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UNITED NATIONS ENVIRONMENT PROGRAMME

***The West and Central African Action Plan:  
evaluation of its development and achievements***

***UNEP Regional Seas Reports and Studies No.101***

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## 1. INTRODUCTION

1.1 This document is an in-depth evaluation of the Action Plan for the protection and development of the marine and coastal environment of the West and Central African Region, covering the preparatory activities leading to its adoption in March 1981, and its subsequent implementation until mid 1988.

1.2 The following main elements have been used in evaluating the achievements of the Action Plan:

- (a) Changes in national environmental policies and practices (including in national legislation) made either as a direct consequence of the Action Plan, the Convention and Protocol adopted in 1981, or in conformity with the objectives of the Action Plan and the Convention;
- (b) National financial and manpower resources which have been mobilized or used in connection with activities relevant to the Action Plan;
- (c) Participation and contribution of national institutions to the implementation of the Action Plan;
- (d) Efficiency of training (individual and group training) provided through the Action Plan;
- (e) Efficiency of technical meetings held in the framework of the Action Plan;
- (f) Role of co-operating agencies and supporting organizations - their substantive and financial contributions to the Action Plan; and
- (g) Role of UNEP and its financial support in the formulation of the Action Plan and its subsequent implementation.

1.3 The achievements were specifically analyzed from the standpoint of how and how much they contributed to the principal objective of the Action Plan adopted seven years ago, to the awareness and understanding of environmental issues of the region and to the formulation of national and regional environmental policies of the region.

1.4 The evaluation has been prepared by the secretariat of the Action Plan (UNEP) on the basis of information available in the files of UNEP and of information supplied by the institutions participating in the Action Plan (see annex II and IV).

## 2. MAJOR STEPS IN THE DEVELOPMENT OF THE ACTION PLAN

2.1 A UNEP exploratory mission to assess the feasibility of a regional action plan for West Africa visited the region during the period April - July 1976 as a follow-up to the request of West and Central African States at the third session of the UNEP Governing Council.

2.2 In May 1977, the fifth session of the Governing Council called upon UNEP to undertake the necessary steps for the development of an action plan and a regional agreement to prevent and abate pollution in the West African Region [UNEP/GC/Dec/88(V)].

2.3 An IMCO/UNEP workshop on the Prevention, abatement and combating of oil pollution from ships in the Gulf of Guinea and adjacent coastal areas was convened in Douala, 12-17 December 1977.

2.4 The IOC/FAO/WHO/UNEP international workshop on Marine pollution problems in the Gulf of Guinea and adjacent coastal areas was convened in Abidjan, 2-9 May 1978. The workshop reviewed the major marine pollution problems of the region.

2.5 A UNDP Resident Representatives/Interagency Meeting took place in Abidjan, 10-11 May 1978. The meeting focused on the identification of activities that could practically and effectively be carried out as part of the Action Plan.

2.6 On the basis of the activities mentioned above, UNEP formulated a preliminary draft action plan and circulated it to the Governments of the region in October 1978. Thereafter a UNEP mission visited the region during the period December 1978 - April 1979 to collect Governments' comments and respond to their queries.

2.7 Under a joint FAO/UNEP project, studies on legal and scientific aspects of marine environment protection in the Gulf of Guinea and adjacent coastal areas, and on the need for control of pollution and possible mechanisms thereof were prepared and served as a basis for the meetings of Government experts to review the draft action plan.

2.8 A United Nations/Governments of Benin and Togo workshop on causes of, and possible solutions to, coastal erosion in Benin and Togo, was convened in Lomé, 29 January - 9 February 1979.

2.9 A workshop on Coastal ecosystems on the West Coast of Africa was convened by Unesco in Dakar from 11-15 June 1979. The workshop formulated a proposal for a regional research and training programme on the coastal lagoons, estuaries and mangroves of West Africa.

2.10 The draft action plan and draft convention and protocol were reviewed by meetings of Government scientific and legal experts in Libreville, 5-9 November 1979; and Lomé, 24-27 November 1980.

2.11 During the period April-October 1980, a mission visited those States that had not yet actively participated in the expert meetings and other activities.

2.12 High level experts from the region met in Geneva from 21 to 23 January 1981 at the invitation of the Executive Director of UNEP to advise him on the institutional and financial arrangements related to the Action Plan for the West African region.

2.13 As part of the preparatory process of the Action Plan, a number of studies and surveys were undertaken in the region in early 1980 in the framework of joint UN bodies and UNEP projects. These covered:

- UNIDO/UNEP: Survey of industrial pollution of the marine environment from land-based sources;
- IMCO/UNEP: Survey of oil pollution problems in the West African region with particular emphasis on pollution from shipping activities;
- Unesco/UNEP: Survey of river discharge of pollutants to West African seas; and
- UN-DIESA/UNEP: Studies on coastal development and management in West Africa.

2.14 The Conference of Plenipotentiaries on Co-operation in the protection and development of the marine and coastal environment of the West and Central African region was convened by UNEP in Abidjan from 16-23 March 1981. The Conference adopted the Action Plan, the Convention and Protocol as well as resolutions on institutional and financial arrangements for the implementation of the Action Plan.

2.15 The subsequent meetings of the Steering Committee for the marine environment of West and Central Africa (Abidjan, 20-23 July 1981; Geneva, 22-23 April 1982; Lagos, 30 April - 2 May 1984; Abidjan, 15-17 April 1985; Nairobi, 16-18 May 1988), the Extraordinary Intergovernmental Review

Meeting (Lagos, 2-4 May 1984), and the First meeting of the Contracting Parties to the WACAF Convention (Abidjan, 18-20 April 1985) provided UNEP with the required guidance on programme priorities and workplans as well as on institutional and financial arrangements for their implementation and follow-up.

2.16 Since the adoption of the Action Plan, three major projects identified by Governments as first priorities were initiated by UNEP:

WACAF/1: Institution and co-ordination of national contingency plans in the West and Central African region (in co-operation with IMO and UNIDO);

WACAF/2: Monitoring of pollution in the marine environment of the West and Central African region (in co-operation with FAO, IOC, WHO and IAEA); and

WACAF/3: Control of coastal erosion in West and Central Africa (in co-operation with Unesco and UN-DIESA).

2.17 The preparation of the in-depth evaluation of the action plan, which is the subject of this document, was discussed and agreed at the Fifth meeting of the Steering Committee (Nairobi, 16-18 May 1988).

### 3. ACHIEVEMENTS

3.1 The adoption, four years after the decision of the Governing Council, of the Action Plan, the Convention, the related Protocol to the Convention and the institutional and financial arrangements are undoubtedly major achievements.

3.2 The Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region and its related Protocol on Combating Pollution in Cases of Emergency entered into force on 5 August 1984, and constitute the legal basis for regional co-operation in the framework of the Action Plan.

3.3 National focal points for the Action Plan were identified by each participating government (see annex II). They played a major role in the co-ordination, at the national level, of the implementation of programme priorities agreed by meetings of the Steering Committee, the Intergovernmental and the Contracting Parties Meetings.

3.4 The Steering Committee, since its establishment in 1981, provided UNEP and the Intergovernmental and Contracting Parties Meetings with the necessary policy guidance for determining programme priorities.

3.5 The Governments of the region agreed to establish a Regional Co-ordinating Unit for the Action Plan and accepted the offer of the Government of Côte d'Ivoire to host such a unit in Abidjan (UNEP/IG.59/6).

3.6 A Trust Fund was established with the intention to cover the common costs of implementing the Action Plan and to replace gradually the support provided by the Environment Fund.

3.7 Five regional projects dealing with contingency planning for marine pollution emergencies (WACAF/1), monitoring of pollution in the marine environment (WACAF/2); coastal erosion control (WACAF/3, WACAF/6) and development of national environmental legislation and its harmonization with the Abidjan Convention (WACAF/5) were initiated at the request of the Governments of the Region. They were implemented in co-operation with UN bodies and involved national institutions and experts from the region (see annex IV).

3.8 As the result of ongoing and completed activities (see paragraphs 2.12. 2.15 and 3.7):

(a) Information and data were gathered on:

- the status of oil production, transportation, pollution and pollution control along the coasts of West and Central Africa;
- the type and quantity of industrial pollution from major land-based sources entering the marine environment through direct coastal discharges or indirectly through rivers, as well as the status of industrial wastes management practices;
- The ocean energy potential of the West and Central African region;
- onshore impact of offshore oil and natural gas development in the West and Central African region.

(b) A review of the legal aspects of marine environmental protection in the Gulf of Guinea and adjacent areas has been made.

(c) A survey on the environmental management problems in resource utilization and a survey of resources in the West and Central African region has been prepared.

(d) A directory of marine research centres in Africa has been published.

(e) National contingency plans for maritime emergencies were drafted for ten countries. Two of these contingency plans were formally adopted by Congo and Côte d'Ivoire.

(f) Guidelines for the preparation of national contingency plans for industrial accidents and for industrial hazard analyses have been prepared. Information on the current state of preparedness and intervention capability in case of major industrial accidents was collected during field missions to Liberia and Senegal. A regional industrial risk assessment has been carried out for the major industrial sectors in five geographical zones which make up the region.

(g) Twenty-three research or university institutes and laboratories from ten countries were organized in a network of institutions for monitoring the quality of the marine environment. The first assessments of the state of marine and coastal waters in the West and Central African region are available.

(h) Coastal erosion, a problem faced by most West and Central African States, has been dealt with through a project which provided the region with basic scientific information about the causes and processes leading to coastal erosion, as well as about the technical measures which may mitigate the problem.

(i) A manual on training, research and control of coastal erosion as applied to West and Central African region has been prepared under the responsibility of Unesco.

(j) Reports on the state of national legislation relevant to the protection of the marine environment have been prepared for Gabon and Ghana, with the assistance of FAO and IMO.

3.9 Technical assistance was provided to several Governments and national institutions in the region and a large number of their technical personnel were trained in subjects relevant to the Action Plan (see section 4). This contributed considerably to the strengthening of national capabilities to respond to marine environmental problems of the region.

3.10 The support of FAO, IMO, IOC, Unesco, IAEA, WHO, UNIDO and UN-DIESA, particularly in the preparatory phase leading to the adoption of the Action Plan, was generous, efficient and contributed significantly to the development and implementation of the Action Plan.

#### 4. TRAINING AND TECHNICAL ASSISTANCE

4.1 In the implementation of any regional programme, particularly one which involves developing countries, a major difficulty is the uneven level of technical capabilities of participating States and the frequent lack of infrastructure adequate for their effective participation in the programme. For this reason the need for training and technical assistance has been strongly emphasized in each of the main elements of the Action Plan.

4.2 Provision of training (in the form of both individual or group training) and technical support has been a major component of the various implemented or ongoing activities (see annex V). Furthermore, UNEP has sponsored participation of a number of individual experts from the West and Central African region in training programmes not organized in the framework of but relevant to the Action Plan.

4.3 Technical assistance has also been provided to the States of the region and their institutions in the form of experts and in the supply of equipment and material needed for carrying out the various projects and tasks (see annex VI).

#### 5. INSTITUTIONAL ARRANGEMENTS

5.1 When adopting the Action Plan and the Convention with its Protocol (see paragraph 2.13), the Governments designated UNEP as the secretariat of the Convention and the Action Plan and UNEP has served in this capacity since then. In consultation with the Governments of the region, and in close co-operation with the relevant United Nations bodies, UNEP, within available financial resources, has made such arrangements as required to achieve the objectives of the Convention, the Protocol and the Action Plan. The secretariat functions are discharged by the Oceans and Coastal Areas Programme Activity Centre of UNEP in Nairobi (until 1985 in Geneva).

5.2 The Governments participating in the Action Plan also decided to establish, upon entry into force of the Convention, a Regional Co-ordinating Unit, placed under the authority of UNEP, which would technically co-ordinate the various activities of the Action Plan. The first meeting of the Contracting Parties to the Convention accepted the offer of Côte d'Ivoire to host the Regional Co-ordinating Unit in Abidjan. Negotiations between UNEP and Côte d'Ivoire are in progress about an agreement formalizing the establishment of the Unit.

5.3 A Steering Committee composed of 7 States (later expanded to ten) was set up by the Governments when adopting the Action Plan to provide UNEP with policy guidance on substantive and financial matters related to the implementation of the Convention, the Protocol and the Action Plan in between meetings of the Contracting Parties.

5.4 The first meeting of the Contracting Parties to the Convention adopted the Rules of Procedure for the meetings convened under the Action Plan and the Terms of Reference of the Steering Committee.

5.5 The periodic meetings of the Steering Committee (see paragraph 2.14) proved to be an effective mechanism for determining programme priorities in the programmes, for reaching an agreement on the contributions to the Trust Fund and for determining financial allocations to various activities.

5.6 Each State participating in the Action Plan has designated an official national focal point for the Action Plan:

- to act as the official channel of communication between the respective Government and the secretariat of the Action Plan (UNEP);
- to co-ordinate the participation of national institutions and agencies in the agreed programmes.

5.7 The first meeting of the Contracting Parties recommended the establishment of national committees for the Action Plan to provide support to the national focal point in co-ordinating activities relevant to the Action Plan on the national level.

## 6. FINANCIAL ARRANGEMENTS

6.1 Financial support for the activities of the Action Plan were envisaged from:

- (a) Contributions from participating governments to the Trust Fund according to a scale determined from time to time by the governments concerned;
- (b) International organizations;
- (c) Non-governmental organizations.

6.2 It was envisaged that, initially, support should be provided by the United Nations system on the assumption that this financial contribution will progressively decrease as the governments themselves assume financial responsibility for the programme. The ultimate aim should be to make the proposed regional programme self-supporting.

6.3 The preparatory phase leading to the adoption of the Action Plan in March 1981 was financially supported by the Environment Fund of UNEP (US\$ 1,132,439) and by contributions of specialized agencies of the United Nations system (US\$ 223,436) [see table 1 (a)].

6.4 The Conference of Plenipotentiaries of West and Central African States (Abidjan, 16-23 March 1981) decided to establish a Regional Trust Fund to cover part of the common costs of implementing the Action Plan, that would be financed by proportional contributions from States identified in Article 1 of the Convention. The Conference also requested the Executive Director of UNEP to assume responsibility for administering the Regional Trust Fund and called upon the Executive Director to search for additional financial resources which may be available for the implementation of the Action Plan, in particular those from UNDP earmarked for regional activities. The decision to extend the Trust Fund for a two-year period was periodically approved by the Governing Council of UNEP.

6.5 The First Meeting of the Steering Committee (Abidjan 20-22 July 1981) adopted the Terms of Reference for the management of the Trust Fund. The First Meeting of the Contracting Parties (Abidjan 18-20 April 1985) reconfirmed the validity of Terms of Reference for the management of the Trust Fund and adopted these Terms of Reference as Financial Rules of the Contracting Parties in accordance with Article 21 of the Abidjan Convention (Doc. UNEP-RSG.12; UNEP, 1988). The pledges to the Trust Fund are made at the meetings of the Contracting Parties. UNEP, as the manager of the Trust Fund, used the received contributions according to the allocations decided by the meetings of the Contracting Parties.



