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DRAFT

COASTAL AREA MANAGEMENT PROGRAMME FOR THE
COASTAL REGION OF ALBANIA

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1. PREPARATORY ACTIVITIES

In May 1990 the Government of Albania signed the Barcelona Convention and its four related protocols.

After the signature a number of activities took place in the frame of the Albanian participation in the Mediterranean Action Plan, in particular:

- National monitoring programme of Albania was launched at the end of 1990, which includes intensive training, provision of instruments and chemicals and intensive sampling programme (to start in September 1991);
- discussions were held on several occasions between Albanian representatives and representatives of the Mediterranean Action Plan on possible areas of co-operation and development of activities for 1992-1993;
- Albanian delegation at the Joint Meeting of the Scientific and Technical Committee and the Socio-Economic Committee (Athens, 6-10 May, 1991) proposed that a Coastal Areas Management Programme (CAMP) for Albania be developed in 1992.

The Seventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Related Protocols (Cairo, 8-11 October, 1991) approved the development of the Coastal Areas Management Programme for Albania.

The Albanian Government expressed its commitment to the philosophy of the integrated planning and management of the coastal areas of Albania and invited the Co-ordinating Unit of the Mediterranean Action Plan to send a mission to Albania in order to initiate the programme. The objective of the mission was to assist the Government of Albania in the formulation of environmental policy with particular reference to the integrated planning, development and management of the Albanian coastal region and to assist in the decision-making process concerning development projects in the coastal areas.

A multi-disciplinary MAP mission visited Albania on 26 to 28 May, 1992, and in discussions with representatives of the Albanian Government and specialized institutions, identified priority issues to be included in the programme proposal.

After the mission, for each of the issues identified, relevant offices of MAP and other international organizations were asked to prepare programme proposals for respective issues and, on the basis of materials received, this programme proposal was prepared.

2. BACKGROUND INFORMATION ON ALBANIA

Geographical position and population

Albania lies on the west side of the Balkan peninsula. To the north and northeast Albania is bounded by former Yugoslavia and to the south and southeast by Greece. To the west and southwest it is bordered by the Adriatic and Ionian Seas.

Albania extends over an area of 28,748 square kilometres; its population is estimated at 3.25 million (1990) (see Figure).

Relief

Albania is mainly a mountainous country; 76.6% of the land is mountains and hills, while the plains 200 metres above sea level occupy only 23.4% of the land.

Albania's coastline is 470 km long. Along the coastline are many lagoons sand belts and sand dunes. Extensive pine forests have been planted along the sandy coastal strips. A series of valleys, which lie across the country, link its coasts with the interior of the country. The lowlands of the Adriatic coastline, previously covered with marshes and swamps, have now been converted into arable land.

The Adriatic section of the coastline is under constant dynamic change due to river inputs and the seismic profile of the area and is considered as accumulative. The Ionian coast is rocky with small beaches and limited sandy areas. The majority of freshwater sources in the Ionian section of the coastline are underground with outlets directly to the sea.

Climate

Albania is situated in the Mediterranean climatic belt, with a hot dry summer, a generally mild winter and abundant rainfall.

The climate is warmest in the southwestern part which is mainly under the influence of the warm air masses from the sea. The winter is moderate with temperatures rarely falling below zero and the summer is hot (maximum July temperature recorded, 44 °C).

The climate is coldest in the northeastern part which is mainly under the influence of continental air masses. The winter is cold with frequent minus temperatures (minimum temperature recorded, -35°C).

Rainfall in Albania is abundant. Average annual rainfall is over 2,000mm in the Alps in Northern Albania and 650-700mm in the valleys of the interior. 40% of the annual precipitation falls in the winter. Summer droughts are more pronounced towards the southwest.

Rivers and lakes

Due to the rugged relief of the land, rivers are torrential with a high erosive power. Rivers originate from the high mountain regions, open out into the plains and flow into the Adriatic Sea. The normal river flow is an average of 36 litres per second. The longest rivers are the Drin river, on the eastern coast of the Adriatic (285 km long), Buna, Mat, Shkumbin, Seman and Vjosa.

The rivers of Albania constitute an important source of hydroelectric power. At least 2 hydro-power stations have been constructed on the Drin river while it is intended to turn the river into a series of lakes to serve the already existing hydro-power plants or those to be constructed on it. Hydro-power plants have also been constructed on the Mat and Bistrica rivers.

The lakes are of varying origin: glacial lakes in the highlands, karstic lakes on the hills and tectonic lakes (Shkodra, Ohri and Prespa) which are the largest and most important in terms of fisheries and lakes of the lagoon type which are large fishing reserves. The lakes of the hills and highlands are also used for irrigation purposes.

Agriculture

Agriculture is the mainstay of the economy, normally employing over 55% of the workforce. Emphasis is placed on the production of cereals. Despite the rapid mechanization and extensive irrigation programme, the sector remains underdeveloped. Major crops include sugar-beet, cotton, grains, beans and sunflower seeds.

Industry

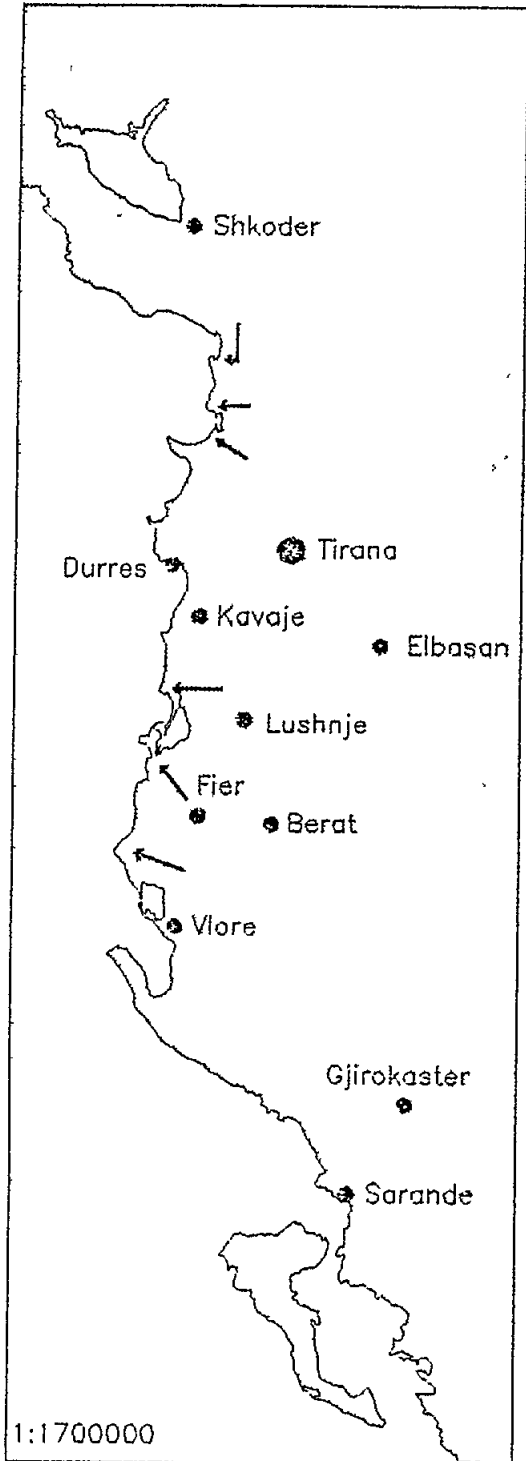
Industry in Albania is predominantly small-scale with a bias towards engineering, chemicals, metals, construction materials, food processing and other agro-allied industries. Industry normally employs 25% of the workforce accounting for 55% of the GDP.

Tourism

A study on the assessment of the coastline potential for the future development of tourism has been carried out by the Albanian Scientific Consultative Commission. The study includes the capacity of sites estimated to the year 1996 and the figures are based on data made available through the Albanian Ministry of Tourism. The demand is projected to be 40,000 visitors per year by the year 1996. The study's projected capacity per coastal area includes: 7000 for Vlore; 9000 for Sarande; 12,000 for Durres and 3000 for Shkoder.

