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Presentation of results of the Coastal
Area Management Programme for the Bay
of Izmir

Izmir, 29-30 September 1993

**REPORT
OF THE MEETING ON THE PRESENTATION OF RESULTS
OF THE COASTAL AREA MANAGEMENT PROGRAMME FOR THE BAY OF IZMIR**

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Introduction

1. The involvement of Mediterranean Action Plan (MAP) and Priority Actions Programme (PAP) in Izmir started in 1987, as one of the first area-specific activities of MAP which mark the second decade of its activity in the Mediterranean. At the end of 1989, the Country Pilot Projects (CPPs) that had been implemented by PAP between 1987 and 1989 were expanded following a decision of the Contracting Parties to the Barcelona Convention and renamed "MAP Coastal Area Management Programmes (CAMPs)". One of those was CAMP "The Bay of Izmir" which was launched in 1990. Following an agreement signed in 1991 between the Turkish Government and MAP, all components of MAP joined in the implementation of the Izmir CAMP. As envisaged in that agreement, the programme was to be concluded in 1993. Therefore, a meeting was organized for the purpose of presenting results of the Coastal Area Management Programme for the Bay of Izmir to the Turkish national and local authorities, experts and institutions.

2. The meeting was organized by the Turkish Ministry of the Environment and the Metropolitan Municipality of Izmir (MMI) and was held in Izmir on 29-30 September 1993.

Participation

3. The meeting was honoured by the attendance of Mr. R. Akcali, Minister of the Environment, Mr. K. Aktas, Governor of the Izmir Province, and Mr. Y. Cakmur, Mayor of Metropolitan Municipality of Izmir. Also were present the World Bank, State Planning Organization, Ministry of Public Works, Ministry of the Environment, Ministry of Tourism, Ministry of Interior Affairs, Ministry of Health, Ministry of Transportation, a number of universities and institutions, as well as representatives of the Municipalities of Uurlu, Manisa, Buca, Konak, Karsiyaka, Istanbul, Izmit and Iskenderun.

4. The list of participants is attached as Annex I to this report.

Opening of the meeting

5. The meeting was opened by Mr. Y. Cakmur, Mayor of Metropolitan Municipality of Izmir. Addressing the participants he spoke of a number of misplanned developments (e.g. housing complex of 2,600 units constructed for immigrants in the protected area of Tahtali dam) that took place in Izmir, miscalculated decisions (e.g. legalizing of slum areas,) and lack of finances. In that context, he strongly underlined the need for a better coordination between the central authority and local administrations.

6. The participants were then addressed by Mr. K. Aktas, Governor of the Izmir Province. He stressed that, in addition to the Izmir area, the MAP CAMP should include the other coasts of Izmir Province too. Speaking of the waste water discharged in the Bay from 389 discharge points and wastes dumped from ships as yet another important cause of pollution, he referred to disputes regarding the authority over the management of the Bay area, and informed the meeting that the studies regarding the institutional arrangements for environmental management were underway and would be shortly submitted to the National Assembly and the Government.

7. Mr. R. Akcali, Minister of the Environment, greeted the participants and stressed the need for an efficient environmental management which would integrate economic, commercial, social and political aspects of development. He further underlined the importance of adequate institutional arrangements which would eliminate shortcomings in administrative and legal structures. The environmental concern should be incorporated in all economic decisions which, in turn, should be consistent with the general economic strategy of the Government. Commending the Izmir CAMP as a good example of management actions implemented on the

local level, he pointed out the catalytic role of the Ministry of the Environment and thanked the local authorities which had taken the bulk of responsibility and largely contributed to the success of the project. Finally, he recommended that the Izmir experience be used in dealing with other coastal areas of Turkey.

8. Mr. L. Jeftic, Deputy Co-ordinator of MAP, welcomed the participants on behalf of Ms. Elisabeth Dowdeswell, the Executive Director of UNEP, and expressed his gratitude to the Turkish authorities for hosting and organizing the event. He briefed the meeting on the structure of MAP and its basic activities.

Adoption of the agenda

9. The meeting adopted the agenda as contained in Annex II to this report. The meeting was chaired by Mr. C. Arkon (the first day morning session), Mr. S. Agirgün (the first day afternoon session) and Mr. T. Balkas (the second day).

Presentation of activities and results

10. Ms. N. Talu, Director of the International Relations Department, Ministry of the Environment, spoke of the importance of the Izmir CAMP in view of the interests and needs of the Turkish national and local authorities. She stressed, in particular, the catalytic effect of the Izmir CAMP which largely contributed to a better understanding of the complexity and importance of issues dealt with in the programme not only for the city of Izmir but also for the entire country.

11. Mr. A. Gülerman, Head of the Planning, Reconstruction and Implementation Division addressed the participants on behalf of the Metropolitan Municipality of Izmir and pointed out the Integrated Management Study as one of the most significant achievements of the Izmir CAMP as well as the training programme on GIS which contributed to the strengthening of his Division. As a direct result of these activities, a Bureau for the Preparation of the Master Plan and a Bureau for GIS were established in the Division. Finally, he supported one of the basic recommendations of the Integrated Management Study, i.e. the need to examine the possibility of further improving the institutional arrangements for coastal zone management.

12. Mr. L. Jeftic briefed the meeting on the basic concept, objectives, structure and activities of MAP CAMPs. He pointed out that the main objective of each CAMP project was to introduce or develop the process of integrated planning and management of Mediterranean coastal areas or to contribute to a sustainable development and environmental protection of the area in case. In addition, he pointed out that the first generation of CAMP projects (Island of Rhodes, Bay of Izmir, Kastela Bay and Syrian Coast) were to be completed by the beginning of 1994. Three of the second generation CAMPs (Fuka-Matrouh area, Albanian Coast and Sfax Region) are being developed and implemented, and the other two (Morocco and Algeria) are in preparatory phase. Third generation CAMP projects (Malta, Israel, Lebanon and Italy-Venice) are being proposed to the 8th meeting of the Contracting Parties (Antalya, 11-15 October 1993) for adoption.

13. Mr. I. Trumbic, Assistant Director of PAP/RAC, presented the major results of the Izmir CAMP and embarked on the Integrated Management Study of the Area of Izmir (IMS) highlighting the problems which might be expected in Izmir in the future (population growth, increased pollution, lack of land for building construction) if no action will be taken. Finally, he introduced the most important recommendations contained in a number of the CAMP outputs, namely:

The Turkish authorities should consider completing the activities envisaged in the Agreement.

, Priority should be given to the activities for which the programmes have been already outlined (Study on the recovery of the Izmir Bay, Study on the Assimilative capacity of the Izmir Bay, etc.) and which are the basis for future planning and management actions in the region.

, Efforts should continue for obtaining funds from the World Bank and other financial sources.

, The process of institutional capacity building should continue.

, Preparation of the Integrated Coastal Master Plan of the Area of Izmir should start.

14. In a discussion that followed, Mr. Y. Cakmur and Mr. K. Aktas commended the presentation of Mr. Trumbic and embarked on the problems related to the improvement of institutional arrangements suggesting that the improvement be achieved through a better organization and decentralization of authority rather than by the creation of new administrative structures.

15. Mayors of Urla and Manisa, as well as the representatives of Iskenderun and Istanbul also took part in the discussion. The two Mayors insisted on the inclusion of a wider region in the follow-up of the integrated coastal area management project (ICAM).

16. Mr. O. Uslu, Director of the Oceanographic Institute, based his statement of the state on the area in general and the Bay of Izmir in particular on a series of research studies performed by Turkish and international institutions. Further referring to the excessive pollution of the Bay and disturbing development trends, he spoke strongly in favour of the continuation of research activities as well as of the ICAM programme as a whole.

17. Mr. I. Trumbic presented the document "Coastal Area Management Programme for the Area of Izmir: A Synthesis Report" (attached as Annex III) and explained the history of the project (the pilot and the CAMP phase) reviewing the results by each project phase. Finally, he expressed regrets that some of the envisaged activities could not be launched because the expected support of the World Bank failed to be secured.