6.6 The status of the Trust Fund (in US dollars) as at 31 August 1988 is summarized below:

A. Income (1982-1988)

Contributions received	566,009
Interest credited	<u>146,793</u>
TOTAL	712,802

B. Expenditures and Commitments <sup>1/</sup>

For projects in 1985	13,125
For projects in 1986	177,088
For projects in 1987	152,322
For projects in 1988	223,350
Programme support cost (1985-1988)	<u>73,565</u>
TOTAL	639,450

C. Cash Available (A - B) 73,352

6.7 After the adoption of the Action Plan and until 31 August 1988 only 8 States have contributed to the Trust Fund (table 2). The payments to the Trust Fund are far behind schedule causing problems with the implementation of decisions made at meetings of the Steering Committee and Contracting Parties.

6.8 The Fifth meeting of the Steering Committee endorsed the proposal of the Executive Director consisting of:

- no pledges to the Trust Fund for the biennium 1988-1989;
- pledges of contributions to the Trust Fund for 1987 to be cancelled, with the understanding that contributions already received for that year will be credited against the contributions due for previous years; and
- remaining outstanding contributions to be paid in three equal instalments, on or before 1 September 1988, 1 March 1989 and 31 December 1989;

6.9 After the adoption of the Action Plan all programme activities and the secretariat support costs were financed by the Environment Fund of UNEP (US\$ 2,001,961), the Trust Fund (US\$ 565,853) and from UN agencies participating in programme activities (US\$ 534,225). Except for the participation of the BRGM in the implementation of the WACAF/3 project (US\$ 45,000) there was no additional financial support from other sources.

## 7. ENCOUNTERED DIFFICULTIES

7.1 The first major difficulty is the shortfall in contributions to the Trust Fund which are far behind schedule, leaving the programme facing a serious financial crisis. The future implementation of the agreed programme may be seriously jeopardized and it is practically impossible to consider new activities which would be financed by the Trust Fund.

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<sup>1/</sup> Expenditures represent the actual level of disbursement in a calendar year. Commitments represent budgetary allocations against which disbursements are authorized. Programme support cost equals 13 per cent of expenditures and commitments. For details on project expenditures and commitments see table 1(b).

7.2 Furthermore, the environment Fund of UNEP cannot continue to be the major source for cash contributions to programme activities. Efforts to attract financial resources for programme activities from donors have not generated any response so far.

7.3 As a consequence of the financial crisis, the establishment of the Regional Coordination Unit in Abidjan will be delayed.

7.4 By December 1984, the process of ratification, accession or approval of the Abidjan Convention had stopped completely. Thirteen ratifications, accessions or approvals are expected.

7.5 Except for a limited number of countries, national practical involvement in the Action Plan has remained at a very low level.

## 8. SUMMARY

8.1 UNEP's intellectual input and co-ordinating role was of particular and decisive importance in the preparatory phase of the Action Plan.

8.2 The substantive role and the financial contribution of international organizations were of vital importance for the Action Plan in its preparatory phase and continue to be important.

8.3 The number of national institutions and agencies participating in the activities carried out in the framework of the Action Plan testifies that the Action Plan has started with success in building institutional support which augurs well for the long-term prospects of the Action Plan.

8.4 Training activities were carried out in the framework of each activity undertaken as part of the Action Plan. As a result of these training activities we may point out the training of Scientists from national institutes who are participating actively in the monitoring of pollution in the marine environment of the West and Central African region.

8.5 The Action Plan did not succeed in mobilizing financial resources and in attracting financial support from funding organizations or donors to increase at the appropriate level the activities which would be developed in the framework of the Action Plan. Due to the low level of national contribution to the Trust Fund, the resources of the Trust Fund are inadequate for a large scale environmental action in the region.

8.6 The implementation of the protocol on co-operation in combating pollution in the case of emergency has been slow due to the fact that few States have already developed their national organization (National contingency plan).

Table 1(a) - Expenditures and commitments to the projects relevant  
to the preparatory phase of the WACAF Action Plan  
(in US\$) as at 31 August 1988

EF = Environment Fund, CC = Counterpart Contributions over the duration of the project.  
Closed projects are marked with asterisk

Project No.	1976		1977		1978		1979		1980		1981		1982		Total		Project Total
	EF	CC	EF	CC	EF	CC	EF	CC	EF	CC	EF	CC	EF	CC	EF	CC	
FP/0504-76-01*	10,886	-	29,385	-	-	-	-	-	-	-	-	-	-	-	40,271	-	40,271
FP/0503-77-02*	-	-	24,463	22,820	11,836	5,000	6,692	5,000	-	-	-	-	-	-	42,991	32,820	75,811
FP/5102-77-03	-	-	2,656	-	21,679	-	37,505	-	61,178	-	73,191	17,551	-	-	196,209	17,551	213,760
FP/0503-77-04*	-	-	-	2,128	4,000	40,716	17,000	(3,576)	500	-	-	-	-	-	21,500	39,268	60,768
FP/0503-77-05*	-	-	-	-	18,943	11,450	-	-	-	-	-	-	-	-	18,943	11,450	30,393
FP/0503-79-16*	-	-	-	-	-	-	39,974	8,000	-	-	(17,769)	-	-	-	22,205	8,000	30,205
FP/0503-79-17*	-	-	-	-	-	-	-	-	58,674	16,500	2,228	-	-	-	60,902	16,500	77,402
FP/0503-79-18*	-	-	-	-	-	-	-	-	133,131	32,500	2,341	-	161	-	135,633	32,500	168,133
FP/0503-79-19*	-	-	-	-	-	-	102,458	-	170,926	-	251,269	2,030	(8,292)	317	516,361	2,347	518,708
FP/0503-79-20*	-	-	-	-	-	-	-	-	53,844	15,000	1,030	-	-	-	54,874	15,000	69,874
FP/0503-80-04*	-	-	-	-	-	-	-	-	91,980	48,000	4,000	-	(73,430)	-	22,550	48,000	70,550
GRAND TOTAL	10,886	-	56,504	24,948	56,458	57,166	203,629	9,424	570,233	112,000	316,290	19,581	(81,561)	317	1,132,439	223,436	1,355,875

Table 1 (b)

Expenditures and commitments relevant to the implementation of the Action Plan by projects and activities  
(in US \$, as at 31 August 1988)

TF = Trust Fund, EF = Environment Fund, CC = Counterpart contributions over the duration of the project.

Project or activity	1982	1983	1984	1985		1986		1987		1988		1989	1982 - 1989			Total
	EF	EF	EF	EF	TF	EF	TF	EF	TF	EF	TF	EF	EF	TF	CC	
WACAF/1 (FP/5102-82-11)	60,150	45,878	54,683	44,533	-	5,126	-	232	-	-	-	-	210,602	-	62,500	273,102
WACAF/2 (FP/5102-82-20)	-	388,510	41,951	87,478	13,125	-	177,088	45,000	152,322	52,000	223,350	-	614,939	565,885	386,100	1,566,924
WACAF/3 (FP/5102-83-01)	-	94,731	60,640	19,605	-	(7,081)	-	18,000	-	10,000***	-	-	195,895	-	85,625	281,520
WACAF/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WACAF/5*	-	-	-	-	-	-	-	40,000	-	-	-	-	40,000	-	-	40,000
WACAF/6*	-	-	-	-	-	-	-	20,000	-	-	-	-	20,000	-	-	20,000
WACAF/7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WACAF/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WACAF/9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Co-ordination** and general support	118,200	113,321	182,473	107,084	-	63,363	-	128,487	-	158,317	-	49,280	920,525	-	-	920,525
<b>GRAND TOTAL</b>	<b>178,350</b>	<b>642,440</b>	<b>339,747</b>	<b>258,700</b>	<b>13,125</b>	<b>61,408</b>	<b>177,088</b>	<b>251,719</b>	<b>152,322</b>	<b>220,317</b>	<b>223,350</b>	<b>49,280</b>	<b>2,001,961</b>	<b>565,885</b>	<b>534,225</b>	<b>3,102,071</b>

\* Supported through project FP/5102-82-03

\*\* Supported through projects FP/5102-77-03, FP/5102-82-03, FP/5102-84-06, FP/5102-85-05, FP/5103-85-06, FP/5102-86-02, FP/9101-87-83, FP/9101-88-81

\*\*\*Supported through project FP/5102-82-03

Table 2 - Status of assessed pledges and received payments to the WACAF Trust Fund  
(as at 30 April 1988, in US \$)

	1982		1983		1986		1987		1988		Total (1982-1988)		Unpaid pledges
	Pledged <sup>1/</sup>	Paid	Pledged <sup>1/</sup>	Paid	Pledged <sup>2/</sup>	Paid	Pledged <sup>2/</sup>	Paid	Pledged	Paid	Pledged	Paid	
Angola	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Benin	37,200	-	55,800	55,800	37,200	-	37,200	-	-	-	167,400	55,800	111,600
Cameroon	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Cape Verde	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Congo	37,200	31,975	55,800	-	37,200	-	37,200	-	-	-	167,400	31,975	135,425
Côte d'Ivoire	61,600	61,600	92,400	92,400	61,600	20,273	61,600	-	-	-	277,200	174,273	102,927
Equatorial Guinea	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Gabon	49,400	49,400	74,100	25,392	49,400	-	49,400	-	-	-	222,300	74,792	147,508
Gambia	37,200	15,410	55,800	-	37,200	-	37,200	-	-	-	167,400	15,410	151,990
Ghana	61,600	61,600	92,400	1,118	61,600	-	61,600	-	-	-	277,200	62,718	214,482
Guinea	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Guinea Bissau	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Liberia	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Mauritania	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Nigeria	220,100	-	330,150	-	220,100	-	220,100	35,143	-	-	990,450	35,143	955,307
Sao Tome & Principe <sup>3/</sup>	-	-	-	-	37,200	-	37,200	-	-	-	74,400	-	74,400
Senegal	37,200	37,200	55,800	46,624	37,200	-	37,200	-	-	-	167,400	83,824	83,576
Sierra Leone	37,200	-	55,800	-	37,200	-	37,200	-	-	-	167,400	-	167,400
Togo	37,200	-	55,800	-	37,200	14,728	37,200	-	-	17,346	167,400	32,074	135,326
Zaire	49,400	-	74,100	-	49,400	-	49,400	-	-	-	222,300	-	222,300
<b>TOTAL</b>	<b>962,900</b>	<b>257,185</b>	<b>1,444,350</b>	<b>221,334</b>	<b>1,000,100</b>	<b>35,001</b>	<b>1,000,100</b>	<b>35,143</b>	<b>-</b>	<b>17,346</b>	<b>4,407,450</b>	<b>566,009</b>	<b>3,841,441</b>

<sup>1/</sup> Resolution adopted by the Conference of Plenipotentiaries, Abidjan, 16-23 March 1981 (UNEP/IG.22/7 - UNEP 1983)

<sup>2/</sup> UNEP/IG.59/6, paragraph 16 and paragraph 22 of document UNEP/IG.58/5

<sup>3/</sup> Pledges for 1982 and 1983 deleted following advice of inability to contribute

**Note:** No pledges were made for the contributions to the Trust Fund for the biennium 1984-1985

Annex I

ANALYSIS OF ACTIVITIES CARRIED OUT IN THE FRAMEWORK  
OF THE ACTION PLAN

This annex contains (a) the list of all projects carried out specifically in the framework of the Action Plan or supporting the Action Plan, (b) the analysis of the results obtained by individual projects, (c) an analysis of the projects' relevance to the Action Plan, and (d) the references relevant to the analyzed activities.

A. LIST OF PROJECTS

Projects are arranged in chronological order, i.e. as they have been formally approved by the Environment Fund of UNEP. Project numbers of completed projects are underlined. The organizations responsible for the implementation of the projects are identified in the project titles. Activity codes do not correspond to project denominations used in various WACAF documents.

<u>Project number</u>	<u>Project title</u>	<u>Activity Code</u>
<u>FP/0504-76-01(1211)</u>	Development of Draft Legal Instruments for Environmental Protection of the West African Coast of the Atlantic (UNEP)	WACAF/PREP.1
<u>FP/0503-77-02(1314)</u>	Preparatory Work for the Protection of the Marine Environment in the Gulf of Guinea and Adjacent Coastal Areas (FAO)	WACAF/PREP.2
<u>FP/5102-77-03(1373)</u>	Programme Activity Center for Regional Seas (UNEP)	WACAF/Gen.
<u>FP/0503-77-04(1354)</u>	An International Workshop on Marine Pollution in the Gulf of Guinea Region (IOC/FAO/WHO)	WACAF/PREP.3
<u>FP/0503-77-05(1367)</u>	IMO/UNEP International Workshop in the Prevention, Abatement and Combating of Pollution from ships in the Gulf of Guinea and Adjacent Coastal Areas	WACAF/PREP.4
<u>FP/0503-79-16(2118)</u>	Preparation of Studies in Coastal Development and Management in West Africa (UN-DIESA)	WACAF/PREP.5
<u>FP/0503-79-17(2112)</u>	Survey of oil pollution in the West African Region (IMO)	WACAF/PREP.6
<u>FP/0503-79-18(2113)</u>	Survey of marine pollutants from industrial sources in the West African Region (UNIDO)	WACAF/PREP.7
<u>FP/0503-79-19(2088)</u>	Development of a comprehensive Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West African Region (UNEP)	WACAF/Gen.
<u>FP/0503-79-20(2143)</u>	River Inputs to the West African Region (Unesco)	WACAF/PREP.8
<u>FP/0503-80-04(2142)</u>	Preparation and Management of a Regional Seminar Workshop on Coastal Area Development and Management in West Africa (UN-DIESA)	WACAF/PREP.9

FP/5102-82-03(2342)	UNEP Support to the Action Plan for the West and Central African Region (UNEP)	WACAF/Gen.
FP/5102-82-03(2342)	UNEP Support to the Action Plan for the West and Central African Region (UNEP) supported through the project: Development of national environmental legislation for the West and Central African countries and its harmonization to the Abidjan Convention	WACAF/5
FP/5102-82-03(2342)	UNEP Support to the Action Plan for the West and Central African Region (UNEP) supported through the project: Preparation of a manual on training, research and control of coastal erosion as applied to West and Central Africa	WACAF/6
<u>FP/5102-82-11(2366)</u>	Institution and Co-ordination of National Contingency Plans in the West and Central African Region (IMO/UNIDO)	WACAF/1
FP/5102-82-20(2365)	Monitoring of pollution in the Marine Environment of the West and Central African Region (FAO/IOC/WHO/IAEA)	WACAF/2
<u>FP/5102-83-01(2375)</u>	Control of Coastal Erosion in the West and Central African Region (Unesco/UN-DIESA)	WACAF/3
FP/5102-84-06(2343)	Directories of Marine Institutes and Bibliographies (FAO)	WACAF/Gen.
FP/5102-85-05(2592)	Programme Activity Center for Oceans and Coastal Areas (UNEP)	WACAF/Gen.
FP/5102-86-02(2667)	Programme Activity Center for Oceans and Coastal Areas (UNEP)	WACAF/Gen.

