

# Norwegian Institute for Water Research

D R A F T

O-80028

WATER RESEARCH IN DEVELOPING COUNTRIES

A desk survey about planned  
and ongoing research projects

Oslo, January 30, 1981

Svein Stene Johansen, Research Engineer

Kjell Baalsrud, Head of the Institute



F O R E W O R D

*The Norwegian Institute for Water Research, NIVA, would like to thank the Norwegian Agency for International Development, NORAD, for sponsoring NIVA to undertake a desk survey about*

- a) the need for water research in the main partner countries of Norway*
- b) ongoing and planned research activities in water development for developing countries including a brief description of the research projects.*

*We would also thank the institutions and individuals who have responded to our request with sending us useful information.*

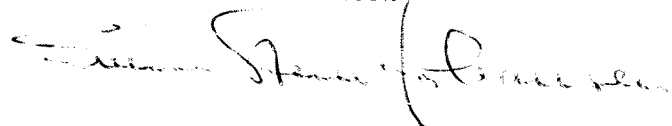
*We do feel we have got a picture of the water research situation in the developing world and that we have got a base for considering a co-operation between Norwegian water research institutions and developing countries in*

- training the scientists and technologists both through the provision of study abroad and through training programmes in developing countries,*
- the implementation of major research programmes relating to water developing,*
- establishing a direct linkage through co-operation arrangements including joint research and developing programmes.*

*Keeping in mind the U.N. Water Decade which has just started and the shocking evaluation reports of major water programmes we are convinced that water research should be an important part of water development also in the developing world.*

Brekke, 30.01.1981

Svein Stene Johansen



	Page:
1. SUMMARY AND RECOMMENDATION	5
1.1 The need for water research	5
1.2 Institutions in NORAD's main partner countries which may be evaluated regarding research co-operation	7
1.3 Planned and ongoing water research projects	8
1.4 Proposed water research projects	10
1.5 The Norwegian Resource Base in Water Research and Development	10
1.6 Recommendation regarding water research policy	11
2. INTRODUCTION	12
3. SOME INFORMATION ABOUT INSTITUTIONS IN NORAD'S MAIN PARTNER COUNTRIES WHERE WATER RESEARCH ACTIVITIES MAY BE FURTHER DEVELOPED THROUGH CO-OPERATION	14
3.1 General	14
3.2 Institutions in Bangladesh	14
3.3 Institutions in Botswana	14
3.4 Institutions in India	15
3.5 Institutions in Kenya	15
3.5.1 Ministry of Water Development	15
3.5.2 The University of Nairobi	16
3.6 Institutions in Mosambic	17
3.7 Institutions in Sri Lanka	17
3.8 Institutions in Tanzania	17
3.8.1 The Ministry of Water, Energy and Minerals (MAJI)	17
3.8.2 Ministry of Agriculture (KILIMO)	17
3.8.3 University of Dar Es Salaam, Faculty of Engineering	17
3.9 Institutions in Zambia	18
3.9.1 The University of Zambia	18
3.9.2 National Council for Scientific Research	18
3.9.3 Department of Water Affairs	19
4. BRIEF DESCRIPTION OF FOREIGN ORGANIZATIONS INVOLVED IN WATER RESEARCH ACTIVITIES RELATED TO DEVELOPING COUNTRIES	20
4.1 Introduction	20
4.2 UNESCO - United Nations Educational, Scientific and Cultural Organization - International Hydrological Programme (IHP)	20

	Page:
4.2.1 The way IHP works	20
4.2.2 The International Hydrological Programme I (IHP I) 1974-1980	21
4.2.3 The International Hydrological Programme II (IHP II) 1981-1983	22
4.2.4 The International Hydrological Programme III (IHP III) 1984-1989	22
4.3 UNICEF - United Nations Children's Fund	23
4.3.1 UNICEF's co-operation in water supply and sanitation	23
4.4 UNDP - United Nation Development Programme	23
4.4.1 UNDP's involmnet in water supply and sanitation development programmes	23
4.4.2 The UNDP projects	24
4.5 UNEP - United Nations Environment Programme	24
4.5.1 How UNEP functions	24
4.5.2 The UNEP functional tasks	26
4.6 UNIDO - United Nations Industrial Development Organization	28
4.7 The International Development Research Centre (IDRC) - Canada	28
4.7.1 A brief background on IDRC	28
4.7.2 The IDRC projects	28
4.8 The World Bank	29
4.8.1 The World Banks involmnet in water research	29
4.8.2 The World Banks projects	29
4.9 IMCO - Inter-Governmental Maritime Consultative Organization	29
4.10 WHO - World Health Organization	29
4.10.1 WHO's activities in water research	29
4.11 WHO-IRC - WHO International Reference Centre for Community Water Supply	30
4.11.1 IRC's activities	30
4.11.2 IRC's programmes and projects	30
4.11.3 Information	31
4.12 IWSA - International Water Supply Association	32
4.13 National Environmental Engineering Research Institute, Nagpur, India	33

	Page:
4.14 Inter-American Development Bank, Washington, D.C, USA	34
4.15 Asian Institute of Technology, Bangkok, Thailand (AIT)	34
4.16 Freshwater Biological Association, Windermere, England	35
4.17 National Environmental Protection Council, Ministry of Human Settlements, Philippines (NEPC)	35
4.18 IDB - Inter-American Development Bank	35
4.19 Department of International Development Co-operation, Ministry of Foreign Affairs of Finland	35
4.20 SIDA - Swedish International Development Assistance	36
4.21 SAREC - Swedish Agency for Research co-operations with Developing Countries	37
4.22 Center for Development Research, Copenhagen	38
4.23 Department of Sanitary Engineering, Technical University of Denmark	39
4.24 Dansk hydraulisk institut (DHI)	39
4.25 VKI - Water Quality Institute, Hørsholm, Denmark	40
4.26 DANIDA	40
4.27 Royal Institute of Technology Section of Developing Countries, Stockholm	40
4.28 Consulting Engineers	41
4.29 ANSTI - African Network of Scientific and Technological Institutions	42
5. PROPOSALS FOR RESEARCH ACTIVITIES	45
5.1 Zambia	45
5.2 Kenya	48
5.3 Tanzania	49
5.4 Botswana	49
5.5 Research Proposals from Norwegian Consulting Engineers	49
6. THE NORWEGIAN RESEARCH BASE IN WATER RESEARCH AND DEVELOPMENT	52
6.1 General	52
6.2 Drinking water	52
6.3 Waste Water Research	55

## 1. SUMMARY AND RECOMMENDATION

### 1.1 The need for water research

The importance of safe water supply is universally recognized. The goal to provide all of mankind with reasonable access to safe water by the year 1990 was confirmed by the United Nation Water Conference in Mar del Plata, Argentina in 1977.

The same resolutions from Mar del Plata also speak of sanitation to be provided to every body by 1990. The need for sanitation is as great as the need for safe water. In fact, both measures - for water and sanitation - are truly efficient only if they complement each other.

Furthermore, efficiency is real only when the people to be provided with safe water supply systems are properly motivated and educated for building latrines and taking other measures for environmental sanitation and personal hygiene.

The task ahead is staggering. Some basic figures illustrate the magnitude of the problem. In order to meet the goals for the International Drinking Water Supply and Sanitation Decade 1981-1990, up to US \$ 60 000 million would be required to provide safe water for everyone. For sewage US \$ 300 000 million to 600 000 million would be needed.

The situation calls for inexpensive types of sanitary facilities for excreta and other waste disposal as well as for water supply installations.

Water research projects in developing countries are for the time being mostly organized by U.N.-organizations through expatriate staff. The linkage between the researchers and the national water authorities are often not too good. The transfer of research results to the practical life is always a problem, especially in the developing countries.

In our opinion every country need their own national water research institution to support their national water development programmes. It is very important to organize the water research at an early stage in the national water development programmes. Research staff must be selected and given further education and training in research projects.

In most of the developing countries the authorities have yet not formulated any overriding water research policy. Resources have until now been concentrated on immediate needs.

This situation is changing. The resolutions from the United Nations Conference of Science and Technology for Development (UNCSTED) held in Vienna in August 1979, are a direct challenge to the developed countries for transfer of knowledge and research methodology.

The amount of attention paid to the Conference in many developing countries reflects an increasing awareness by these countries of the significance of research and technology for their own development.

UNCSTED's action programme has three main sections. The first strengthening the capacity of research and technology in the developing countries.

The second section encompasses proposals on how international relations can be made more equitable regarding research and technology.

The role of the UN in science and technology is discussed in the third section. More efficient participation and increased influence by the developing countries over internationally conducted research is sought. The UN system as a whole ought to direct its activities towards supporting the initiatives of the developing countries.

Previous demand are repeated; that is, that 0.05% of the GNP in the industrial countries is to be used for research concerning the problems of the developing countries, or that 10% of research resources are to be set aside for tasks relevant to the developing countries.

UNCSTED's recommendations regarding the role of developed countries are listed in Annex 1.1/I.



1.2 Institutions in NORADs main partner countries which may be evaluated regarding research co-operation

The water research activities in the far east are fairly advanced in India and Thailand. In India the water research activities are carried out at several institutions and co-ordinated by the National Environment Engineering Institute at Nagphur. In Thailand the water research is carried out by the Asian Institute of Technology, Division of Water Resources Engineering. This Institute is aiming at being a centre for the developing countries in the far east.

From the informations received we think it should be possible for the water authorities in Bangladesh and Sri Lanka to benefit from the Asian Institute of Technology both through education programmes and research projects.

In Kenya very little research activity takes place. The University of Nairobi, Faculty of Engineering participates in a world wide research project on slow sandfiltration financed by WHO. Seven developing countries are involved. Except from this, research takes only place as part of M.sc. studies.

The Faculty of Engineering organize a M.sc. Course in Environmental Engineering and a Diploma Course in Public Health Engineering, sponsored by NORAD.

At the Water Department, the Ministry of Water Development, a research project on fish cultivations in ponds takes place. The Water Department has a well equiped laboratory financed by NORAD.

Both the University and the Ministry may be suited for research co-operation.

The Ministry of Water, Energy and Minerals (MAJI) in Tanzania is the principal Government Agency responsible for the domestic water supply sector including the development of National and Regional Master Plans, the hydropower sector and to some extent flood control. MAJI is according to our information not involved in water research for the time being.

Tanzania has recently become the centre for Water Resources Engineering as part of ANSTI - African Network of Scientific and Technological Institutions. In Tanzania the co-operating institutions should be the University in Dar Es Salaam, Faculty of Engineering and the Ministry of Water, Energy and Minerals, MAJI.

The co-operating institution in Zambia would be the National Council for Research and Science, NCSR, the University of Zambia and the Department of Water Affairs.

In Botswana the Department of Water Affairs is responsible for water development, and research activities are taken care of by the consulting engineers supervised by Water Affairs.

The water development situated in Mosambic is unclear to us as we have got no replies. The working language is portuguese which may cause problems.

Based on the information received NIVA recommends to NORAD to consider water research co-operation with Institutions in Kenya, Tanzania and Zambia. It will be necessary to visit the three countries to evaluate the possibilities and the countries' interests in water research co-operations.

Table 1 gives a pre-evaluation of the need for water research and development within the water sector.

### 1.3 Planned and ongoing water research projects

Chapter 4 gives an overview of institutions outside Norway directly or indirectly engaged in water research. In the Annexes to Chapter 4 the planned and ongoing research projects are listed.

We have, however, got the impression that the results have not been easily available to the developing countries. Exceptions are some WHO/IRC-projects and publications.

TABLE 1. SUB-SECTORS WITHIN THE WATER SECTOR WHICH NEED WATER RESEARCH AND DEVELOPMENT ACTIVITIES IN THREE OF NORADS MAIN PARTNER COUNTRIES

	KENYA		TANZANIA		ZAMBIA	
	NORAD FINANCED PROGRAMME	GENERAL	NORAD FINANCED PROGRAMME	GENERAL	NORAD FINANCED PROGRAMME	GENERAL
1. WATER						
Water sources						
Water quality	X	X	X	X	X	X
Water treatment	X	X	X	X	X	X
Distribution/pipeliner		X	X	X	X	X
Operation and maintenance/plant control	X	X		X	X	X
Administration of water systems		X		X	X	X
Education/training		X	X	X	X	X
Socioeconomical impact of water supply		X	X	X	X	X
2. WASTEWATER/REFUSE						
Environmental impact of pollution		X		X		X
Sewage/pumping		X		X		X
Wastewater treatment		X		X		X
Operation of collection and treatment systems	X	X		X		X
Education/training	X	X		X		X
Solid waste handling		X		X		X

#### 1.4 Proposed water research projects

The number of proposed water research projects are as expected very few. The reasons are mainly lack of water research policies in the developing countries and the lack of staff to identify needs and prepare proposals for water research projects.