18. Mr. T. Balkas commented on the problems pertaining to the recovery of the Bay of Izmir from the aspects of the Protocol on land-based sources of pollution, MARPOL Convention, monitoring of pollution, determination of the assimilative capacity of the Bay, and recovery programme for the Inner Bay.

19. Mr. L. Jeftic illustrated possible implications of the expected climate change on the area of Izmir and briefed the meeting on the relevant experience of MAP obtained through the preparation of 11 case studies. As the coastal area of MMI includes a stretch of low lying shoreland, he recommended that a study be made of that area.

20. Mr. A. Ozer, Head, Planning Department of MMI and Ms. Meral Uskup, Planner in the Department, demonstrated several GIS applications produced within the framework of the GIS training programme and used in the preparation of the Integrated Management Study of the Area of Izmir.

21. Since the authors were unable to participate in the meeting, Mr. A. Pavasovic, Director of PAP/RAC presented the findings of their document "Environmental Impact Assessment of the Izmir Sewage Treatment Project" and suggested that (a) the technological modifications

proposed in the document be re-examined; (b) additional research be undertaken of the assimilative capacity of the Bay; (c) a study be made of the most suitable site for the submarine outfall; and (d) EIA be prepared of the effluent discharge in the old bed of the Gediz river as well as of the submarine outfall.

22. Ms. N. Algan, Ministry of the Environment, presented the experiences of MAP in the preparation of systemic prospective studies of development-environment interactions on the example of the Iskenderun scenario, and recommended that a similar study be prepared for the area of Izmir.

23. Representing Regional Activity Centre for Specially Protected Areas, Mr. M. Barbieri illustrated the findings of a reconnaissance mission that had visited the Camalti Bird Paradise area. He proposed a number of actions to be taken for the protection and enhancement of that area, such as, that the water of the Gediz River be the principal source of water supply during winter floods and to examine the possibility of constructing an adequate irrigation system and prepare a relevant feasibility study. Finally, he expressed concern with regard to possible negative impacts of the sewage treatment plant on that ornithological habitat.

24. Mr. F. Juhasz, PAP consultant, presented the results of the Integrated Management Study (IMS) which had been prepared by a joint team of national/local experts and a group of international experts recruited by PAP/RAC. The Study incorporated results of all other MAP activities, as well as numerous institution for the study preparation and, apart from contributing professionally, provided the logistic and preceding documents prepared by Turkish institutions. The Planning Department of MMI was the hosting administrative support. In his exhaustive presentation, Mr. Juhasz illustrated the consequences of the rapid population growth and the vigorous economic development (increased pollution of the entire area and, particularly, of the Bay; pollution of fresh water resources; loss of agricultural land; uncontrolled building construction including illegal housing; insufficiency of environmental services, etc.). Referring to the main conclusion of the study, he claimed that, unless the negative trends were reversed the area would face a complete destruction of natural systems, depletion of resources and, very soon, lack of space for further rational urbanization. In that context, the study proposed a set of urgent measures that needed to be enforced in the following 5-year period with the aim to check the uncontrolled growth of the city, decrease the pollution, and create necessary conditions for the establishment of the ICAM process including the preparation of the Integrated Master Plan of the Area of Izmir as the most important next step.

25. Since the IMS is the final document of the Izmir MAP CAMP, its executive summary is attached as Annex IV to this report.

General debate

26. In a general debate that followed, a large number of participants took part. The main issues raised during the debate referred to: (a) continuation of the Izmir Programme and its possible institutional framework; (b) adoption of the region as the expanded coverage of the project; (c) continuation of research activities and monitoring; and (d) further strengthening of GIS capacities. What was particularly pointed out was the need to secure funds for the follow up of the Programme. The majority of participants who took part in the debate recommended that the conditions be created for the preparation of the Integrated Master Plan for the Area of Izmir.

27. The majority of participants also expressed their confidence that the activities completed by MAP were a good example of international cooperation and a reliable basis for the continuation of the Izmir programme. They hoped that MAP will continue to participate in the programme and recommended that the experiences obtained through the Izmir CAMP be used in other similar cases in Turkey.

Conclusions and recommendations

28. The meeting agreed that a special working group would draft the text of conclusions and recommendations on the basis of presented outputs and the general debate. These conclusions and recommendations are attached as Annex V to this report.

Preparation of the meeting report

29. The present report was drafted by a reporting group which included the representatives of the Ministry of the Environment, MMI and MAP.

Closure of the meeting

30. Mr. L. Jeftic thanked the participants for their contribution to the meeting. He expressed MAP's views that the Izmir CAMP was very successful and stated that due to agreed principles, heavy commitments and lack of adequate financing CAMP Izmir had to be closed as an UNEP project. However, he expressed hopes that the project would go on as a Turkish national project. Further regretting that it had not been possible to secure the participation of big donors (World Bank, UNDP, CEC, and others), he hoped that they could still join in. He reiterated the need felt by MAP that an authority should be established for the follow up of the project which would bring together scientists, administrators and the public at the national, regional and local level. Furthermore, he supported the suggestion of the meeting to transfer the experience of the Izmir CAMP to other areas of Turkey wherever the need for such an exercise existed. As to the follow up of the project, MAP was ready to continue to assist within its possibilities provided the assistance be requested by the Turkish side and approved by the Contracting Parties to the Barcelona Convention.

Finally, Mr. Jeftic thanked the Ministry of the Environment, Governorate of the Izmir Province, and the Metropolitan Municipality of Izmir for their support and cooperation, as well as all the Turkish experts and institutions involved in the implementation of the Izmir CAMP.

31. In his role of the Chairman of the final session, Mr. T. Balkas expressed his satisfaction with the presentation of the Izmir CAMP and stated that the meeting was unanimous in wishing the project to continue in cooperation with international organizations and institutions. He expressed his gratitude to MAP for its contribution to the implementation of this CAMP.

32. The meeting was closed on 30 September 1993, at 17.00 hours.

ANNEX I

List of participants

Ministry of the Environment

Mr. Riza AKCALI, Minister

Mr. Sait YüCE, Advisor

Mr. Turgut BALKAS, Advisor

Mr. Murat Sungur BURSA, Director General, Directorate of Environmental Impact Assessment and Planning

Mr. Sami AGIRGÜN, Deputy Director General, Directorate of Prevention of Environmental Pollution and Control

Ms. Nuran TALU, Head, Department of Foreign Relations

Ms. Nesrin ALGAN, Chief, Department of Foreign Relations

Mr. Hami YILDIRIM, Chief, General Directorate of Environmental Impact Assessment and Planning

Ms. Nursen NUMANOGLU, Environmental Engineer, General Directorate of Prevention of Environmental Pollution and Control

Metropolitan Municipality of Izmir

Mr. Yüksel CAKMUR, Mayor of Izmir

Mr. Ali Riza GÜLERMAN, Head, Planning, Construction and Implementation Division

Mr. Ahmet OZER, Chief, Planning Department

Mr. Sündül YANIKYÜRFK, Head, Environment Division

Ms. Beril BERGIN

Ms. Sema BILGIN

Mr. Sevimser CAGLAYAN

Ms. Güler GÜNES

Mr. Levent SAYAR

Mr. Kutlu RUSCUKLU

Ms. Meral USKÜP

Ms. Hatice YILMAZ

Ms. Zeliha DEMIRAL

Ms. Nilay TRKMEN

Prime Ministry Undersecretariat of State Planning Organization

Ms. Sema ALPAN

Ministry of Interior Affairs

Mr. Ismet Grbz CIVELE, Head

Ministry of Public Works and Settlement

Mr. Feral EKE, General Director

Ms. Aysun CAKAR

Ministry of Health, Regional Directorate

Mr. Mustafa ALPARSLAN

Ministry of Tourism

Mr. Neriman Sevgi BOZ, Chief

Ministry of Transportation, Sixth Regional Directorate of Maritime, Airlines and Harbour Construction