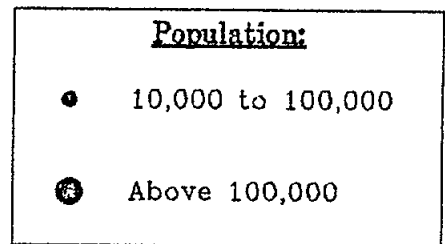
Energy

Crude oil is the major source of primary energy. Oil production is largely from two small fields at Patos and Morinza. The normal refining capacity is 1.5 million tonnes per annum. The major gas fields are at Diviak and Bubuline. Hydroelectricity is developed with the surplus normally exported.

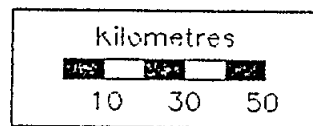


ALBANIA

Cities



Blue arrows indicate river inputs



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3. STRATEGY, OBJECTIVES, MAIN EXPECTED BENEFITS AND OUTPUTS OF THE PROGRAMME

3.1 STRATEGY OF THE PROGRAMME

The strategy of the programme is based on the principles of sustainable development, integrated planning and management of coastal resources. All activities should lead to the preparation of management plans integrating all knowledge gained by individual actions. At the same time, the results of all individual actions will be included in plans of a more comprehensive nature.

Such a strategy requires a selective approach to the identification of areas in which the majority of activities will be carried out. Since the problems of pollution, as well as development resources and potentials, are concentrated in the immediate coastal zone of the region, the programme should focus on that particular area.

The problems of development-environment inter-relations will be studied in an integrated way, and the basis will be established for future planning activities. However, sectorial actions have to be taken alongside so that implementation plans could be launched sooner, and which can serve as inputs to the preparation of more complex plans.

For the successful implementation of this programme the active involvement of national and local authorities is probably the most important factor: they will provide necessary funds and manpower required for each activity, study and management project. Additionally, the knowledge of the local conditions and the precise identification of the environmental problems in Albania can only be secured by the relevant institutions. In parallel, the co-ordinating and supervising role of the central governmental services (Committee for Environmental Preservation and Protection) is essential for the determination and methodological approach of the scopes and objectives of each activity.

3.2 OBJECTIVES OF THE PROGRAMME

The general objective of the programme is to protect and rationally utilize the coastal resources over a relatively long period of time. The task of such a programme is to determine and recommend the management measures with a view to resolving the existing environmental conflicts and setting up the optimum paths of the future dynamic development.

3.2.1 Long-Term Objectives of the Programme

The long-term objectives of the programme are the following:

- propose a development concept of the coastal area of Albania, harmonized with the receptive capacity of the environment;
- create conditions for the establishment of the system of integrated planning and management of resources in the coastal area of Albania.

3.2.2 Immediate Objective of the Programme

The immediate objective of the programme is to give, within the individual actions, solutions of environmental problems of the most urgent nature which could be implemented immediately. In the elaboration of those solutions, particular attention will be paid to the strategic objectives of the programme.

3.3 MAIN EXPECTED BENEFITS OF THE PROGRAMME

This programme is expected to provide the following benefits:

- improvement in the state of the environment;
- incorporation of environmental considerations into planning activities and decision-making process;
- enhancement of the local capacities in solving various development and environmental problems;
- transfer of knowledge from relevant international organizations to national and local institutions;
- creating conditions for responding to some accidental situations.

3.4 MAIN EXPECTED OUTPUTS OF THE PROGRAMME

The following are expected to result as main outputs of the programme:

- proposals for immediate actions;
- technical and economic measures for addressing existing environmental problems;
- integrated management plans;
- studies and reports on the specific subjects;
- training of local and national experts;
- demonstration projects;
- monitoring programme;
- database for various development and environment aspects;
- software to be used in solving some specific problems.

4. SUMMARY OF PROPOSED ACTIVITIES

(to be prepared)

5. INSTITUTIONAL FRAMEWORK

The following institutions will participate in the implementation of this programme:

- Mediterranean Action Plan of UNEP;
- local authorities and institutions;
- national authorities and institutions;
- other international institutions and organizations.

5.1 MAP PARTICIPATION

MAP will participate through:

- Co-ordinating Unit for MAP (Athens);
- Pollution Monitoring and Research Programme (MED POL);
- Priority Actions Programme Regional Activity Centre (PAP/RAC);
- Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC);
- Centre for Specially Protected Areas (SPA/RAC);
- Centre for the Blue Plan (BP/RAC);
- Centre for Historic Sites.

The Co-ordinating Unit of MAP will act as a general co-ordinator of all MAP programmes, secure the necessary scientific, technical and financial support as envisaged by the budget and workplan. Individual MAP Programmes will participate in the formulation, preparation and implementation of the programme according to their programme framework.

5.2 LOCAL AUTHORITIES AND INSTITUTIONS PARTICIPATION

The following local authorities and institutions will participate:

(to be agreed with Albanian authorities)

5.3 NATIONAL INSTITUTIONS PARTICIPATION

The following national institutions will participate in the implementation of this programme:

- Committee for Environmental Preservation and Protection;

(list to be completed with Albanian authorities)

The Committee for Environmental Preservation and Protection will act as a general co-ordinator for all Albanian institutions and experts and receive necessary scientific, technical, logistical and financial support as envisaged by the budget and workplan. Individual Albanian institutions will participate in the formulation, preparation and implementation of the programme according to their programme framework.

5.4 OTHER INTERNATIONAL INSTITUTIONS AND ORGANIZATIONS PARTICIPATION

Other International Institutions and Organizations will participate in their respective field of competence:

- Council of Europe, European Working System, Open Partial Agreement on Major Disasters (Activity 7.3.4 Physical Planning on Seismically Active Zones);
- International Centre for Advanced Mediterranean Agronomical Studies (ICAMAS) (Activity 7.5 Programme of the Development of Agriculture).

5.5 CO-ORDINATION

Co-ordination will be organized in the following way:

MAP will nominate Chief Co-ordinator for the programme.

Each individual activity will have one Co-ordinator from the Albanian side and one Co-ordinator from MAP or international organizations responsible for that activity.

The Chief Co-ordinator and all Co-ordinators will constitute a Task Team which should meet at least once a year to review progress and consider future plans.

Any activity might establish its own Task Team if the subject is of a complex nature.

6. BUDGET AND COST SHARING

(to be prepared)

7. DETAILED DESCRIPTION OF IMMEDIATE ACTIONS

7.1 POLICY FOR INTEGRATED PLANNING

7.1.1 Environment/Development Scenario

(to be prepared)

7.1.2 Linked Sectoral Planning, Especially in Agriculture and Tourism

(to be prepared)

**7.2 INTEGRATED COASTAL AREA MANAGEMENT PLAN WITH PARTICULAR
REFERENCE TO DURRES-VLORE REGION**

(to be prepared)

7.3 TRAINING AND APPLICATION OF TOOLS AND TECHNIQUES FOR COASTAL ZONE MANAGEMENT

7.3.1 GEOGRAPHICAL INFORMATION SYSTEM (GIS)

BACKGROUND

Integrated planning represents a basis for the implementation of the activities within the coastal area management programme (CAMP) for Albania. It is a dynamic process of achieving goals and objectives for environmentally sustainable development within the constraints of physical, social, and economic conditions and the constraints of legal, financial and administrative systems and institutions. It is a comprehensive approach requiring a certain training of local and national experts which are expected to implement it.

The Geographic Information System (GIS) is one of the basic tools of integrated planning. GIS consists of the geocoded base of physical, environmental and socio-economic data, and a series of analytical techniques which enable for a complex analysis and modelling of interrelated thematic subjects. All those operations are performed on PCs with the software support of the pcARC/INFO package. Within the framework of PAP professional and material conditions have been created for the implementation of a training programme on GIS. The objective of that training programme is to create professional conditions for the application of GIS required for the process of integrated planning within the CAMP of Albania. Since it is a complex activity, it is envisaged to be implemented in two phases:

- an orientation course in Split for the organizers of GIS application in Albania;
- a training course in Albania with a practical application of the pcARC/INFO software.