The proposals received are mainly from governmental institutions in NORADs main partner countries where the contact persons are known to our staff members. We have also received proposals from some consulting engineers.

#### 1.5 The Norwegian Resource Base in Water Research and Development

To give a technology review of water research activities in Norway, relevant to the problems in the developing world, is almost impossible within the limits of this survey. Some research topics relevant in Norway may be of relevance in the developing world.

Thus we have listed in chapter 6 the ongoing research and development projects within the water supply and pollution sectors at Norwegian institutions.

The Norwegian institutions involved in water research are all members of the Norwegian Hydrological Committee (NHK) which has offered NORAD full co-operation in water research and development programmes for the developing countries.

1.6 Recommendation regarding water research policy

1. Direct linkages should be established between the Norwegian research base and institutions in the developing countries. Such arrangements should provide for the undertaking of joint research and developing programmes.
2. The research should to the maximum extent be carried out in the developing countries.
3. The development of human resources is an important part of the research activities. The Norwegian research base should co-operate with developing countries in training their scientists and technologists both through the provision of fellowships for study in Norway and through training programmes in developing countries involving scientists and technologists from the developing countries.
4. NORAD should devote more resources to water research relevant to the developing countries in connection with water development programmes financed by NORAD.

Water development programmes are long term in nature and will always include important water research activities which should be part of the programmes.

## 2. INTRODUCTION

The need for water research as part of water development is fully recognized in the developed countries, and water research institutions are working in close co-operations with the water authorities and ministries. Thus water research results are an important basis for decision-making in water management.

The same applies to the developing countries, but organized water research activities on national basis are still not implemented.

In order to get an overview over the situation, The Norwegian Institute for Water Research, NIVA, applied to the Norwegian Agency for International Development, NORAD, for research funds to undertake a comprehensive study regarding the water research situation in developing countries, particularly in NORAD's main partner countries.

The study was limited to investigate

- a) the need for water research in the main partner countries of Norway
- b) ongoing and planned research activities in water development for developing countries including a brief description of the research projects.

The aim of the study is to give NORAD a base for considering a co-operation between Norwegian water research institutions and developing countries in

- training scientists and technologists both through the provision of study abroad and through training programmes in developing countries,
- the implementation of major research programmes relating to water developing,
- establishing a direct linkage through co-operation arrangements including joint research and developing programmes.

In order to carry out the desk survey we have sent out questionnaires to organizations, firms and institutions involved in water development programmes in the developing countries.

In the questionnaires we have inquired regarding ongoing and planned research activities and proposals for research projects. The feedback we have received has been presented mostly by catalogues and publications as the questionnaires were not convenient to most of the institutions.

3. SOME INFORMATION ABOUT INSTITUTIONS IN NORAD'S MAIN PARTNER COUNTRIES WHERE WATER RESEARCH ACTIVITIES MAY BE FURTHER DEVELOPED THROUGH CO-OPERATION

3.1 General

Inquires were sent out to the water authorities and governmental agencies in NORAD's main partner countries. Very few institutions replied and the replies gave very little information about the water organizations. The informations we have collected are thus very heterogeneous.

3.2 Institutions in Bangladesh

NORAD is not involved in any water research and development programmes and is not aware of such activities. About 30 professionals will be trained at AIT in Thailand each year, see chapter 4.15, sponsored by UNDP. We do expect further information from the River Research Institute in Dacca on research activities.

3.3 Institutions in Botswana

The Ministry of Water Affairs in Botswana is responsible for water development in the country. Water Affairs do not undertake water research by its own staff, but is depending on consulting firms and foreign donors. Water Affairs is for the time being to a great extent depending on expatriate staff recruited through SIDA.

In Botswana's current 5-years plan for the period 1979-1985 some research activities and projects have been suggested. Except for one project, A Utilization Study of Limpopo River, donors have agreed to finance the projects.

Most of the proposed projects cover hydrological and hydrogeological investigations. The country has very limited water resources. No research projects are related to technical problems, distribution, treatment, operation and maintenance.



### 3.4 Institutions in India

A great number of water research projects are carried out at different organizations which include National Laboratories, Universities, Institutions within the Universities and other Governmental or Semi-Governmental research establishment. Reference is made to Chapter 4.13 in this report.

### 3.5 Kenya

#### 3.5.1 Ministry of Water Development

Ministry of Water Development is responsible for water development in Kenya. The executing agency is the Water Department which consist of 3 branches;

Engineering  
Water Resources  
Administration

The Water Resources Branch have a Water Quality and Pollution Control Division with a well equiped water laboratory. The laboratory is equiped with funds from NORAD which previously recruited the expatriate staff to the lab.

The laboratory facilities are well suited for some research work, but due to lack of funds and staff, very little research has been undertaken so far.

The ongoing research is consentrated on pollution control and may be summerized as follow:

- 1) The examination of existing design criteria of stabilization ponds,
- 2) The examination of the feasibility of cultivating fish in the ponds.

The Ministry takes also part in the slow sandfiltration research project carried out by the University in co-operation with IRC/WHO. See Chapter 3.5.2.

3.5.2 The University of Nairobi, Department of Civil Engineering,  
Public Health Engineering Section

The Public Health Engineering Section within the Department of Civil Engineering is responsible for two postgraduate courses, one Diplome Course in Water Engineering sponsored by NORAD and one M.sc. Course in Environmental Engineering.

In connection with these courses and master degree studies, some research work is undertaken by the Department. The projects are summerized as follow:

- 1) Slow sandfiltration for domestic water,
- 2) Solar destillation,
- 3) Defluoridation
- 4) Laboratory and field investigation of waste stabilization ponds.

The senior staff for the courses is recruited by NORAD which has also funded laboratory equipment.

More Senior staff are needed for the Public Health Engineering Section both for education purposes and for strengthening the research activities.

### 3.6 Institutions in Mosambic

No information is received about water development activities in Mosambic.

Until now, resources have been concentrated on immediate needs; that is basic education of university students. The researchers which remained after independence must dedicate much time either to teaching or to working in the ministeries and state agencies.

A central research committee, Comissao Central para Investigacao Cientifico, has been set up to stimulate research within special high priority areas. We have no information regarding the priority of water research.

### 3.7 Institutions in Sri Lanka

We have so far received no informations about water development in Sri Lanka. It may be possible for Sri Lanka to co-operate with the Institutions in India and Thailand, see Chapter 4.13 and 4.15.

### 3.8 Institutions in Tanzania

#### 3.8.1 The Ministry of Water, Energy and Minerals (MAJI)

MAJI is the principal Government agency responsible for the domestic water supply sector including National and Regional Water Master Plans, the hydro-power sector and to some extent the flood control. Under its Project Preparation Branch there is a research section on the Organization Chart, but according to our information no research takes place.

#### 3.8.2 Ministry of Agriculture (KILIMO)

KILIMO is the Government Agency responsible for water development related to irrigation, flood control and watering of livestock, activities which in a sense also contribute to the provision of water for domestic purposes.

#### 3.8.3 University of Dar Es Salaam, Faculty of Engineering

At the Faculty of Engineering, post graduate courses in water resources engineering will be started as part of the African Network of Scientific and Technological Institutions (ANSTI).

The course will cover the following sectors:

- Hydrology
- Groundwater Engineering
- Water Resources Assessment Planning and Management
- Dams and River Engineering
- Irrigation and Drainage Engineering

### 3.9 Institutions in Zambia

The information received from Zambia is very comprehensive and detailed. It is compiled by Østlandskonsult A/S. The official replies indicate the same demand and wish for co-operation.

#### 3.9.1 The University of Zambia (UNZA), Civil Engineering Department

The Civil Engineering Department of UNZA does not have a postgraduate programme, the research is therefore limited to the 3rd and 4th year undergraduate students. However, these research programmes are elementary and does not include major pressing field problems. Also, the number of students in the final years is very small.

#### 3.9.2 National Council for Scientific Research (NCSR)

Considerable assistance is needed for the project "WATER RESOURCES INVENTORY OF ZAMBIA". This project is estimated at some ZK 3.5 million. SAREC\* is financing the project this year. The project is well known to NORAD as they financed it for 3 years 1975-1978.

NCSR needs mobile water research laboratories and laboratory equipment for the extension of the water laboratory at the Headquarter. The laboratory will be used for routine functions and research.

\* Swedish Agency for Research Co-operation with Developing Countries, affiliated with SIDA.

Groundwater quality assessment is needed in both rural and urban areas. In rural areas, due to high mineral contents of soils, and in urban areas more than half of domestic premises in cities and large towns are served by septic tanks with minimal or no maintenance, resulting in inferior treatment.

Staff requirement:

The following suggestion has been received:

To offer postgraduate scholarships abroad to Zambian undergraduates in their respective needed fields for completing the theoretical part of their studies only. For their research projects they should return to Zambia and work on specific projects in NCSR with their expatriate counterparts.

The following categories of staff are needed:

- Public Health Engineers
- Analytical Chemists
- Microbiologists
- Biochemists

All above are expected to have at least a masters degree in their respective fields.

3.9.3 Department of Water Affairs (DWA)

DWA is responsible for the rural water supplies throughout the country. The Headquarters is situated in Lusaka, but the operation and maintenance is decentralized through Provincial Water Engineers.

DWA is understaffed and solely depending on expatriate staff.

DWAs water laboratory is not functioning due for lack of staff and equipment. DWA co-operate with NCSR's water laboratory.

#### 4. BRIEF DESCRIPTION OF ORGANIZATION OUTSIDE NORWAY AND THEIR INVOLVMENT IN WATER RESEARCH ACTIVITIES RELATED TO DEVELOPING COUNTRIES

##### 4.1 Introduction

Most of the replies from the international organization are given as catalogues and reports which give a fairly good picture of the organizations. The research projects are mostly described in key words.

Since one of the main purposes for this survey is to evaluate the need for water research in the main partner countries of Norway, we find it important to report on the water research activities for developing countries carried out by the international organizations, including how the organizations work, finance or take directly part in research projects.

##### 4.2 UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
INTERNATIONAL HYDROLOGICAL PROGRAMME (IHP)

###### 4.2.1 The way IHP works

The programme is guided and supervised by an Intergovernmental Council which consists of the representation of thirty elected member States.

It is being carried out in successive, mediumterm phases of a six-year duration.

In each participating country a National Committee defines and organizes research activities on particular national problems which relate to the international programme. Special group and expert panels are set out by the Council to coordinate national contributions and to ensure that common methodologies are used for the various projects.

The IHP forms an integral part of the efforts made by the U.N. system as a whole to promote a rational policy for the development and management of world water resources.

#### 4.2.2 The International Hydrological Programme I (IHP I) - 1974-1980

The IHP I was the first six-year phase of which ends in 1980.

The objective is the improvement of knowledge concerning water resources and development of the scientific basis for understanding interrelationships between human activities and the hydrological system and for developing the rational management of water resources.

The activities undertaken include:

- the carrying out of a scientific programme which will contribute to a better knowledge of the hydrological system and serve as a basis for the exploitation and integrated management of water resources.
- the development and improvement of teaching methods in water sciences and the varying out of national, regional and international training and information programmes in order to assist in the training of the specialists needed for the development of water resources and to bring out more clearly the importance of these resources for social and economic development.
- the strengthening of Member States' institutional infrastructures in the sphere of water resources, with a view to increasing their capacity to evaluate their water resources and manage them scientifically.

The main scientific projects in the first phase are listed under Annex 4.2/I.

#### 4.2.3 The International Hydrological Programme II (IHP II) 1981-1983

The Intergovernmental Council of the International Hydrological Programme (IHP) held its Third Session in November 1979. At this session, the Council adopted the Programme and Plan for the second phase of the IHP (1981-1983). This Programme and Plan as adopted by the Council is enclosed as Appendix 4.2/II. Appendix 4.2/III shows a list of working groups to be established within IHP II and Appendix 4.2/IV a list of rapporteurs to be appointed within IHP II.

The General objective is to increase the capacity of Member States to apply advanced methodologies and technologies to the assessment, development and management of their water resources through a scientific programme aimed at the improvement of the understanding of hydrological processes and the encouragement of research and the dissemination of its results among Member States.

#### 4.2.4 The International Hydrological Programme III (IHP III) 1984-1989

The plan for the third phase (1984-1989) of IHP will be prepared and considered by an International Conference on Hydrology and Rational Management of Water Resources.