Mr. Ayhan OZERDEM, Director

Governorate of Izmir

Mr. Kutlu AKTAS, Governor

Mr. Nejat EFEOGLU, Deputy Governor

Mr. Blent BECERIK, Director, Environmental Division

Mr. Vildan GNDOGDU

Ms. Fatma DOGAN

Mr. Lale LEFLEF

Mr. Ozlem OZGEN

Metropolitan Municipality of Istanbul, Environmental Protection Division

Mr. Tuncer CELIK, Head

Municipality of Manisa

Mr. Mehmet Faruk ISGENC, Environmental Engineer

Municipality of Iskenderun

Mr. Hasan INSAN, Mayor

Mr. Fatih DEMIRAL

Municipality of Urla

Mr. Bülent BARATALI, Mayor

Municipality of Karsiyaka

Mr. Tuncay CETIN

Municipality of Izmit

Mr. Mine TUNCALI

Bank of Provinces

Mr. Abdulah ATES, Deputy General Director

State Hydraulic Works, Regional Directorate

Mr. Hikmet OZGOBEK, Director

Mr. Ilker ATIS, Chief

General Directorate of IZSU

Ms. Nursen DEMIRTAS, Head, Treatment Plant Department

Mr. Ozer OCER, Administrative council

Aegean University, Environment Centre

Prof. Dr. Münir OZTURK

Prof. Dr. Umit ERDEM

Mr. Emür MENDEN

Mr. Nergis TEKER

Mr. Ali TAYLAN

Aegean University, Faculty of Aquaculture

Prof. Dr. Attila ALPAZ, Dean

Mr. Omer Faruk KARA, Hydrobiologist

"9th September" University, Institute of Marine Science

Prof. Dr. Orhan USLU, Director

Prof. Dr. Sükran CIRIK, Deputy Director

"9th September" University, Environmental Engineering Department

Dr. Zerrin TOPRAK

Mr. Ali Nevzat TUNCA

Mr. Omer SAYGIN

Mr. Hayat ZENGIN

Mr. Meltem AYDINGZ

"9th September" University, City and Regional Planning Department

Prof. Dr. Cemal ARKON

Atatürk Industrial Region

Mr. Murat DEMIRER, Head

Mr. Meltem AYDINGOZ, Environmental Engineer

National Coastal Area Management Committee

Prof. Dr. Erdal OZHAN

The World Bank

Mr. Dale HILL

Chamber of Industry of the Aegean Region

Mr. Cemal DIRIN

Union of Chambers of Engineers and Architects

Mr. Seygi KILDIS

Mr. Ahmet Tuncay KARACORLU

Mr. Jale ORSAN

Union of Aegean Municipalities

Izmir Chamber of Commerce

Co-ordinating Unit for the Mediterranean Action Plan

Mr. Ljubomir JEFTIC, Deputy Co-ordinator

Regional Activity Centre for Specially Protected Areas

Mr. Marco BARBIERI, International Expert

Regional Activity Centre for the Priority Actions Programme

Mr. Arsen PAVASOVIC, Director

Mr. Ivica TRUMBIC, Assistant Director

Mr. Ferenc JUHASZ, PAP Consultant

Mr. Vlado VELDIC, PAP Consultant

ANNEX II

Agenda

Wednesday, 29 September

10.00 - 10.20	Opening addresses
10.20 - 10.25	Coastal Area Management Programmes of MAP
10.25 - 10.30	CAMP Izmir - National perspective
10.30 - 10.35	CAMP Izmir - Municipal perspective
10.40 - 11.15	Presentation of the Coastal Area Management Programme for the Bay of Izmir: a synthesis report
11.45 - 13.00	Discussion
15.00 - 15.25	Basic information on the Bay of Izmir
15.25 - 15.30	Introduction to the Izmir CAMP
15.30 - 15.45	Land-based sources of pollution
15.45 - 15.50	Emergency Protocol and MARPOL Convention
15.50 - 16.00	Monitoring of pollution
16.00 - 16.05	Assimilative Capacity of the Izmir Bay
16.05 - 16.10	Recovery of the Inner Bay
16.10 - 16.15	Implications of climatic changes
16.40 - 17.10	Geographical Information System
17.10 - 17.30	Environmental Impact Assessment
17.30 - 17.40	Development-environment scenarios
17.40 - 18.00	Specially Protected Areas

Thursday, 30 september

10.00 - 10.30	Integrated Management Study
10.30 - 11.30	General debate
12.00 - 12.15	Presentation of the draft conclusions and recommendations
12.15 - 13.00	Discussion on the draft conclusions and recommendations
15.00 - 17.00	Adoption of the conclusions and recommendations
17.00	Closure of the meeting

ANNEX III

Coastal Area Management Programme for the Bay of Izmir: A Synthesis Report

by

Ivica TRUMBIC

Assistant Director

Priority Actions Programme/Regional Activity Centre

UNEP - Mediterranean Action Plan

Split, Croatia

ABSTRACT

The involvement of MAP and PAP in Izmir started in 1987, as one of the first area-specific activities of MAP which mark the second decade of its activity in the Mediterranean. At the end of 1989, the Country Pilot Projects (CPPs) that had been implemented by PAP between 1987 and 1989 were expanded following a decision of the Contracting Parties to the Barcelona Convention and renamed "MAP Coastal Area Management Programmes (CAMPs)". One of those was CAMP "The Bay of Izmir" which was launched in 1990 following an agreement signed between the Turkish Government and MAP.

This synthesis report explains in detail the goals, concept, contents, findings and outputs of the first (CPP) phase of the activity in Izmir covering the period 1987-1989, as well as the second (CAMP) phase since its outset in 1990. Therein, MAP and PAP played an important catalytic role since their initial funds prompted a large involvement of Turkish experts and invaluable financial support of the Metropolitan Municipality of Izmir. The bulk of activity was geared towards two main objectives, namely, (a) recovery of the Bay of Izmir, and (b) establishment of the process of integrated coastal and marine areas management (ICAM) of Izmir. The first group of activities materialized in a scope smaller than envisaged due to funds expected from sources other than MAP and PAP that failed to be secured, making possible only the preparation of programmes which offer appropriate frameworks for these activities in the future. ICAM incorporated two complementary activities: preparation of the Integrated Management Study for the Area of Izmir and the Training Programme on GIS, both being part of institutional capacity building as a key component in the ICAM implementation. The study integrated the findings of all the sectorial documents preceding it and pinpointed the most critical problems of development and environment faced in Izmir. In addition to the proposed short- and middle-term measures, the study urged the preparation of an Integrated Master Plan for the area of Izmir, which should be the basis for activities aiming to secure a sustainable development of the area.

1. INTRODUCTION

Regarding the hitherto activities of the Mediterranean Action Plan (MAP) and its Regional Activity Centres which cover a span of nearly two decades (since 1976), it is possible to discern two characteristic phases.

In the first decade after the inception of MAP, the bulk of its activity was almost exclusively issue-oriented, with the aim of studying and tackling environmental problems typical of the Mediterranean Region, as well as creating the methodological bases for carrying out the activities of a more complex nature. The efforts in that period departed from the emerging understanding of pollution problems and sources, the necessity for the regional and global development to be harmonized with the receptive capacity of the environment, and the need

for a rational management of the limited resources available in the region. That led to the refocusing of MAP activities towards environmentally sound integrated management of Mediterranean coastal areas.

Since 1985, the new orientation of MAP has manifested itself through two parallel streams of activities: (a) development of an approach to integrated management of coastal and marine areas (ICAM) which is adjusted to the conditions prevailing in the majority of Mediterranean countries, and (b) implementation of Coastal Area Management Programmes (CAMPs). In both cases, the Priority Actions Programme Regional Activity Centre (PAP/RAC) of MAP has had a leading role in the development of practical methodological frameworks.

2. THE CONCEPT OF ICAM: A BASIS FOR THE IMPLEMENTATION OF MAP CAMPs

Methodological and practical actions of the ICAM programme have been entrusted to two MAP Centres: the Blue Plan, on the regional scale, for the preparation of development-environment scenarios, and PAP for the development of a practical approach to tackling the problems on a local scale.