OBJECTIVES, EXPECTED BENEFITS

The objectives of this training programme are the following:

- to train local experts in the application of GIS in integrated planning and management of Albanian coastal resources;
- to create a geocoded information system to serve as a tool in the planning and decision-making process.

The expected benefits of this programme are the following:

- understanding of the importance of GIS for the implementation of the integrated planning and management process;
- enhancement of capabilities of planners and decision-makers in Albania to assess and manage coastal zone resources;
- integration of physical, environmental and socio-economic databases into a single information base for the CAMP of Albania.

ASSUMPTIONS

The following is required for the implementation of this training programme:

- experience of local experts in using PCs who are to serve as organizers of this activity;
- environmental, spatial and socio-economic database prepared in advance;
- availability of hardware in Albania suitable for use of the pcARC/INFO software.

OUTPUTS

The outputs of this activity will be:

- training of Albanian experts;
- establishment of GIS in one Albanian institution;
- practical results related to a number of specific aspects (thematic maps-coverage) to be used as inputs in other activities of this CAMP.

INSTITUTIONAL FRAMEWORK

This activity will be carried out under the auspices of the national and local authorities in collaboration with PAP/RAC and UNEP/GRID (Global Resources Information Database). The national team leader will be an Albanian expert nominated by Albanian authorities. PAP/RAC and UNEP/GRID will provide training expertise and scientific co-ordination of the activity. The participating parties will provide the following:

PAP/RAC provides for the entire organization of the orientation course in Split and offers professional assistance for the training course in Albania as follows:

- (i) Orientation course in Split
 - IBM compatible PCs and peripheral equipment;
 - pcARC/INFO software;
 - premises for the course;
 - experts to run the course;
 - administrative and logistic support;
 - expenses pertaining to the stay of Albanian experts in Split.

(ii) Training in Albania

- experts to run the course;
- pcARC/INFO software on a non-commercial basis for training purposes;
- training documents.

MEDU

- MEDU will provide financial support in the preparation of the database for the programme.

UNEP/GRID to assist in the implementation of the programme in Split and Albania and to provide the following (tentative):

- 1 computer expert to run the course in Split;
- 1 computer expert to run the course in Albania.

Albanian national authorities will provide the general co-ordination of the programme.

Albanian national institution in charge carries out the organization of the programme in Albania and provides for the following:

(i) Orientation course in Split

- 2 local experts to attend the course

(ii) Training in Albania

- team of local experts to be trained and to be in charge of the project;
- necessary sources of data;
- premises for the working team;
- administrative and logistic support.

WORKPLAN

- Selection of participants for the course in Split Oct. 1992
- Orientation course in Split Dec. 1992
- Selection of the working team in Albania and the preparation of the database Jan. 1993

- Start of the training in Albania and the first mission of PAP and GRID experts March 1993
- Completion of the preparation of a set of thematic maps and second mission of PAP and GRID experts June 1993
- Completion of the first analysis and the third PAP experts mission Oct. 1993
- Preparation of thematic maps for the integrated planning study May 1994
- Final report June 1994

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- PAP/RAC	5	20	15	-	-	-	5	20	15
- MEDU (data)	10	-	-	-	-	-	10	-	-
<u>Counterpart contribution</u>									
- Albanian institute	-	-	-	5	20	15	5	20	15
<u>Others:</u>									
- Purchase of equipment from an external source	20	-	-	-	-	-	20	-	-
TOTAL	35	20	15	5	20	15	40	40	30

7.3.2 Carrying Capacity for Tourist Activities

(to be prepared)

7.3.3 Environmental Impact Assessment (EIA)

(to be prepared)

7.3.4 Physical Planning in Seismically Active Zones

(to be prepared)

7.4 PROGRAMME OF ENVIRONMENTALLY SOUND ENERGY PLANNING

BACKGROUND

The damage being done to the environment by current patterns of energy production and use is now being recognized as one of the most important issues facing energy policy makers today. On the global level, the main focus is on the risks of climatic changes, while on the regional, national and more local levels there are other types of effects from energy production. These effects which cause serious environmental concern are the emission of sulfur dioxide, nitrogen oxides, hydrocarbons and suspended particulate matter. In addition to these airborne pollutants, the solid and liquid wastes should also be given due consideration as pollutants of sea and soils.

As a first step towards developing more environmentally sound and sustainable patterns of energy production and use, it is essential that the environmental aspects are fully integrated at the planning stage. These aspects are extremely important to coastal areas that generally present fragile environmental conditions. Such an example is the Albanian coast which is expected to develop a strong tourist industry. This target can be accomplished through an energy planning exercise where the environmental aspects will be fully taken into consideration. In this context it will be possible to identify an environmentally sound energy plan which will be able to support the major development needs of the coastal area.

OBJECTIVES, EXPECTED BENEFITS

Development of environmentally sound and economical exploitation of energy resources at local or regional levels, through improved energy planning methods, utilization of renewable energy sources and application of more efficient technologies at both production and end-use levels.

In particular, the objectives of the programme are as follows:

- analysis of the role of renewable sources of energy (RSE) in the energy planning process taking into account economic and environmental criteria;
- development and analysis of the strategies for substitution of conventional energy sources by RSE;
- optimization of RSE system design for typical applications;
- training of national personnel for:
 - (i) collecting information significant for RSE application;
 - (ii) evaluation of data collected;
 - (iii) methods and tools for simulation of long-term performance of RSE systems and optimization of their design.

Furthermore, this project is intended to demonstrate that there is no fundamental conflict between the objectives of economic growth and protection of the natural environment.

Expected benefits are the following:

- to identify and examine the major energy problems of the coastal area and the impact of energy production and use on the environment;
- to weigh available technologies for the exploitation of the indigenous energy sources and for the rational use of energy;
- to suggest solutions to the clearly identifiable problems and to provide a strategy for immediate action.

ASSUMPTIONS

For the implementation of the project, the following has to be assumed:

- PAP/RAC will secure participation of internationally reputed experts, and act as the general implementing institution;
- the national authorities will nominate a responsible institution, qualified to act as the national co-ordinator and to secure the necessary administrative and logistic support, as well as available data. In case the available data is not sufficient, the workplan will have to be modified accordingly.

OUTPUTS

The outputs of this activity will be:

- a plan of action for the future environmentally and economically sound energy development of the coastal area;
- a planning methodology for integrated energy-environment planning, especially aiming at coastal regions;
- a number of Albanian energy professionals trained and experienced in both the energy-environment interactive process and the planning methodology.

INSTITUTIONAL FRAMEWORK

The role and inputs of the participating parties are as follows:

PAP/RAC will provide assistance in the project preparation and implementation. It will also organize meetings to review the progress of the work and to have the final discussion of the study. Finally, it will prepare the final report and present it to the national and local experts and authorities.

A national institution will act as the responsible management institution for the project by coordinating all activities relevant to the administrative and financial aspects of it.

Municipalities of the coastal area will provide support for the establishment of a local energy office. Under this context, they will provide:

- 1 expert who will staff the energy office and act as the local project manager;
- premises for the working team and corresponding administrative support;
- necessary sources of data.

The relevant ministry will provide the means required for the measurements that will provide an estimation of the pollution caused by the energy production activities.