Technical assistance will be given to Member States, at their request, in order to improve their capacity to find the best ways of assessing, developing and conserving their water resources. Two major regional projects on the rational use and conservation of water resources in rural areas, which will help in improving the living conditions of the people concerned, will be started, one in Latin America and the other in the Arab States.

Unesco will co-operate with the other international organizations concerned with the carrying out of the Plan of Action adopted by the United Nations Water Conference, particularly as regards the assessment of water resources, the promotion of research and training, and the activities of the International Drinking Water Supply and Sanitation Decade.



#### 4.3 UNICEF - United Nations Children's Fund

##### 4.3.1 UNICEF's co-operation in water supply and sanitation

UNICEF as such is no research institution. In the context, however of UNICEF's co-operation with a great number of governments in their rural water supply and sanitation programmes, including some peri-urban areas, certain ad hoc development of materials and equipment for water resources development and utilization is undertaken, notably in the field of water well drilling and handpump design and manufacture.

UNICEF works closely with other UN Agencies, bilaterals etc.

#### 4.4 UNDP - United Nation Development Programme

##### 4.4.1 UNDP's involmment in the water supply and sanitation development programmes

UNDP is involved in the water area in a number of different ways.

UNDP's primary activity in this sector at the present time, however, is in planning and coordinating the International Drinking Water Supply and Sanitation Decade.

Although this program is primarily aimed at providing clean drinking water for the underserved population in the world, UNDP at the same time have a number of projects already underway related to the development of water resources.

UNDP feels very strongly that a key element in the overall Decade program must be the training of adequate number of individuals in developing countries and the development of adequate institutions of allow the continued development of manpower in those countries.

#### 4.4.2 The UNDP projects

Because of the magnitude of UNDPs operation and the diffuse nature of their projects in so many countries we have chosen to present the projects in annex 4.4/I which shows the whole range of water projects UNDP is currently involved in.

Annex 4.4/II shows the status of the planning for the water decade.

#### 4.5 UNEP - United Nations Environment Programme

##### 4.5.1 How UNEP functions

UNEP was not established as an operational agency to take its place alongside other UN-bodies. Certain institutional arrangements were required within the UN-system to coordinate environment-related activities, to serve as a focal point for global environmental concerns, and to stimulate and catalyze action where it is needed.

UNEP include the Governing Council, the Secretariat, the Fund and the inter-agency mechanism which was the Environment Coordination Board (ECB) until 1978. At that time the General Assembly decided that the Administrative Committee on Coordination of the United Nations (ACC) would assume the functions of ECB.

By establishing the Environment Fund, the General Assembly acknowledged the need for additional funds to finance wholly or partly the costs of new environmental initiatives, including cooperative projects undertaken within the United Nations system. The Fund can also be used to stimulate action outside the UN system through supporting organizations, or in directly implementing important resultant activities. It should be noted that the UNEP Fund depends upon voluntary contributions.

The Governmental Council of UNEP held its first session in Geneva in June 1973, and has since met annually in Nairobi.

The UNEP secretariat supports the Governing Council and serves the United Nations system in the discharge of its responsibility by collecting and interpreting information, coordinating elements of the environment programme, and administering the Environment Fund. The Administrative Committee on Coordination facilitates coordination and cooperation by providing high level executive linkages between the UNEP Secretariat and cooperating organizations of the UN system.

UNEP's programmatic approach involves three levels:

Level One aims at providing information on environmental problems and the efforts being made to respond to them, in order to identify gaps. Each year, the Governing Council chooses specific topics for which a "State of the Environment" reports is to be prepared and presented at the Council's next session.

Level Two sets out objectives and strategies for the environment programme and formulates specific actions. It presents an environment programme to the whole world for specific action; to Governments, international and non-governmental organizations, inter-governmental bodies, various supporting organizations and all other groups concerned.

Level Three identifies those areas of the programmes presented at Level Two which are selected for support from the Environment Fund, that is, UNEP-supported projects. In selecting activities for Fund support the possible catalytic and coordinating effects of such actions are kept uppermost in mind.

The three-level programmatic process is something that is internal to UNEP, and is designed to prepare the way for further action by UNEP and/or by others. Projects can be undertaken in one of three ways; by cooperating agencies, that is, bodies within the United Nations family; by other supporting organizations; or by direct implementation. Major activities involving direct implementation have been the development of

the Global Environmental Monitoring System (GEMS), the International Referral System, now known as INFOTERRA and the International Register of Potentially Toxic Chemicals (IRPTC). For these activities UNEP has established Programme Activity Centres. These Centres have also been established for the Industry, and for the Regional Seas Programmes. It should be borne in mind, that the role of UNEP, even in the case of internal projects, is primarily catalytic, that is, to stimulate actions by others.

The functional structure of the UNEP Bureau of the Programme is geared to the six "subject areas". These are:

- human settlements and human health;
- terrestrial ecosystems;
- environment and development;
- oceans;
- energy;
- natural disasters.

#### 4.5.2 The UNEP Functional Tasks

The ultimate objective of UNEP's programme in the Basic Human Needs area is the promotion of environmentally-sound patterns of development. UNEP-supported assessment work in this field is aimed at investigating the relationship between the satisfaction of basic human needs and the protection and improvement of the environment.

In the assessment of outer limits five subjects have been chosen for study by the Governing Council:

- the characteristics and causes of climatic change,
- the nature and impact on the environment of deliberate weather modifications,
- the dimensions and significance of risks to the stratospheric zone layer,
- the limits to the capacity of societies to modify their behaviour in the interests of sound environmental management,
- bioproductivity.

One of the chief ways in which UNEP provides information on critical subject areas is through its annual State of the Environment reports. Among other things the General Assembly in its resolution 2997 (XXVII) of December 1972, gave to the UNEP Governing Council responsibility "to keep under review the world environmental situation in order to ensure that emerging environmental problems of wide international significance receive appropriate and adequate consideration by Governments".

The first three SOE reports dealt with the following issues; lands and water, climatic changes, energy, toxic substances, human stress and social tension (1974); population, food, oceans, energy, raw materials and outer limits (1975); and the interaction between man and environment with particular reference to hunger, pollution, world climate, and ways to improve management of the environment (1976).

At its fourth session, in 1976, the Governing Council decided that future reports would be selective in treatment and that an analytical, comprehensive report should be issued every fifth year, beginning in 1982. Topics focussed on during 1977 were; The Ozone Layer, Environmental Carcinogens, Soil Loss, and Firewood. In 1978 they were Chemicals and the Environment, Malaria, Use of Agro-Industrial Residues for Increasing the Base of Food Production, and Conservation of Energy. In 1979 they will be Environmental Disease, particularly Schistosomiasis, Noise, Tourism and the Environment, and Resistance to Pesticides. Brief mention will also be made of Genetic Engineering, and Peaceful Uses of Outer Space.

The first comprehensive five-year State of the Environment report in 1982 will mark the tenth anniversary of the Stockholm Conference. Entitled "The State of the Environment: Ten years After Stockholm", this publication will seek to identify, analyse and interpret changes in the environment and environmental situations. according to the available information. By displaying inter-relationships, the report may identify trends and possible future changes in ecosystems. The 1982 goals are listed under Annex 4.5/I.

#### 4.6 UNIDO - United Nations Industrial Development Organization

UNIDO is not involved in water research or water development programmes.

#### 4.7 The International Development Research Centre (IDRC) - CANADA

##### 4.7.1 A brief background on IDRC

The International Development Research Centre (IDRC) was established by an Act of the Canadian Parliament assented to on 13 May 1970. The first meeting of the 21 member Board of Governors took place in October 1970.

It was set up (in the words of the Act) "to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions".

The Centre was established as a public corporation, to give it the greatest possible measure of flexibility and autonomy while still being accountable to Parliament. Its funds are in the form of "untied aid", which allows it to secure the best available professional skills and to finance projects in the most appropriate way, regardless of the origin of the research workers and the source of equipment.

From October 1970 to October 1978, the Board approved support for over 800 projects, which required appropriations of close to \$ 143 million. A few projects involve expenditures of more than \$175 000. Nearly 200 research projects have been completed, and many have entered a second and even a third phase. Research is taking place in 100 different countries.

The centre has established five regional offices - in Singapore, Bogota, Dakar, Cairo and Nairobi - four of them which are headed by nationals of the region.

##### 4.7.2 The IDRC projects

The projects are listed in Annex 4.7/I and have been organized under the Health Sciences Division which includes all water-related projects.

#### 4.8 The World Bank

##### 4.8.1 The World Banks involvment in water research

The Bank has already completed and is continuing research work in the Water Supply and sanitation technologies, particular in the latter. In addition the Bank has done a considerable amount of work in the area of economic analysis, finance, tariffs, etc., all related to water supply and waste disposal.

##### 4.8.2 The World Bank Projects

The Banks projects are listed in Annex 4.8/I under three headings; Appropriate Technology, Economic Evaluation and Pricing, and General.

#### 4.9 IMCO - Inter-Governmental Maritime Consultative Organization

IMCO is not involved in any water research activities.

#### 4.10 WHO - World Health Organization

##### 4.10.1 WHOs activities in water research

A great number of WHO-supported activities in water research are carried out by a WHO Collaborating Centre, the International Reference Centre for Community Water Supply (WHO/IRC), The Netherlands, and its networks of collaborating centres in developed and developing countries. See Chapter 4.11.

#### 4.11 WHO/IRC - WHO International Reference Centre for Community Water Supply

##### 4.11.1 IRCs activities

The International Reference Centre for Community Water Supply - IRC in short - was established in 1968 following an agreement between the World Health Organization (WHO) and the Netherlands Government.

Its activities were to include:

- the development of criteria for the design and management of community water supply facilities, mainly in developing countries;
- The provision of services for the comparison, evaluation, design and management of systems;
- the evaluation of the appropriateness of new techniques and procedures, as developed by collaborating institutions;
- the dissemination of research results;
- the training of personnel.

One of the key problems in developing countries is that there is a lack of experience and knowledge on planning, design, management, operation and maintenance of community water supply and sanitation facilities.

Against this background, the IRC has chosen as its terms of reference the development of activities, aiming at the implementation and improvement of water supply and sanitation systems, by means of international co-operation. Special attention is given to the solution of structural and fundamental problems in the field of water supply and sanitation and related subjects, mainly by promoting the exchange and transfer of technical and scientific knowledge and experiences.

##### 4.11.2 IRCs programmes and projects

On the following page, the programmes and projects of the International Reference Centre will be described.



In general, the following programme areas can be distinguished;

- (1) infrastructural and institutional facilities for community water supply and sanitation;
- (2) programme and project management and evaluation;
- (3) education and training of personnel;
- (4) development and application of appropriate technology;
- (5) social development/education and involvement of population;
- (6) information and research co-ordination.

In most of the programmes, technical subjects serve as a "vehicle" for an integrated development of the technological, organizational and sociological components of the various programmes. This means, that a variety of aspects is taken into account, such as planning, operation and maintenance, financial arrangements and administration, organization and management, as well as various institutional, infrastructural and sociological aspects, such as manpower development and community participation.

A series of integrated demonstration projects is being developed. Basic items of interest, such as hand pumps, slow sandfiltration, public standposts, well construction, simple pre-treated methods and pipe methods design are used to show the importance of integrated programme development.

#### 4.11.3 Information

Since its establishment, IRC has tried to contribute to the improvement of exchange and transfer of relevant information both within the programmes and projects, and by performing request handling services.

#### Programme on Exchange and Transfer of Information (POETRI):

POETRI aims at filling structural gaps in the field of information exchange. To this end contracts are being established in a number of developing countries with institutions which preferably have already acquired a central position in the field of water supply and sanitation.

### Newsletter

IRC has got a monthly newsletter, where distribution has grown to 15.000 copies. Its provides information on new developments in the sector, data on new publications and forthcoming courses, conferences, symposia, exhibitions as well as IRC-news.

### Library and documentation

At the moment the IRC Library contains approximately 5.000 documents. The Centre also regularly receives approximately 140 journals and newsletter.

### 4.12 IWSA - International Water Supply Association, Committee on co-operation in Development

IWSA is not involved in water research for the developing countries and have sent our questionnaires to WHO/IRC (see Chapter 4.11).

4.13 The National Environmental Engineering Research Institute, Nagpur, India

The National Environmental Engineering Research Institute, Nagpur, India, gives in its publication "Research Programmes in Environmental Engineering and Science in India" detailed information about all research projects in the field of Environmental Engineering and Science.