PAP made an analysis of the existing state in the field of planning in the majority of Mediterranean countries with the specific objective to test the level of integration within the national planning systems. The current practice shows that the prevailing type of planning is sectorial, while land-use planning seems to be the most frequently adopted approach in the sphere of environmental planning. In the course of 1988, PAP produced a methodological document which defined a framework for planning and management (entitled "A Common Methodological Framework for Integrated Planning and Management in Mediterranean Coastal Areas"). It provided a methodological "umbrella" for the activities which were to be carried out within MAP CAMPs (earlier called Country Pilot Projects - CPPs - implemented by PAP only).

Following a period of testing of the approach recommended in the Common Methodological Framework, PAP prepared, at the beginning of 1993, together with UNEP's Ocean and Coastal Areas Programme Activity Centre (OCA/PAC), "Guidelines for Integrated Coastal and Marine Areas Management with Special Reference to the Mediterranean Basin". In addition to the experiences of MAP and PAP, the document also provides a synthesis of experiences of other Centres implementing ICAM and respects fully the recommendations adopted at the UN Conference on Environment and Development held in Rio de Janeiro in 1992 ("Agenda 21", Chapter 17). Specifically, the document provides a workable definition of ICAM and elaborates on its process and phases aiming at the application of ICAM in a multitude of situations. As defined in the document, ICAM is an adaptive process of resource management for environmentally sustainable development in coastal areas. It is not a substitute for sectorial planning. Rather, it focuses on the linkages between sectorial activities. It is a process containing seven phases (initiation, preparatory phase, analysis and forecasting, definition of goals and strategies, integration of detailed plans and management policies, implementation, monitoring and evaluation).

Recommendations provided in that document are being incorporated in ongoing CAMPs, Izmir included.

3. MAP COASTAL AREA MANAGEMENT PROGRAMMES: PURPOSE AND OBJECTIVES

Appreciating the effort of PAP within the framework of four Country Pilot Projects (the Izmir Bay, the Kastela Bay, the Island of Rhodes, and the Coastal Region of Syria) over the 1988-1989 biennium, the Sixth Ordinary Meeting of the Contracting Parties to the Barcelona Convention (October 1989) decided that the work on the four ongoing projects be continued

under the name of "Coastal Area Management Programmes (CAMPs) involving all components of MAP. The Seventh Meeting of the Contracting Parties held in October 1991 confirmed that decision.

CAMPs are a new form of cooperation of MAP with national and local institutions and experts aiming primarily to create suitable conditions for the process of ICAM to be introduced and developed in Mediterranean coastal areas. That is an area-specific activity carried out in comparatively small selected areas of the region and based on the integration of knowledge and experience obtained by all MAP components.

The general objectives of MAP CAMPs are the following:

- , to propose a "sustainable development" concept for the area in concern;
- , to create appropriate conditions for the establishment of the process of ICAM;
- , to secure the fulfillment of requirements contained in the Barcelona convention and its related protocols on the protection of the Mediterranean environment which have been signed and enforced by the Contracting Parties to the Convention;
- , to help resolve environmental problems of the most urgent nature.

The achievement of these objectives has been envisaged through the accomplishment of a number of tasks, such as:

- , improvement of institutional capacities of ICAM;
- , training of local and national experts;
- , updating of the environmental knowledge and databases in the area concerned;
- , preparation of planning and management documents;
- , fulfillment of obligations resulting from legal documents at the regional level;
- , application of tools and techniques of ICAM;
- , making proposals for resolving environmental problems of coastal areas.

Most of the activities within CAMPs should lead to the preparation of integrated coastal area management plans integrating results arrived at through individual actions.

The Turkish authorities, institutions and experts have been very active in the implementation of MAP in general, and in developing and implementing the concept of ICAM, as well as CAMPs, in particular. That was one of the reasons for PAP to make a survey, in 1987, of the Mediterranean coastal area of Turkey and, applying a relevant set of criteria, identify the area of Izmir as a zone suitable for the preparation and implementation of a pilot project (CPP). The PAP proposal for that project was fully supported by the Metropolitan Municipality of Izmir (MMI). The main reason, however, why MMI was selected as the project area lies in a difficult environmental situation observed in the Izmir Bay. Its major characteristics are discussed in brief in the following section.

4. STATE OF THE IZMIR BAY: REASONS FOR ACTION

As in most urban areas of Turkey, population pressures in Izmir (the third largest city of the country) are enormous. The existing population of approximately 2 million will, according to some estimates, double in the next 30 years. It needs mentioning that the area influencing

Izmir actually extends almost to the Anadolia region wherefrom people continue to migrate to larger cities in seek of better life opportunities, Izmir being one of the most popular destinations where indiscriminate occupation of land by illegal housing has taken tremendous proportions. Insufficiently developed infrastructure systems add up to the negative effects of such development on the state of natural resources. Tackling this huge problem seems to have been reduced to mere "accounting" of the areas which have fallen pray to the new illegal development, and to legalizing something which is already there. Reflecting the realities of life, and having evolved into a series of separate plans being drafted for one or another area of the city, the existing Master Plan of Izmir no longer provides a cohesive planning document.

Izmir, together with a number of "satellite" cities in its vicinity, is a major industrial area. In addition to large industrial establishments, a large number of small- and medium- scale enterprises (mainly dealing in leather and textiles) have flourished in and around the city. Environmental control over these establishments does not seem to be very efficient. Their residues are discharged untreated into numerous streams running into the Inner Bay of Izmir adding to its already high level of pollution. The continuing industrialization of the area has been the response to an ever-increasing demand for new jobs. Decisions made to establish several new industrial areas within the boundaries of MMI (either to expand the existing capacities or to move those from the city centre) have hardly improved the situation. Some of the industries are situated in watershed areas which are of vital importance for the water supply of the city. The decision-making powers are split between the municipal, regional and state levels, with insufficient mutual interaction.

The present environmental situation of Izmir, particularly that of its Bay area, suggests that the natural systems are no longer able to accommodate the pressures of human activities. The recent development has brought about a series of conflicts of interests over the use of resources which have not only resulted in a deteriorated state of natural systems but also in a diminished capacity of the systems to produce enough high-quality goods and services the area has traditionally been providing (fisheries, tourism, agriculture, etc.). Characteristics of the current situation may be summarized as follows:

- , Urban development, reflecting high population growth, is continuing around the bay area and consuming the scarcest of resources - the land. Urban waste waters are one of the major sources of pollution of the bay.
- , Wastes discharged by the industries situated around the bay have critically affected the water quality and cut down the opportunities for recreation, tourism and fishing.
- , Because of accidents they may cause, port facilities in the eastern part of the bay, as well as navigating vessels, present constant threat to the bay ecosystems.
- , Loss of cultivated land to residential purposes on the one hand, and increasing demands for agricultural produce on the other, have reduced the nature conservation areas, decreased the level of flood protection, and increased soil erosion.
- , The decision to build a waste water treatment plant in the delta of the Old Gediz River has been a response to the urgent need for an adequate sewerage system. However, the proposed solution for the disposal of treated effluent into the old bed of the Gediz River will probably affect the marine environment of the Middle and the Inner Bay.
- , Discharges of domestic and industrial waste waters, urban and agricultural run-off, sediments and contaminated waters from rivers and streams have had a cumulative adverse impact on the water quality and natural characteristics of the Inner Bay, resulting in eutrophication.

The system of resources management in the area is split between four administrative and decision-making levels, namely, the central government, the Governorate (regional level), the metropolitan (Metropolitan Municipality of Izmir), and the district level (four district municipalities within MMI). The existing mechanisms of decision making call for a much better coordination. There are several agents within the boundaries of MMI empowered with decision making. Thus, for example, decisions with regard to highway construction or establishment of large industrial complexes in the area are made at the central government level with little or no consultation with the local authorities. A somewhat better coordination exists between the metropolitan and the district level. There is no single authority entrusted with the environmental management of the area.

In view of the nature of conflicting uses of the area resources, it is here suggested that the planning interventions be focused on the following issues:

- a. Use of natural resources. An inventory of natural resources will have to be made with an estimate of the future development these resources can sustain.
- b. Socio-economic issues. Social and economic effects of hitherto development will have to be re-assessed, put into a larger geographical context and related to the availability of resources in the area.
- c. Management issues. The existing institutional mechanisms have failed to prove satisfactory thus requiring considerable improvements to be able to respond adequately to the changing needs of the area.