#### B. ANALYSIS OF INDIVIDUAL PROJECTS

The results of each project are primarily analyzed from the standpoint of how much they contributed to the formulation and adoption of the Action Plan as well as to the subsequent implementation of its objectives. Activities indicated as WACAF/Gen. serve as a basis to the Action Plan and its continued support. Activities starting from WACAF/1 to WACAF/3 and WACAF/5 and WACAF/6 were initiated after the adoption of the Action Plan.

WACAF/General

UNEP SECRETARIAT SUPPORT TO THE DEVELOPMENT OF THE ACTION PLAN  
FOR THE WEST AND CENTRAL AFRICAN REGION (WACAF):

FP/0504-76-01(1211), FP/5102-77-03(1373), FP/0503-79-19(2088),  
FP/5102-82-03(2342), FP/5102-85-05(2592), FP/5102-86-02(2667)

Secretariat support of UNEP to the development and implementation of the WACAF Action Plan was provided through six internal projects. They covered:

(a) The cost of UNEP staff and consultants involved in the co-ordination of the preparations for the adoption of the Action Plan and of its subsequent implementation;

(b) The cost of 30 UNEP convened technical and intergovernmental meetings as indicated in annex III; and

(c) Support to specific activities carried out in support of the Action Plan.

The meetings convened by UNEP have played an essential role in allowing the governments of the region to define the content of the Action Plan and to plan and follow its implementation.

During the period July 1976 - June 1979, UNEP initiated a number of preparatory activities which led to the formulation of a draft Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region. The draft Action Plan was circulated to the Governments of the region for review at the national level in October 1978.

The first meeting of experts to review the draft Action Plan was convened by UNEP from 5-9 November 1979 in Libreville, Gabon. It was attended by 33 Government designated experts from thirteen West and Central African States and representatives from six United Nations bodies. The meeting adopted a revised draft Action Plan and recommended its submission to the Governments of the West and Central African Region. It also recommended the preparation of a draft regional convention on the protection of the marine environment from pollution as well as a document outlining the institutional and financial arrangements required for the implementation of the Action Plan.

A second meeting of experts to review the draft Action Plan and meeting of legal experts on a regional convention for the West and Central African Region took place in Lomé, Togo, from 24 to 27 November 1980. The meeting was attended by 30 experts from thirteen West and Central African States, representatives from two United Nations bodies and two intergovernmental organizations. The meeting finalized drafts of a convention and protocol and discussed informally a draft document on institutional and financial options available to Governments for the implementation and co-ordination of the Action Plan activities.

At the invitation of the Executive Director of UNEP, ten high level experts from the WACAF Region met in Geneva from 21 to 23 January 1981, to advise him on the finalization of the document on "Options for Institutional and Financial Arrangements required for the implementation of the Action Plan for the West and Central African Region".

By early 1981, UNEP completed the preparatory process which lasted almost four years. During this period, UNEP was able to launch, with the support of UN bodies, a number of technical studies and scientific surveys which served as a basis for the identification of the major common environmental problems of the region. Governments of the WACAF Region were constantly associated with this process through their designated scientific and legal experts who regularly advised the UNEP secretariat on the development of a regional environmental co-operation programme which reflects the needs and priorities of the Region.



The Conference of Plenipotentiaries on Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region was convened by UNEP in Abidjan, Côte d'Ivoire, from 16 to 23 March 1981. The Conference adopted:

- An Action Plan for the West and Central African Region;
- A Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region; and
- A Protocol concerning Co-operation in Combating Pollution in Cases of Emergency.

The Conference decided to set up a steering committee which would provide UNEP with the necessary policy guidance on all substantive and financial matters related to the implementation of the Convention, the Protocol and the Action Plan. The Conference invited the Executive Director of UNEP:

- "To prepare, with the co-operation of appropriate international and regional organizations, a detailed programme document, describing the operational details of projects to be developed on the basis of priorities identified by the Steering Committee;
- To convene, in early 1982, a meeting of the representatives of national authorities, designated pursuant to article 16 of the Convention, in order to review and revise as necessary, the programme document;
- To submit the recommendations of that meeting to the first subsequent meeting of the Steering Committee for endorsement;
- To co-ordinate the implementation of the projects endorsed by the Steering Committee, subject to the availability of funds."

The Conference adopted resolutions specifying institutional and financial arrangements for the implementation of the Action Plan. By those resolutions, the Conference decided to establish a Regional Trust Fund, to cover part of the common costs of implementing the Action Plan, that would be financed by proportional contributions from States identified in article 1 of the Convention; and requested the Executive Director of UNEP to assume responsibility for administering the Regional Trust Fund. The Conference called upon the Governments to establish, upon entry into force of the Convention, a regional co-ordination unit placed under the authority of UNEP which would technically co-ordinate the various programme activities and act as the secretariat of the Action Plan.

The First Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Abidjan, 20-23 July 1981, decided that the following activities, with their corresponding main objectives, should be assigned priority among those outlined in the Plan of Action:

- (a) Institution and co-ordination of national contingency plans;
- (b) Control of coastal erosion;
- (c) Monitoring of marine pollution;
- (d) Supporting measures.

Furthermore, the Steering Committee invited the Executive Director to draw up, on the basis of the priorities identified above, and in conformity with the resolution on institutional arrangements, a detailed programme document describing the operational details and financial implications of the projects to be developed, for submission to the meeting of national

authorities scheduled for the beginning of 1982. The meeting took also a number of decisions, among them the adoption of the Terms of Reference for the Management of Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region.

As a follow-up to the decision taken by the First Steering Committee Meeting, a detailed draft programme document was prepared by UNEP with the collaboration of United Nations bodies and specialized agencies. The draft programme document was then submitted to the First Meeting of the National Authorities for the Action Plan for the West and Central African Region convened by the Executive Director of UNEP in Geneva, from 19 to 21 April 1982. The Meeting considered that, as a whole, the document was in keeping with the decisions of the Abidjan Conference of Plenipotentiaries and the Steering Committee's guidelines. The Meeting of National Authorities examined and revised, as necessary, the draft programme document and recommended its endorsement by the Second Meeting of the Steering Committee.

The Executive Director of UNEP, in consultation with the Chairman of the Steering Committee, convened the Second Meeting of the Steering Committee in Geneva, from 22 to 23 April 1982. The Meeting considered the report of the Meeting of National Authorities and endorsed it in its entirety.

Furthermore, the Steering Committee requested its Chairman to undertake a visit to selected States of the Region in order to encourage their participation in activities envisaged in the framework of the Action Plan and their ratification or adherence to the Abidjan Convention.

The third meeting of the Steering Committee and the Extraordinary Intergovernmental review meeting of the Action Plan for the West and Central African Region, was convened by the Executive Director of UNEP, at Lagos from 30 April to 2 May 1984 and from the 2 to 4 May 1984 respectively.

These meetings decided to:

- continue the implementation of the ongoing projects;
- enlarge by two additional members the Steering Committee, which increased from 7 to 9 members.

The Executive Director of UNEP, in consultation with the Chairman of the Steering Committee, convened the Fourth Meeting of the Steering Committee and the First Meeting of the Contracting Parties to the Convention at Abidjan, from the 15 to 17 April 1985 and from the 18-20 April 1985 respectively.

These meetings decided that the resources of the Trust Fund to be made available should be allocated to ongoing activities (WACAF/1 and WACAF/2), and that future activities be financed from surplus resources according to the following priority order:

- |         |   |
|---------|---|
| WACAF/1 | Institution and co-ordination of national contingency plans for marine pollution emergencies.   |
| WACAF/2 | Monitoring of pollution in the marine environment of the West and Central African Region.   |
| WACAF/4 | Pollution impact assessment in the marine environment of the West and Central African region.   |
| WACAF/5 | Development of national environmental legislation for the West and Central African countries and its harmonization with the Abidjan Convention. |

- WACAF/6 Preparation of a manual on training, research and control of coastal erosion as applied to West and Central Africa.
- WACAF/7 Establishment of a regional documentation centre on coastal erosion in West and Central Africa.
- WACAF/8 Identification and establishment of specially protected areas in the West and Central African region.
- WACAF/9 Marine mammals: Determination of the distribution and status of the West and Central African manatee.

Furthermore, the meetings, in accepting the offer of the Ivory Coast to host the RCU in Abidjan, "requested that the RCU should be established without delay, using a gradual approach, taking advantage of the offer made by the Government of the Ivory Coast and using the resources of the Trust Fund once the requirements of WACAF/6 have been satisfied."

The meetings also adopted:

- The rules of procedure for meetings and conferences of Contracting Parties and the terms of reference of the Steering Committee;
- The financial rules of the Contracting Parties.

The Executive Director of UNEP, in consultation with the Chairman of the Steering Committee, convened the Fifth Meeting of the Steering Committee in Nairobi, UNEP Headquarter, from 16 to 18 May 1988 [UNEP(OCA)/WACAF IG.1/5]. The main conclusions, recommendations and decisions taken by the meeting are the following:

(a) Decision to endorse the proposal of the Executive Director consisting of:

- no pledges to the Trust Fund for the biennium 1988-1989;
- pledges of contributions to the Trust Fund for 1987 to be cancelled, with the understanding that contributions already received for that year will be credited against the contributions due for previous years; and
- remaining outstanding contributions to be paid in three equal instalments, on or before 1 September 1988, 1 March 1989 and 31 December 1989;

(b) Approval of the workplan and budget for the 1988-1989 biennium.

The Fifth Meeting of the Steering Committee also requested the secretariat to prepare an in-depth evaluation of the past achievements, shortcomings, experiences and encountered difficulties of the Action Plan [UNEP(OCA)/WACAF IG.1/5, annex VII, paragraph (h)] and a proposal based on that evaluation for a 5-6 year programme focused on objectives of the Action Plan achievable in that timetable and with the resources which may be available.

Support to activities approved by the first meeting of the Contracting Parties has been provided for the :

- Development of national environmental legislation for West and Central African countries and its harmonization with the Abidjan Convention - WACAF/5 - Reports on the state of national legislation relevant to the protection of the marine environment have been prepared for Gabon and Ghana, with the assistance of FAO and IMO. The total cost of the project was US\$ 40,000 to the Environment Fund of UNEP (in 1977).

- Preparation of a manual on training, research and control of coastal erosion as applied to West and Central Africa - WACAF/6. Such a manual has been prepared under the responsibility of Unesco. The total cost of the project was US\$ 20,000 to the Environment Fund of UNEP (in 1977).

As contribution to the Action Plan, a directory of marine research centres in Africa has been published with the support of the Environment Fund of UNEP.

The general support of UNEP to the development and implementation of the Action Plan for the West and Central African Region may be reviewed and assessed on the basis of the results during its two major periods. The preparatory period lasted almost four years. During this period, UNEP was able to launch, with the support of UN bodies, a number of technical studies and scientific surveys which served as a basis for the identification of the major common environmental problems of the region. Governments of the WACAF Region were constantly associated with this process through their designated scientific and legal experts who regularly advised the UNEP secretariat on the development of the regional environmental co-operation programme which reflect the needs and priorities of the Region.

After the adoption of the Action Plan, the Convention and Protocol by the Governments of the Region in March 1981, UNEP continued to serve as the secretariat of the Action Plan and its co-ordination. UNEP also continued to be the major source for funding for the Action Plan activities during this period. It is quite obvious that without the UNEP institutional and financial support the WACAF Regional programme would have collapsed.

The Steering Committee and Intergovernmental Meetings were very effective in advising the secretariat and in determining programme priorities, financial allocations and institutional mechanisms. However, their decisions and recommendations failed to draw entirely satisfactory responses at the national level.

The total cost of support provided to the Action Plan, through approved projects from 1976 to end 1988 (Environment Fund, Trust Fund and counterpart contributions) is estimated at US\$ 4,457,946. The approximate breakdown of this cost is:

a) Support to specific activities	2,704,682 (61%)
b) Staff Support	480,000 (11%)
c) Meetings	250,000 (6%)
d) Miscellaneous (consultants, communications, staff travel, document reproduction)	1,023,264 (22%)

Several other UNEP projects have incorporated WACAF components with a total cost of US\$ 920,525 (included in the above figures). See tables 1(a) and 1(b) for details.

References : 7, 8, 9, 10, 11, 12, 13, 14, 18, 20, 24, 25, 30, 31, 36, 37, 39, 40, 41.

WACAF/PREP.2

PREPARATORY WORK FOR THE PROTECTION OF THE MARINE ENVIRONMENT  
IN THE GULF OF GUINEA AND ADJACENT COASTAL AREAS (FAO) -  
FP/0503-77-02(1314)

This project was undertaken as a follow-up to the Task Force Meeting of Legal Instruments for Marine Regions convened by UNEP in Nairobi, 1-5 November 1976, where it was agreed that a number of studies be undertaken in order to provide Governments with the necessary information on possible alternative schemes for legal measures to protect the marine environment of the region. Accordingly, UNEP invited FAO to undertake the following studies:

- (i) Survey and analysis of national legislations of the States of the region relevant to the protection of the marine environment from pollution;
- (ii) Participation of the States of the region in international and regional agreements relevant to the protection of the marine environment from pollution;
- (iii) Study of alternatives for regional legal action and complementary activities;
- (iv) Scientific, Technical and Background Paper on a comprehensive assessment of the problems to be resolved.

The total cost of the project was US\$ 75,810.51 (UNEP US\$ 42,990.51 and counterpart contribution US\$ 32,820.00)

References: 1, 4.

WACAF/PREP.3

AN INTERNATIONAL WORKSHOP ON MARINE POLLUTION IN THE GULF OF GUINEA  
(IOC/FAO/WHO) - FP/0503-77-04(1354)

This workshop, held in Abidjan, 2-9 May 1978, brought together 31 experts from seventeen West and Central African States. On the basis of background material on the state of marine pollution in the Gulf of Guinea region, the workshop:

- reviewed the marine pollution problems in the region;
- identified priority pollution research and monitoring projects which would be executed in the region and developed outlines for those projects;
- made a preliminary evaluation of the needs of the region for technical assistance and training of scientists and technicians to enable the countries of the region to participate as fully and effectively as possible in the baseline studies to be undertaken.

The report of the workshop was circulated to Governments of the West African Region as well as to the Meeting of Experts to review the draft Action Plan for the West African Region, Libreville, 5-9 November 1979. This report provided an important basis for the formulation of the environmental assessment component of the Action Plan.