The basic aim of the inventory is to provide answers to questions on who is doing what research, where, under whose support, during which period, in environmental Engineering.

The publication contains information on 462 research projects carried out by about 893 scientists working in different organizations, which include National Laboratories, Universities, Institutions deemed to be the Universities and other Governmental or Semi-Government research establishments.

The research projects have been broadly grouped under following eleven sections:

- I) Water
- II) Waste Water
- III) Solid Wastes
- IV) Air Pollution
- V) Noise Pollution
- VI) Pollution by Pesticides
- VII) Pollution by Radioactive Substances
- VIII) Industrial Hygiene
- IX) Rural Sanitation
- X) Environmental Sanitation in General, and
- XI) Allied Subjects

Some of the sections eg. Water, Waste Water, Air Pollution and Allied Subjects have been further divided into smaller groups.

4.14 Inter-American Development Bank, Washington, D.C., USA

The Bank normally do not conduct research projects except the development of some methodologies.

The Bank is, however, financing research project. Recently, under the auspices of Electricité de France the Bank is conducting in two selected countries a study about water rates based on marginal cost. Finally, the Bank is financing in Peru a research project on water and sewerage maintenance which is conducted by the Centro Panamericano de Ingenieria Sanitaria.

4.15 Asian Institute of Technology, Bangkok, Thailand (AIT)

The development of water resources is vital to the technologied program of Southeast Asia. Water research in this area is undertaken by the Asian Institute of Technology with a vast array of research topics. Investigations are conducted by students as part of their thesis research and by staff members as faculty research.

Studies in Water Science and Engineering are being carried out in the area of coastal processes, fluvial hydraulics, soil conservation, statistical and stochastic hydrology, partially saturated flow in soils, system analyses, and other topics, both theoretical and applied. Typical research projects have been concerned with channel roughness, salt-water intrusion and the diffraction of waves caused by break waters. Research is being conducted to determine the basic hydrologic patterns and to assemble desk for Southeast Asia for the planning and design of engineering works.

NORAD sponsors 10 scholarships at AIT for students from Bangladesh, India, Pakistan and Sri Lanka. The scholarships began in January 1978 and will extend for 3 years.

4.16 Freshwater Biological Association, Windermere Laboratory, England

The Windermere Laboratory have no concrete proposals or plans for water research projects. The general idea, however, was to explore co-operation with the laboratory of the Uganda Freshwater Fisheries Research Organization at JINJA.

4.17 National Environmental Protection Council, Ministry of Human Settlements, Philippines (NEPC)

NEPC is mandated to support projects and researches geared towards environmental protection. Their present resources, however, do not permit the full implementation of this task due to various constraints, notably, financial and manpower limitations.

4.18 IDB - Inter-American Development Bank

The Bank normally do not conduct research projects, but is financing in Peru a research project on water and sewerage maintenance which is conducted by the Center Panamericano de Ingenieria Sanitari.

4.19 Department of International Development Co-operation, Ministry of Foreign Affairs of Finland

There are no pure research activities going on by the Finish development assistance. Water Development is, however, one of the major sector in some of their main recipient countries.

A Post-graduate Course in Water Technology is being arranged for students from Tanzania, Zambia and Kenya at the Tampere University of Technology. After one year in Finland the students will prepare works required for the diploma in their home countries.

#### 4.20 SIDA - Swedish International Development Assistance

Since the beginning of the second development decade (1970), SIDA's involvement in Water related fields have amounted to 275 million US \$.

The assistance to education training and applied research in connection with water supplies amounts to 9.0 million US \$ and on studies on economic and social effects of water to 1.1 million US \$.

SIDA's research related assistance is incorporated in major water development programmes. The water research and research related to water problems are carried out by Consultants and evaluation teams.

4.21 SAREC - Swedish Agency for Research Co-operation with Developing Countries

The first years of SAREC's existence, 1975-79, have been an experimental period to implement the Swedish Government's policy to increase Swedish support for Third World research and research co-operation. 1st July 1979 SAREC was re-organized as a Governmental authority, similar to SIDA and other government authorities.

It is the intention to retain SAREC as a relatively small interdisciplinary unit and expand the activities mainly by broadening and deepening the collaborating network of institutions and scientists both internationally and within Sweden.

The formation of SAREC's activities has to a great extent followed goals and principles which are now reflected in UNCTED's programme of action. The programme also contains several suggestions for how research support could be further developed. SAREC's support to research is divided into four different programmes:

1. Research Cooperation with Developing Countries
2. Research Cooperation Between Developing Countries and Special Research Projects
3. International Research Programmes
4. Swedish Development Research.

The division has been based on categorization by cooperation partner. The projects in the different programmes may have different characteristics. In some cases, for example, SAREC aid goes to institutions which in their turn allocate money for research projects, while in other cases SAREC is the direct financier of research projects.

Raising the developing countries' capacity to do research has received strong support at UNCTED. SAREC has in this context primarily chosen to contact the central research and planning authorities in the developing countries in order to explore different ways of giving outside support to development oriented research. In most developing countries, with the exception of the least developed, there is some form of organization at the government level dealing with research policy planning and co-ordination, and often financing of research.

These research policy authorities in the developing countries, which were created in order to use scarce research and development funds as effectively as possible, are often quite weak. Resources which are allocated for research are small and the responsibility for financing lies almost entirely within the ministries, which are also responsible for day-to-day activities within their given sector. In such an organization, research needs must often be sacrificed to the urgency of immediate problems.

Strengthening of the developing countries' research capabilities is now a state goal for the international programmes, but this still mostly implies providing training in special courses, and not the initiation of research. A new and positive role for the international organizations should be to make it easier for the developing countries to organize research within their own borders or in co-operation with institutions in other developing countries, and then provide services such as scientific advice, seminars, etc. They should not, however, be responsible for the total financing and project organization. The International Foundation for Science, IFS, which receives SAREC support, provides individual research support according to these principles.

Also within the programme to support development research in Sweden there are possibilities to contribute to the strengthening of the research capability of the developing countries. Swedish research institutions are able to obtain grants from SAREC for research co-operation with developing countries. Restricted exchange programmes, where the developing country lays local costs and SAREC the exchange costs, Swedish salaries, etc, could, in certain cases, be of value in supporting research in a developing country. SAREC may also take the initiative for research co-operation with developing countries where special expertise exists on the Swedish side.

#### 4.22 Center for Development Research, Copenhagen

The Center for Development Research is involved with the Bureau of Resource Assessment and Land Use Planning, University of Dar Es Salaam (BRALUP) on a joint socio-economic Research Project in connection with the preparation of Water Master Plans for Mbeya, Iriringa and Ruvuma Regions.



#### 4.23 Department of Sanitary Engineering, Technical University of Denmark

From the Department we have received the following project description.

Water Supply for a densely populated area must be up-dated and one of the problems is that of setting up supply parameters for the behaviour of the surface waterworks. The water supply system often has to be worked out while the reservoirs are under design. Financing the water treatment process can only be done with knowledge of the water quality in the river which will eventually be dammed. The same water quality is rarely found later in the reservoir.

The project includes a literature study on methods of prediction and control of water quality in drinking water reservoirs. This will be followed by a study of an Malaysian reservoir, at present under construction. A model of chemical and biological parameters will be developed.

#### 4.24 Dansk hydraulisk institut (DHI)

From the above institute we have received a comprehensive list of DHI projects in the following sector:

1. Post and terminal facilities
2. Cooking water investigation
3. Hydrology, rivers and water supply
4. Harbour protection work
5. Receiving water studies
6. Transfer of know-how
7. Tides and storm surges
8. Special hydraulic Investigations
9. Offshore investigations
10. Sedimentation and coastal protection

Most of the projects have been or are currently carried out in the developing countries.

4.25 VKI - Water Quality Institute, Hørsholm, Denmark

VKI is currently engaged in a project called "Data registration and data processing in water planning in developing countries - outline of a water planning model for rural areas in Kenya".

The research projects is financed by DANIDA through The Research Council for Development Research.

4.26 DANIDA

The water research activities financed by DANIDA are listed in Annex 4.26/I.

4.27 Royal Institute of Technology Section of Developing Countries,  
Stockholm

The on-going activities connected to water research with a bearing on developing countries are listed in Annex 4.27/I.

#### 4.28 Consulting Engineers

Major consulting engineering firms in Scandinavia with long experience in developing countries have been contacted.

Water research activities are parts of the Consultants wider services and are only to a small degree reported in such a way making it possible to identify ongoing research projects. The information from the Consulting Engineers are summarized in the following.

##### VBB/SWECO - Stockholm - Sweden

A bibliography over special reports have been received and cover a wide range of topics. The reports are listed under Appendix 4.28/I.

##### VIAK - East Africa Ltd. and VIAK AB, Stockholm

VIAK is for the time not being involved in water research, but have recently carried out some evaluation projects of rural water supplies in Kenya.

The projects referred to by VIAK are:

1. Evaluation of the Rural Water Supply Programmes
2. Rural Water Supply Pilot Reliability Study
3. Investigation of Water Consumption Variations.

##### COWICONSULT - Copenhagen, Denmark

Cowiconsult has submitted a description of a research project on sanitation technologies currently under implementation. The objectives of the study are:

- to review current implementation of sanitation technologies in Africa through a field study,
- to establish the financial capability of an urban community to solve their sanitation problems with, emphasis on the principle that an urban community must be able to financially afford a proposed sanitation scheme,
- to illustrate through a case study a method of appraising alternative sanitation schemes considering the whole of a complex urban area in Africa.

The case study addressed an urban area (Morogoro in Tanzania) typical for Africa. Many aspects were considered within the fields of socioculture, economy, environment, and technology.

I. KRUGER A/S - Copenhagen, Denmark

I. Krüger A/S is currently involved in a water resources project at the Phillipines, please see Chapter 4.23.

SOILWATER CONSULTANTS - Helsinki, Finland

Soilwater Consultants have submitted a brochure which gives some ideas of the firms activities. Water research activities have not been specified, but are included in some of the projects.

4.29 ANSTI - African Network of Scientific and Technological Institutions

The establishment of an African Network of Scientific and Technological Institutions (ANSTI) was conceived by Unesco as a follow-up to the Conference of African Member States of Unesco responsible for the application of Science and Technology for Development (CASTAFRICA) held in Dakar, Senegal, on 21-30 January 1974. The ANSTI project aims at bringing about close and active collaboration between African Engineering, Scientific and Technological Institutions involved in postgraduate training and/or undertaking research and development in areas of developmental significance.

Unesco appointed a high level consultant who visited 13 African Universities and national research institutions in 1975. Based upon his report, Unesco suggested, a network that could include all the basic and engineering sciences, to be established at a cost ultimated at US \$ 5.000.000. However, giving due consideration to all the parameters involved in financing and implementing this kind of network, a meeting of African experts agreed with Unesco that it was preferable to concentrate first on an engineering science network whose preparatory and establishment phase could be undertaken at the more reasonable cost of about US \$ 1.5 million over a period of 2 to 3 years.

The first and a subsequent meeting of experts also concluded that disciplinary sub-networks be established in engineering sciences in fields which can make significant contributions to the development efforts of the participating countries. Experts drawn from the African Universities approved nine disciplines at the meeting held at Nairobi on 11-15 December 1978.

### Structure

The nine disciplinary sub-networks and the corresponding co-ordinating institutions are as follows:

1. Agricultural Engineering/Food Processing Technology - Centre Universitaire de Dschang, Cameroun.
2. Chemical Engineering - Institut Universitaire de Technologie, Dakar, Sénégal.
3. Civil Engineering - University of Lagos, Nigeria.
4. Electrical Engineering - University of Science and Technology, Kurnasi, Ghana.
5. Energy/Power Production - Office Nationale de l'Energie Solaire (ONERSOL), Niamey, Niger.
6. Mechanical Engineering - University of Nairobi, Kenya.
7. Minerallurgical Engineering - University of Zambia, Lusaka, Zambia.
8. Mining/Geological Engineering - Faculté Por technique, UNAZA, Lubumbashi, Zaire.
9. Water Resources Engineering - University of Dar Es Salaam, Tanzania.

With regards to (9) Water Resources Engineering please see chapter 3.7.3. According to our latest information water supply Engineering and Environmental Engineering will be done in Zaria, Nigeria. Drainage Engineering may be done in Nairobi. However, the final structure of ANSTI may be decided early in 1981.