Since the use of resources is essentially dependent upon institutional arrangements, these should be set in such a way as to provide a long-term framework for the effective environmental management.

5. COASTAL AREA MANAGEMENT PROGRAMME "THE BAY OF IZMIR": HISTORY AND RESULTS

Considering the time and contents, the hitherto activities of MAP in the area of Izmir can be divided into two major phases:

- From 1987 to 1989 during which time the project had a pilot character (CPP);
- Since 1990, the period of activities that are being undertaken within the framework of CAMP "The Bay of Izmir" following an agreement signed between the Turkish Government and MAP.

5.1 Country Pilot Project (1987-1989)

At the beginning of 1987, the experts from Izmir prepared an "on-site report". That was the first step towards launching the project. The report enabled goals of the project to be set and contents of the project to be determined as well as modes of co-operation for the project implementation. It also provided a basis for the preparation of a detailed programme of work for the 1988- 1989 biennium and a tentative programme of activities during the period 1990-1991.

The "On-Site Report of the Area of Izmir" confirmed the fact that the area in concern and its environment were under tremendous pressures of development and population and that there were no appropriate environmental protection measures. The Bay of Izmir, which had already become partly eutrophic, was identified as the most imperiled part of the area.

The Metropolitan Municipality of Izmir as well as the regional and state authorities were taking large-scale recovery measures and preparing project studies (construction of the large sewerage system and the treatment plant). Recognized by the Izmir scientific community as particularly important were the project on urban effluent treatment, the created organizational and staffing conditions (establishment of the Environmental Health and Social Department, and the Physical Planning Department), and the amount of data that had been collected. All this led to a proposal for the project to be implemented in co-operation with international institutions and experts gathered around or affiliated to MAP.

The legal basis for that pilot project was a Letter of Understanding signed between PAP/RAC and the Turkish Focal Point for PAP (now, International Relations Department, Ministry of the Environment). It defined mutual obligations of the signatory parties.

In that phase of MAP and PAP activity in Izmir, the following objectives were set:

- , to identify and propose urgent measures towards the improvement of the state of the Izmir Bay;
- , to create appropriate conditions for the finalization of actions undertaken in the field of liquid waste collection, treatment and disposal;
- , to organize training and preparatory activities leading to the preparation of an integrated plan for the Metropolitan Municipality of Izmir.

Furthermore, it was agreed that the results arrived at in the course of CPP be used in other Mediterranean coastal areas facing similar problems.

The principal parties in the implementation of CPP were the Metropolitan Municipality of Izmir, from the Turkish side, and the Priority Actions Programme from the MAP side.

It was agreed that the Turkish authorities and MMI provide:

- , support to the activities of PAP through the participation of relevant national and local experts, and provision of relevant organizational and technical services;
- , following the results of PAP missions, a programme for and an oceanographic study of the Bay;
- , a programme for an additional monitoring of the Bay and its effectuation in consultation with MED POL - Co-ordinating Unit of MAP.

As agreed, the main contribution of PAP was the following:

- , expert missions and the resulting set of mission reports on (a) the treatment plant sewerage system and waste water reuse; (b) eutrophication of the Izmir Bay and recovery of the Inner Bay; and (c) water resources and water reuse; and an assessment of water resources and pollution;
- , Environmental Impact Assessment of the stabilization ponds;
- , programme and contents of the Bay recovery study;
- , proposal for, and later on, setting up of a permanent monitoring of the state of the Bay;
- , workshop on integrated planning;

, training of local experts on integrated planning and solid and liquid waste management;

, preliminary study leading to the integrated plan of the Metropolitan Municipality of Izmir.

5.1.1 Outputs of the first (CPP) phase

Owing to the active involvement of Turkish authorities, institutions and experts (several Departments of MMI, in particular) and the effort of PAP experts, the work in that period yielded a number of outputs (in form of reports, training papers, policy proposals, etc.) as well as expert meetings and missions. The following was completed:

, On-site report providing basic information on development and environment problems of the City of Izmir;

, meeting of representatives of Izmir and PAP which discussed objectives, contents and forms of cooperation (Split, July 1987);

, PAP expert mission envoyed to Izmir in December 1987 (one expert from France, one from Israel and one from the former Yugoslavia) to get acquainted with the problems and efforts undertaken to alleviate these problems, particularly in the fields of water resources management and waste water treatment and disposal;

, document "Fact-Finding Mission to Assess the State of Pollution of the Izmir Bay" (beginning of 1988) containing reports of the mission members and a synthesis report;

, expert meeting of the representatives of Turkish national authorities, Izmir, PAP and MED POL (Split, 30 March - 1 April 1988) which reviewed proposals for the contribution of PAP and MED POL in the recovery programme of the Izmir Bay;

, resulting from the above meeting, the document "Environmental Management and Recovery of the Izmir Bay (Approaches and Proposals)" was completed containing draft programmes for: (i) the long-term monitoring programme of the Izmir Bay, (ii) environmental impact assessment of stabilization ponds and submarine outfalls, (iii) study of the waste recovery capacity of the Izmir Bay, (iv) determination of effluent quality and location of submarine outfalls, (v) recovery of the Inner Bay of Izmir;

, EIA of the stabilization ponds for the sewerage project of Izmir (two PAP experts from Israel visited Izmir in June and September 1988) carried out in cooperation with a number of Turkish experts;

, PAP expert meeting on the common methodological framework for integrated planning and management of Mediterranean coastal areas (Izmir, 29 June - 1 July 1988) attended by a number of local planners; the representatives of Turkish authorities, Izmir and PAP defined the activities for 1989;

, Head of the Planning Department of MMI visited PAP/RAC (October, 1988) attending, as observer, the training course on integrated planning organized for a PAP pilot project in Syria, with the purpose to organize a similar course in Izmir and, later on, the preparation of the Integrated Planning Study of the area of Izmir;

, two programmes launched (at the end of 1988) by Turkish authorities, namely, a detailed oceanographic study of the Bay, and an expanded monitoring programme; Turkish authorities succeeded in engaging other sponsors in resolving the problems of the Bay of Izmir; special contacts were made with the World Bank;

- , policy meeting of the representatives of the Turkish national authorities, Izmir, MEDU, MED POL, PAP and the World Bank (Split, 9-11 March 1989) which (i) examined the possibilities of bringing in line all ongoing activities related to the Izmir Bay project, (ii) discussed the institutional and organizational aspects of future cooperation, (iii) reviewed the programme for 1989, and (iv) set the basis for the activities in 1990-1991;
- , one expert from Izmir attended a 6-month UNITAR training course on the application of GIS in environmental planning (Geneva, October 1989 - April 1990);
- , training course on the methodology of integrated planning (December 1989), with the participation of 20 trainees from Izmir institutions which were to take part in the preparation of the Integrated Planning Study of the Izmir Area;
- , document "Natural Characteristics of the Izmir Bay and the Impact of Waste Water".

Following its contacts with OECD, PAP secured the preparation of a case study on coastal zone management in the area of Izmir, as part of an OECD project. The study provided useful suggestions with regard to the organization of an institutional system of coastal resource management and was used in the later phases of MAP involvement in Izmir.

5.1.2 An appraisal of results of the first phase

Most of the activities completed within the framework of CPP "The Bay of Izmir" over the period 1987-1989 prepared the ground for the outset of the Coastal Area Management Programme. Those activities may be grouped as follows (as indicated in section 5.1.1):

- a preparations for the CPP (a, b, k);
- b recovery of the bay and identification of relevant management measures (c, d, e, f, g, j, n);
- c establishment of a continuous process of ICAM for the area encompassing the bay (h, i, l, m).

Activities under (a) secured a comparatively smooth implementation of the project and provided the basis for the subsequent activities of CAMP.