The total cost of the project was US\$ 60,768.24 (UNEP US\$ 39,268.24 and counterpart contribution US\$ 21,500.00)

Reference: 2.

WACAF/PREP.4

IMO/UNEP INTERNATIONAL WORKSHOP ON THE PREVENTION, ABATEMENT  
AND COMBATING OF POLLUTION FROM SHIPS IN THE GULF OF GUINEA  
AND ADJACENT COASTAL AREAS (IMO) - FP/0503-77-05(1367)

This was a training workshop which took place in Douala, Cameroon, 12-17 December 1977 and was attended by 28 participants from 10 West and Central African States. Participants were introduced to procedures for the identification of pollution problems caused by ships in their own countries so that they be instrumental in formulating national programmes required to:

(a) Implement the requirements of relevant international Conventions for the prevention of pollution from ships;

(b) Recommend the necessary institutional and administrative arrangements which will ensure that contingency plans and other precautions, as appropriate, are taken to combat pollution resulting from maritime emergencies.

More specifically, the workshop covered the following:

1. Control of pollution from ships:

- (i) Technical problems;
- (ii) Financial implications;
- (iii) Legislative implications (i.e. national regulations, etc.)

2. Contingency arrangements in case of a massive oil spillage:

- (i) Methods of dealing with oil spillages;
- (ii) Stocks of equipment and materials;
- (iii) Co-operative arrangements;
- (iv) Training.

3. Legal aspects of pollution damage:

- (i) Status of relevant IMCO Conventions, namely, 1969 Civil Liability Convention, 1971 Fund Convention, International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties, 1969, and Protocol relating to Intervention on the High Seas in cases of Marine Pollution by Substances other than Oil, 1973;
- (ii) Status of voluntary compensation agreements by ship owners and oil industry, namely TOVALOP and CRISTAL;
- (iii) Procedures for settlement of compensation for pollution damage.

4. Prevention of Pollution by Dumping:

- (i) Status of London Dumping Convention;
- (ii) Practical implications.

The total cost of the project was US\$ 30,393.83 (UNEP US\$ 18,943.83 and counterpart contribution US\$ 11,450.00).

Reference: 5.

WACAF/PREP.5

PREPARATION OF STUDIES ON COASTAL DEVELOPMENT AND MANAGEMENT  
IN WEST AFRICA (UN-DIESA) - FP/0503-79-16(2118)

Within the framework of the preparatory process for the regional action plan, the studies undertaken under this project were designed to:

- (i) provide participating States with basic information on coastal and marine resources management, including management of energy resources;
- (ii) assist Governments in determining the potential of ocean resources and the regional requirements for co-operation to develop them, and in managing the impact of offshore petroleum and gas development on coastal areas.

The project produced two reports. The first is a general paper on resource utilization and environmental management in West Africa. On the basis of existing information and experience the report examines the following:

- current resource utilization levels in the region;
- observed and inferred negative impacts on natural ecosystems in the region;
- observed and inferred negative interactions with other resource utilization schemes;
- projected levels of coastal and marine resource utilization, taking into account the needs of land-locked countries in the region;
- feasibility of harmonizing resource utilization and environmental protection within the region;
- regional potential for coastal area management and development.

The second paper is a state of the art report covering the coastal impact of offshore petroleum development and the regional potential for alternate ocean energy development.

The outputs of the project were useful in identifying existing and potential demands on the coastal resources of the States involved in the project, as well as activities to be undertaken to manage those resources. Activities identified were proposed for inclusion in the regional programme for the protection and development of the marine and coastal environment of West and Central Africa.

The total cost of the project was US\$ 30,205.00 (UNEP US\$ 22,205.00 and counterpart contribution US\$ 8,000.00).

References: 21, 26, 27.

WACAF/PREP.6

SURVEY OF OIL POLLUTION PROBLEMS OF THE WEST AFRICAN REGION WITH  
PARTICULAR EMPHASIS ON POLLUTION FROM SHIPPING ACTIVITIES (IMO)  
FP/0503-79-17 (2112)

This project was undertaken as a follow-up to the International Workshop on Marine Pollution in the Gulf of Guinea and Adjacent Areas, Abidjan, 2-9 May 1978 (FP/0503-77-04) which identified petroleum hydrocarbons (mainly from maritime transport) as a major source of marine pollution in the region. The report of the Workshop notes that:

"Pollution by petroleum hydrocarbons is increasing in the coastal waters and on the beaches along the whole coast of the Gulf of Guinea and adjacent areas. Effects observed locally indicate that some damage is being done to the coastal ecosystems and fisheries resources. The origin of this pollution is primarily the heavy maritime transport of crude oil, and to a lesser extent the local exploration, exploitation and refinement of petroleum. The presently available information on the extent of this type of pollution is very fragmentary and inadequate. Therefore, a continuous surveillance of the trends in the pollution of beaches and coastal waters of the Gulf of Guinea and of the adjacent areas is recommended."

Accordingly, the survey undertaken under this project provided an initial assessment of sources and quantity of oil pollution in the region and made proposals for concrete activities to be undertaken by the Governments of the region to control the problem. In terms of maritime transport, the survey identified existing regulations for controlling pollution from ships as well as port-generated pollution and pollution from off-shore platforms and practical means for enforcing the regulations both on a national and regional basis.

The total cost of the project was US\$ 77,402 (cost to UNEP US\$ 60,902, counterpart contribution US\$ 16,500).

Reference: 17.

WACAF/PREP.7

SURVEY OF MARINE POLLUTANTS FROM INDUSTRIAL SOURCES IN THE  
WEST AFRICAN REGION (UNIDO)  
FP/0503-79-18

Under this project, the United Nations Industrial Development Organization (UNIDO) co-operated with UNEP in carrying out a survey of marine pollutants from industrial sources in the West African region. The survey was initiated as a result of a recommendation of the international scientific workshop on marine pollution in the Gulf of Guinea and adjacent areas, Abidjan, 2-9 May 1978, and its implementation was agreed to by the meeting of experts to review the draft action plan for the West African region, Libreville, 5-9 November 1979. In October 1979, UNEP sent a letter to all Governments of the region informing them that the project was to be implemented. Activities under the project began in early 1980.

The survey is based on information collected by field missions to the States of the West African region. The objective of the co-operative UNIDO/UNEP project is to provide the Governments of the West African region with information on the type and quantity of pollutants from major land-based industrial sources entering the marine environment through direct coastal



discharges or indirectly through rivers, as well as on the present status of industrial waste management (treatment and disposal) practices. It is intended that the results of the survey should assist Governments in identifying priority regional activities to be developed under the action plan, including practical waste management activities.

The total cost of the project was US\$ 168,133 (cost to UNEP US\$ 135,633, counterpart contribution US\$ 32,500).

Reference: 15.

#### WACAF/PRP.8

#### RIVER INPUTS TO THE WEST AFRICAN REGION (Unesco) FP/0503-79-20 (2143)

Under this project Unesco agreed to co-operate with UNEP in carrying out a survey of pollutants discharged into the West African region by rivers. The survey was initiated as a result of the recommendations of the meeting of experts to review the draft action plan, Libreville, 5-9 November 1979. In February 1980, UNEP sent a letter to all Governments informing them that the project was to be implemented. Operational activities began under the project in mid-1980.

The survey was prepared on the basis of information collected by field missions to the West African States. The objectives of the project are:

- (a) to assess the present knowledge of water and sediment discharged by rivers into the marine environment of West Africa;
- (b) to assess the nature and quantity of chemical compounds that are of concern to human health and/or to the environment entering the West African marine environment through rivers;
- (c) to make recommendations concerning harmonized methods of analysis of dissolved and particulate pollutants in rivers and to assist in developing a basis for water quality control measures in the coastal zones; and
- (d) to identify institutions, laboratories and individual scientists actively involved in river studies relevant to the survey.

After the first draft of the survey was prepared by Unesco, a meeting of experts was convened in Dakar from 16-18 December 1980 to review the findings of the survey and to assist the secretariat in formulating recommendations on water quality monitoring. The final text of the survey was circulated to Governments in 1982.

The total cost of the project was US\$ 69,874 (total cost to UNEP US\$ 54,874, counterpart contribution US\$ 15,000).

Reference: 16.

WACAF/REP.9

PREPARATION AND MANAGEMENT OF A REGIONAL WORKSHOP ON COASTAL AREA  
DEVELOPMENT AND MANAGEMENT IN WEST AFRICA (UN/DIESA)  
FP/0503-80-04

The main purpose of the project was to provide training in marine and coastal resources management and development, an activity which has high priority in the framework of the Action Plan for the West and Central African region. It was intended to enable decision-makers to appreciate more fully the integrated and comprehensive planning principles embodied in the Action Plan, highlighting problems of regional concern and those commonly faced by West and Central African coastal States.

The project required UN-DIESA, through the Ocean Economics and Technology Branch (OETB), to prepare and convene a regional seminar/workshop for participants from West and Central African States, utilizing consultants as well as UN system inputs for substantive and administrative support. UN Specialized agencies and in particular WHO, FAO, UNIDO and Unesco were expected to contribute to the project.

As part of the preparatory activities for the project, two documents, were prepared by consultants contracted by UN-DIESA.

- "Simple information system for coastal zone management"; and
- "A microcomputer information system for coastal zone management".

The two documents are basically descriptions of computer storing and retrieving systems for data relevant to coastal area management.

The seminar/workshop was never organized due to the difficulties encountered by UN-DIESA in identifying a host Government.

The WACAF Steering Committee was informed about this problem in July 1981. As a consequence, the Steering Committee took a decision which should assist in avoiding similar difficulties in the future (See UNEP/WG.61/5, paragraph 19).

The environmentally sound management of coastal areas resources is one of the most important elements of Regional Seas activities and objectives. Although this project could not achieve all its objectives due to logistical difficulties, experience gained in its preparatory phase will be useful in the development of similar projects in other regions. In particular, as the background documents prepared in its framework are of theoretical nature and conceived as flexible management tools, they may be of interest to decision makers and coastal area managers in all the regions covered by Regional Seas Programmes.

With regard to the WACAF region, experience gained through this project will be valuable for the implementation of project WACAF/3 "Control of coastal erosion in West and Central Africa".

The total cost of the project was initially fixed at US\$ 242,253 (cost to UNEP US\$ 194,253, counterpart contribution US\$ 48,000). However, as only some of the preparatory activities were carried out the cost to UNEP came to US\$ 22,550.

WACAF/1

INSTITUTION AND CO-ORDINATION OF NATIONAL CONTINGENCY PLANS  
(IMO/UNIDO) FP/5102-82-11 (2366)

The project, which received a high priority from the Governments, dealt both with contingency planning for marine pollution by oil emergencies as well as emergencies associated with industrial installations. The project generated a number of technical reports and draft national contingency plans and served as a basis for the organization of two training workshops.

The technical reports relevant to emergencies associated with industrial installations have been published in the UNEP Regional Seas Reports and Studies No. 54. Likewise, a training workshop in contingency planning for industrial emergencies in the West and Central African region was organized in Dakar, 20-24 February 1984. It was attended by twenty experts from fifteen West and Central African States. The report of the workshop was published in March 1984 (UNEP/IG.50/INF.4).

As far as marine environment oil pollution emergencies are concerned, draft national contingency plans have been developed for nine countries: Benin, Cameroun, Congo, Gabon, Ghana, Guinea, Ivory Coast, Senegal and Sierra Leone.

- A mission report on arrangements for combating marine oil pollution in the West African sub-region (Nigeria, Cameroun, Equatorial Guinea, Gabon, Sao Tome and Principe) has been prepared.
- A workshop on contingency planning for marine pollution emergencies was held in Abidjan from 24 to 28 June 1985. The workshop was attended by thirty-three experts from sixteen States of the region. The workshop reviewed the state of the national contingency plans of the participating countries and adopted recommendations regarding future activities.

The preparation of a sub-regional contingency plan for zone IV envisaged according to short-term objectives of the project was not fully completed by the third Steering Committee meeting and the extraordinary intergovernmental review meeting of the WACAF action plan (Lagos, 30 April - 4 May 1984).

"In view of the difficulties raised by the elaboration of the sub-regional contingency plan envisaged in project WACAF/1, it was suggested that, without extra cost for the project, the funds earmarked for that activity should be used for (a) formulation of national contingency plans and (b) a meeting of Government experts in 1985 in order to consider the experience gained by those plans and the future development of project WACAF/1". The workshop is mentioned above.

With the exception of the elaboration of the sub-regional contingency plan, most of the objectives of the project in terms of assistance to countries to prepare draft national contingency plans and training of national experts have been achieved.

The total cost of the project in terms of its outputs remained very reasonable: US\$ 273,102 (cost to UNEP US\$ 210,602, counterpart contributions US\$ 62,500).

References: 22, 32, 38.

WACAF/2

MONITORING OF POLLUTION IN THE MARINE ENVIRONMENT OF THE WEST  
AND CENTRAL AFRICAN REGION (FAO/IOC/WHO/IAEA)  
FP/0503-82-20(2365)

The project, initiated in 1982, under the technical co-ordination of the Food and Agriculture Organization (FAO) of the United Nations and implemented in collaboration with the Intergovernmental Oceanographic Commission (IOC), World Health Organization (WHO), and the International Atomic Energy Agency (IAEA), consists of the following four components:

- WACAF/2-A: Analysis of metals, chlorinated hydrocarbons and petroleum components in marine biota (co-ordinated by FAO)
- WACAF/2-B: Intercalibration exercise for sampling and analytical techniques (co-ordinated by IAEA in co-operation with FAO)
- WACAF/2-C: Observation of oil slicks and tar on beaches, sampling and analysis of floating tar balls and basic oceanographic observations (co-ordinated by IOC)
- WACAF/2-D: Monitoring of the microbiological quality of recreational waters and seafood (co-ordinated by WHO)

The project was conceived to generate data to provide the basis for statements about the marine environment of the region, and to give coastal States an awareness of, and a platform for legislation against, marine pollution. It was also the intention to assist national research centres and laboratories to develop their capabilities to participate in the programme as a whole, while providing information on the pathways and trends in pollution of the marine environment in the region.

In order to ensure the implementation of the different components of this project:

(a) A network of national research and monitoring centres was established. At present 23 national institutions or laboratories in 10 States of the region participate in the network (annex IV);

(b) Equipment, expendable supplies and materials worth US\$ 490,639 were provided for the members of the network since the project was initiated (annex VI);

(c) Training in methodologies relevant to analysis of metals and chlorinated hydrocarbons as well as in the use of equipment provided to the members of the network was organized by FAO for 18 scientists and technicians from 17 research and monitoring centres. A training workshop on observation of oil slicks and tarballs on beaches and on basic oceanographic measurements was organized by IOC (Lagos, 22-30 November 1987) for 18 participants from 11 research and monitoring centres. Another training workshop on the microbiological monitoring of coastal waters and seafood was organized in Accra (20-22 June 1988) by the WHO for 8 participants from 7 research and monitoring laboratories. The list of trainees is reflected in annex V.