WORKPLAN

- | | |
|---|-----------------------|
| - Preliminary mission | Sept.- Dec. 1992 |
| - Training course on data collection | Sept.- Dec. 1992 |
| - Collection of meteorological data relevant for RSE utilization: | Jan.- May 1993 |
| (i) already existing data | |
| (ii) data on inclined surface (irradiation), and wind energy data on several spots | |
| - Evaluation and statistical processing of data | Sept. 1993 |
| - Feasibility study on the application of RSE | |
| (i) Analysis of energy strategies concerning effects on environment and role of RSE | |
| (ii) Proposal of measures and incentives to be taken by government in order to promote environmentally sound energy planning through the use of RSE | Dec. 1993 - Feb. 1994 |
| - Presentation of results | May 1994 |

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- PAP/RAC	10	20	10	-	-	-	10	20	10
<u>Counterpart contribution</u>									
	-	-	-	10	15	10	10	15	10
TOTAL	10	20	10	10	15	10	20	35	20

7.5 PROGRAMME OF THE DEVELOPMENT OF AGRICULTURE

(to be prepared)

7.6 DEVELOPMENT OF ENVIRONMENTAL LEGISLATION

BACKGROUND

The development of environmental legislation as a distinctive activity within the Coastal Area Management Programmes (CAMPs), is an indispensable tool for advancing the enforcement aspect of these Programmes. Their effective implementation requires the corresponding prescription and application of legal norms based on the understanding of the relationship between environment and development in the particular legal, administrative, social, economic and political context of each Contracting Party. For this purpose an investigation into the existing state and the implementing quality of the relevant environmental legislation would be required, taking into account the legal system it operates, the level of economic development and the attitudes in the receiving system. Hence an effective identification of the relevant legal issues will take place, facilitating, in specific terms, the further development, specialization and improvement of national environmental legislation and pointing to the most appropriate enforcement strategy.

As a result of a recent MAP expert mission in Albania (25-28 August, 1992) and in co-operation with the competent Albanian authorities, the content of the legal activity, comprised in the Coastal Area Management Programme (CAMP) for Albanian, was specified at four levels:

- development of a general integrated environmental law;
- evolution of the present institutional structure dealing with the environment;
- development of specific sectoral environmental legislation;
- identification of the most suitable means for an enforcement strategy.

For the determination of the above content of the CAMP-Albania legal activity, a series of contextual factors are of special relevance. These are:

- The complete reconstruction of the Albanian legal system. A democratic Constitution is now in preparation which will contain specific provisions regarding environmental protection and preservation, whereas a Civil as well as a Penal Code will soon be promulgated. In this intensely transitional period from the old communist to the new democratic system of government, ministries are oriented to the most effective allocation of competencies in their effort to initiate and develop national policies in all sectors.
- The entire lack of any Environmental Legislation. With only one insignificant exception (Decree No. 5105/30.10.1973 "On Protection of Environment Against Pollution"), there is no Environmental Legislation of any kind in Albania. The newly established Committee for Environmental Preservation and Protection, within the Ministry of Health and Environmental Protection, is responsible for initiating the development of such a legislation and for contributing to the elaboration of a comprehensive environmental policy in Albania.
- The development pressures and the newly enacted Law on Foreign Investments, 1992, should urgently take into account environmental considerations which, until now, have not found any legislative expression. In this regard, the development of expert knowledge on environmental law, at all levels of its operation, should be systematically introduced.

OBJECTIVES, EXPECTED BENEFITS

The long-term objective of this activity is twofold: to develop an effective Environmental Legislation and to contribute to the evolution of the most adequate institutional structure designing and implementing a comprehensive national environmental policy.

The immediate objectives are:

- to assist in the improvement and finalization of the Draft Law on Environmental Protection;
- to advise on issues of institutional development concerning environmental administration;
- to assist in the institutional development of in-service training programmes on environmental issues and environmental policy;
- to assist in the development of specific, sectoral Environmental Legislation in accordance with the identified priorities and needs;
- to advise on the implementation of the relevant International Conventions.

The expected benefits are:

- systematization and effective organization of the development of national Environmental Legislation reflecting a sound combination of general, integrated Environmental Law and specific sectoral legislation;
- identification of the most appropriate Environmental Legislation suited for the needs and priorities of the country;
- upgrading knowledge on issues of environmental law;
- improvement of the existing institutional structure dealing with environmental administration at the national and district level;
- development of a suitable environmental training policy for public services in Albania so that a better understanding and an overall approach of the environmental issues of the country will be attained improving the performance of public administration in the field of environmental protection.

ASSUMPTIONS

The implementation of this activity will be based on the following assumptions:

- MEDU will provide the expertise for Environmental Law and all the relevant legal material;

- expert knowledge on Environmental Law will be effectively employed in relation to the above stated activity if it adequately combines a comparative approach to Environmental Legislation and Administration with the conventional regimes, precepts and organizational aspects of International Environmental Law;
- The Committee for Environmental Preservation and Protection and relevant Albanian ministry, together with the Juridical Office of the Council of Ministers, will fully support this activity, will define and initiate the implementation of any aspect of this activity, and will secure the necessary input from national legal and other experts;
- MEDU will provide the expertise on the possible organization of in-service training programmes on issues of environmental policy, administration and law.

OUTPUTS

The main outputs of this activity will be:

- the enactment of a suitable general, integrated Law on Environmental Protection;
- the development and adoption of specific sectoral Environmental Legislation which does not presently exist;
- the development of an effective institutional and decision-making structure relating to environmental protection;
- the effective implementation of the Barcelona Convention and its related Protocols, as well as of other relevant International Environmental Conventions;
- the training of all public servants dealing with issues of environment and development to make them familiar with national environmental policy, administration, international co-operation and law.

INSTITUTIONAL FRAMEWORK

The activity will be carried out by a Task Team composed of an international legal expert provided by MEDU, of national experts provided by the Committee for Environmental Preservation and Protection and of the Juridical Adviser to the Prime Minister from the Council of Ministers Juridical Office.

A national legal expert nominated by the competent Albanian authorities and an international legal expert provided by the MEDU will act as Co-ordinators.

The Task Team will be established by the competent national authorities in consultation with the MEDU.

The Task Team may further ask for the advice of other international specialists if such a need arises, who will be provided by the MEDU.

WORKPLAN

- Advice on, and specific suggestions for the re-drafting of the Draft Law on Environmental Protection by an international legal expert August 1992
- Advice on specific institutional questions by an international legal expert August 1992
- Advice on a general enforcement strategy of Environmental Law by an international legal expert August 1992
- Finalization of the re-drafted Draft Law on Environmental Protection September 1992
- Nomination of the Co-ordinators of the Task Team and establishment of the Task Team October 1992
- Preparatory Meeting of the Task Team November 1992
- Preparation of specific sectoral Environmental Legislation and assessment of institutional developments March-June 1993
- Preparation of a training policy and of programmes of in-service training for the competent public sector employees concerning environmental policy, administration, international co-operation and law June 1993
- Review of the prepared specific sectoral Environmental Legislation and of institutional developments Sept.-Oct. 1993
- Preparation of the Draft Report November 1993
- Preparation of the Final Report March-May 1994
- Publication of the Report and presentation to the Albanian authorities May 1994

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>MAP contribution</u>	10	20	10	-	-	-	10	20	10
<u>Counterpart contribution</u>	-	-	-	5	20	10	5	20	10
TOTAL	10	20	10	5	20	10	15	40	20

7.7 WATER RESOURCES MANAGEMENT PLAN

BACKGROUND

In securing satisfactory living conditions for the population and meeting the needs of the planned development of tourist and other activities in the coast, the supply of fresh water is of paramount importance. At that, the fresh water quality has to meet the WHO standards and the monitoring and distribution systems have to guarantee such a quality. The management system should secure a feasible supply and distribution while protecting fresh water resources from pollution.

To meet the above requirements, a water resources management study will be prepared for a selected coastal area.

It should be noted that PAP/RAC has implemented similar studies in the period 1988-92 for the Syrian coastal zone and the Kastela Bay area, Croatia, while the water resources management plan has been completed and implemented for the island of Malta. The management study concerning the island of Rhodes, Greece, is in preparation. Experience obtained from all these activities will be used in the Albanian study.

OBJECTIVES AND EXPECTED BENEFITS

The long-term objectives of this activity are to contribute to the protection and rational use of water resources of the Albanian coastal zone, and to create conditions necessary for the development of tourist and other coastal activities.

The immediate objectives of the study are to assess the availability of resources and their quality, to propose measures for the prevention of their pollution, to analyse the existing water resources management system, and recommend a system of monitoring and sanitary control. The study will also present the water balance of the existing and future needs for water and recommend a feasible approach to the planning and implementation of development projects.