As a part of activities under (b), PAP envoyed to Izmir a fact- finding mission with the aim to provide information needed for devising a detailed programme of activities relative to (i) long- term monitoring, (ii) environmental impact assessment of the stabilization ponds and submarine outfalls of the proposed waste water treatment system, (iii) study of the assimilative capacity of the bay, (iv) determination of the effluent quality and location of the submarine outfalls, and (v) recovery of the Inner Bay.

The project prompted the outset of a long-term programme of monitoring of the sea water in the Izmir bay endorsed by the national and local authorities. This activity will contribute to the improvement of knowledge of the area's ecosystems and provide sound basis for any steps to be further undertaken with regard to the state of the Izmir bay.

EIA of the Izmir sewage treatment project was made by PAP experts using a practical procedure of the preparation of EIAs devised by PAP and OCA/PAC-UNEP. The EIA report discusses possible environmental impacts of the proposed sewage treatment project, proposes measures to reduce adverse effects and their estimated costs.

Although the report was met in the first instance with mixed feelings, it spurred the preparation of several additional studies which clarified some doubtful issues (it was proved, for example, that there was little chance for odours from the treatment plant to affect the residential areas) and positively influenced the elaboration of the final design of the treatment plant.

The second important contribution to the efforts towards the recovery of the bay was the document entitled "Natural Characteristics of the Izmir Bay and the Impact of Waste Water" which provides an assessment of the state of pollution of the bay, and describes sources and types of pollution. Recommendations contained in the document refer to the way of monitoring the major indicators of pollution with the aim to establish a reliable database for further activities.

Since the remaining three activities of CPP address long-term, complex and comprehensive interventions in the bay, it was decided that a set of detailed programmes be prepared for implementation in the later phases of the Izmir project.

The following important course of the activities within CPP "the Bay of Izmir" referred to the establishment of the process of ICAM for the area, an effort amply supported by the Planning Department of MMI which bears the responsibility for the majority of planning actions concerning the urban development of Izmir. However, due to the pressing problems, the illegal housing (gecekondu) being the most apparent one, the Department is only managing to cope with day-to-day operations, while dealing with long-term planning and management of resources still makes a small part of their activity. Also, their contacts with planning departments at other administrative levels (district and regional) or sectors are still very loose. Aiming at the establishment of the ICAM system in the wider area of Izmir, PAP proposed a framework for the procedure of introducing it. The first steps towards that direction was an international workshop on ICAM organized by PAP in 1988 which was attended by a large number of local experts, and a training course (1989) on the methodology of practical application of ICAM addressed to a multidisciplinary group of experts from several Izmir institutions. Thereby, a core group of experts was obtained to prepare an integrated planning document in the following two years (1990-1991). In addition to that, PAP envoyed a number of missions to Izmir with the task of tackling a variety of development and environment issues. Reports of those missions laid grounds for further planning activities of a more complex nature and, ultimately, for the preparation of an integrated master plan of Izmir.

The significance of activities undertaken within CPP in the 1987-1989 period surmounted the local and national character. Actually, the project was a testing ground for a new form of activities MAP and PAP started in that period, namely, the area-specific projects. The results of work arrived at through CPP indicated that MAP and PAP measured up to the task of finding solutions to problems as complex as those of Izmir. In line with the general refocusing of UNEP and MAP on coastal zone management, the Contracting Parties brought a decision at the end of 1989 for MAP and PAP to continue with the area-specific projects.

5.2 Coastal Area Management Programme (since 1990)

The opportunity to continue the activities in Izmir, within a larger scope and under the name of CAMP "The Bay of Izmir" was readily taken by MAP, the Turkish Government and the authorities of Izmir. MAP and Turkish experts jointly prepared an action programme contained in the document "Agreement relative to the Coastal Area Management Programme for the Bay of Izmir - Turkey" which was co-signed in June 1990 by MAP and the Turkish Government. That document provided a legal framework for the subsequent activities.

The Agreement covered a period of two years (1990-1991) anticipating a prolongation for the activities that already started. A total of 11 envisaged activities may be divided into the following groups:

- a implementation of Protocols signed by the Mediterranean countries (land-based sources of pollution and dumping Protocol; Emergency Protocol and MARPOL Convention; monitoring of pollution; specially protected areas);
- b activities relative to the recovery of the Izmir Bay (Study of the assimilative capacity of the Bay; Study of the recovery of the Inner Bay of Izmir);
- c establishment of the ICAM process (training programme on GIS; EIA of the submarine outfalls; development- environment scenarios; Integrated management study; Implications of expected climatic changes).

CAMP was expected to meet two sets of objectives:

- , long-term objectives aimed at devising a concept of sustainable development for the area by creating conditions for the establishment of the ICAM system;
- , immediate objectives of proposing solutions to acute environmental problems.

The implementation of the Izmir CAMP envisaged the involvement of a number of institutions:

- , Turkish national and regional authorities (General Directorate, now Ministry of the Environment, Governorate of Izmir);
- , Metropolitan Municipality of Izmir;
- , MAP, including all its Regional Activity Centres;
- , the World Bank.

5.2.1 Outputs of the second (CAMP) phase

In the course of work on the Izmir CAMP, a high level of co- operation was achieved between the Turkish Ministry of the Environment, Metropolitan Municipality of Izmir, MAP and PAP. The following was completed:

(a) Integrated Management Study (IMS) for the Area of Izmir, which had been preceded by:

- , a number of preparatory missions and meetings that discussed the methodological, organizational and financial aspects of the study preparation and resulted in a workplan adopted by the national and local authorities;
- , a number of PAP expert missions envoyed to Izmir to work together with local and national experts on the preparation of IMS;
- , a number of sectorial reports which covered all issues relevant to the development and the environment of the area of Izmir;
- , Interim Report of IMS, completed in November 1992 and presented in Izmir at a workshop which extensively discussed the issues presented in the Report and proposed guidelines for the IMS preparation.

The study made use of all the sectorial reports and many other documents of relevance which had been prepared within the framework of CPP and CAMP, as well as of several scientific and thematic documents prepared by Turkish authors and institutions.

(b) Training programme on GIS

The training programme was being implemented in close co-ordination with the activities of IMS. The training course for local experts in handling pcARC/INFO had started earlier in order to prepare the experts for applications by the time IMS was launched. The software was provided by PAP (on a non-commercial basis), with the help of UNITAR. The Planning Department of MMI was the host institution which provided excellent working conditions (hardware and premises). The following was completed within the training programme:

- , two experts from Izmir attended the Orientative Training Course on GIS which was organized by PAP in September 1990;
- , the training course was organized in three phases (1991-1992) addressing an interdisciplinary team of local experts who were explained the basic concept of GIS and familiarized with the main operations on pcARC/INFO;
- , as a practical application, a database was built for the needs of IMS, specifically, for the spatial analyses and projections.

Final Report of the Training Programme on GIS was prepared explaining in detail the procedure and summarizing the results of the training activity.

(c) Activities for the recovery of the Inner Bay of Izmir

Since the end of the period 1987-1989 by which time most of the preparatory activities for the study of the assimilative capacity of the Izmir Bay as well as for the study of the recovery of the Inner Bay were completed, little progress has been made due to the fact that the expected support of the World Bank failed to be activated. Yet, some events and activity did take place, such as a consultation with a Turkish expert organized in Split in June 1991, a survey made of the available information base, a proposal of additional research, and a review of the workplan and timetable earlier proposed for that particular set of activities.

5.2.2 An appraisal of results of the second (CAMP) phase

Owing to the catalytic role of MAP and PAP, a large number of local and national institutions and experts were involved in the preparation of IMS which was decisive for the successful implementation of the programme, because the reliable knowledge of the local conditions and pinpointing of environmental problems of the area could only be provided by those institutions and experts. In parallel, the coordinating and supervising role of the national authorities was highly important in deciding on the appropriate methodological approach and determining the scope and objectives of the programme.

The involvement of outstanding Mediterranean experts recruited by PAP and their joint work with the national and local experts secured an input of international knowledge and experience both in methodology and practice, which was essential in dealing with the complex problems of Izmir.