The meeting also recommended the appointment of a Project Co-ordinator initially at the Unesco Regional Office of Science and Technology for

Africa (ROSTA), Nairobi, who will assist the co-ordinators of each disciplinary network in the establishment of the network as well as co-ordinating their communication, training, research and development functions. In addition he will take steps to mobilize funds for the continuing development of the network.

The overall activities of ANSTI will be under the direction of a Management Committee consisting of the following:

1. The disciplinary area co-ordinators (9 during the first phase of the project).
2. A representative of the Association of African Universities (AAU) who shall be the Chairman.
3. A representative of UNESCO. The Project Co-ordinator is secretary to the Committee.

#### Functions

The main functions of ANSTI are to help organize postgraduate and research programmes on a co-ordinated basis, organize meetings and seminars, students and professor exchanges, provide fellowships and promote network activities through publications.

## 5. PROPOSALS FOR RESEARCH ACTIVITIES

### 5.1 Zambia

The department of Water Affairs, office of the Director, has submitted the following proposals.

1. Ground-water inventory, different aquifers, their characteristics and behaviour in different formation.
2. Water balance of Lake Baugweula and Swamps.
3. Water balance study of Chambeshi and Luapula river basin as a whole.
4. Water balance study of Luena flats in the Zambesi basin.
5. Detailed hydrological behaviour of Luanguva river basin for multi-purpose benefits.

From Østlandskonsult A/S,

Lusaka we have received the following proposals.

#### POSSIBLE RESEARCH-PROJECTS IN ZAMBIA.

##### 1.0 Water-Balance Study of the Township Water Supplies.

- 1.1 Registration of water demand per capita within the residential areas.

Differentiate between high-, medium- and low-cost housing.

- 1.2 Registration of the variation in the water use throughout the year to determine peak-day and peak-hour factors.

- 1.3 Registration of leakages.

- 1.4 Registration of water for irrigation, i.e. gardens in residential areas.

The President, Dr. Kaunda, has requested everybody to grow their own food. What influence does an intensive cultivation have on the total water demand?

- 1.5 Registration of water meters.
- 1.6 Determination of the design criteria for the water demand.
- 1.7 Proposition on the installation (and repair) of water meters, and on the reduction of the leakages.
- 1.8 Proposition on a system for water tariff.

2.0 Standards and design criteria for water and sewage works.

3.0 The sewerage systems in Western Province (and Zambia as well) are not satisfactory. The normal scheme is singlehouse septic-tanks.

The water intakes are normally near the main point of population. Therefore a study on the total pollution-potential should be considered.

This problem is general, and the developing of the township water supplies is strengthening the situation.

4.0 Rising Main.

DWA does require a separate inlet pipe from treatment/highlift to the storage tanks. This is due to the demand on maximum circulation in the tanks.

(The idea is to reduce the problems or disadvantages caused by growth in the tanks and warm water).

A study on minimizing the energy used has to be combined with growth-tests.

The disadvantages with the DWA-requirements are mainly that the storage tank is located near the intake, and not related to the reticulation system.

5.0 Sand Filter.

DWA has installed all types of filters in the Western Province, and neither of them has been operated according to schedule.

This is due to the lack of filter sand (transported from the Copperbelt - ab. 1000 km).



5.1 Determination on the use of Kalahari-sand as filter material and design-criteria such that

- filtering rate
- backwashing rate
- changing of sand

6.0 Hydrology.

A great number of hydrological stations have been established throughout Zambia, and daily water levels are recorded. The main intention is to forecast flood, and not do record the variation in discharge.

During our fieldwork we have found that quite a few water gauges are out of position.

The gauges should be controlled and adjusted. We do also recommend the construction of a reliable profile, such that rating curves can be constructed.

7.0 Water Laboratory.

The idea of a water laboratory was mentioned for Director of Water Affairs in jan. 79, and he was immediately enthusiastic.

The existing laboratory at DWA is badly equipped and lacks chemicals and qualified personnel.

If NIVA will be in charge of such a laboratory, we will recommend that they cooperate with the Water Laboratory at NCSR (National Council for Scientific Research).

8.0 Water Master Plan Kaoma/Luena River.

The government has large and extensive plans for the developing of Kaoma District.

- Kamakokwa TBZ (Tobacco Board of Zambia) will be extended.
- A greater Agricultural center is planned at Longe.
- The breeding of cattle will be extended, and consequently an abattoir has to be constructed.

But it is not just Kaoma Township which is depending on Luena River.

- Water Supply for the villages downstream Kaoma.
- Fishing
- Irrigation and agricultural activities.

It might be of some interest that the coefficient of runoff in Kaoma District is less than in the rest of the Province, and also that the probability of finding potable groundwater is less.

## 5.2 Kenya

The Water Department, Ministry of Water Development has submitted the following 2 projects.

1. Treatment of effluents arising from the wet-processing of Coffee.
2. Realistic standards for fluorides in drinking water with special reference to the African environment.

University of Nairobi, Civil Engineering Department,  
Public Health Engineering Section has submitted the following proposals.

1. Appropriate methods of water treatment in rural areas e.g.
  - a) Slow sand filtration, gravity and upflow.
  - b) Defluoridation
  - c) Claypot chlorination
2. Simple waste water facilities
  - 1) Stabilization ponds
  - 2) Non-water borne sanitation.
3. Solar distillation of saline water.
4. Windmill pumping.
5. Hand Pumps.

### 5.3 Tanzania

We have got no replies either from the University, Faculty of Engineering, the Ministry of Water, Energy and Minerals or NORAD's Resident Representative.

### 5.4 Botswana

NORAD's Resident Representative has pointed out that the Ministry of Water Affairs have no donars for the project, "Limpopo Water Utilization Study". The Limpopo is one of the largest single sources of water in Botswana. It is important, particularly in regard to international water rights, that long term planning for the use of its water be undertaken.

### 5.5 Research Proposals from Norwegian Consulting Engineers

A/S HJELLNES & Co:

The following list of proposals have been received:

- Systematic registration of available literature on water engineering in developing countries in general and in the main partner countries in particular.
- Establish a library of such literature.
- Registration of institutions, government bodies etc. dealing with water engineering in each main partner country.
- Practical and safe disinfection methods for use in developing countries.

GRØNER CONSULTING ENGINEERS:

May we suggest that NIVA assigns a competent person with varied experience to do research work within developing countries. This person should be available to work on the staff of consulting engineers working abroad.

To establish a specialist of that category, it may be suggested that some institution, say NORAD, should sponsor:

- A study of laboratories in the countries in question.
- Suggest standard testing procedures, sampling methods and presentation of analyses.
- Establish co-operation with laboratories, and provide an instruction program for the attendants of the laboratories.
- Compile and make accessible data from existing analyses and reports of interest. These data should be filed at NIVA.

If an arrangement as the above shall be realised, we assume that this will comprise the basis of a number of research projects. The volume of the research works is assumed to depend on the impact the suggested arrangement will give the financing institutions of the projects.

We have been discussing possible objects of research, and may suggest the following.

Water supply: Protection against

Bilharzia, water born diseases

Simpler improved disinfection methods

Treatment methods, simple and safe

- ground infiltration.

Sewerage: Stabilization ponds-algae removal, disinfection for reuse, protection of streams.

Effluents from coffee factories, etc.

Artificial aeration of stabilizing ponds. The effect of temperature and altitude on treatment processes.

Irrigation: Standards for water quality using treated sewage, taking crops and soil conditions into consideration.

Quality criteria for drinking water, effluents and water for irrigation use.

Domestic use of water, disposal systems, social acceptibility of systems.

Design of storm water systems, standard design.

Sulphate corrosion in sewage mains. Study of flushing devices for end mains. Training of water and sewerage works attendants.

Use of solar energy in water supply processes, for instance using distillation.

ELLIOT STRØMME A/S:

Strømme stresses the need for basic data in hydrology as well as simple treatment methods and control systems.

Østlandskonsult A/S.

See under subheading ZAMBIA, chapter 5.1.

## 6. THE NORWEGIAN RESEARCH BASE IN WATER RESEARCH AND DEVELOPMENT

### 6.1 General

Several institutions in Norway are involved in water research, but for the purpose of this report we have listed the institutions currently involved in drinking water research and waste water research. We have also listed the research projects currently undertaken as well as the costs or the man-month requirements.

### 6.2 Drinking water

The overview of the drinking water research projects is compiled by The Drinking Water Committee under The Royal Norwegian Council for Scientific and Industrial Research (NTNF).

We gather the information as representative for the drinking water research situation in Norway.

### DRINKING WATER

INSTI- TUTION	MAIN AREAS/PROJECT TITLES	MAN-MONTHS	
		1980	1981
	SOURCES AND SUPPLIES		
IFE	Supplies - studies of dispersion in surface and groundwater reservoirs	4	4
	Capacity measurements, discharge measurements	2	2
	Radon in ground water	2	4
NGU	Mapping of groundwater resources		12
	Dispersion/mechanisms for toxic substances in various types of geologic materials		1
	Establishment and testing of drilled wells		36
	Artificial infiltration		1
	National groundwater network		2
	Groundwater data bank		18
NIVA	Characteristics and importance of humus for the chemical, biological and hygienic status of water	8	16
	Dispersion models of pollutants	3	2
	Seepage water from solid waste dumps and urban areas	4	7
	Algal metabolites	2	2

		MAN-MONTHS	
		1980	1981
NLH	Supply for agriculture and sivilculture - water-use plan for agriculture		30
NLVF	Groundwater	18	18
	Legal restrictions for catchments		2
NVH	Groundwater - microbial quality		1
	Supply and survival of bacteria from domestic sewage		6
SI	Supply from the atmosphere and from industry	1	1
SIFF	Bacteriological conditions in large lakes	2	3
	Effects of water regulation		4
	Carcinogens in well-water		24
	Algal metabolites	1	0
SINTEF	Seepage water from solid waste dumps	3	4
<hr/>			
TREATMENT			
IFE	Water treatment with active charcoal	3	3
NIVA	Evaluation of existing water-treatment plants	4	1
	Development of small water-treatment units	4	6
	Alkalization of drinking water		3
	Precipitation on filters, electrolytic Al-dosing		4
NTH	Removal of humus by various methods	12	12
	Biproducts of treatment methods	12	12
SIFF	Algal metabolites		
	Creation of by-products by treatment (UV, chlorine)	1	0
SINTEF	Treatment of drinking water, R.D. and electro- membrane techniques	6	3
	Water treatment with activated charcoal	4	9
<hr/>			
TRANSPORT			
IFE	Leak searching using tracers	4	4
NIVA	Corrosion in transport systems - remedies	2	2
SIFF	Quality changes under transport (metals, asbestos)		2
UTV	Leak searching		
	Computer program for calculation of pressure		

		MAN-MONTHS	
		1980	1981
<hr/>			
WATER QUALITY AND HEALTH			
IFE	Development of analysis methods (chemical)	2	2
	Speciation of pollutants	2	2
Cancer Register	Epidemiological studies, drinking water - cancer		4
NGU	Heavy metals in stream sediments		
NIVA	Development of chemical and biological analytical methods	1	1
	Speciation of pollutants, biological availability	1	1
	Committee for research on drinking water		3
NVH	Algal toxins		3
	Development of methods - bacteriology		2
SI	Development of methods for biological and chemical analysis	5	7
	Speciation of pollutants	2	3
	Supporting projects (SIFF, NTH, NIVA)	1	1
SIFF	Algal metabolites		
	Steering committee for civil defence		
<hr/>			
OPERATION - CONTROL AND EVALUATION OF WATER-TREATMENT PLANTS			
NIVA	Evaluation of existing water-treatment plants		2
NTH	Optimization of operation of water treatment		9
SIFF	Water-works data, computers		24
<hr/>			



### 6.3 Waste Water Research

With regard to waste water research we have based our information on the overviews compiled by NTNF's Committee for Treatment Plant Operation Research and the Committee for Transport of Water.