The expected benefits are:

- rational utilization of water in harmony with development;
- protection of fresh water resources from pollution;
- upgrading of knowledge and experience of local and national experts and institutions.

ASSUMPTIONS

For the successful implementation of the project, national and local authorities are supposed to provide required data and information, and nominate a national institution responsible for the co-ordination and implementation of the study. The availability of relevant hydrological and hydrogeological studies is particularly important.

PAP/RAC will secure that the programme be carried out and that the final report be prepared.

OUTPUTS

The main output of this activity will be the water resources management study, together with the accompanying (sectorial and specific) documents.

INSTITUTIONAL FRAMEWORK

PAP/RAC will draft the workplan, organize expert missions, and provide consultants, as well as secure the participation of a relevant Albanian institution co-operating with PAP/RAC.

The relevant National Ministry will act as national co-ordinator and secure the participation of relevant national and local institutions and authorities.

The national implementing institution will co-operate with PAP/RAC on the implementation of the study, and secure the participation of national and local experts (civil engineers, hydrologists, sanitary engineers, hydrogeologists). This institution will also provide the necessary administrative and logistic support as well as:

- inventory of the actual situation;
- data on development trends and programmes;
- data on hydrogeological and hydrological conditions.

WORKPLAN

- | | |
|---|------------------|
| - Preparatory activities, forming of teams, one expert mission, drafting of a detailed workplan | Sept.- Dec. 1992 |
| - Data collection, identification of problems, alternative strategies | March 1993 |
| - Formulation and screening of alternatives | June 1993 |
| - Draft final report, discussion and amendments | Nov. 1993 |
| - Finalization of the study and presentation | March 1994 |

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- PAP/RAC	10	15	15	-	-	-	10	15	15
<u>Counterpart contribution</u>									
	-	-	-	15	20	10	15	20	10
TOTAL	10	15	15	15	20	10	25	35	25

7.8 SOLID AND LIQUID WASTE MANAGEMENT

BACKGROUND

In coastal areas oriented towards tourist development, an efficient control of solid and liquid waste management is a crucial factor in maintaining the appropriate health conditions and bathing water quality. The preparation of a general plan for the management of solid waste and municipal waste waters from main coastal towns is, thus, of utmost importance.

This plan implies an assessment of all pollution sources, planning of collection, treatment and disposal systems, as well as proposals for upgrading the relevant institutional arrangements.

PAP/RAC has elaborated the practical guidelines for environmentally sound management of solid and liquid waste respectively which contain technical and management recommendations.

It should also be noted that appropriate waste management is essential for the protection of aquifers and establishment of a monitoring programme.

OBJECTIVES AND EXPECTED BENEFITS

The long-term objective of this activity is the improvement of sanitary conditions in urban and rural areas of the coastal zone through a better management of solid and liquid wastes.

The immediate objectives of this activity are:

- to assess all pollution sources;
- to recommend the most appropriate treatment and disposal systems;
- to determine pollution control measures in accordance with the development trends taking into account the common measures adopted by the Contracting Parties;
- to adjust the monitoring programme for marine pollution and bathing water quality.

The expected benefits are:

- improvement of sanitary conditions;
- prerequisites for the development of tourism fulfilled;
- appropriate administrative and organizational framework for waste management established;
- upgraded knowledge and experience of national and local experts and institutions;
- obtained results used as pilot inputs for other similar projects, both in the country and elsewhere in the region.

ASSUMPTIONS

In order to launch and implement the activity, the following is necessary:

- data on population, development trends and projects, solid and liquid waste, existing administrative and legal basis for waste management to be provided by national and/or local authorities;
- relevant data and information on a national level to be provided by the relevant ministry.

OUTPUTS

A general solid and liquid waste management plan will be prepared, containing practical and technical recommendations for upgrading waste management.

INSTITUTIONAL FRAMEWORK

PAP/RAC will be responsible for the elaboration of the management plan, together with the institution nominated by the national authorities. PAP/RAC will secure the involvement of internationally reputed consultants and the leader of the PAP team of experts.

National and local authorities will provide at least four experts to carry out the work: one expert in solid waste management, one in liquid waste management, one chemical engineer, and one hydrogeologist. The experts will be responsible for data collection, laboratory analyses, and administrative and legal arrangements. One national or local laboratory should be available for the analytical work. The national authorities will also be responsible for dissemination of results by organizing a conference at the end of the activity.

The relevant Albanian Ministry will have a supervisory and co-ordinating role. Other relevant ministries and/or institutions will be involved in the activity through the relevant ministry.

WORKPLAN

- | | |
|--|------------------|
| - Preparatory activities, including one expert mission | Sept.- Dec. 1992 |
| - Assessment of local conditions and data collection | Jan. 1993 |
| - Setting of standards | Feb. 1993 |
| - Planning of the systems | June 1993 |
| - Proposal for administrative organization | Sept. 1993 |

- Drafting of the final report, discussions and amendments Jan. 1994
- Final report and presentation April 1994

The proposed workplan is subject to modification, following the findings of the mission.

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- PAP/RAC	10	15	15	-	-	-	10	15	15
<u>Counterpart contribution</u>	-	-	-	10	30	10	10	30	10
TOTAL	10	15	15	10	30	10	20	45	25

7.9 SOIL EROSION AND CONSERVATION

BACKGROUND

Soil erosion and degradation are among the most severe problems of many Mediterranean coastal areas. In the northern and eastern parts of the region, the prevailing problems are rainfall-induced erosion, erosion of the coastal strip, and loss of agricultural land due to urban expansion. The Albanian coastal area is mainly under the influence of the rainfall-induced erosion, while the loss of agricultural land due to urban expansion and development is an approaching threat.

PAP/RAC, in co-operation with FAO and the Spanish institution ICONA, has been implementing since 1986, the priority action entitled "Soil Protection as an Essential Component of the Protection of the Mediterranean Coastal Areas". Within this priority action, a co-operative project on soil erosion mapping and monitoring has been formulated and is now in implementation with the participation of Spain, Tunisia and Turkey. Within the framework of this project, and with the participation of experts from all Mediterranean countries, a common methodology of erosion mapping and monitoring has been formulated and is now being tested.

In addition, within the same priority action, a number of case studies have been prepared dealing with the most important aspects of soil protection and conservation.

Experience gained through those activities will be applied within the activity on soil protection and conservation in the Albanian coastal zone.

OBJECTIVES, EXPECTED BENEFITS

The long-term objective of this activity is to contribute to the protection of soil against erosion processes with special attention to the prevention of loss of agricultural land due to urban expansion.

Immediate objectives are:

- to prepare a comprehensive review of the state of erosion processes and of urban expansion;
- to train national and local experts on the PAP/FAO/ICONA methodology of erosion mapping (including erosion status and dynamics) and monitoring;
- to prepare a project proposal for mapping and monitoring of erosion processes;
- to formulate proposals for the protection of agricultural land;
- to formulate proposals for an appropriate institutional arrangement.

The expected benefits are:

- increased knowledge of the problems of soil protection;

- experts trained on mapping and monitoring of erosion processes;
- possibility of international funding for the project proposal;
- possibility of improving the present institutional arrangement.

ASSUMPTIONS

In order to initiate and implement this activity, the following is necessary:

- national and local authorities will provide available data on erosion processes, the loss of agricultural land, and the expected urban expansion, maps, soil maps, as well as nominate the responsible national institution as a counterpart to PAP/RAC;
- PAP/RAC will secure the participation of FAO, ICONA and internationally reputed experts as consultants;
- the relevant Albanian Ministry will act as the general co-ordinator, and will secure the inputs from the nominated national institution.

OUTPUTS

The outputs of this activity will be:

- a comprehensive study on soil erosion processes including recommendations for mitigation measures;
- training of national experts on erosion mapping and monitoring;
- maps of the selected pilot areas prepared according to the developed methodology;
- a project proposal for mapping and monitoring of erosion processes to cover a larger selected area.