(d) Sixty-nine individual visits of experts were organized to the centres participating in the network and to the national focal points for the Action Plan. The purpose of these visits was to identify potential participants in the network and to support the members of the network with technical advice;

(e) Reference materials for analysis of organochlorines and trace metals in fish were prepared, tested and distributed by IAEA to all centres participating in WACAF/2-B component of the project. Two intercalibration exercises were carried out by IAEA on the basis of these reference materials. The results received by IAEA from these exercises, although limited in number, were within the acceptable order of magnitude, and showed a fairly good and encouraging laboratory performance;

(f) The equipment maintenance engineer of IAEA visited, during the period 27 October - 12 November 1987, seven centres participating in WACAF/2-A and B components of the project to service and repair the analytical equipment used by these centres. Another service mission was undertaken from 16 July to 13 August 1988 to all eight laboratories in the region. This mission was combined with a "split-sample" exercise for data quality assurance;

(g) The first scientific workshop, bringing together participants in the project, was organized by IOC, in co-operation with FAO, WHO, IAEA and UNEP, in Dakar, 28 October - 1 November 1985 (IOC Workshop Report No. 41). The workshop, attended by 23 experts from 15 research and monitoring centres participating in the network, reviewed the results obtained by the project and examined the possible elements for a long-term regional programme for marine pollution monitoring and research in the WACAF region;

(h) The second workshop of participants in the project was organized by IOC, in co-operation with FAO, WHO, IAEA and UNEP, in Accra, 13-17 June 1988. The workshop, attended by 29 experts from 21 research laboratories participating in the network in 10 countries, discussed the scientific results obtained so far from the different components of WACAF/2 monitoring programme, critically reviewed the development and status of implementation of phase I of the project, and made concrete recommendations regarding the future development of the project in phase II;

(i) The participants of the second workshop noted that during the first phase of the project for most of the components of WACAF/2 the short-term objectives had been met. For component A, the scientific data indicate that marine pollution of biota in open ocean waters of the region is not alarming; the background levels of various pollutants are similar to other regions. For the second phase of the project it was felt that monitoring in the marine environment should continue to provide a sound data base on the state of pollution. Such monitoring, however, should now be focused on coastal waters, lagoons and estuaries where pollution effects were more likely to occur than in open waters. Data produced by monitoring would now have to be linked to information on sources of pollution, transport pathways and fate of pollutants and on biological effects of pollution. Ultimately the continued monitoring of pollution, combined with relevant research activities, would be expected to result in a better understanding of marine pollution problems in the region, the identification of pollutants of regional and local relevance, and estimation of pollution loads in coastal waters, and thus provide a valid tool for environmental management and become a basis for actions at national and regional level to prevent, control and abate marine pollution.

The total cost of the project in the period 1983-1988 was US\$ 565,885 to the Trust Fund and US \$614,939 to the Environment Fund of UNEP. The contribution of FAO, IOC, WHO and IAEA to the project in the same period is valued as US\$ 386,100.

In approving the workplan and budget for the biennium 1988-1989, the fifth meeting of the Steering Committee gave the highest priority to the continuation of the WACAF/2 project.

WACAF/3

CONTROL OF COASTAL EROSION IN WEST AND CENTRAL AFRICA  
(Unesco/UN-DIESA) - FP-5102-83-01

The project, initiated in 1982, under the technical co-ordination of the United Nations Educational, Cultural and Scientific Organization (Unesco) and implemented in collaboration with the United Nations Department of International Economic and Social Affairs (UN-DIESA) produced a number of technical reports relevant to coastal erosion in West and Central Africa, and provided individual and group training through workshops.

a) Collection of historical data available in Africa, Europe and North America, on coastal erosion in West and Central Africa:

A bibliography on coastal erosion and related processes was prepared and published in 1985 (UNEP/Unesco/UN-DIESA-1985: Bibliography on coastal erosion in West and Central Africa - UNEP. Regional Seas Directories and Bibliographies - Rome, FAO 92p). The Research Planning institute prepared for UN-DIESA, using the North American sources a bibliography on West and Central african coastal erosion (December 1984). This document has been used to prepare the above mentioned bibliography.

In addition, two big volumes on coastal erosion literature composed of photocopies of articles were prepared by UN-DIESA's consultants. These two volumes were received by OCA/PAC in July 1986 and were not published but they should be used in the future as a basis for a databank.

b) Field surveys of representative sites and training of national personnel at the request of the governments of the participating countries:

A number of fact finding missions and two training seminars one for French speaking participants (23 Sep-2 October 1984 - Lomé, Togo) and the other one for English speaking participants (4-11 Feb. 1985 Lagos, Nigeria) were organized. A workshop ending the phases of the project WACAF/3 has taken place from 11 to 18 March 1985 in Dakar, Senegal. (Report of the Unesco/UN-DIESA/UNEP Seminar-Workshop on control of coastal erosion in West and Central Africa in UNEP/IG.58/INF.5).

The following documents were prepared by the BRGM for the training seminar in Togo:

- "Les facteurs d'une érosion côtière naturelle moyens d'étude en mer" - Novembre 1984.
- "Eléments de dynamique sédimentaire littorale - Géomorphologie et hydrodynamique sédimentaire" - September 1984.
- "Eléments de dynamique sédimentaire littorale - Guide pour un programme de mesures" - September 1984.

c) Analysis of the data gathered which can be used by various authorities for coastal erosion control and improved management of the coastal areas: A report on coastal erosion at a regional level, based on several regional and country reports, as well as on the material collected by fact-finding missions (with the help of national organizations) was prepared and published in 1985. (Unesco/UN-DIESA/UNEP-1985: Coastal erosion in West and Central Africa, UNEP Regional Seas Reports and Studies No.67).

The following reports prepared by UN-DIESA's consultants have been used, among others, as contributions to the above mentioned final report:

Reports of M. Murday and B. Savitsky, Research Planning Institute (RPI), Colombia, USA :  
"Inventory of North American sources for maps and charts" December 1984.

"Inventory of North American sources for remote sensing" December 1984.

In addition, the BRGM prepared a country report: "Etude du littoral du Togo à l'est de Lomé à partir de l'analyse de l'évolution de profils de plage" November 1985. This report has been transmitted to the Togolese authorities.

The outputs of the project provided the West and Central African countries with a comprehensive scientific review of the coastal erosion problem as they face it in the region based on literature and field surveys as well as knowledge on ways and means of dealing with the problem and training of national experts.

The total cost of the project remained reasonable, in view of the data generated and number of people trained, as it came to US\$ 253,520 (cost to UNEP 167,895; counterpart contribution: Unesco: US\$ 30,500, UN-DIESA: US\$ 10,125, BRGM: US\$ 45,000).

References: 29, 33, 34.

C. ANALYSIS OF PROJECTS RELEVANT TO THE ACTION PLAN

<u>Envisaged by the Action Plan</u>		<u>Implemented</u>	
Paragraph	Activity	Activity	Comments
13.1	Survey of national capabilities and activities in the region, as they relate to marine pollution and coastal area development - Directories of institutions and bibliography - Survey of socio-economic activities	WACAF/Gen. WACAF/PREP.5	- A directory of marine research centres in Africa has been published - 1982 (Ref. 19) - A report on environmental management problems in resource utilization and survey of resources in West and Central African region was published in 1984 (Ref. 27)
13.2	Training of local scientists and technicians.	WACAF/1 WACAF/2	Continuing (see Annex V)
13.3	Assessment of the origin and magnitude of oil pollution in the region.	WACAF/PREP.6 7, WACAF/2	Two reports published 1982; workshops in 1985 and 1988 (Refs 17, 35, 42); continuing
13.4	Identification of the origin and magnitude of suspended and dissolved matter in rivers and riverine geomorphology as it affects coastline conditions.	WACAF/PREP.8	One report prepared 1982 (Ref. 16)
13.5	Identification of the origin and assessment of the magnitude of chemical residues from industry and agriculture.	WACAF/PREP.7	Survey and report 1982 (Ref. 15)
13.6	Identification of the origin and assessment of the magnitude of pollution from domestic wastes.	WACAF/2	Continuing
13.7	Cartographic presentation of the sources and concentration of various pollutants.		not implemented
13.8	Studies in coastal lagoon, estuaries, related inland waters and mangroves.	WACAF/8	not implemented (Unesco-Comar has organized activities on this topic)
18.1	Strengthening or expanding the relevant ongoing national, regional or internationally supported development projects which demonstrate sound environmental management practices.		not implemented



18.2	Regional seminar/workshop on coastal area development and management.		not implemented
18.3	Regional workshop on problems and control of coastal erosion.	WACAF/3	Refs 29, 33, 34
18.4	Regional seminar workshop on Environmental impact assessment (EIA) and cost benefit analysis.	WACAF/4	not implemented
18.5	Regional training course in environmental assessment and coastal pollution reduction and control.	WACAF/4	not implemented
18.6	Regional symposium on environmentally sound management of coastal lagoon, estuaries and mangrove ecosystems.	IUCN/UNEP Seminar	Seminar held 1987 (Ref. 43)
19.1	Seminars/workshops for officials on environmentally sound management in the development of coastal areas.	WACAF/PREP.9	Background paper prepared (Ref. 27); Workshop not held
19.2	Training of technical personnel in environmentally sound management practices.		One seminar in 1987 (Ref. 43)
19.3	Assistance to Governments in the establishment and strengthening of national environmental institutional mechanisms.	WACAF/5	not implemented
19.4	Formulation of guidelines for management of industrial, agricultural and domestic wastes.		not implemented
19.5	Development of contingency plans for dealing with pollution emergencies.	WACAF/1	National and subregional assistance leading to workshop in 1985 (Refs. 22, 32, 38)
19.6	Co-operation for the reduction of pollution in ports.	WACAF/1	As part of contingency planning (Refs 22, 32, 38)
19.7	Development of principles and guidelines for water quality in coastal aquaculture.		not implemented
19.8	Specially protected aquatic and terrestrial areas.	WACAF/8	not implemented
19.10	Measures to control pollution by hydrocarbons and inspection of tankers prior to deballasting.		not implemented

21.1	Compilation of national laws relevant to protection of the marine environment.	WACAF/5	Begun in two countries (Refs 40, 41)
21.2	Technical assistance to Governments for drafting appropriate national legislation relevant to the regional marine environment protection agreements.	WACAF/5	Begun in two countries (Refs 40, 41)
25.	Establishment of a Regional Co-ordinating Unit.	WACAF/Gen.	Postponed
26.	Establishment of a financing mechanism.	WACAF/Gen.	Established
27.	Training and technical assistance.		Continuing
28.	Public environmental awareness.		not implemented
29.	Environmental education.		not implemented

#### D. REFERENCES

The following list gives the principal reports and publications that resulted from the different projects leading to the adoption of, or undertaken in the framework of, the Action Plan or from activities stimulated by the Action Plan.

1. The Gulf of Guinea: Pollution, the need for control and possible mechanisms thereof. UNEP/WG.27/INF.3.
2. Report of the IOC/FAO/WHO/UNEP International Workshop on marine pollution in the Gulf of Guinea and adjacent areas. Abidjan, 2-9 May 1978. UNEP/WG.27/INF.4.
3. Report of the Workshop on Causes and possible solutions to coastal erosion in Benin and Togo. Lomé, 29 January - 9 February 1979. UNEP/WG.27/INF.6.
4. Legal aspects of marine environment protection in the Gulf of Guinea and adjacent areas. UNEP/WG.27/INF.7.
5. Regional co-operation in combating pollution by oil and other harmful substances in cases of emergency. UNEP/WG.27/INF.8.
6. Extract from the Final Report of the Workshop on Coastal Ecosystems with Special Reference to Coastal Lagoons and Estuaries, on the West Coast of Africa. Dakar, 11-15 June 1979. UNEP/WG.27/INF.11.
7. Report of the meeting of experts to review the draft action plan for the West African region. Libreville, 5-9 November 1979. UNEP/WG.27/4.
8. Report of the meeting of experts to review the draft action plan and meeting of legal experts on a Regional Convention for the West African region. Lomé, Togo, 24-28 November 1980. UNEP/WG.45/5.
9. Report of the Second meeting of legal experts on a Regional Convention for the West African region. Abidjan, Ivory Coast, 13-14 March 1981. UNEP/WG.55/5.
10. Report of the First meeting of the Steering Committee for the Marine Environment of West and Central Africa. Abidjan, 20-22 July 1981. UNEP/WG.61/5. 31 July 1981. (6 pages and 4 annexes)
11. Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (including Protocol concerning co-operation in Combating Pollution in Cases of Emergency). UNEP Regional Seas Conventions and Protocols. UNEP 1981. (23 pages)
12. Report of the meeting of the national authorities for the Action Plan for the West and Central African region. Geneva, 19-21 April. UNEP/WG.71/4. 21 April 1982. (3 pages and 4 annexes)
13. Report of the Second meeting of the Steering Committee for the Marine Environment of West and Central Africa. Geneva, 22-23 April 1982. UNEP/WG.72/3. 23 April 1982. (4 pages, 3 annexes and 1 appendix)
14. UNEP: Achievements and planned development of UNEP's Regional Seas Programme and comparable programmes sponsored by other bodies. UNEP Regional Seas Reports and Studies No. 1. UNEP 1982. (64 pages).