#### TREATMENT PLANT OPERATION

INSTI- TUTION	MAIN SECTORS/PROJECT TITLES	COST IN \$
QUANTITY AND QUALITY OF SEWAGE		
NIVA	Effects of food-processing waste water on the operation of sewage treatment plants	30.000
SEWAGE TREATMENT PROCESSES		
NIVA	Filtration of treatment plant effluents	190.000
NIVA	Nitrogen removal in activated sludge plants	14.000
NTH	Chemical precipitation in rotating biological contactor plants	10.000
PROCESS EQUIPMENT		
Thune- Eureka A/S	Equipment for dewatering of solids from screens	5.000
NIVA	Evaluation of prefabricated sewage treatment plants	230.000
NTH/SINTEF	Corrosion problems in sewage treatment plants	10.000
	A survey of hydraulic flow meters in sewage treatment plants	
TREATMENT PLANT OPERATION AND CONTROL		
SI/NIVA	Instrumentation and process control of sewage treatment plants using chemical precipitation	135.000
MANPOWER PLANNING		
ANØ	Stability of treatment plant performance	50.000
NIVA	Operational experiences in sewage treatment plants receiving septic tank sludge	20.000

---

INSTITUTION	MAIN SECTORS/PROJECT TITLES	COST IN \$
Telemark Distrikts- høgskole	Operation costs in sewage treatment plants	20.000
Ing. Vidar Tveiten	Sludge dewatering at small sewage treatment plants	12.000
	A survey of sewage treatment plant operation costs	
ANØ	Evaluation of a technical assistance task force in the Nordre Øyern Sanitary District	38.000
Ing. Vidar Tveiten	Organization of treatment control at sewage treatment plants	16.000
<hr/>		
OCCUPATIONAL CONDITIONS		
Østlands- konsult A/S	Ventilation and energy consumption in sewage treatment plants	47.000
SI	The health hazardard for treatment plant operators (Preliminary project)	10.000
	Use of heat-pump in sewage treatment plants	

---

TRANSPORT

INSTI- TUTIONS	PROJECT TITLES	COST IN \$
VHL/C.H. Grøner A/S	Cost/benefit analysis of leak searching methods	14.000
VHL	Research and development strategy for leak searching	5.000
Bærum municipality	Storage and infiltration	5.000
VIAK	House connections - Branch lines	23.000
NTH	Postanalysis of rehabilitation work	5.000
NTH	Runoff from trafic areas	3.000
VHL	Separating pipe systems	8.000
NTH	Operation of pumping stations	400
VHL	Evaluation of rehabilitation of sanitation system included in Mjøsaksjonen	40.000
VHL	Evaluation of reconstruction plans	6.000
NIVA	Rehabilitation of existing sanitation systems	20.000
VHL	EDB used in distribution system calculations	
NGI	Frozed grounds influence on buried pipes	4.000
NBI	Development work on distribution- and sanitation pipes	87.000
Østlands- konsult A/S	Damage on under-water pipes	12.000

ABBREVIATION

ANØ	Norther Øyern Joint Sewage Foundation
IFE	Institute for Energy Technique
NBI	The Norwegian Building Research Institute
NGI	Norwegian Geotechnical Institute
NGU	Geological Survey of Norway
NIVA	Norwegian Institute for Water Research
NLH	The Agricultural University of Norway
NLVF	The Agricultural Research Council of Norway
NTH	The Norwegian Institute of Technology
NVH	The Veterinar College of Norway
SI	Central Institute for Industrial Research
SIFF	The National Institute of Public Health
SINTEF	The Foundation for Scientific and Industrial Research at the University of Trondheim
UTV	Committee for transport of water, Royal Norwegian Council for Scientific and Industrial Research
VHL	River and Harbour Laboratory

ANNEX 1.1/I

UNITED NATIONS CONFERENCE OF SCIENCE AND TECHNOLOGY FOR DEVELOPMENT  
(UNCSTED)

UNCSTED's Recommendation

UNITED NATIONS CONFERENCE OF SCIENCE AND TECHNOLOGY FOR DEVELOPMENT  
(UNCSTED)

UNCSTED's Recommendation

1. Role of developed countries in the process of strengthening the scientific and technological capacities of developing countries

Major elements of scientific and technological co-operation policies

- A.39 There is a need for action on the part of developed countries to support and facilitate the internal efforts of developing countries to achieve development through the establishment of endogenous scientific and technological capacities. Such action should be geared towards sharing of knowledge and experience and the enhancement of the range of options available to developing countries in the process of achieving their nationally defined development goals.
- A.40 Developed countries should, in this context, support scientific and technological research aimed to solving the problems of developing countries, which should be carried out, to the maximum extent possible, within those countries. Further, such research in developing countries should be congruent with national, subregional or regional priorities and should be carried out with effective, appropriate planning, participation and control of the appropriate national institutions of developing countries.

- A.41 New forms of co-operation that reflect the interests and aspirations of developing countries should be promoted. Such an approach should include an intensive participation and initiative of developing countries in the designing, orientation and implementation of science and technology co-operative activities. It could materialize in comprehensive agreements, including long term agreements, covering technology, finance, production and trade.
- A.42 This approach to international co-operation should translate itself into the adoption of action-oriented measures by developed countries with the following objectives:
- a) To make available, in a systematic manner in accordance with their national laws and regulations, the results of their research and development, relevant to the social and economic development of developing countries;
  - b) To increase substantially the proportion of their research and development expenditures and efforts devoted to the solution of jointly identified specific problems of primary interest to developing countries in accordance with objectives and priorities set by each Government of the developing countries. Research and development efforts of developed countries devoted to the problems of developing countries should be consistent with the priorities of developing countries and should provide for the active participation of developing countries in their design, planning, execution and evaluation.
  - c) To provide substantially increased support to developing countries in enhancing their scientific and technological capacities for the production and marketing of capital goods, in accordance with their national development priorities.

#### Institutional arrangements

- A.43 Direct linkages should be established between the research and development systems of developed and developing countries through co-operative arrangements. Such arrangements should provide for

the undertaking of joint research and development programmes, which should be carried out to the maximum extent possible in developing countries, so as to exchange personnel and share results.

A.44 Developed countries should co-operate with developing countries in the process of restructuring and improving/the existing international machinery or building-up new international institutions that are more responsive instruments for development and international co-operation in science and technology.

A.45 In order to develop and strengthen their scientific and technological co-operation, developed and developing countries should, in appropriate cases, conclude and expand bilateral intergovernmental agreements, including long-term agreements, and set up joint intergovernmental commissions for this purpose.

A.45 Bib. Co-operation between the scientific and technological associations of developed and developing countries should be encouraged.

A subject to national laws and regulations and international agreements to which they are signatories, both developed and developing countries should eliminate restrictions on the reproduction and translation of scientific and technological journals and materials.

#### Development of human resources

A.49 Developed countries should;

- a) Co-operate with developing countries in training their scientists and technologists both through the provision of fellowships for study abroad and through training programmes in developing countries involving scientists and technologists from developed countries. Such exposure and training should be undertaken in conformity with the needs, priorities and specific conditions of developing countries;



- b) Train citizens of developing countries in technology management in appropriate institutions and in industrial plants located within their territories in order to promote the enhancement of production and services in developing countries;
- c) Facilitate and strengthen the awareness of their people of the need to understand fully the scientific and technological historical process, particularly through the provision of education on the development of scientific and technological cultures of developing countries. Developing countries could assist in this task;
- d) Increase significantly free training or fellowships for training or fellowships for training to students from the developing countries, both in developed and developing countries;
- e) Remove any discriminatory conditions affecting the training of the training of personnel from developing countries;
- f) Intensify international discussions about ways and means to curb and reverse the brain drain from the developing to the developed countries and to encourage the absorption of highly skilled and trained scientists and technologists within developing countries and support activities of international organizations aimed at finding urgently needed solutions to the brain drain problem without prejudice to existing international agreements.
- g) Co-operate in the implementation of major programmes relating to the problems of developing countries as identified by developing countries themselves for basic and field research work;
- h) Support the efforts undertaken by developing countries to establish national, subregional, regional and interregional centres of excellence in higher education and research.

A.53 Developed countries are urged to:

- a) Through individual or joint action, untie grants, soft loans, credits and any other forms of development aid as well as their contributions to international financing institutions and foundations so as to facilitate the utilization and subsequent strengthening of the endogenous scientific and tech-

and foundations so as to facilitate the utilization and subsequent strengthening of the endogenous scientific and technological capacities of developing countries;

- b) Ensure the maximization of the use of local technologies and services required in a development project in the developing countries where the projects are set up;
- c) Encourage the strengthening of regional, subregional and interregional co-operation in the field of science and technology by means of increasing the volume and improving the terms and conditions of financing the programmes undertaken by developing countries at those levels.

#### Action by developed countries

B.10 Developed countries should:

- B.10 a) In view of the accumulation of scientific and technological knowledge in their countries, make those information resources which are readily accessible to their own nationals also readily accessible to users from developing countries.
- b) In regard to commercially available information, adopt measures and arrangements allowing developing countries to use their specialized information systems and acquire their publications at reasonable cost and, whenever possible, in local currency or free of charge;
- c) Provide the fullest possible access to available information on technologies, terms and conditions of supply, local technical and management requirements, and activities of transnational corporations and enterprises in the fields of science and technology.

#### Elements of international co-operation in science and technology

B.17 The following arrangements for effective international co-operation should be encouraged:

- a) Co-operative activities aimed at the development of mutually beneficial and user-oriented information systems in areas of major scientific and technological concern, which are of particular importance to developing countries, at the sub-regional, regional, interregional and international levels;
- b) Bilateral scientific and technological co-operation arrangements providing for the exchange of scientific and technical personnel between institutions with the same objectives or activities; information about such bilateral co-operation should also be exchanged;
- c) Personal contacts and continuing working relationships between scientists and technologists and between scientific and technological societies and associations of developed and developing countries.

Action by developed countries

- B.19
- a) Developed countries should devote more resources to the solution of problems relevant to developing countries, and to co-operative projects between developing and developed countries; priority should be given to those projects which contribute the most to strengthening and promoting scientific and technological capacities in developing countries;
  - b) The choice and mode of implementing co-operative projects should accord with the development priorities determined by the developing countries themselves;
  - c) Training programmes for nationals from developing countries should emphasize those areas and disciplines for which there is a clear need in the developing countries as determined by developing countries themselves;
  - d) The leader of a co-operative project undertaken in a developing country should be a national of that country, who should be responsible for its management and technical control. When this is not immediately possible, the project should include the training of local managerial and technical personnel;

- e) The choice of any foreign consulting firm and/or consultant required by the developing countries should be made by the country itself unless otherwise mutually agreed;
- f) Sponsoring agencies in developed countries should accept that any science and technology co-operative project in a developing country should be undertaken jointly with the participation and control of local institutions to ensure that the project and its execution conform to the national interest, laws and regulations of the developing country concerned;
- g) Co-operation projects conducted in developed country laboratories or research institutions should involve scientists from the participating developing country. In the elaboration of the terms and conditions of the agreements concerning such projects, due regard should be paid to the objective of including provisions for the transfer of results to the participating developing country and their application there on a preferential basis. Conditions for commercial exploitation of the results of co-operative research should be determined by the co-operating parties. Due recognition to the developing country partner should be given in the patents covering such results.
- h) In cases where the raw data pertaining to a developing country partner collected in the course of a co-operative project are considered by that developing country partner to be sensitive from its security or economic point of view, the decision to release such data or information should be at the discretion of the developing country partner. Publication of analyses and conclusions should be a joint undertaking; except by prior agreement.
- i) Co-operative projects should not be conducted when the developing country is used as a testing ground for new scientific concepts or technical innovations, without potential for benefit to its development;

- j) Whenever a co-operative project involves research in drugs, chemosterilants, pesticides etc., in a developing country, it should conform not only to the current regulations and ethical requirements in the developing country, but also to the regulations of the developed country as well as those accepted internationally unless an explicit decision to the contrary is taken by the developing country partner;
- k) Identification and assessment of the ecological implications of co-operative programmes should be an integral part of the programme itself. Co-operative research conducted in a developing country should conform to the environmental standards adopted by the developing country concerned;
- l) Co-operative programmes should be flexible so as to allow the developing country concerned to choose the combination of inputs (expert, equipment, training etc.) best suited to its specific needs;
- m) Scientific and technological co-operation should not be used to impose any particular political or economic system on developing countries.

ANNEX 4.2/I

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

The Main Scientific Projects - Phase I

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

The Main Scientific Projects - Phase I

1. *Development and improvement of methodology of computation of water balances and their elements, including groundwater.* Concerned with improving computation of the components of the short-term water balances and refining methods of extrapolating results of ground-water balance studies by the application of mathematical and physical models.
2. *Compilation of regional, continental and global water balances.* Covers the assessment of long-term, large-scale water balances, completion of the world inventory of variations of snow and ice and the inventory of perennial and annual snow masses, study of glacier variations, and estimation of water, ice and heat balance elements at selected representative glacier basins.
3. *Research into hydrological regimes and development of methods for computation of their elements for water planning.* Concerned with assessment of parameters of the hydrological regime necessary for various water resource development projects, study of fluctuations in the hydrological regime and the problem of adapting water resources to water needs and generalization of results of research.
4. *Development of investigations on representative and experimental basins.* The aim is to improve understanding of the interrelationships of elements of the hydrological regime under natural conditions and as affected by man's activities. Includes application of mathematical models and systems analysis, prediction of basin flow, extrapolation of data from small to large regions, and evaluation of the influence of man's activities on the hydrological cycle.