INSTITUTIONAL FRAMEWORK

PAP/RAC will be responsible for the elaboration of the detailed workplan of this activity, for its implementation, and for the organization of training for national experts. PAP/RAC will also prepare the final report and the project proposal of a larger mapping and monitoring programme.

National authorities will provide data and experts on soil erosion mapping and monitoring, including geologists, hydrologists and hydrogeologists. They will also secure the necessary administrative and logistic support.

The relevant Albanian Ministry will act as a general co-ordinator, and will secure the involvement of other relevant national institutions.

WORKPLAN

- Preparatory activities, expert mission Sept.- Dec. 1992
- Training of national experts on mapping March 1993
- Training of national experts on monitoring June 1993
- Mapping of a pilot area Oct. 1993
- Installation of a pilot monitoring system Jan.- Sept. 1993
- National report on mapping Jan. 1994
- National report on monitoring Nov. 1994
- Final report and project proposal Dec. 1994

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- PAP/RAC	10	15	20	-	-	-	10	15	20
<u>Counterpart contribution</u>									
- External funding*	-	15	-	10	30	20	10	30	20
TOTAL	10	30	20	10	30	20	20	60	40

* Approximately US\$15,000 for the purchase of monitoring equipment should be secured from external sources. Otherwise, the monitoring programme should be postponed for 1994/95, to be completed by the end of 1995.

7.10 INVENTORY OF LAND-BASED SOURCES (LBS) OF POLLUTION AND IMPLEMENTATION OF LBS AND DUMPING PROTOCOLS

BACKGROUND

I. Land-Based Sources Protocol

A) Common measures

The Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution (1976 Barcelona Convention) undertook the obligation to take all appropriate measures to prevent, abate and combat pollution of the Mediterranean Sea area caused by discharges from rivers, coastal establishments or outfalls, or emanating from any other land-based sources within their territories (Article 8).

In order to implement the above obligation, the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (LBS) was adopted in 1980 and came into force in 1983.

The LBS Protocol stipulates (Article 5) that the Contracting Parties shall eliminate pollution of the Protocol Area from Land-Based Sources by substances listed in Annex I ("Black list of substances") to the Protocol and that to this end, they shall elaborate and implement, jointly or individually, as appropriate, the necessary programmes and measures, which shall include, in particular, common emission standards and standards of use.

The Protocol also stipulates (Article 6) that the Contracting Parties shall strictly limit pollution from land-based sources in the Protocol area by substances or sources listed in Annex II ("Grey list of substances") to the Protocol and that to this end, they shall elaborate and implement, jointly or individually, as appropriate, suitable programmes and measures.

In addition, the Protocol stipulates (Article 7) that the Contracting Parties shall progressively formulate and adopt, in cooperation with competent international organizations, common guidelines and, as appropriate, standards or criteria dealing in particular with :

- (a) the length, depth and position of pipelines for coastal outfalls, taking into account, in particular, the methods used for pretreatment of effluents;
- (b) special requirements for effluents necessitating separate treatment;
- (c) the quality of sea-water used for specific purposes that is necessary for the protection of human health, living resources and ecosystems;
- (d) the control and progressive replacement of products, installations and industrial and other processes causing significant pollution of the marine environment;
- (e) specific requirements concerning the quantities of the discharged substances listed in Annexes I and II, their concentration in effluents and methods of discharging them.

The calendar of activities for the progressive implementation of the Protocol approved by the Fifth Ordinary Meeting of the Contracting Parties (Athens, September 1987) envisages that by 1995 common measures will be adopted for all substances listed in Annexes I and II to the Protocol.

Up to October 1991, the Contracting Parties to the Barcelona Convention and Protocols adopted the following common measures in terms of the LBS Protocol:

1. Interim Environmental Quality Criteria for Bathing Waters (1985) (Article 7.1(c));
 2. Interim Environmental Quality Criteria for Mercury (1985) (Article 7.1(c));
 3. Measures to Prevent Mercury Pollution (1987) (item 4 of Annex I);
 4. Environmental Quality Criteria for Shellfish Waters (1987) (Article 7.1(c));
 5. Measures for Control of Pollution by Used Lubricating Oils (1989) (item 6 of Annex I);
 6. Measures for Control of Pollution by Cadmium and Cadmium Compounds (1989) (item 5 of Annex I) ;
 7. Measures for Control of Pollution by Organotin Compounds (1989) (item 3 of Annex I) ;
 8. Measures for Control of Pollution by Organohalogen Compounds (1989) (item 1 of Annex I).
 9. Measures for Control of Pollution by Organophosphorus Compounds (1991) (item 2 of Annex I).
 10. Measures for Control of Pollution by Persistent Synthetic Materials (1991) (item 7 of Annex I).
 11. Measures for Control of Pollution by Radioactivity (1991) (item 9 of Annex I).
 12. Measures for Control of Pollution by Pathogenic Microorganisms (1991) (item 8 of Annex II).
- B) Survey of Land-Based Sources of pollution

The assessment of the total pollution input to the Mediterranean Sea from Land-Based Sources was the major objective of the MED X project launched by UNEP in 1977 and implemented in cooperation with ECE, UNIDO, FAO, UNESCO, WHO and IAEA. The report "Pollutants from Land-Based Sources in the Mediterranean" was published as "UNEP Regional Seas Reports and Studies No 32".

The Contracting Parties to the Barcelona Convention decided to launch a new, improved survey of land-based sources of pollution in the Mediterranean Sea and the following set of new questionnaires was sent in June 1989 to all National Co-ordinators for MED POL with the request to be completed and returned by November 1989 :

1. Questionnaire on liquid domestic discharges;
2. Questionnaire on industrial discharges containing selected substances listed in Annexes I and II to the Protocol for the protection of the Mediterranean Sea against pollution from land-based sources;
- 3(a) Questionnaire on industrial discharges of petroleum hydrocarbons;
- 3(b) Questionnaire on oil discharges from refineries;
- 3(c) Questionnaire on oil discharges from reception facilities.

II. Dumping Protocol

The Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft was ratified by all Contracting Parties to the Barcelona Convention and entered into force on 12 February 1978.

According to articles 7 and 14 of the Protocol, Contracting Parties to the Protocol owe to report on :

- issuance of permits (including non-issuance of permits, so called "nil reports") and
- reports on actual dumping.

OBJECTIVES

The main objective of this project is the environmental protection of the coastal region of Albania through the full implementation of the Land-Based Sources Protocol and the Dumping Protocol.

WORKPLAN

- Establishment of the working group with representation of national and local authorities and the Mediterranean Co-ordinating Unit Oct. 1992
- Survey of Land-Based Sources of Pollution (MED X bis) Oct. 1992
- Elaboration of the detailed plan of implementation of the project Nov. 1992
- Adoption of the plan with financial considerations Dec. 1992

BUDGET

The parties concerned will provide the following (in 000 of US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- MED POL (LBS)	10	10	-	-	-	-	10	10	-
<u>Counterpart contribution</u>									
	-	-	-	20	20	-	20	20	-
TOTAL	10	10	-	20	20	-	30	30	-

7.11 MONITORING AND RESEARCH OF MARINE POLLUTION

BACKGROUND

Considering the number of coastal towns on the 470 km of the Albanian coastline, which involve all types of human activities (dwellings, ports, industrial areas and existing and projected tourist developments), the development of a permanent network of sampling stations for the monitoring of the quality of the coastal waters was considered essential.

Such a network was established through the National Monitoring Programme of Marine Pollution which was developed in 1990 by the Mediterranean Co-ordinating Unit, in collaboration with Albanian authorities, experts from Albanian universities and research institutions. This programme has been implemented since 1991.

OBJECTIVES, EXPECTED BENEFITS

The general objectives of the pollution monitoring programme are to determine the sources, levels, pathways and trends of pollution along the Albanian coasts. The information obtained through the implementation of the monitoring programme will be used as a management tool for the development of the whole coastline area.