15. UNIDO/UNEP: Survey of marine pollutants from industrial sources in the West and Central African region. UNEP Regional Seas Reports and Studies No. 2. UNEP 1982. (120 pages)
16. Unesco/UNEP: River inputs to the West and Central African marine environment. UNEP Regional Seas Reports and studies No. 3. UNEP 1982. (63 pages)
17. IMCO/UNEP: The status of oil pollution and oil pollution control in the West and Central African region. UNEP Regional Seas Reports and Studies No. 4. UNEP 1982. (187 pages)
18. UNEP: Guidelines and principles for the preparation and implementation of comprehensive action plans for the protection and development of marine and coastal areas of regional seas. UNEP Regional Seas Reports and Studies No. 15. UNEP 1982. (11 pages)
19. UNEP/UN-ECA/Unesco: Directory of Marine Research Centres in Africa. UNEP Regional Seas Directories and Bibliographies. Rome, FAO 1982. (254 pages)
20. UNEP: Action Plan for the protection and development of the marine environment and coastal areas of the West and Central African region. UNEP Regional Seas Reports and Studies No. 27. UNEP 1983. (13 pages)
21. UN-DIESA/UNEP: Ocean energy potential of the West and Central African region. UNEP Regional Seas Reports and Studies No. 30. UNEP 1983. (55 pages)
22. UNIDO: Contingency planning for industrial emergencies for the West and Central African Region. UNIDO/IS.425, December 1983 (204 pages).
23. UNIDO/UNDRO/WHO/UNEP: Report of the workshop on the institution and co-ordination of national contingency plans for emergencies associated with industrial installations in the West and Central African Region, Dakar, 20-24 February 1984. UNEP/IG.50/INF.4.
24. Report of the Third meeting of the Steering Committee for the Marine Environment of West and Central Africa. Lagos, 30 April - 2 May 1984. UNEP/IG.50/5. 14 May 1984.
25. Report of the Extraordinary Intergovernmental Review Meeting of the Action Plan for the West and Central African region. Lagos, 2-4 May 1984. UNEP/IG.51/3. 14 May 1984. (3 pages and 7 annexes)
26. UN-DIESA/UNEP: Onshore impact of offshore oil and natural gas development in the West and Central African Region. UNEP Regional Seas Reports and Studies No. 33. UNEP 1984. (62 pages)
27. UN-DIESA/UNEP: Environmental management problems in resource utilization and survey of resources in the West and Central African region. UNEP Regional Seas Reports and Studies No. 37. UNEP 1984. (80 pages)
28. UNEP: The marine and coastal environment of the West and Central African region and its state of pollution. UNEP Regional Seas Reports and Studies No. 46. UNEP 1984. (85 pages)
29. Unesco/UN-DIESA/UNEP Report of the Workshop on coastal erosion control in West and Central Africa - Dakar, 11-18 March 1985 - UNEP/IG.58/INF.5.
30. Report of the Fourth meeting of the Steering Committee for the Marine Environment of West and Central Africa. Abidjan, 15-17 April 1985. UNEP/IG.58/5. 24 April 1985. (6 pages and 4 annexes)

31. Report of the First meeting of the Contracting Parties to the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African region. Abidjan, 18-20 April 1985. UNEP/IG.59/6. 26 April 1985. (7 pages and 9 annexes).
32. UNIDO/UNEP: Contingency planning for emergencies associated with industrial installations in the West and Central African region. UNEP Regional Seas Reports and Studies No. 54. UNEP 1985. (143 pages)
33. UNEP/Unesco/UN: Coastal erosion in West and Central Africa. UNEP Regional Seas Reports and Studies No. 67. UNEP 1985. (237 pages)
34. UNEP/Unesco/UN-DIESA: Bibliography on Coastal Erosion in West and Central Africa. UNEP Regional Seas Directories and Bibliographies. Rome, FAO 1985. (92 pages)
35. FAO/IOC/WHO/IAEA/UNEP: Report of the workshop on monitoring of pollution in the marine environment of the West and Central African region - Dakar, 28 October - 1 November 1985 - IOC Workshop Report No. 41.
36. Rules of Procedure for Meetings and Conferences of the Contracting Parties to the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African region. Terms of Reference of the Steering Committee. Terms of Reference for the Management of the Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African region. UNEP 1988. (51 pages)
37. Report of the Fifth meeting of the Steering Committee for the Marine Environment of West and Central Africa. Nairobi, 16-18 May 1988. UNEP(OCA)/WACAF IG.1/5. 23 May 1988. (7 pages and 9 annexes)
38. Report of the IMO/UNEP Workshop on contingency planning for marine pollution emergencies. Abidjan, 24-28 June 1985. [UNEP(OCA)/WACAF IG.1/INF.3/2]
39. Manual on methodology for inventory and control of coastal erosion in the West and Central African region [UNEP(OCA)/WACAF IG.2/INF.6], 1988
40. Development of national environmental legislation for the WACAF countries and its harmonization with the Abidjan Convention - Ghana country review [UNEP(OCA)/WACAF IG.2/INF.7]
41. Elaboration de législation environnementale nationale pour les Etats de l'Afrique de l'Ouest et du Centre et son harmonisation avec la Convention d'Abidjan - Rapport sur l'état de la législation gabonaise relative à la protection du milieu marin (disponible uniquement en français) [UNEP(OCA)/WACAF IG.2/INF.8]
42. Report of the second workshop of participants in the joint FAO/IOC/WHO/IAEA/UNEP project on monitoring of pollution in the marine environment of the West and Central African Region - WACAF/2, first phase - (Accra, 13-17 June 1988) (IOC Workshop Report) [UNEP(OCA)/WACAF IG.2/INF.11]
43. IUCN International seminar on coastal wetlands conservation and coastal zone planning, their contribution to sustainable development in West Africa (Mbour, Senegal, 9-13 November 1987)
44. WHO Training workshop on the practical aspects of microbiological monitoring of coastal waters and seafood (Accra, Ghana, 20-22 June 1988) [UNEP(OCA)/WACAF IG.2/INF.12].

Annex II

National Focal Points for the Action Plan

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Son Excellence  
Le Ministre des affaires étrangères  
Ministère des affaires étrangères  
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SIERRA LEONE	His Excellency The Minister for External Affairs Ministry of External Affairs FREETOWN Sierra Leone
TOGO	Le Directeur des affaires maritimes Direction des affaires maritimes Ministère du commerce et des transports LOME République Togolaise
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Annex III

Meetings convened in the framework of the Action Plan  
for the West and Central African Region

Meeting	No. of participants	Activity code
- Workshop on prevention, abatement and combating of pollution from ships in the Gulf of Guinea and adjacent coastal areas, Douala, Cameroon, 12-17 December 1977  IMCO/UNEP	28	WACAF/PREP.4
- International Workshop on Marine Pollution in the Gulf of Guinea and adjacent coastal areas, Abidjan, Côte d'Ivoire, 2-9 May 1978  IOC/FAO/WHO/UNEP REPORT: IOC Workshop Report No. 14	37	WACAF/PREP.3
- UN Interagency/UNDP Resident Representatives meeting on the development of an action plan for the West African Region, Libreville, Gabon, 10-11 May 1978  UNEP	30	WACAF/General
- Workshop on causes of, and possible solutions to the coastal erosion problems in Togo and Benin, Lomé, Togo, 29 January - 9 February 1979  UN-DIESA/Unesco Report: UNEP/WG.27/INF.8	42	
- Workshop on coastal ecosystems coastal lagoons and estuaries on the West Coast of Africa, Dakar, Senegal, 11-15 June 1979  Unesco Report: Unesco Reports in Marine Science 17 Extract from report : UNEP/WG.27/INF.11	38	
- UNEP Meeting of Experts to review the draft Action Plan for the West African Region, Libreville, Gabon, 5-9 November 1979  Report: UNEP/WG.27/4	45	WACAF/General
- UNEP Meeting of Experts to review the draft action plan and meeting of Legal Experts on a regional Convention for the West African Region, Lomé, Togo, 24-28 November 1980  Report: UNEP/WG.45/5	35	WACAF/General

Meeting	No. of participants	Activity code
<ul style="list-style-type: none"> <li>- Expert meeting on River Discharge of Pollutants to West African Seas, Dakar, Senegal, 16-18 December 1980</li> </ul> <p>Unesco Report: UNEP/IG.22/INF.5</p>	16	WACAF/PREP.8
<ul style="list-style-type: none"> <li>- Informal Consultations on the Institutional and Financial Arrangements related to the Action Plan for the West African Region, Geneva, 21-23 January 1981</li> </ul> <p>UNEP</p>	12	WACAF/General
<ul style="list-style-type: none"> <li>- Second Meeting of Legal Experts on a Regional Convention for the West African Region, Abidjan, Côte d'Ivoire, 13-14 March 1981</li> </ul> <p>Report: UNEP/WG.55/3</p>	43	WACAF/General
<ul style="list-style-type: none"> <li>- Conference of Plenipotentiaries on Co-operation in the Protection and Development of the Marine Environment of the West African Region, Abidjan, Côte d'Ivoire, 16-23 March 1981</li> </ul> <p>Report: UNEP/IG.22/7</p>	70	WACAF/General
<ul style="list-style-type: none"> <li>- First Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Abidjan, Côte d'Ivoire, 20-22 July 1981</li> </ul> <p>Report: UNEP/WG.61/5</p>	17	WACAF/General
<ul style="list-style-type: none"> <li>- Meeting of National Authorities for the Action Plan for the West and Central African Region, Geneva, 19-21 April 1982</li> </ul> <p>Report: UNEP/WG.71/4</p>	24	WACAF/General
<ul style="list-style-type: none"> <li>- Second Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Geneva, 22-23 April 1982</li> </ul> <p>Report: UNEP/WG.72/3</p>	9	WACAF/General
<ul style="list-style-type: none"> <li>- Workshop on contingency planning for industrial emergencies in the West and Central African Region, Dakar, Senegal, 20-24 February 1984</li> </ul> <p>UNIDO/UNEP Report: UNEP/IG.50/INF.4</p>	34	WACAF/1

Meeting	No. of participants	Activity code
- Third Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Lagos, Nigeria, 30 April - 1 May 1984	26	WACAF/General
Report: UNEP/IG.50/5		
- Extraordinary Intergovernmental Review Meeting of the Action Plan for the West and Central African Region, Lagos, Nigeria, 2-4 May 1984	30	WACAF/General
Report: UNEP/IG.51/3		
- Training Seminar on control of coastal erosion in West and Central Africa, Lomé, Togo, 23 September - 2 October 1984	21	WACAF/3
Unesco/UN-DIESA/UNEP		
- Training Seminar on control of coastal erosion in West and Central Africa, Lagos, Nigeria, 4-11 February 1985	8	WACAF/3
Unesco/UN-DIESA/UNEP		
- Seminar/Workshop on coastal erosion Control in West and Central Africa, Dakar, Senegal, 11-18 March 1985	36	WACAF/3
Unesco/UN-DIESA/UNEP Report: UNEP/IG.58/INF.5		
- Fourth Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Abidjan, Côte d'Ivoire, 15-17 April 1985	34	WACAF/General
Report: UNEP/IG.58/5		
- Intergovernmental Review Meeting of the Action Plan for the West and Central African Region and first Meeting of the Contracting Parties to the Abidjan Convention, Abidjan, Côte d'Ivoire, 18-20 April 1985	35	WACAF/General
Report: UNEP/IG.59/6		
- Workshop on contingency planning for marine pollution emergencies, Abidjan, Côte d'Ivoire, 24-28 June 1985	33	WACAF/1
IMO, UNEP Recommendations: UNEP(OCA)/WACAF IG.1/INF.3		
- Meeting for the formulation of a regional pilot project for the control of coastal erosion in West and Central Africa, Accra, Ghana, 11-14 August 1986	22	
OAU, UNEP Report: UNEP(OCA)/WACAF IG.1/INF.4		

Meeting	No. of participants	Activity code
<ul style="list-style-type: none"> <li>- Interagency review meeting on WACAF/2 project, Rome, 20-21 October 1986</li> </ul> <p>FAO, WHO, IAEA, UNEP</p>		WACAF/2
<ul style="list-style-type: none"> <li>- First Scientific Workshop of Participants in WACAF/2 Project: Monitoring of Pollution in the Marine Environment of the West and Central African Region, Dakar, Senegal, 28 October - 1 November 1987</li> </ul> <p>FAO, IOC, WHO, IAEA, UNEP Report: IOC Workshop Report No. 41</p>	31	WACAF/2
<ul style="list-style-type: none"> <li>- Training in analysis of metals and chlorinated hydrocarbons</li> </ul> <p>FAO</p>	18	WACAF/2
<ul style="list-style-type: none"> <li>- International Seminar on Coastal Wetlands Conservation and Coastal zone planning, their contribution to sustainable development in West Africa, Mbour, Senegal, 9-13 November 1987</li> </ul> <p>Government of Senegal, IUCN, ORSTOM, UNEP, USNPS, USAID Report: UNEP(OCA)/WACAF IG.1/INF.5</p>	66	
<ul style="list-style-type: none"> <li>- Training workshop on observation of oil slicks and tarballs on beaches and on basic oceanographic measurements, Lagos, Nigeria, 22-30 November 1987</li> </ul> <p>IOC</p>	18	WACAF/2
<ul style="list-style-type: none"> <li>- Interagency meeting on WACAF/2, Paris, 16-17 April 1988</li> </ul> <p>UNEP/FAO/Unesco/WHO/IAEA</p>	9	WACAF/General
<ul style="list-style-type: none"> <li>- Fifth Meeting of the Steering Committee for the Marine Environment of West and Central Africa, Nairobi, Kenya, 16-18 May 1988</li> </ul> <p>Report: UNEP(OCA)/WACAF IG.1/5</p>	24	WACAF/General
<ul style="list-style-type: none"> <li>- Second Workshop of Participants in the Joint FAO/IOC/WHO/IAEA/UNEP project on Monitoring of Pollution in the Marine Environment of the West and Central African Region, (WACAF/2, First Phase) Accra, Ghana, 13-17 June 1988</li> </ul> <p>FAO/IOC/WHO/IAEA/UNEP Report: IOC Workshop Report UNEP(OCA)/WACAF IG.2/INF.11</p>	29	WACAF/2

Meeting	No. of participants	Activity code
- Interagency consultation on project WACAF/2: Monitoring of Pollution in the Marine Environment of the West and Central African Region, Accra, Ghana, 18-19 June 1988	5	WACAF/2
FAO/IOC/WHO/UNEP Report: Revision 10 to WACAF/2 project document		
- Training workshop on the microbiological monitoring of coastal waters and seafood, Accra, Ghana, 20-22 June 1988	8	WACAF/2
WHO Report: WHO/WACAF/2-0/CEH/88.1		

Annex IV

INTERNATIONAL AND NATIONAL INSTITUTIONS WHICH PARTICIPATED IN  
THE DEVELOPMENT AND IMPLEMENTATION OF THE ACTION PLAN

<u>A. International organizations:</u>	<u>Major activity code</u>
United Nations Department of International Economic and Social Affairs United Nations N.Y. 10017 New York United States of America	WACAF/3
United Nations Economic Commission for Africa P.O. Box 3001 Addis Ababa Ethiopia	Directory
Food and Agriculture Organization of the United Nations Via delle Terme di Caracalla 00100 Rome Italy	WACAF/2, 5
United Nations Educational, Scientific and Cultural Organization 7 Place de Fontenoy 75700 Paris France	WACAF/3, 6
United Nations Industrial Development Organization Vienna International Centre P.O. Box 300, A-1400 Vienna Austria	WACAF/1
Intergovernmental Oceanographic Commission Unesco 7 Place de Fontenoy 75700 Paris France	WACAF/2
World Health Organization 20 Avenue Appia 1211 Geneva 27 Switzerland	WACAF/2
International Maritime Organization 4 Albert Embankment London SE1 7RS United Kingdom	WACAF/1, 5
International Atomic Energy Agency International Laboratory of Marine Radioactivity 2 Avenue Prince Héréditaire Albert 98000 Monaco Principality of Monaco	WACAF/2

International Atomic Energy Agency  
Wagramerstrasse 5  
P.O. Box 100  
A-1400 Vienna  
Austria

WACAF/2

Organization of African Unity  
P.O. Box 3243  
Addis Ababa  
Ethiopia

WACAF/3

Office of the United Nations Disaster Relief  
Co-ordinator  
Palais des Nations  
CH-1211 Geneva  
Switzerland

WACAF/1

International Union for the Conservation  
of Nature and Natural Resources (IUCN)  
Avenue du Mont-Blanc  
1196 Gland  
Switzerland

WACAF/General

Office de la recherche scientifique  
et technique Outre-Mer (ORSTOM)  
24, rue Bayard  
75008 Paris  
France

WACAF/General

United States National Parks Society (USNPS)  
International Park Affairs Division  
National Park Service  
United States Department of the Interior  
P.O. Box 37127  
Washington D.C. 20013-7127  
USA

WACAF/General

United States Agency for International Development  
Washington, D.C. 20523  
U.S.A.

