosquito Control Project of the University of Southampton, UK. In an effort to share experiences of other South Asian Countries and also with the possibility of formulating country specific programmes involving the community in integrated vector control, a workshop for participants from SACEP member countries was held from the 5th—11th November 1986 in Colombo, Sri Lanka. This workshop was sponsored by the European Economic Community and held in collaboration with the Sarvodaya Movement of Sri Lanka and University of Southampton.

This workshop was held at the Sarvodaya Headquarters at Moratuwa, Sri Lanka. There was the participation of many experts from the SACEP member countries, namely Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, whilst the others were from the University of Southampton, Harvard School of Public Health, OXFAM America, Mosquito Control Association of West Germany, the World Health Organisation and Free Lance consultants.

This workshop was inaugurated by Hon. Dr. Ranjit Atapattu, Minister of Health for Sri Lanka and included a three day field trip to Anuradhapura, where all participants obtained first hand information on the current ongoing project of Sarvodaya with OXFAM America on community participation in Mosquito Control Activity.

It is expected that the entire proceedings of this important workshop along with its recommendations, will be ready for distribution sometime in early 1987 and there is every possibility that workshops of this nature will be conducted in other SACEP member countries in the future.

NEWS OF OTHER SACEP ACTIVITIES

Environmental Legislation

This project which was approved at the First Governing Council of SACEP and later adopted by UNDP has now entered its final phase. The participating countries have submitted their Country Reports which were prepared by Country Consultants under given terms of reference.

A workshop will be convened on the 15th and 16th January, 1987 in New Delhi where the Country Consultants and a Panel of Experts would study these reports and recommend to the countries concerned of any changes or amendments that are necessary.

The expected outputs from this project will be that each participating country will have their environmental laws updated and recommendations will be made to the respective Governments for the drafting of new laws.

Integrated Energy Saving Domestic Stoves and Fuelwood Systems

This project was formulated taking into consideration the rapid increase in the rate of deforestation, the consequent loss of tree cover and noting that firewood provides nearly 90% of the cooking energy requirements in South Asia. Since its initial approval at the First Governing Council, the project has undergone some revision to fit into the current developments in this field.

The Food and Agricultural Organisation (FAO) is at present co-ordinating a Regional Wood Energy Development Programme for Asia and Pacific with assistance from the Government of Netherlands and since the Dutch Government has also indicated some interest in the SACEP project, negotiations are underway with both
FAO and the Dutch Government for the possible integration of the 2 projects and to identify a specific role for SACEP.

Year of the Trees

A resolution declaring 1988 as the Year of the Trees for South Asia was adopted unanimously at the First Governing Council of SACEP in 1983 and subsequently commended by the United Nations Environment Programme, who agreed to provide funds for the formulation of projects and programmes in connection with this activity, after deciding on the modalities of operation.

Whilst some member countries of SACEP have already initiated certain activities and under taken specific projects and programmes to commemorate 1988 as the Year of the Trees for South Asia, UNEP has provided funds for a Consultant to visit the member countries so as to ascertain individual country requirements and also the proposed programmes of the respective Governments with a view of drawing up a Regional Action Plan on the basis of these activities. The designated consultant is due to visit the member countries towards the end of 1986 and it is hoped that the Regional Action Plan would be ready by early 1987.

Environmental Impact Assessment and Cost/Benefit Analysis

This particular subject area has wide ranging importance in all aspects of the environment, as well as effectively establishing environmental management in a developing context. The SACEP Secretariat has been in close communication with the Focal Point of this Subject Area and some international organisations with a view of initiating activities connected with this subject.

The SACEP Secretariat was able to obtain assistance from East West Centre, Hawaii, who sponsored the participation of 2 delegates from Nepal and Pakistan to attend a three week Environmental Impact Assessment Programme conducted for the Government of Sri Lanka by the East West Centre, Hawaii and US AID.