ASSUMPTIONS

For the implementation of the proposed monitoring programme, the following is assumed:

- involvement of competent Albanian research institutions;
- full support of the Environmental Protection and Preservation Committee and relevant Albanian ministry;
- financial contribution from MAP.

OUTPUTS

The main output of the implementation of the programme is the creation of a permanent network of sampling stations for the monitoring of coastal pollution.

The results of the monitoring programme will assist Albania in the implementation of the Barcelona Convention and its related protocols and in the management of the Albanian coastal zone.

INSTITUTIONAL FRAMEWORK

The Mediterranean Co-ordinating Unit is responsible for review, further development and implementation of the National Monitoring Programme through provision of expert advice, instrumentation, chemicals, supplies and training, as well as development and implementation of the Data Quality Assurance Programme.

The Environmental Protection and Preservation Committee of Albania is responsible for the organization of the programme in Albania through selection and co-ordination of the work of participating research institutions.

Participating research institutions are responsible for the technical implementation of the programme, including participation of their scientific and technical personnel, as well as availability of laboratories and instrumentation.

WORKPLAN

The existing National Monitoring Programme contains the following components:

- monitoring of sources of pollution;
- monitoring of coastal areas;
- monitoring of reference areas.

The main parameters which have been monitored cover measurements of microbial quality of bathing waters and shellfish growing areas, measurement of heavy metals, halogenated and petroleum hydrocarbons and measurement of nutrients.

The agreement signed between the Government of Albania and UNEP on the National Monitoring Programme of Albania contains all the necessary information concerning the location of sampling stations, frequency of sampling, parameters to be measured, institutions responsible for each parameter, etc.

BUDGET

The parties involved will provide the following (in '000 US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- MED POL	50	50	50	-	-	-	50	50	50
<u>Counterpart contribution</u>									
	-	-	-	50	50	50	50	50	50
TOTAL	50	50	50	50	50	50	100	100	100

7.12 ASSESSMENT OF RISK FROM POLLUTION BY OIL AND OTHER HARMFUL SUBSTANCES AND THE PREPARATION OF A CONTINGENCY PLAN FOR ALBANIA

BACKGROUND

Pollution caused by marine transport is a major threat to the Mediterranean ecology. It is claimed that tankers, passenger ships, freighters and other vessels discharge hundreds of tons of waste material, including oil residues every day. It has been estimated that between 1/8 and 1/4 of the world's pollution by oil ends up in the Mediterranean Sea. Not surprising, since the Mediterranean is one of the most important intersections of maritime transport.

Aware of the extent of the problem, the Mediterranean countries adopted, within the framework of the Barcelona Convention, the Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency. The implementation of this Protocol has been entrusted to MAP's Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) located in Malta. Its purpose is to provide training for experts from the Mediterranean countries in oil pollution control; to assist the countries in the formulation of national and sub-regional contingency plans and, in cases of emergency, to help co-ordinate the technical response of governments to accidents.

OBJECTIVES

The objectives of this activity are to produce an analytical survey of possible risks from pollution by oil and other harmful substances with the aim of preventing routine (day-to-day) pollution of the sea by marine transport, and to prepare a contingency plan of response to accidental pollution for Albania.

EXPECTED BENEFITS

This activity is expected to increase the level of preparedness of Albanian structures (administrative, technical, industry) to respond effectively to the immediate threat which a shipping accident causing pollution by oil may present.

In order to achieve these objectives, it is necessary:

- to evaluate the density and type of maritime traffic in the coastal region of Albania;
- to identify potential sources of marine pollution related to maritime transport;
- to identify possible sources of this type of pollution in the region (ports, terminals, tank farms, etc.);
- to identify and evaluate already existing arrangements and structures for dealing with accidental marine pollution;

- to identify and evaluate available resources for accidental oil pollution control;
- to identify existing infrastructure elements which may possibly be of use in case of a major oil pollution emergency (radio communications, airfields, disposal sites, etc.);
- to identify needs for training local personnel in subjects related to response to accidental marine pollution.

Results of these preliminary surveys should be presented in the form of a study which may serve as a basis for formulating a national contingency plan.

At a later stage, prevention of operational pollution and response to accidental pollution by harmful substances other than oil may also be included in the proposed study, should the survey prove the need for it.

ASSUMPTIONS

All available knowledge concerning the above-mentioned topics which already exist in various components of the Mediterranean Action Plan (PAP, MEDU, REMPEC) will be used as a basis for the study. This, in particular, refers to identification of coastal zone sensitivity.

OUTPUTS

Principal outputs are expected to be:

- proposal of a draft contingency plan;
- proposal for the improvement of existing contingency arrangements;
- proposal of a training course on pollution control and response;
- proposal for the preparation of a sensitivity map.

INSTITUTIONAL FRAMEWORK

The REMPEC contribution to the project will be carried out by a consultant recruited by REMPEC in close co-operation with relevant national authorities and with the REMPEC Albania national Focal Point.

WORKPLAN

- Assessment of local conditions (on the coastal region)
- Collection and processing of additional data
- Finalization of the Report and draft Contingency Plan

7.13 PROTECTION AND MANAGEMENT OF HISTORIC SETTLEMENTS

(to be prepared)

7.14 SPECIALLY PROTECTED AREAS (SPA) AND IMPLEMENTATION OF SPA PROTOCOL

BACKGROUND

Due to its historical vicissitudes and present socio-economic conditions, in particular the level of industrialization and human settlement along the coasts, Albania appears to be an area of potentially exceptional conservational interest with regard to the coastline.

As clearly stressed in the report of the Mediterranean Action Plan mission to Albania, the current socio-economic situation demonstrates a potentially grave predicament, in that a deteriorating economy might seriously, speedily and irrevocably prejudice environmental concerns; and this, especially in the vulnerable and fragile coastal areas where existing and growing outside pressures for tourism complexes might lead to wrong decisions which, in the haste of applying perceived immediate remedies for jobs generation and economic growth might quickly mar that very coast which is one of Albania's main sources of tourism.

In this situation, the establishment of a network of specially protected or specially managed areas with different objectives (recreation, tourism, education, scientific research, conservation, etc.), must be regarded as one of the elements to be integrated in a more general management plan of the coastal area, in order to prevent the loss and irreparable deterioration of the natural estate, worthy of protection in itself as heritage for present and future generations, but whose safeguard and appropriate exploitation could well represent a favourable element for a long-term development of tourism activities.

Present knowledge about Albania's protected areas is very poor and fragmentary. Nine coastal protected areas are known for the country:

- Divjaka (National Park);
- Ksamil (Nature Reserve);
- Fushe-Kuge Patok (Nature Reserve);
- Rushkull-Potum (Nature Reserve);
- Kune (Nature Reserve);
- Velipoje (Nature Reserve);
- Vain (Managed Nature Reserve);
- Pishe Poro (Nature Reserve);
- Karaburum (Nature Reserve).

Only two of these (Divjaka and Kune) are recorded in the Directory of marine and coastal protected areas of the Mediterranean (MAP Technical Report Series No. 36), where an even limited amount of information is furnished. For all the others, practically nothing is known. Moreover, the almost complete lack of information is a generalized situation for the entire Albanian coast.

OBJECTIVES, EXPECTED BENEFITS

The primary objective of this activity is to establish a network of specially protected areas in order to safeguard the sites of special natural and cultural value.

This activity is expected:

- to verify the naturalistic value and strengthen the effectiveness of protection in existing coastal protected areas;
- to identify possible new sites of special natural and/or cultural value worthy of protection;
- to set the categories of natural areas for protection;
- to determine the coverage and boundaries of each area;
- to create proper conditions for effective management of these areas.

The expected benefits of this activity are the conservation of the natural estate in the protected areas, with related favourable repercussions from the social and economic point of view (recreation, education, tourism).

ASSUMPTIONS

The proposed activity falls within the field of application of the protocol concerning Mediterranean Specially Protected Areas (Geneva, 1982) with whose directives the activity will, therefore, comply.