WACAF/General

Bureau de recherches géologiques  
et minières (BRGM)  
Département géologie marine et  
sédimentologie dynamique  
Antenne de Marseille  
Domaine de Luminy  
Route Léon-Lachamp  
13009 Marseille  
France

WACAF/3

Ghana

Institute of Aquatic Biology  
P. O. Box 38  
Achimota (components A, B and C)

WACAF/2

Department of Microbiology  
University of Ghana  
Accra  
in co-operation with Noguchi Memorial  
Institute for Medical Research  
(component D)

WACAF/2

Department of Zoology  
University of Cape Coast  
Cape Coast (component C)

WACAF/2

Nigeria

Chemistry Department  
University of Ibadan  
Ibadan (components A and B)

WACAF/2

Institute of Oceanography  
University of Calabar  
PMB 1115  
Calabar (component C)

WACAF/2

Chemical and Physical Oceanography Division  
Nigerian Institute for Oceanography  
and Marine Research  
PMB 12729  
Lagos  
Victoria Island (component C)

WACAF/2

Senegal

Laboratoire de chimie analytique et toxicologie  
Faculté de médecine et de pharmacie  
Université de Dakar  
Dakar (components A and B)

WACAF/2

Institut fondamental d'Afrique Noire  
Département de biologie marine  
Université de Dakar  
Dakar (component C)

WACAF/2

Division de prévention et contrôle  
de pollution et nuisance  
Direction de l'environnement  
Rue Carnot  
Dakar (component C)

WACAF/2

Laboratoire de microbiologie de l'Ecole  
nationale supérieure universitaire de  
technologie (ENSUT)  
Université de Dakar  
Dakar (component D)

WACAF/2



Sierra Leone

Institute of Marine Biology and Oceanography  
Fourah Bay College  
Private Mail Bag  
Freetown (components A and B)

WACAF/2

Department of Botany  
Fourah Bay College  
Private Mail Bag  
Freetown (component D)

WACAF/2

Togo

Zaire

Annex V

TRAINING PROVIDED THROUGH THE ACTION PLAN

A. INDIVIDUAL TRAINING

Name and country of origin	Duration	Place of training
F. Ba (Senegal)	7-11 November 1983	Barcelona, Spain
D. Kouame (Côte d'Ivoire)	7-11 November 1983	Barcelona, Spain
A. Accrombessi (Benin)	18 May - 18 June 1984	Siena, Italy
J. Ndene (Gambia)	18 June - 18 July 1984	Zug, Switzerland; Siena, Italy; and Monaco
C. Biney (Ghana)	21 June - 21 July 1984	Zug, Switzerland; Siena, Italy
A. Jusu (Sierra Leone)	August 1984	Local training
D. Faulkner (Sierra Leone)	9-30 September 1984	Glasgow, Scotland
M. Harris (Sierra Leone)	8 November - 1 December 1984	Zug, Switzerland; Siena, Italy
S. Metongo (Côte d'Ivoire)	8 November - 1 December 1984	Zug, Switzerland; Siena, Italy
L. Mbome (Cameroon)	8 November - 1 December 1984	Zug, Switzerland; Siena, Italy
C. Mbi (Cameroon)	8 November - 1 December 1984	Siena, Italy
M. Njie (Gambia)	9-25 November 1984	Siena, Italy
B. Niane (Senegal)	1-21 December 1984	Zug, Switzerland; Siena, Italy
Kone Seydou (Côte d'Ivoire)	8-18 December 1984	Siena, Italy
M. Njie (Gambia)	19 May - 22 August 1986	Sierra Leone
I. Sow (Senegal)	21 April - 1 May 1987	Brest France
P. Ndiaye (Senegal)	2-24 June 1987	Brest, France
O. Osibanjo (Nigeria)	3-28 June 1987	Monaco
S. Jallow (Gambia)	21 September - 14 October 1988	Siena, Italy

B. GROUP TRAINING

WACAF/PREP.4

Workshop on Prevention, Abatement and Combating of Pollution from Ships  
in the Gulf of Guinea and adjacent coastal areas  
Douala, Cameroon, 12-17 December 1977

L. Diboti (Cameroon)	W.D. Denis (Liberia)
A. Ndjigang Ndjiwa (Cameroon)	F.A.K. Olusunmade (Nigeria)
C. Foning (Cameroon)	A. Okoye Ike (Nigeria)
B. Evi Kalewou (Cameroon)	E.L. Alisiobi (Nigeria)
M. Mono Mboum (Cameroon)	K.K. Laniyan (Nigeria)
A. Mbama (Congo)	H.A. Akinlawon (Nigeria)
C. Damas (Gabon)	M. Ndao (Senegal)
G. Mathas (Gabon)	B. Deme Elhadji (Senegal)
J.B. Kofie (Ghana)	Ya Mutawale Mayimbwe (Zaire)
Y. Ofiri (Ghana)	E. Nginda (Zaire)
J. Tchies Attimbre (Côte d'Ivoire)	Mibenge (Zaire)
J. Not (Côte d'Ivoire)	Malundama (Zaire)
M. Levry (Côte d'Ivoire)	Katshuva (Zaire)
Abo Egnifinam (Côte d'Ivoire)	

WACAF/REP.3

International Workshop on Marine Pollution in the Gulf of Guinea and Adjacent Areas  
Abidjan, Côte d'Ivoire, 2-9 May 1978

E.J.B. Tutuwan (Cameroon)  
E. Mbemba (Congo)  
A. Moutsara (Congo)  
C. Colin (Côte d'Ivoire)  
G. Kakadié (Côte d'Ivoire)  
H. Rotschi (Côte d'Ivoire)  
A.E. Kpekata (Ghana)  
J.K. Debrah (Ghana)  
L. Lemasson (France)

M.D. Daou (Mauritania)  
T.M. Aluko (Nigeria)  
T. Orekoya (Nigeria)  
A. Trzosinska (Poland)  
W. Okera (Sierra Leone)  
J-P. Rebert (Senegal)  
K.D. Nenonene (Togo)  
P.G. Jeffery (United Kingdom)

WACAF/Gen.

Meeting of Experts to Review the Draft Action Plan for the West African Region  
Libreville, Gabon, 5-9 November 1979

O. Onono-Ondja'a (Cameroon)  
C. N'Gandjui (Cameroon)  
E. Mbemba (Congo)  
D. Leko (Congo)  
A.A. Angwibi (Côte d'Ivoire)  
S.G. Zabi (Côte d'Ivoire)  
K.F. Koffi (Côte d'Ivoire)  
J.-B. Moussavou (Gabon)  
B. Ondo-Nze (Gabon)  
A. Nzamba-Nzamba (Gabon)  
J.M. Ango-Eyene (Gabon)  
B. Ekomie (Gabon)  
J.D.D. Nze Angoue (Gabon)  
S. Ombegue (Gabon)  
J. Ondo-Menie (Gabon)  
F. Edou Zue (Gabon)  
B.W. Garbrah (Ghana)

J.K. Debrah (Ghana)  
S. Bah (Guinea)  
M. Mansour (Guinea)  
A.S. Delgado (Guinea-Bissau)  
C.M. Spencer (Guinea-Bissau)  
J. Thomas (Liberia)  
E.H. Shannon (Liberia)  
O. Lolomari (Nigeria)  
A.D. Diop (Senegal)  
S.B. Boissy (Senegal)  
E.T.A. Golley-Morgan (Sierra Leone)  
I.W.O. Findlay (Sierra Leone)  
K. Djelema (Togo)  
Y.V. Ajtalle (Togo)  
B. Baba (Zaire)  
M. Mbulu (Zaire)

WACAF/Gen.

Meeting of Legal Experts on a Regional Convention for the West and Central Africa  
Lomé, Togo, 24-27 November 1980

B.A. Acakpovi (Benin)  
J.I. Gandaho (Benin)  
A.M. Caldeira Marques (Cape Verde)  
J.L. Jesus (Cape Verde)  
E. Mbemba (Congo)  
S. Gatabantou (Congo)  
Z.D. Ndongo Mba Obono (Equatorial Guinea)  
C. Michaela (Equatorial Guinea)  
J.M. Ango-Eyene (Gabon)  
J. Mbogho Oyame (Gabon)  
B.W. Garbrah (Ghana)

D.M. Bleou (Côte d'Ivoire)  
F. Koffi (Côte d'Ivoire)  
M. Gaston (Côte d'Ivoire)  
J. Thomas (Liberia)  
A.O. Awobamise (Nigeria)  
A.D. Diop (Senegal)  
H.O. Davies (Sierra Leone)  
K.A. Fergusson (Sierra Leone)  
A. Fousseni (Togo)  
O. Anem (Togo)  
K.E. Ekue (Togo)

D.M. Mills (Ghana)  
L. Fofana (Guinea)  
C.Y. Diallo (Guinea)  
K. Kone (Côte d'Ivoire)

K.A. Ohiami (Togo)  
K. Amegavie (Togo)  
E.K. Hegbe (Togo)

WACAF/PREP.8

Experts Meeting on River Discharge of Pollutants to West African Seas  
Dakar, Senegal, 16-18 December 1980

A. Kogblevi (Benin)  
N. Otto (Cameroon)  
A. Youmbi (Cameroon)  
B. Maziezoula (Congo)  
S.H. Djoussou (Côte d'Ivoire)  
M.I. Njie (Gambia)  
T. Akiti (Ghana)

A.T. Amuzu (Ghana)  
J. Nylander (Liberia)  
V.A. Fodeke (Nigeria)  
J.B. Omotunde (Nigeria)  
C.A.K. Konte (Senegal)  
M. Dielumvua (Zaire)

WACAF/Gen.

Informal Consultations on the Institutional and Financial Arrangements  
related to the Action Plan for the West African Region  
Geneva, 21-23 January 1981

O. Onono-Ondja'a (Cameroon)  
M. Njiensi Ouakam (Cameroon)  
Y.J. Monney (Côte d'Ivoire)  
B. Ondo-Nze (Gabon)  
B.W. Garbrah (Ghana)  
L. Fofana (Guinea)

R.O. Ojikutu (Nigeria)  
A.D. Diop (Senegal)  
H.R.O. Davies (Sierra Leone)  
A. Fousseni (Togo)  
M. Mbulu (Zaire)

WACAF/Gen.

Second Meeting of Legal Experts on a Regional Convention  
for the West African Region  
Abidjan, Côte d'Ivoire, 13-14 March 1981

M.G. De Almeida Távira (Angola)  
G. Ferreira de Passos (Angola)  
M. de L. Prazeres de Sa (Angola)  
J. de D. Mbouendeu (Cameroon)  
J.-C. Njock (Cameroon)  
S. Gatabantou (Congo)  
F. Koffi (Côte d'Ivoire)  
D.M. Bleou (Côte d'Ivoire)  
A.M. Akaffou (Côte d'Ivoire)  
A.A. Angwibi (Côte d'Ivoire)  
O.S. Daix (Côte d'Ivoire)  
K. Kone (Côte d'Ivoire)  
G. Mian (Côte d'Ivoire)  
Y.J. Monney (Côte d'Ivoire)  
D. Moussako Mah (Côte d'Ivoire)  
S.G. Zabi (Côte d'Ivoire)  
J.M. Ango-Eyene (Gabon)

B. Ondo-Nze (Gabon)  
B.L. Sonko (Gambia)  
R. Sock (Gambia)  
B.W. Garbrah (Ghana)  
L. Fofana (Guinea)  
C.M. Fofana (Guinea)  
K. Touré (Guinea)  
Z. Ndongo Mba Obono (Equatorial Guinea)  
J.P. Keller (Liberia)  
R.L. Urey (Liberia)  
A.S. Sall (Mauritania)  
E.M. Adegbulu (Nigeria)  
A.D. Diop (Senegal)  
S.B. Boissy (Senegal)  
S.C. Konate (Senegal)  
H.R.O. Davies (Sierra Leone)  
A. Fousseni (Togo)

WACAF/Gen.

Meeting of the National Authorities for the Action Plan for  
the West and Central African Region

Geneva, 19-21 April 1982

A. Acakpovi (Benin)  
J.I. Gandaho (Benin)  
A. Youmbi (Cameroon)  
E. Mbemba (Congo)  
A.R. M'Bengue (Côte d'Ivoire)  
A.M. Akaffou (Côte d'Ivoire)  
K. Kone (Côte d'Ivoire)  
J.M. Ango-Eyene (Gabon)  
J.-B. Mebame (Gabon)

B.L. Sonko (Gambia)  
A.A. Cato (Ghana)  
L.K. Christian (Ghana)  
L. Fofana (Guinea)  
G. Arku (Liberia)  
J.P. Keller (Liberia)  
W. Knight (Liberia)  
S.C. Konate (Senegal)  
A. Yacoubou (Togo)

WACAF/1

UNIDO/UNDRO/WHO/UNEP Workshop on the Institution and Co-ordination of  
National Contingency Plans for Emergencies Associated with Industrial  
Installations in the West and Central African Region

Dakar, Senegal, 20-24 February 1984

R. Yamadjako (Benin)  
F. Costa Silva (Cape Verde)  
E. N'Tempo (Congo)  
M. Bado (Côte d'Ivoire)  
S. Obiang-Efong Bengono (Equatorial Guinea)  
A. Maganga-Nziengui (Gabon)  
S. Fye (Gambia)  
E. Akpetey (Ghana)  
O. Sow (Guinea)  
C. Fernandes (Guinea-Bissau)  
T.W. Sherman (Liberia)

B.R. Cooper (Liberia)  
M. Diaby (Mauritania)  
A.D. Diop (Senegal)  
I. Diawara (Senegal)  
B. Diop (Senegal)  
A. Fall (Senegal)  
A. Gueye (Senegal)  
B. Kante (Senegal)  
A.B. Ndiaye (Senegal)  
A.K.M. Tamakole (Togo)  
K. Lumande (Zaire)

WACAF/3

Training Seminar on control of coastal erosion in West and Central Africa

Lomé, Togo, 23 September - 2 October 1984

A. Acakpovi (Benin)  
K.S. Adam (Benin)  
L. Gnonlonfin (Benin)  
M. Issanga-Ngamissimi (Congo)  
P. Yace (Côte d'Ivoire)  
N.L. Sakho (Guinea)  
A.T. Diaw (Senegal)  
A. Agbekodo (Togo)  
D. Akovi (Togo)  
S. Assiongbon (Togo)