UNEP in collaboration with the Government of Sri Lanka, the South Asia Co-operative Environment Programme and with financial support from the Netherlands Government, will be organising a Senior Level Expert Workshop to Evaluate Benefits and Constraints of EIA Process in SACEP countries in March 1987. The objective of the workshop is to evaluate the advantages and constraints in using EIA. By examining case

Desertification

It was decided initially that since this Subject Area has a global foundation and is being actively pursued by UN and other agencies, SACEP Secretariat and the member countries should identify their needs and participate actively in the on-going global programmes.

As a follow up to a major UN Conference held in 1977 where a Plan of Action to combat Desertification (PACD) was drafted, an International Conference titled "Economics of Dry Land Degradation and Rehabilitation" was conducted by the Government of Australia, UNEP and East West Centre, Hawaii. The SACEP Secretariat was represented at this conference and as a follow up to it, a workshop for South and South East Asia was held in August 1986 in Delhi where UNEP sponsored the participation of delegates from SACEP Member Countries, nominated by the respective governments.

It is envisaged that activities that would emerge from this workshop would result in the active participation of SACEP Member Countries in the field of desertification.

Co-ordinated Environmental Education Programme

A programme for Environmental Education designed as an overall programme for sensitising people about environmental problems was drafted on the recommendations of the UNDP/SACEP mission of 1982. UNEP, subsequently decided to adopt this programme in their Environmental Education Programme for Asia and Pacific.

SACEP was invited to participate at the UNEP/UNESCO sponsored Meeting of Experts on Environmental Education and Training held in Bangkok. At this Meeting the programme of action for Environmental Education was finalised and approved. Consequent to this meeting, the SACEP project proposal has been modified and submitted to UNESCO for possible collaboration.

The Meeting of Experts on the South Asian Seas Regional Programme held in Bangkok in December 1986 approved a project on Environmental Education and Promotion of Public Awareness for South Asian Countries in connection with the South Asian Regional Seas Programme with funding from UNEP and this could well be a starting point of SACEP's activity in this important area of concern.

Pic 1

Hon. Dr. Ranjit Atapattu, Minister of Health for Sri Lanka delivering the Inaugural Address at the Mosquito Control Workshop.

Pic 2
Most countries of the South Asian sub region have had a long period of time, in some instances, even dating back to centuries ago, legislation dealing with the environment. However, in most areas, the laws are obsolete and are incapable of tackling the complex multi disciplinary environmental problems that have come to afflict man. The general tendency has been to prevent and penalise deterioration. Positive environmental protection and improvements are rarely sought to be achieved through legislation.

The Stockholm Conference on Human Environment marked a watershed in the development of policies and legislation for environmental protection, as a result of which, many countries all over the world have enacted new laws and constituted institutions for dealing with environmental problems. The need for reviewing and updating existing laws has also been done. However, the enactment of new laws is not by itself sufficient. Their effective application has to be ensured and the concerned mechanism for this function must be adequately equipped.

The degree to which environmental concerns have been nationally recognised is reflected in its legislation. Most countries have a number of laws, acts, regulations or policy directives which, in one way or the other are related to environmental concerns. Some laws date back to many decades ago whilst the other are of more recent origin. If one studies the trends or the pattern of a country's legislation one could clearly see the marked degree of clarity in the law, i.e. the laws are more specific and the powers that the law encompasses is wide and leaves no room for loopholes, to put it in a nutshell, it illustrates the varied development of environmental awareness among policy makers and legislators.

These laws cover a wide area and a variety of situations ranging from management of resources and preservation of national heritage to the prevention of pollution and the improvement of health.

Some countries have elaborate legislation on environmental subjects and some go to the extent of even establishing vigorous norms by which punitive action could be taken for the infringement of such laws. However, the extent and details of legislations are usually in keeping with their priorities on environmental management as a whole as well as on specific subject areas.

Although rigorous and elaborate legislation may be in existence, the most important factor is the effective implementation and enforcement. In most countries, this is a major stumbling block and it may be due to a variety of reasons ranging from lack of personnel, poor laws, inadequate funds, punishment not sufficient to act as a deterrent and sometimes the lack of a single purpose and mixture of priorities.

In most countries, the parameters of what are to be considered environmental law are still evolving. Thus, all of the protection and enhancement of the environment have been included within the terminology of environmental legislation. This is, however, not the case in most of the laws drafted within the last year or two.