The Integrated Management Study has been a key effort towards the establishment of the ICAM process in Izmir. The study provides analyses, made in an integral way, of the major issues of development and environment ascertaining that the state of both are largely correlated. Namely, rapid growth of the city has been based on an irrational exploitation of natural resources which has turned many renewable resources into non-renewable (forests, soil water, to mention only a few). The lesser are the resource stocks, the lesser is the city's potential for future development. And, the accumulated problems remain unabated. These are the threats Izmir is facing today and they are explicitly stated in the study.

The measures and proposals contained in the study are advisory in character and may be divided into:

- , urgent measures for the alleviation of acute problems related to the use of resources;
- , measures to be taken in the interim 5-year period by the end of which the institutional system of ICAM is expected to be established enabling the preparation of the Integrated Coastal Master Plan (ICMP) of Izmir;
- , methodological framework for the preparation of ICMP.

In addition to having formed a well trained group of local experts, the training programme on GIS was a complementary activity to the preparation of IMS. It proved that GIS was a tool which could be efficiently used in the process of ICAM. The database and analyses based on it were extremely useful for the preparation of IMS. The core group of local experts on GIS is a valuable asset not only for the needs of the Planning Department of MMI but also for many other purposes (for example, building up of an urban information system of the city).

An achievement which does not explicitly appear in the outputs of CAMP should, however, be pointed out as a direct consequence of CAMP activities. That is a notable step forward in the institutional capacity building. Findings reported by the international experts who were on mission in Izmir contributed largely to the upgrading of knowledge and understanding of the ICAM concept by the local and national experts, a fact that may be claimed to have had direct effect on the establishment of the Master Planning Bureau within the Planning Department of MMI entrusted exclusively to deal with the most critical problems of the city as a whole.

An activity which was not part of CAMP and had been undertaken and completed by MAP was the preparation of a Preliminary Study on the Cost and Benefits of Measures for the Reduction of Degradation of the Environment from Land-Based Sources of Pollution and Activities in Coastal Areas of the Bay of Izmir.

That valuable study which was prepared by Turkish and MAP experts added a new dimension to the efforts towards the resolution of pollution problems of the Izmir Bay. It was also used in the preparation of IMS. Furthermore, the study claimed that the interventions aimed to decrease pollution of the Izmir Bay would have positive effects on the future economy of the areas around it.

In conclusion, it should be reiterated that almost all activities undertaken within CAMP "The Bay of Izmir" required quite an amount of work due to the "weight" of development and environmental problems ascertained in Izmir as well as due to the very size of the urban area covered.

6. CONCLUSIONS AND RECOMMENDATIONS

After six years of co-operation between MAP and the Turkish authorities which involved a large body of institutions and experts, it is possible to sum up the following:

- , The CPP and CAMP exercises proved a useful form of direct involvement of MAP in an area-specific programme which provided transfer, at the local level, of knowledge and experience obtained through issue-specific activities. The results of that programme will be used in other areas of the Mediterranean.
- , An ambitious programme was originally envisaged in both phases. The programme of the first (CPP) phase was almost completed in full. In the second (CAMP) phase a part of the programme could not be implemented due to difficulties in securing funds from other sources. Nevertheless, some preparatory activities for that part of the programme were completed.
- , In both phases of the programme, a high level of co-operation between the Turkish national and local authorities and MAP was achieved.
- , The catalytic role of MAP and PAP re-asserted itself in the programme implementation. The initial funds provided by MAP and PAP enabled the Turkish counterpart to engage a large number of experts and provide support for the work of joint expert teams.
- , The Turkish experts demonstrated a high professional quality so that their involvement was also invited in some other actions of MAP and PAP.
- , A large number of expert meetings and missions was organized and a sizable amount of reports and documents was completed, the document "Integrated Management Study for the Area of Izmir" being the most important output of the programme, since it integrated the findings of almost all sectorial reports that preceded it.
- , Within the framework of each individual activity, a number of short- and middle-term measures were recommended with reference to (a) actions towards the recovery of the Izmir Bay, and (b) establishment of the process of integrated coastal and marine areas management (ICAM) in the area of Izmir. Also, detailed programmes were drafted for the most important activities in the future.
- , The training component constituted an important part of the programme. In addition to the training courses, much attention was accorded to on-the-job training. All that contributed to institutional strengthening and capacity building of the Planning Department of MMI, in particular.

What should be presently recommended in general is:

- , to analyze the given proposals for the enforcement of the recommended immediate measures;
- , to continue and complete the activities of MAP which started earlier;
- , to give priority to the activities for which the programmes have been already outlined (Study on the assimilative capacity of the Izmir Bay; Study of the recovery of the Izmir Bay) and which are the basis for future planning and management actions;
- , to continue efforts towards obtaining funds from the World Bank and, eventually, other financial sources;

- , to continue the process of institutional capacity building in which MAP and PAP are ready to extend support (this applies not only to the Planning Department of MMI but other regional and city institutions entrusted with the implementation of ICAM);
- , to start immediately with preparations for the Integrated Coastal Master Plan of the Area of Izmir which should define a system of resource management capable of securing sustainable development of the area.

ANNEX IV

INTEGRATED MANAGEMENT STUDY FOR THE AREA OF IZMIR EXECUTIVE SUMMARY

1. Following a decision of the Sixth Ordinary Conference of the Contracting Parties to the Barcelona Convention held in Athens in 1989, the Turkish Government and the Mediterranean Action Plan (MAP) signed in June 1990 "An Agreement Relative to the Preparation of the Coastal Area Management Programme for the Bay of Izmir - Turkey".
2. One of the most important activities envisaged within CAMP "The Bay of Izmir" is the preparation of an Integrated Management Study (IMS) for the area of Izmir using the integrated approach to coastal and marine areas management (ICAM). That approach is consistent with the objectives for integrated management and the sustainable development of coastal areas and the marine environment established at the UN. Conference on Environment and Development, held in Rio de Janeiro in 1992.
3. The Integrated Management Study was prepared during the 1991-1993 period as a joint effort of a combined team of Turkish and PAP experts.
4. The most important objective of IMS is to lay grounds for the preparation and implementation of a new Integrated Coastal Master Plan of Izmir (ICMP). Being an "umbrella" document integrating results of the majority of activities undertaken within the framework of CAMP "the Bay of Izmir", IMS had the tasks to synthesise available knowledge of the eco-systems, i.e. to offer an insight, as comprehensive as possible, into the state and ways of the use of resources in the MMI area; to bring into focus the existing problems and conflicts with regard to the use of resources, and to provide a general framework for the formulation of adequate programmes of action to achieve a sustainable pattern of development in the area concerned.
5. In the first, analytical part of the study, relevant aspects of the development of the Izmir area to date are studied on the basis of available data. A special attention is paid to the analysis of environmental impacts of development. It is observed that urban growth, taking place since the 1960s, has been increasingly devouring the space of MMI regardless of the value of its natural resources. In spite of their great efforts, the local, as well as regional and national authorities, have not been able to channel such a growth which affects almost all the spheres of economic life, bringing about conflicts between different users and creating an ever larger gap between the development processes and the quality of environment. Indiscriminate occupation of land for illegal housing has taken enormous proportions in Izmir. So far, dealing with this problem has been reduced to mere "recording" of the areas which have fallen prey to new illegal development.
6. Izmir, together with a number of "satellite" cities, is a major industrial area. In many cases, however, the location of industries in that area was guided solely by the principles of economic efficiency which took into account only the employment effects of the projects and their contribution to GDP. At present, the city of Izmir is burdened by such a structure of development factors which highly endanger the quality of environment (polluting industries, transportation etc.) This, coupled with difficulties to establish an appropriate and well co-ordinated control over the use of natural resources and pollution brought about environmental degradation, resource depletion and pollution-related damages.
7. The analyses of concentrations of noxious wastes in the natural media indicate that the permissible limits of threat to the human environment in the area of MMI are largely overstepped, and that the capacity of ecosystem is insufficient to absorb the large amount of

wastes that is presently being discharged from numerous pollution sources. The available data and analyses also show that every single component of the environment is seriously endangered, while the pollution of some of the components, especially the aquatorium of the Izmir Bay, has exceeded the critical point. The findings of IMS indicate that the development of Izmir has reached a stage at which direct benefits of urbanization and vigorous economic growth are being overwhelmed by the costs of environmental degradation.