K. Katakou (Togo)  
M. Agnitevi (Togo)  
M. Djolegbéhou (Togo)  
T. Tossou (Togo)  
G. Rossi (Togo)  
A.B. Blivi (Togo)  
N. Simpara (Togo)  
H. Wager (Togo)  
E.D. Eklú-Natéy (Togo)

WACAF/3

Training Seminar on control of coastal erosion in West and Central Africa  
Lagos, Nigeria, 4-11 February 1985

8 participants from Liberia, Ghana, Gambia and Nigeria (Names not available)

WACAF/3

UNESCO/UN-DIESA/PNUF Seminar-Workshop on coastal erosion control in West and Central Africa  
Dakar, Senegal, 11-18 March 1985

S.K. Adam (Benin)	C. Hall (Liberia)
G. Kitemo (Congo)	B.O. Weeks (Liberia)
K.P. Koffi (Côte d'Ivoire)	A.C. Ibe (Nigeria)
B. Boulinguy (Gabon)	L.W. Neto (Sao Tome and Principe)
M.K. Barrow (Gambia)	I. Sow (Senegal)
J.F. Abban (Ghana)	I. Sy (Senegal)
S. Touré (Guinea)	A.E. Agbadje (Sierra Leone)
M. Bah (Guinea)	A. Agbekodo (Togo)
S. Calde (Guinea-Bissau)	G. Rossi (Togo)

WACAF/2

First Workshop of Participants in the Joint FAO-IOC-WHO-IAEA-UNEP Project on Monitoring of Pollution in the Marine Environment of the West and Central African Region  
Dakar, Senegal, 28 October - 1 November 1985

C. Mbi (Cameroon)	U.K. Enyenihi (Nigeria)
F. Ikomé (Cameroon)	E.C. Okonya (Nigeria)
I.L. Mbome (Cameroon)	D. Bâ (Senegal)
J.C. Njock (Cameroon)	M. Cissé (Senegal)
P.K. Koffi (Côte d'Ivoire)	J.F. Cooper (Senegal)
B.C. Kouadio (Côte d'Ivoire)	P.A. Diaw (Senegal)
D. Kouamé (Côte d'Ivoire)	A. Diop (Senegal)
B.S. Métongo (Côte d'Ivoire)	P. N'Diaye (Senegal)
J.B. Babadounga (Gabon)	R. Paris (Senegal)
M. N'Jie (Gambia)	I. Sow (Senegal)
C. Biney (Ghana)	D.F. Faulkner (Sierra Leone)
A.C. Ibe (Nigeria)	

WACAF/Gen.

Meeting for the Formulation of a Regional Pilot Project for the Control of Coastal Erosion in West and Central Africa  
Accra, Ghana, 11-14 August 1986

G. Lazare (Benin)	J.M. Abban (Ghana)
J. Mawuse Dake (Ghana)	L. Onolaja (Nigeria)
G.G. Nai (Ghana)	F. Seck (Senegal)

WACAF/Gen.

International Seminar on Coastal Wetlands Conservation and Coastal Zone Planning,  
their Contribution to Sustainable Development in West Africa

Mbour, Senegal, 9-13 November 1987

C.H. Dramane (Côte d'Ivoire)	B. Couteau (Senegal)
K. N'Dri (Côte d'Ivoire)	M. Dieng (Senegal)
M. Nicole (Côte d'Ivoire)	E.H.S. Diop (Senegal)
M.E. Wadja (Côte d'Ivoire)	P.S. Diouf (Senegal)
M.K.A. Barrow (Gambia)	S. Diouf (Senegal)
C. Kwasi Manu (Ghana)	A.O. Fall (Senegal)
Y. Ntiama-Baidu (Ghana)	M. Lo (Senegal)
N. Doumbouya (Guinea)	J. Piot (Senegal)
S. Sagnah (Guinea)	B.O. Sall (Senegal)
E.G. Gbeintor (Liberia)	S.I. Sylla (Senegal)
D.M. Aliou (Mauritania)	D. Leung Tack (Senegal)
P. Campredon (Mauritania)	S. Thiam (Senegal)
I. Thiaw (Mauritania)	P.D. Palmer (Sierra Leone)
A.O.K. Ogunyoye (Nigeria)	A. Agbekodo (Togo)
B. Coly (Senegal)	K. Koulekey (Togo)
M. Condamine (Senegal)	

WACAF/2

Training workshop on observation of oil slicks and tarballs  
on beaches and on basic oceanographic measurements

Lagos, Nigeria, 22-30 November 1987

F. Ikome (Cameroon)	C. Akumji (Ghana)
L. Yoba (Congo)	F. Asuquo (Nigeria)
J. Makaya (Congo)	E. Antia (Nigeria)
K. Koffi (Côte d'Ivoire)	C. Ibe (Nigeria)
A. Kouassi (Côte d'Ivoire)	I. Irere (Nigeria)
K. Kumba (Gabon)	E. Okonya (Nigeria)
M. Njie (Gambia)	J. Unyimadu (Nigeria)
C. Biney (Ghana)	I. Sow (Senegal)
E. Ameyiboh (Ghana)	D. Faulkner (Sierra Leone)

WACAF/2

Second Workshop of Participants in the Joint FAO/IOC/WHO/IAEA/UNEP Project  
on Monitoring of Pollution in the Marine Environment of the West  
and Central African Region

Accra, Ghana, 13-17 June 1988

D. Alexandre (Benin)	M.A. Odei (Ghana)
H. Soclo (Benin)	S.N. Afoakwa (Ghana)
F.E. Ikome (Cameroon)	D. Agbodaze (Ghana)
C. Mbi (Cameroon)	C. Ameyaw-Akumfi (Ghana)
M.I. Mbone (Cameroon)	E. Ameyibor (Ghana)
J.P. Makaya (Congo)	C.A. Biney (Ghana)
L.G. Yoba (Congo)	E.E. Antia (Nigeria)
M. Coulibaly (Côte d'Ivoire)	A.C. Ibe (Nigeria)

N. Kaba (Côte d'Ivoire)  
P.K. Koffi (Côte d'Ivoire)  
A. Kouassi (Côte d'Ivoire)  
S. Metongo (Côte d'Ivoire)  
J.P. Baradougua (Gabon)  
S.B. Jallow (Gambia)  
A. N'Jie (Gambia)  
M. N'Jie (Gambia)

E. Okonya (Nigeria)  
O.O. Osibanjo (Nigeria)  
D. Ba (Senegal)  
B. Niane (Senegal)  
P. N'Diaye (Senegal)  
I. Sow (Senegal)  
D.F. Faulkner (Sierra Leone)  
C. Macfoy (Sierra Leone)

WACAF/2

Training workshop on the microbiological monitoring of coastal waters and seafood  
Accra, Ghana, 20-22 June 1988

D. Alexander (Benin)  
M. Agbazahou (Benin)  
V. Jimaja (Benin)  
I. Njie (The Gambia)

J. Babadounga (Gabon)  
I. Sow (Senegal)  
F. Sy (Senegal)  
C. Macfoy (Sierra Leone)



Annex VI

Technical assistance provided through the Action Plan

(a) Equipment

4 Atomic absorption spectrophotometer	Ghana, Côte d'Ivoire, Senegal, Cameroon
4 x Gas chromatograph	Gambia, Nigeria, Sierra Leone, Côte d'Ivoire
5 x Teflon decomposition vessel	Côte d'Ivoire (2), Ghana, Senegal, Cameroon
1 Mercury hybrid system	Côte d'Ivoire
1 Vapor generation accs. for AA	Cameroon
1 Freeze dryer	Nigeria
5 x Digestion Unit	Cameroon, Ghana, Senegal, Côte d'Ivoire, Sierra Leone
1 Modulyd 4K	Sierra Leone
1 8 Port column manifold	Sierra Leone
1 Vapor generation accessory	Senegal
1 7.5KVA lister diesel generator	Sierra Leone
2 Extraction unit	Côte d'Ivoire, Cameroon
1 Memmert universal oven	Cameroon
1 Gas purifier	Côte d'Ivoire
6 Current meter	Cameroon, Côte d'Ivoire, Congo, Nigeria (2), Senegal
6 Water level gauge	Cameroon, Côte d'Ivoire, Congo, Nigeria (2), Senegal
11 Tarball monitoring equipment	Cameroon, Côte d'Ivoire, Congo, Gambia, Ghana (2), Nigeria (2), Senegal (2), Sierra Leone
3 Current meter	
1 Tide gauge	
2 Neuston nets	Ordered for delivery to participating institutions during 1988
2 Nansen bottles	
1 Conductivity meter	
1 Spectrophotometer	
2 Balances	

(b) Experts

WACAF/1

J. McMurtrie (UK)	National contingency planning mission (Liberia, Sierra Leone, January 1983)
B.J. Fouchier (France)	National contingency planning mission (Benin, Guinea, January-February 1983)
J. Bormans (Belgium)	Industrial contingency planning (Senegal, June 1983)
B.J. Fouchier (France)	National contingency planning mission (Congo, June 1983)
P.M. Armenante (Italy)	Industrial contingency planning (Liberia, Côte d'Ivoire, September 1983)
J.A. Nichols (UK) L.E. Cabaniols (France)	Consultations on subregional contingency plan (Nigeria, Cameroon, Sao Tome and Principe, and Gabon, November-December 1983)
P.M. Armenante (Italy) J. Bormans (Belgium) K. Strzepek (USA)	Consultants to workshop on industrial contingency planning (Dakar, Senegal, February 1984)
B.J. Fouchier (France)	National contingency planning mission (Côte d'Ivoire, June-July 1984)
R.E. Nichols (USA)	National contingency planning mission (Ghana, April 1985)
B.J. Fouchier (France)	National contingency planning mission (Côte d'Ivoire, November 1985)
L.E. Cabaniols (France)	National contingency planning mission (Senegal, December 1985)

WACAF/2

WACAF/2-A

E. Bacci	Project planning and evaluation of laboratory capabilities (Senegal, The Gambia, Sierra Leone, Ghana, Côte d'Ivoire and Nigeria, February 1984)
T. Barisic	Project planning and evaluation of laboratory capabilities (Senegal, The Gambia, Sierra Leone, Ghana, Côte d'Ivoire and Nigeria, February 1984)
O. Osibanjo	Project planning and evaluation of laboratory capabilities (Senegal, The Gambia, Sierra Leone, Ghana, Côte d'Ivoire and Nigeria, February 1984)

C. Nauen	To discuss difficulties in implementation of WACAF/2 (Senegal, The Gambia, Benin and Cameroon)
E. Bacci	To assist scientists in preparations for WACAF/2 Scientific Workshop (Cameroon, Côte d'Ivoire and Senegal, September 1985)
C. Gaggi	To assist scientists in preparations for WACAF/2 Scientific Workshop (Gambia, Ghana and Sierra Leone, September 1985)
H. Naeve	Review of continuing difficulties in laboratories (Sierra Leone, Côte d'Ivoire, Ghana and Cameroon, June 1986)
T. Orekoya	Familiarisation with laboratories and arrangements for new laboratories (Senegal, The Gambia, Sierra Leone, Ghana, Côte d'Ivoire, Benin, Nigeria and Cameroon, November 1987)
T. Orekoya	Split-sample exercise and review of instrument problems (Senegal, The Gambia, Sierra Leone, Ghana, Côte d'Ivoire, Benin, Nigeria and Cameroon, July-August 1988)

WACAF/2-B

R. Fukai	Intercalibration exercises (IAEA, Monaco, September 1986))
R. Raquin	Intercalibration exercises (IAEA, Monaco, October 1986)
T. Barisic	Intercalibration exercises (IAEA, Monaco, October-November 1987)
T. Barisic	Intercalibration exercises (IAEA, Monaco, July-August 1988)

WACAF/2-C

O. Linden	Identification of laboratories (Côte d'Ivoire, Nigeria and Cameroon, December 1983)
B. Metivier	Identification of laboratories (Senegal, Benin, Congo and Zaire, December 1983)
C. Ibe	Training Workshop in Lagos (Nigeria, November 1987)
G. Soares	Advice on participation of national laboratory (Benin, December 1987)
R. Mujeriego	Advice on participation of national laboratories (Senegal, Côte d'Ivoire and Nigeria, September 1983)
R. Geisler	Determination of sampling sites for laboratory requirements (Benin, January 1987)
K. Iwugo	Familiarisation visit and workshop planning (Senegal, The Gambia, Sierra Leone, Ghana and Benin, February 1988)

WACAF/PREP.2

- A. Piquemal (France) Review of environmental legislation (Senegal, Ghana, Nigeria, Côte d'Ivoire, Gabon, Gambia, Cameroon, September 1977)
- M.J. Savini (France) Benin survey of oil pollution on beach - 1977

WACAF/PREP.4

- R.W. Hann, Jr (USA) Lecturers for workshop on pollution from ships (Cameroon, December 1977)
- H.N. Young, Jr (USA)
- J.E. McLean, Jr (USA)
- J.O. Boateng (Ghana)

WACAF/PREP.6

- J.J.G. Henaff Study of arrangements for combating marine pollution emergencies (Senegal, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Nigeria, Gabon, Zaire, October-December 1977)
- R. W. Hann, Jr (USA) Survey of oil pollution of the West Africa coast (Nigeria, Gabon, Congo and Zaire, June-July 1980)
- L. Cabaniols (France)
- G. Massart (France)
- H. N. Young (USA)

WACAF/3

- N. Lenôtre (France) Evaluation of coastal erosion problems (Gabon, Congo, Cameroon, February-March 1984)
- R.E. Quélenec (France) Evaluation of coastal erosion problems (Senegal, Gambia, Guinea, Côte d'Ivoire, March 1984)
- M. Murday (Mauritius) Collection of coastal erosion information (Nigeria, Togo, Ghana, April 1984)
- B.N. Akpati (Nigeria) Evaluation of coastal erosion problems (Nigeria, Ghana, Sierra Leone, Liberia, June 1984)
- M. Murday (Mauritius) Resource persons, WACAF/3 final workshop (Dakar, Senegal, March 1985)
- N. Lenôtre (France)
- R.E. Quélenec (France)
- C. Veeningen (Netherlands)
- J.P. Barusseau (France)
- C. Pattiaratchi (UK)
- B. Deniaux (France)
- V. Dorbu (USA)

V. Dorbu (USA)  
M. Murday (Mauritius)  
N. Lenôtre (France)  
A. Moal (France)  
R.E. Quélenec (France)

Resource persons for Workshop on coastal erosion control in  
West and Central Africa (Lomé, Togo, September-October 1984)

M.B. Collins (UK)  
G. Evans (UK)  
J. Sexton (USA)  
M. Murday (Mauritius)

Resource persons for workshop on coastal erosion control in West  
and Central Africa (Lagos, Nigeria, February 1985)

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