5. *Investigation of the hydrological and ecological effects of man's activities and their assessment.* Concerned with the influence of land use practices, the effects of hydraulic works on channel erosion and sedimentation, changes in the hydrological regime resulting from irrigation, estimation of changes in the salt-fresh water balance in coastal areas resulting from man's activities, study of the hydrological consequences of the exploitation of new energy sources and of the possibility of establishing hydro-ecological indices for evaluation of water projects.
  
6. *Hydrological and ecological aspects of water pollution.* Covers evaluation of the "acceptance" capacity of the various environments into which liquid effluents or solid wastes are discharged in dispersed form and study of the hydrological, atmospheric and ecological consequences of thermal discharge from electrical power plants.
  
7. *Effects of urbanization on hydrological regime and on quality of water.* Covers study of urban hydrology including laboratory and field studies, development of models of urban water systems, mathematical models applied to urban catchment areas, rainfall-runoff relationships for sewage and storm drainage systems and changes in groundwater quality produced by urban and industrial contaminants. Socio-economic effects are taken into account.
  
8. *Long-term prediction of groundwater regime taking into account human activities.* Concerned with study of the response of aquifers to heavy pumping and exploitation and the long-term prediction of reserves available, determination of the limits of rational exploitation and capabilities of models for the prediction of quantitative and qualitative changes in the groundwater regime.



ANNEX 4.2/II

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

Scientific (A) and Educational (B) Projects coordinated by the  
Inter-governmental council of the International Hydrological  
Programme

General objective: To increase the capacity of Member States advanced methodologies and technologies to the assessment, development and management of their water resources through a scientific programme aimed at the improvement of the understanding of hydrological processes and the encouragement of research and the dissemination of its results among Member States.

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organization
A.1 To encourage studies in hydrologic processes with a view to improving the representation of the hydrological regime and assessment of water resources	<p>A.1.1 To improve methods of determining the elements of water balances</p> <p>1.1.1 To review the results of research carried out during the first phase of the IHP on methods and precision of determining the elements of water balances</p> <p>1.1.2 Preparation of technical report summarizing the national experiences</p>	<p>1982</p> <p>1983</p>	<p>National</p> <p>Secretariat</p>	
	<p>A.1.2 To assess the water equivalent in seasonal snow cover, in glaciers and perennial snows and their variations due to climatic changes and anthropogenic effects</p> <p>1.2.1 To investigate large-scale physical processes involved in melting of snow</p> <p>- preparation of a technical report</p> <p>1.2.2 To prepare an atlas of the world resources of perennial ice and snow</p> <p>1.2.3 To compile methods of assessment of water content in seasonal snow cover</p> <p>- preparation of a technical report</p>		<p>IAHS (ICSI)</p> <p>USSR National Committee with Unesco assistance</p> <p>IAHS (ICSI)</p>	<p>!</p> <p>→</p> <p>!</p>

Projects foreseen to be continued or to receive a follow-up during IHP III are indicated by an \* in the column proposed implementation dates.

Note 1. The numbering does not correspond to that of the Questionnaire

Note 2. Dates are 1981 or 1983 if not otherwise indicated

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>1.2.4 To continue the surveillance of glacier fluctuations</p> <p>- preparation of periodic report "Fluctuation of Glaciers"</p>		IAHS/Unesco	UNEP, IUGS/FAGS
	<p>1.2.5 To continue the compilation of the World Glacier Inventory</p>		IAHS/Unesco	UNFP
	<p>A.1.3 To investigate the processes of water erosion and sedimentation in river basins and the calculation of solid matter transport including the use of regional physical geographical parameters</p>			WMO, COWAR, IAHR
	<p>1.3.1 To prepare a report on recent developments</p>		IAHS	1 2 1
	<p>1.3.2 Compilation of global sediment yield data</p>		IAHS/Unesco	
	<p>A.1.4 To assess possibilities of artificial ground-water recharge under different conditions</p>			COWAR IAHS
	<p>1.4.1 Preparation of a technical report</p>		National Committee of Fed. Rep. of Germany	
	<p>A.1.5 To review the application of remote sensing to hydrology, including groundwater</p>		Rapporteur	WMO, UN, IAHS, COSPAR
	<p>1.5.1 To prepare a report on present applications and suggested activities to be executed in IHP III</p>	*		

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>A.1.6 To study groundwater and soil moisture movement by applying nuclear, physical and chemical methods</p> <p>1.6.1 To report on progress on the application of listed techniques</p>		Secretariat	IAEA, UN
	<p>A.1.7 To advance the application of mathematical modelling to the investigation of pollutant transport depending on hydrological, thermal and hydrochemical processes</p> <p>1.7.1 Verification and intercomparison of models on a national basis</p> <p>1.7.2 To prepare proposals for studies on processes of flow and mixing of waters, particularly in connection with high density fluids and waste disposal</p> <p>1.7.3 To prepare proposals for activities on exchange of substances between the water body and its bounding media</p>	*	National  Secretariat	WHO, WMO, COWAR, IAIUS  I O I
	<p>A.1.8 To develop and compare mathematical models of surface and groundwater regimes applied to various physiographic and climatic conditions including the extrapolation of data from small to large basins, for the assessment of changes in hydrological regimes</p>	*	Secretariat/ IHP National Committee of Fed. Rep. of Germany	

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>1.8.1 Preparation of reports on national experiences in the application of models, including those developed from the results in experimental and representative basins</p> <p>1.8.2 Report on extrapolation of data from small basins to large basins and organization of a round table on this subject</p>		<p>National contributions IHP Australian National Committee to prepare summary report Rapporteur</p>	<p>WMO</p> <p style="text-align: center;">- 4 -</p> <p>WMO</p>
	<p>A.1.9 To develop methods for computing groundwater balances and to develop physical and mathematical models for studying the laws governing the regime of groundwater</p> <p>1.9.1 To hold a workshop</p> <p>1.9.2 Report on the application of stochastic methods to the study of aquifer systems</p>	<p>1982</p>	<p>Unesco Workshop (tentatively in Mexico) Rapporteur</p>	<p>UN, IAEA and IAHS</p> <p>IAHS</p>
	<p>A.1.10 Hydrology of humid tropical regions</p> <p>1.10.1 Preparation of a report on present status of knowledge and suggested activities</p> <p>1.10.2 Report on hydrological aspects of hurricanes</p> <p>1.10.3 Reports by National Committees on other specific aspects</p>	<p>*</p>	<p>Rapporteur Rapporteur National</p>	<p>IAHS WMO</p>

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>A.1.11 Hydrology of arid and semi-arid areas</p> <p>1.11.1 Occurrence of drought and its impact on development projects</p> <p>1.11.2 Preparation of a report on present status of knowledge and suggested IHP activities including the following subjects:</p> <ul style="list-style-type: none"> <li>- methods of groundwater prospection and assessment of ground water resources in arid and semi-arid regions;</li> <li>- methods of determining the elements of water balance in arid and semi-arid regions taking into account ground water development</li> <li>- implementation of pilot projects regarding artificial recharge of ground water aquifers</li> <li>- utilization of brackish water resources</li> <li>- rehabilitation and recycling of used water</li> <li>- implementation of pilot projects for collection and storage of flood water of small catchment basins for immediate and urgent needs of rural communities</li> </ul> <p>1.11.3 Compilation of report on measures to reduce water losses due to seepage and evaporation in view of preparing a workshop</p>	<p>*</p>	<p>National</p> <p>2 Rapporteurs</p>	<p>IAEA</p>

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>A.1.12 Hydrology of flatlands without defined river basins</p> <p>Preparation of a report on research needs</p>		IHP National Committee of Argentina	
<p>A.2 To stimulate and co-ordinate studies involving the application of various techniques for the determination of hydrologic parameters and water balances for the purpose of water resources planning, project design and management</p>	<p>A.2.1 To continue compilations of water balance of the continents, taking water management activities into account</p> <p>2.1.1 To collect data and specifications of elements of water balances of continents and the convening of regional seminars</p> <p>2.1.2 To assess water-vapour flux methods for water balances studies of continents, based on the results achieved in the European study</p> <p>2.1.3 To continue periodical publication of "Discharge of Selected River of the World"</p>	<p>*</p> <p>*</p>	<p>Regional</p> <p>Regional</p> <p>Secretariat</p>	<p>WMO</p> <p>IAHS</p>
	<p>A.2.2 To improve methods for computing water balance elements of river basins with regulated river channels, including water supply and waste water discharge for operational management of river basin water resources</p> <p>2.2.1 To review the experience of countries on methods of computing hydrological parameters of river basins with regulated river channels and develop recommendations</p>	<p>*</p>	<p>Working Group</p>	<p>WMO, IAHS</p>

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>A.2.3 To review methods of determining the balances of chemical substances in rivers, reservoirs, lakes, aquifers and coastal zones of seas</p> <p>2.3.1 To organize a Symposium</p>	*	IHP National Committee of Sweden	COWAR, IAHS
	<p>A.2.4 To evaluate the deterioration of the quantity and quality of surface and groundwater resources caused by droughts</p> <p>2.4.1 To review the available information and prepare a report</p>	*	Rapporteur	WMO
	<p>A.2.5 Development of new, and improvement of existing methods and equipment for assessment of aquifer yield under various conditions, including coastal areas</p> <p>2.5.1 To organize a symposium</p>	1983	Unesco Symposium (tentatively in Netherlands)	WMO, IAEA, IAHS
	<p>A.2.6 To review methods of computing sedimentation in lakes and reservoirs</p> <p>2.6.1 Preparation of a report on recent developments</p>		Rapporteur	WMO, IAEA, IAHS, ICID
	<p>A.2.7 To improve methods for the determination of flood characteristics</p> <p>2.7.1 To prepare a report on recent developments</p> <p>2.7.2 To publish world data on very large floods</p>		Spanish NC/IHP Secretariat	IAHS, ICID



A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>A.2.8 To improve methods for the delineation of groundwater run-off regions and determination of base flow and low flow characteristics including mapping at a continental scale</p> <p>2.8.1 To prepare a report on these matters</p>		National Contributions; IAHS/IAH	
	<p>A.2.9 To disseminate knowledge of hydrological processes in urbanized areas</p> <p>2.9.1 To prepare a technical manual on rainfall data and the design of drainage systems of urbanized areas and to prepare information manuals on urban hydrology data collection and analysis</p>		Working Group	WMO, COWAR, IAHS
	<p>A.2.10 To prepare guidance material for computing hydrological parameters for applied engineering purposes</p> <p>2.10.1 To prepare a casebook of examples of methods for computing hydrological parameters for water projects</p>		Working Group	WMO, IAHS
	<p>A.2.11 Groundwater in water resources planning</p> <p>2.11.1 Symposium</p> <p>2.11.2 Workshop on groundwater in rural water supply</p>	83 83	IHP National Committee of Fed. Rep. of Germany	

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMME

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
<p>A.3 To stimulate and support studies concerning the determination and prediction of the influence of man's activities on the hydrological regime and of the interactions of these activities with the environment</p>	<p>A.3.1 To advance the use of benchmark and vigil basins for monitoring natural and man-made changes in the hydrological regimes, including groundwater, and related ecological environments</p> <p>3.1.1 Continuation of studies of benchmark and vigil basins and representative and experimental basins</p> <p>3.1.2 Development of a rational basis for monitoring long-term hydrological and related ecological changes</p> <p>Preparation of recommendations</p>		<p>National</p> <p>IAHS</p>	<p>MAB</p> <p style="text-align: center;">1 9 1</p>
	<p>A.3.2 To review the development of hydro-ecological indices for the evaluation of water projects to be used in environment impact studies of water projects</p> <p>3.2.1 Preparation of a technical report</p>		<p>Working Group</p>	<p>MAB, COWAR</p>
	<p>A.3.3 To improve methods of long-term prediction of variations in groundwater resources and regimes due to human activities</p> <p>3.3.1 Symposium</p>	<p>1982</p>	<p>Unesco Symposium (tentatively in Bulgaria)</p>	<p>IAH, IAHS</p>
	<p>A.3.4 To examine the application of methods of mathematical and physical modelling, mathematical statistics, experimental research and hydrological analogues for the assessment of changes in water quality in river basins</p>			