The guidelines for the selection, establishment, management and notification of information on marine coastal protected areas in the Mediterranean, adopted at the first meeting of focal points (Athens, 1-4 June, 1987) will be utilized as a guide for the implementation of the different phases of the activity.

Due to the present state of knowledge about protected areas, and more in general about coastal areas of Albania, a preliminary study must be carried out in order to cover this lack of information.

This study provides for a mission, accomplished by international and national experts. The aim of this mission would be the following:

- collection of available information on protected and unprotected coastal areas;
- a survey of actual conditions of protection of the existing protected coastal areas;
- general inspection of the littoral of Albania, with a view to identifying potential sites for protection.

OUTPUTS

The outputs of this activity will be:

- report of the mission along the coasts of Albania, with emphasis on its natural (geomorphology, flora, fauna) and cultural values, and current status of protection and management of existing marine and coastal protected areas;
- database for existing and potential marine and coastal protected areas;
- boundaries of protected areas and adjacent zones which influence the state of these areas;
- categories of the areas, as well as the protection and improvement regime of adjacent zones;
- draft proposals of legal acts for the proclamation of coastal areas of special natural value;
- proposals for the management of protected areas (legal acts, financing, operational and institutional).

INSTITUTIONAL FRAMEWORK

In order to implement the activity, a working team composed of national and international experts, will be established. One international and one national expert will also act as co-ordinators of the team.

The parties concerned will provide:

- RAC/SPA will provide the international experts which will prepare the methodological approach and guidelines for the elaboration of the programme and will participate in the preliminary mission;
- Albanian authorities will provide the national experts to participate in the project, as well as the administrative and organizational support to the working team.

WORKPLAN

The workplan of this activity is co-ordinated within the overall management programme, as most data and information to be collected are also useful for other activities, and most of the outputs must be harmonized with other outputs.

- Presentation and approval of the Programme
- Nomination of the co-ordinators of the working team
- Establishment of the working team

7.15 IMPLICATIONS OF EXPECTED CLIMATIC CHANGE IN THE COASTAL REGION OF ALBANIA

BACKGROUND

The greenhouse effect is a pressing environmental problem, one which presents major scientific challenges across a wide range of disciplines. Changes in global climate between now and the middle of the 21st century are likely to be dominated by the influence of global warming due to increasing concentrations of carbon dioxide and other gases in the atmosphere. These greenhouse gases individually and collectively change the radiative balance of the atmosphere, trapping more heat near the Earth's surface and causing a rise in global-mean surface air temperature; as a consequence substantial global warming is virtually certain.

The question of the probable climate warming in the next few decades is a question concerning both the world in general and the Mediterranean in particular.

In spite of uncertainties surrounding predicted climatic change, greenhouse gases seem to have accumulated in the atmosphere to such a level that the changes may have started already and their continuation may now be inevitable.

There is a consensus in the scientific community that if allowed to continue to build up, a doubling of the greenhouse gases concentration (relative to the pre-industrial era) will occur sometime in the 21st century, possibly as early as 2030 AD. A corresponding global increase of temperature by the end of the 21st Century of between 2-5 EC is predicted.

Cyclogenesis and rainfall are often promoted by land-sea temperature contrasts. Because land and sea have different effective thermal inertias, a large-scale warming could affect this contrast, possibly reducing it in winter months. This could in turn lead to reductions in rainfall and in storminess, particularly in the eastern Basin. On the other hand, warmer sea surface temperatures both in the Mediterranean and in the North Atlantic could lead to increases in atmospheric moisture and thus precipitation.

Another main consequence of a warmer atmosphere is an accelerated rise of sea level, due to the melting of alpine and polar glaciers and to the thermal expansion of oceanic waters. Sea-level has been rising since the last glacial maximum (120m rise in the last 16,000 years at rates as rapid as 8 to 12 mm/year). In recent historical times, the rate has been 0.5 to 1.5 mm/yr. Analysis of tide gauge data, the principal source of evidence for detecting relatively short-term sea level trends, suggests that the world-wide rise has been about 10-15 cm in the past 100 years.

Depending on the extent of oceanic thermal expansion and the behavior of the polar ice caps (Greenland of the western Antarctic ice shelf), the range of conservative to moderate estimates of sea level rise is 13-39 cm (by 2025), 24-52 cm (by 2050) and 35-100 cm (by 2100).

There will be a significant lag in sea level rise, however, coupled with oceanic thermal inertia. For example, if greenhouse gas concentrations stopped increasing in the year 2030, warming would continue for many decades. Since the glacial melting and thermal expansion of the oceans would continue, so would sea level rise.

Superimposed on sea level rise will be the effects of local tectonic and sediment compaction. Vertical earth movements in the Mediterranean commonly occur at a rate of 1-5 mm/year averaged over thousands of years, and 3-20 mm/year averaged over 15-20 years. Local subsidence can exceed 5 mm/yr. It follows that in the future the economic cost of protecting or abandoning structures or land on the Mediterranean coast will depend strongly upon the local land movement coupled with sea level rise. Where land is subsiding, the net relative change could be much more than the global eustatic rise of sea level; where land is rising, the relative change will be significantly reduced.

OBJECTIVES, EXPECTED BENEFITS

The objective of this study is to assess possible implications of expected climatic change on ecosystems, land-use and sea-use practices and other human activities of the coastal region of Albania and to propose suitable management and policy response options.

The study is expected:

- to examine the possible effects of the sea level changes on the coastal ecosystems;
- to examine the possible effects of temperature elevations on the terrestrial, aquatic and marine ecosystems, including the possible effects on economically important species;
- to examine the possible effects of climatic and ecological changes on the socio-economic structures and activities;
- to determine areas or systems which appear to be most vulnerable to the above changes;
- to propose suitable management and policy response options.

ASSUMPTIONS

The study will be based on:

- the best available existing knowledge and insight into the problems relevant to the subject of the study;
- assumptions accepted at the Second World Climate Conference (Geneva, 1990), i.e. increased temperature of 2-5 EC and sea level rise of 35-100 cm by the end of the 21st century;
- results of the scenarios of climatic change in the Mediterranean developed by the Climatic Research Unit of the University of East Anglia, U.K.

OUTPUTS

The main outputs of the study will be:

- useful database for coastal zone management of the Coastal Region of Albania;
- assessment of the problem of climatic change;
- development strategies for the coastal region of Albania in the changed climate conditions;
- proposal of management and policy response options.

INSTITUTIONAL FRAMEWORK

The project will be carried out under the auspices of the national and local governments in collaboration with the Mediterranean Co-ordinating Unit, experts from Albanian Universities and Institutions and international experts.

The Task Team co-ordinator will be an Albanian expert nominated by the national authorities.

The Task Team will be established by the national authorities, in consultation with the local authorities and the Mediterranean Co-ordinating Unit. The Task Team will be composed of Albanian experts covering all of the subjects appearing in the outline of the report and representatives of local and national governments, the Senior Marine Scientist of the Mediterranean Co-ordinating Unit and an international expert selected by the Unit.

WORKPLAN

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|---|---|------------|
| - | Nomination of the co-ordinator of the Task Team | Nov. 1992 |
| - | Establishment of the Task Team | Dec. 1992 |
| - | Preparatory meeting of the Task Team | Jan. 1993 |
| - | Collection of data and relevant documentation | April 1993 |
| - | Analysis and evaluation of the data and documentation collected | June 1993 |
| - | Presentation of the preliminary analysis at the Task Team meeting | June 1993 |
| - | Finalization of the draft report | Sept. 1993 |

- Presentation of the final draft of the report at the Task Team meeting Sept. 1993
- Finalization and publication of the report and presentation to the national and local authorities Nov. 1993

BUDGET

The parties involved will provide the following (in '000 of US\$):

SOURCE	CASH			KIND			TOTAL		
	1992	1993	1994	1992	1993	1994	1992	1993	1994
<u>UNEP contribution</u>									
- MED POL	-	20	-	-	-	-	-	20	-
<u>Counterpart contribution</u>									
	-	-	-	-	20	-	-	20	-
TOTAL	-	20	-	-	20	-	-	40	-