The legal aspects of environmental protection and management in all countries take several forms. Methodology adopted have been mainly preventive and regulatory and in a few instances punitive. Enforcement has been administratively as well as judicially.

In the review and reformulation of environmental legislation, it is of paramount importance that we recognize the fundamental right of all human beings to an environment adequate for their health and well being. Such legislation should also take note of the responsibilities of the people and the government to achieve sustainable development.

It should be borne in mind, that countries such as India, Pakistan, Sri Lanka etc were under colonial regime and most of these laws were concerned during the period where administration was geared and oriented towards exploitation of natural resources, revenue collection and the maintenance of law and order. These laws were not enacted with conservation and resource management in mind. Until of late, before the concept of effective Resource Management came into prominence and assumed importance, in making subsequent amendments conservation and development, environment and development and sustainable growth parameters have not been given their due consideration. Therefore, there is a great need to have an entirely fresh approach to all these laws with a view to introducing a total package of legal reforms covering the entire gamut of legislation dealing with environment.

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(c) Review and revise, as appropriate, the draft Action Plan.

(d) Taking into consideration the background documentation to recommend specific institutional and financial arrangements, which may be suitable for the implementation of the action plan.

(e) Review the results of the Meeting of Legal and Technical Experts.

(f) Recommend future activities leading to the adoption of the Action Plan.

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The Secretariat indicated its intention to convene the Meeting of Legal and Technical Experts in July/August 1987, whilst the Meeting of National Focal Points is planned for late 1987. This Meeting would be expected to:

(a) Take note of the revised overview of the marine and coastal environmental problems of the region.

(b) Review the progress in the implementation of the recommended priority activities.
EDITORIAL

The protection of the marine and related ecosystems have been identified as a major problem in all the countries of South Asia with the degree of severity of the problem varying from country to country. Increasing concern has been expressed throughout the region about the deterioration and degradation in the quality of the marine environment and its related eco-systems, its resources and its implications to development and human health. Both maritime as well as land based activities have affected the marine environment in various ways. The combined results of certain developmental activities and their environmental effects have already been felt in the coastal areas lying adjacent to large urban areas. A clear need is thus recognised to take steps to reverse these trends and protect the marine environment from further deterioration.

The High Level Meeting of Officials of South Asian Countries to initiate the South Asia Cooperative Environment Programme (SACEP) held in Colombo in February 1981, whilst designating Bangladesh as the Focal Point for the programme areas of Corals, Mangroves, Deltas and Coastal Areas, and in co-operation with Maldives also for Island Eco-systems, emphasized the significance of Mangroves in protecting coastal erosion, in mitigating adverse impacts of natural disasters such as cyclones, and in serving as habitats for the conservation of living marine environment. This meeting also advocated proper coastal area development including mangrove reforestation and conservation of important marine environment through the establishment of marine national parks for endangered species such as dugong and turtle.

As a first step towards the formulation of specific activities in this area, a Regional Symposium on Environmental Management of Mangroves, Corals and Island Eco-systems in South Asia was conducted by SACEP in collaboration with ESCAP in August, 1983.

This symposium served a very useful purpose as it identified the critical areas for attention in these endangered eco-systems. Based on the recommendation of this symposium, SACEP Secretariat has drawn up a draft action plan. It is envisaged that many of these recommendations will go to form an integral part of the proposed Action Plan for the South Asian Regional Seas Programme.

SACEP CALENDAR OF MEETINGS FOR THE YEAR 1987

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<td>Third Governing SACEP/UNEP/Govt.</td>
<td>New Delhi</td>
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<td>January</td>
<td>Council of SACEP</td>
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<td>15-16</td>
<td>Workshop on Environmental Legislation for SACEP Member Countries</td>
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<td>Workshop for Senior Level Experts in SACEP Countries to evaluate benefits and constraints of EIA Process</td>
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<td>07-08</td>
<td>Meeting of Legal Experts on SAS</td>
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<td>02-06</td>
<td>Meeting of National Focal Points on SAS Action Plan</td>
<td>To be decided</td>
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