8. It is also observed that many problems relative to environmental degradation and pollution of the Izmir area result from institutional drawbacks, such as: insufficient cross-sectorial (horizontal) and institutional (vertical) co-ordination and integration of activities at various institutional levels; divergence in policy objectives pursued by various authorities; lack of sufficient funds for environmental purposes including the development of a consistent ecological monitoring; absence of an adequate system of integrated planning and management. Apart from the day-to-day management of pollution control and the existence of a long term plan for sewerage, collection and treatment, there is no strategy recommending how the Izmir Bay area and its resources should be managed in an environmentally acceptable manner. Nor are there policies, goals or management structure adequately co-ordinated to provide a framework for conflict resolution.

9. A number of uncertainties concerning both the land use and the coastal area management implications have been identified. The most important of them are:

- , initiatives to minimize the urban sprawl (illegal housing) into ecologically sensitive areas;
- , environmental impacts of the proposed waste water disposal on the water quality of the Bay;
- , the rate of recovery of the Inner Bay, including the residual side - effects of a long-term, heavy concentration of pollutants accumulated in the sediments of the Inner Bay;
- , effects of continuing urban discharge and agricultural run-offs entering the Bay.

These uncertainties, as well as other problems observed, raise the need for a permanent monitoring and research aiming at detailed analyses and assessment of the state of environment in the Izmir Bay area, calling for interventions to be made in order to change the course of development.

10. In its prospective part, the Study offers an outline of a possible urban growth of the MMI area bringing into focus its implications on the state of environment. Two options of the future urban growth have been elaborated on: one, based on the persistence of the existing trends, and the other based on the moderate urban growth anticipating the probability for some development policy measures to be implemented with a view to slowing down and reversing the hitherto course of the polarized regional development. The first, "trend" option, assumes that the population of MMI will increase from 2 to 5 million in the 1991-2025 period. Such growth means a further excessive concentration of the population in the coastal sections of MMI. This would cause a growing problem of deteriorated quality of life due to pollution loads some of which could reach the level three to four times higher than the present one. A special problem, however, refers to the tendency of urban growth to consume the remaining land resources. It was observed that the available land to support further urban growth in the MMI area is very scarce. This leads one to the conclusion that a continuation of the existing trends would be opposite to the requirements of an environmentally sound development and would ultimately lead to a massive resource depletion.

11. The results arrived at through the study point out the urgent need for changing the existing trends of growth and development in the Izmir area. To satisfy this need there must be a change in setting the basic goals, strategies and policies of the future long-term development. What is actually needed is seeking to establish the balance between the socio-economic development and the best use of limited natural resources - the problem that must be accorded high priority by the planners and decision makers of MMI.

12. The past experience obtained in Izmir and other coastal regions of the world experiencing a similar rate of development suggests that for achieving a sustainable pattern of development a largely improved management structure would be needed. Consequently and in parallel with the changed strategy of future development of the Izmir Bay area, IMS emphasizes the necessity for an integrated management system, usually referred to as Integrated Coastal and Marine Area Management (ICAM) to be adopted.

13. There are two essential issues concerning the operationalization of ICAM. The first one is setting up of the boundaries for ICAM, while the second one refers to the establishment of workable and well-co-ordinated institutional arrangements to support the integrated management of the area concerned. This two issues are discussed in the following chapters.

14. It is suggested the Izmir Metropolitan Region be one of the viable options in determining the coverage of ICAM. The second alternative option is to take the Izmir Province as a management area. Another option - that is to adopt the boundaries of MMI as the boundaries of ICAM- seems less acceptable since it narrows the focus associated with regard to planning of the area. Namely, considering the dynamic nature of the coast and the complex links between land and water that influence and are influenced by the coast, the broader (regional) perspective appears to offer merit for ICAM. As for the institutional arrangements to support ICAM, one of the possible and workable solutions frequently arrived at in the coastal areas similar to Izmir is the establishment of an Integrated Coastal Management Committee as the main decision making body responsible for the regional development which is in harmony with economic, social and environmental aspirations of the region's inhabitants. The functions and responsibilities of the Committee would include co-ordination of the development of the region, monitoring and control over the use of natural resources, preparation of various legal acts and policy measures for sustainable development, preparation and implementation of regional and integrated master plans for the area concerned. A statutory legal basis could be provided to the Committee by an Act of Parliament. The Turkish Government has accepted in principle the idea of Coastal Management Units as the main bodies responsible for the management of major coastal regions. Alternatively, the Committee could operate as an informal regional body in which case difficulties may be expected in reaching and enforcing decisions.

15. In addition to well-co-ordinated and workable institutional arrangements, a logical step forward towards the implementation of ICAM process is the preparation of the Integrated Master Plan (ICMP) for the Izmir area. The preparation of ICMP aims at providing a new, operational planning and management basis which should - through a thorough research and integrated approach to the analysis of development alternatives- determine an optimal long-term strategy and structural model of sustainable development of the Izmir area, as well as a long-term concept and measures of protection and enhancement of the quality of environment.

16. In order to stop or reduce the negative impacts of the current processes in the region, the study proposes a list of measures to be taken in the interim period between the adoption of this study and the preparation of the Integrated Coastal Master Plan of Izmir. The measures are divided in two groups:

I- Urgent measures which should be implemented immediately after the adoption of the Study by the MMI and other regional and national authorities. The aim of these measures is to stop or, at least, to slow down the processes which are the most harmful to the environment in the area concerned.

II- Follow-up activities to be carried out in the subsequent 5 year period. The aim of these activities is to create conditions for the introduction and establishment of ICAM process. They are also meant to be an input for the Integrated Coastal Master Plan for the Izmir area, which is expected to provide a basis for a long-term sustainable development of the area.

17. The Integrated Coastal Master Plan for the Izmir area should be prepared in the interim 3-5 year period. The objectives of ICMP are to create conditions for making operational decisions in the implementation of the ICAM process, relative to the realization of the concept of sustainable development in the area concerned. This includes: (i) detailed elaboration of the most appropriate and selected cross-sectorial management strategy of the area; (ii) definition of physical requirements that the implementation of that strategy may generate, (iii) preparation of the plan of actions by which that strategy could be implemented; (iv) detailed site-specific land and sea-use proposal, (v) policy measures and instruments to be used in the plan implementation.

ANNEX V

Conclusions and recommendations

Conclusions

1. Experience gained through the implementation of MAP CAMP "The Bay of Izmir" may be utilized in the programmes to be developed for other coastal areas of Turkey.
2. The example of Izmir has proved that local authorities and institutions may be sufficiently motivated to carry out successfully comprehensive programmes such as the Izmir CAMP.
3. The results of the Izmir CAMP suggest that in analyzing the effects of pollution, a wider area should be taken into account. In the case of Izmir, the entire metropolitan region should be considered as a study area.

Recommendations

4. As the misunderstanding over the use of authority between the central and local administrations resulted in increased pollution of the Bay and even contributed to the aggravation of environmental problems, a new institutional arrangement is needed for a better environmental management of the region, either by establishing a new organization or by reinforcing the existing local authorities and investing them with more power of enforcement. These alternatives should be studied carefully.
5. It is necessary to prepare the Integrated Master Plan of the Area of Izmir since it provides the basis for any further actions towards sustainable development.
6. Integrated management of the area of Izmir should imply the utilization of modern tools and techniques, such as GIS, development-environment scenarios and EIA and, therein, rely on the capacities already existing in the local institutions.
7. Implementation of urgent measures recommended in the Integrated Management study should start immediately. In that, support should be secured from local and, where required, foreign sources.
8. In undertaking urgent actions and developing concrete implementation programmes, a multidisciplinary approach should be adopted and expert teams should be set up consisting of outstanding scientists and experienced administrators.
9. Ministry of the Environment promised that it should continue to carry out most of the activities that were envisaged in the Agreement, but could not be completed. It should, also, continue with its coordinating role and provide guidance in the follow up of the programme.