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	3.4.1 Workshop on comparison of methods and publications of report as technical paper	1981	Unesco and IHP Nat.Com. of Spain	WMO, IIASA, IAHS
A.3.5 To review the effects of inter-basin water transfers	3.5.1 Compilation of existing information and preparation of possible research programme in the third phase	* 1983	Secretariat	UN, WMO, COWAR
A.3.6 To study the hydrological aspects of solid and liquid waste disposal	3.6.1 Preparation of a report on deepwell disposal of liquid waste 3.6.2 Pilot project on hydrological aspects of waste disposal		IHP National Committee of Fed.Rep. of Germany IHP Nat. Com. India and Unesco	
A.3.7 To study the impact of agricultural activity on groundwater quality and quantity	3.7.1 Preparation and publication of a monograph on the basis of the IAH/CSSR Symposium 1982 3.7.2 Preparation of organization of regional workshops on the application of groundwater protection and rehabilitation methods	1983	IAH IAH	
A.3.8 To study methods of assessing the influence of hydraulic structures on sedimentation processes and flow regime	3.8.1 Preparation of a report		IHP Nat.Com. of Bulgaria	

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
A.4 To promote studies leading to the development of procedures for the rational and integrated assessment of water resources and their management to meet social and economic needs	<p>A.4.1 To assist in the activities of water resources assessment</p> <p>4.1.1 To compile guidance material</p> <p>4.1.2 Pilot studies on request in developing countries</p>	*	Secretariat and National	WHO WMO
	<p>A.4.2 Review methods available for determining the optimum allocation of water resources among water users for agricultural, industrial and domestic purposes</p> <p>4.2.1 Preparation of a report</p>		Rapporteur	IAHS, ICID
	<p>A.4.3 Evaluate the experience of countries in the application of results of hydrological and operational research in the implementation of water resources development and management</p> <p>4.3.1 Preparation of a report</p>	*	Working Group	IAHS
	<p>A.4.4 Development and application of methodologies of water sciences for integrated water management, taking into account the appropriate economic, sociological and environmental considerations in different actual conditions</p>	*		UN

A. SCIENTIFIC PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMMES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
	<p>4.4.1 Pilot studies in drought prone areas</p> <p>4.4.2 Pilot project on karst water resources in the Mediterranean area</p> <p>4.4.3 To prepare a technical report on multi-purpose utilization of water in urban areas</p> <p>4.4.4 To prepare a report on research needs on the rational utilization and management of water resources in coastal areas</p>		<p>National</p> <p>IHP National Committee of France</p> <p>Rapporteur</p> <p>Rapporteur</p>	<p>IAEA</p> <p>COWAR</p> <p>COWAR, SCOR, ICID</p>
	<p>A.4.5 To investigate the chemical composition of surface and groundwater taking into account the composition of drinking water related to human health</p> <p>4.5.1 To collect and distribute information on state of knowledge regarding relationship of natural water quality and health</p> <p>- preparation of a report</p>		<p>Secretariat</p>	<p>WHO, COWAR</p>

B. EDUCATIONAL PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL PROGRAMME

General objective: To develop education and training programmes to increase the capability of Member States to assess, develop and manage their water resources

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
<p>B.1 To prepare guidance material for the training at national level of technicians to work in the fields of hydrology and water resources and the establishment of training courses for teachers and technicians</p>	<p>B.1.1 To prepare examples of curricula and syllabi for technicians in the field of water resources</p> <p>1.1.1 To compile and prepare for publication such examples for distribution to appropriate education centres in developing countries</p> <p>1.1.2 To develop and prepare for publication model curricula and syllabi for in-service training of hydrological technicians and observers</p> <p>1.1.3 To develop guidance material on the planning and conducting of technician training courses</p>		<p>Working Group</p>	<p>WMO</p>
	<p>B.1.2 To compile and improve existing lecture notes for technician training as a basis for developing new courses</p>			
	<p>B.1.3 To develop curricula for training of teachers of technicians</p>			

B. EDUCATIONAL PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMME

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
<p>B.2 To encourage and assist the preparation of teaching aids and use of modern teaching methods at graduate and post-graduate level</p>	<p>B.2.1 To complete the compilation of guidance material in the field of hydrological and water resources education</p> <p>2.1.1 Curricula and syllabi for graduate and post-graduate hydrological education</p> <p>2.1.2 Teaching the systems approach to water resources development</p> <p>2.1.3 Teaching the application of computers in water resources studies</p> <p>2.1.4 Experimental facilities in water resources education</p> <p>2.1.5 Teaching aids in hydrology, second edition</p>		<p>Rapporteur</p> <p>Rapporteur</p> <p>Rapporteur</p> <p>Rapporteur</p> <p>Rapporteur</p>	<p>WMO</p> <p>Working Group</p>
	<p>B.2.2 To take steps to produce a textbook on comparative hydrology relating to the various hydrological regimes of the world</p> <p>2.2.1 Review of existing material and preparation of outline</p>		<p>Rapporteur with National and regional contributions</p>	<p>COWAR</p>

B. EDUCATIONAL PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMME

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
<p>C. To encourage and promote by appropriate means an increasing awareness and appreciation of the relevance and importance of water resources on the part of planners and policy makers in the Member States in general and in developing countries in particular</p>	<p>C.1. To prepare material illustrating the importance of water resources in socio-economic development under various conditions and to prepare recommendations on other ways in which awareness can be heightened.</p>	<p>*</p>	<p>Working Group</p>	



D. PROJECTS COORDINATED BY THE INTERGOVERNMENTAL COUNCIL OF THE INTERNATIONAL HYDROLOGICAL PROGRAMME RELATED TO THE STRENGTHENING OF NATIONAL INFRASTRUCTURES AND TO THE DEVELOPMENT OF AN INFORMATION SYSTEM IN THE FIELD OF WATER RESOURCES

Programme Objectives	Projects and Planned Activities	Proposed Implementation Dates	Method of Execution	Co-operating International Organizations
<p>D. To promote the establishment and improvement of national infrastructures by Member States for the preparation of national water policies, for water resources development and for national water management</p>	<p>D.1 To prepare a report describing existing infrastructures in the field of water resources.</p> <p>D.2 To undertake a study of the feasibility of establishing an international water resources information system.</p>		<p>National contributions Rapporteur</p> <p>Secretariat</p>	<p>UN, WMO</p> <p>UN, WMO, COWAR, IAHS</p>

ANNEX 4.2/III

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

List of Working Groups to be established within IHP-II

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

List of working groups to be established within IHP-II

ANNEX II

LIST OF WORKING GROUPS TO BE ESTABLISHED WITHIN IHP-II

PROJECT	ACTIVITIES TO BE PERFORMED
A.2.2	To review the experience of countries on methods of computing hydrological parameters of river basins with regulated river channels and develop recommendations
A.2.9	To prepare a technical manual on rainfall data and the design of drainage systems of urbanized areas and to prepare information manuals on urban hydrology data collection and analysis
A.2.10	To prepare a casebook of examples of methods for computing hydrological parameters for water projects
A.3.2	Preparation of a technical report on the development of hydro-ecological indices for the evaluation of water projects to be used in environment impact studies of water projects
A.4.3	Preparation of a report on the application of results of hydrological and operational research in the implementation of water resources development and management
C.1	To prepare material illustrating the importance of water resources in socio-economic development under various conditions and to prepare recommendations on other ways in which awareness can be heightened

Note: The membership of the Working Groups under IHP projects B.1 and B.2.1 (former Working Groups ED.1 and ED.5) has already been established by the Council; therefore, new nominations are not requested for these projects

ANNEX 4.2/IV

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

List of rapporteurs to be appointed within IHP-II

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION  
(UNESCO)

List of rapporteurs to be appointed within IHP-II

ANNEX III

LIST OF RAPPORTEURS TO BE APPOINTED WITHIN IHP-II

PROJECT	ACTIVITIES TO BE PERFORMED
A.1.5	Application of remote sensing to hydrology, including groundwater, to prepare a report on present applications and suggested activities to be executed in IHP III.
A.1.8	Prepare a report on extrapolation of data from small basins (experimental and representative basins) to large basins
A.1.9	Prepare a report on the application of stochastic methods in the study of aquifer systems
A.1.10.1	Hydrology of humid tropical regions; preparation of a report on present status of knowledge and suggested activities
A.1.10.2	Prepare a report on hydrological aspects of hurricanes
A.1.11.2.a	Hydrology of arid and semi-arid regions; preparation of a report on present status of knowledge and suggested IHP activities, including the following subjects: <ul style="list-style-type: none"> <li>- methods of groundwater prospection and assessment of ground water resources in arid and semi-arid regions;</li> <li>- methods of determining the elements of water balance in arid and semi-arid regions taking into account ground water development</li> <li>- implementation of pilot projects regarding artificial recharge of groundwater aquifers</li> </ul>

---

A.1.11.2.b Hydrology of arid and semi-arid regions; preparation of a report on present status of knowledge and suggested IHP activities, including the following subjects:

- utilisation of brackish water resources
- rehabilitation and recycling of used water
- implementation of pilot projects for collection and storage of flood water of small catchment basins for immediate and urgent needs of rural communities

---

A.2.4 To review the available information and prepare a report on the deterioration of the quantity and quality of surface and groundwater resources caused by droughts

---

A.2.6 To review methods of computing sedimentation in lakes and reservoirs preparation of a report on recent developments

---

A.4.2 To review methods available for determining the optimum allocation of water resources among water users for agricultural, industrial and domestic purposes

---

A.4.4.3 To prepare a technical report on multi-purpose utilization of water in urban areas

---

A.4.4.4 To prepare a report on research needs on the rational utilization and management of water resources in coastal areas

---

B.2.2 To review existing material and prepare an outline for a textbook on comparative hydrology relating to the various hydrological regimes of the world

---

D.1 To prepare a report describing existing infrastructures in the field of water resources

---

Note: The rapporteurs under IHP Project B.2.1 have already been appointed by the Council and therefore new nominations are not requested for this project.

ANNEX 4.5/I

UNITED NATIONS ENVIRONMENT PROGRAMME  
(UNEP)

The 1982 goals

UNITED NATIONS ENVIRONMENT PROGRAMME  
(UNEP)

THE 1982 GOALS

An operational Global Environmental Monitoring System (GEMS), with results available, evaluated and published.

An operational International Referral System (IRS), with nearly all countries having registered sources and making use of the service.

The International Register of Potentially Toxic Chemicals (IRPTC) in a position to issue warnings and technical publications.

Periodic state of the environment reports and the issue of the first quinquennial report.

Concrete advice for use by Governments in dealing with priority pollutants.

Implementation of action plans to demonstrate environmentally sound methods of controlling schistosomiasis, malaria and cotton pests.

Concrete achievements in the implementation of the plan of action to combat desertification, advance implementation of a world-wide tree programme and the publication of guidelines to control soil degradation, and a world-wide system of pilot and demonstration projects in rational management of water resources.

A global network of microbiology resources centres to conserve microbiological resources and apply them in environmental management.

Development of global plan for the restoration, conservation and management of wildlife, and the establishment and management of a network of parks and other protected areas.

Advice on environmentally sound patterns of development, including the rational and non-wasteful use of natural resources and eco-development, for use nationally and internationally.



Tested guidelines and methodologies in the proper integration of environmental concerns into development planning processes for use by Governments and international organizations.

A global network of institutions to test, apply and publish advice on appropriate and environmentally sound technology, particularly for use in isolated rural areas.

Guidelines on reducing the adverse environmental impact of specific industries including advice on industrial location, for use by Governments and industries

Adoption and implementation of action plans for each of the regional seas covered by UNEP programmes.

Initiation of an operational world-wide early warning system for natural disasters.

Advanced implementation of the plan of action for environmental education, and the full functioning of the programme activity centre on environmental education and training.

Established procedures for effective communications with Governments and information to the public at large.

A fully operational technical assistance clearing-house facility.

Achievement of wide acceptance and application of existing and future international conventions and protocols in the field of the environment.

Agreement on the principles which should guide States in their inter-relations in respect of shared natural resources, the problems of liability and compensation for pollution and environmental damage, weather modification and risks to the ozone layer, and codification of those principles into international treaties.

Development of the capacity to provide comprehensive and practical advice on the implementation of environmental management, based on the outcome of relevant work throughout the programme.

ANNEX 4.7/I

THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE  
(IDRC)

The IDRC-projects

THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE  
(IDRC)

The IDRC-projects

The projects are listed in the subject and county indexes by year and IDRC file number, followed by the program area identified in paranthesis (H for Health Sciences).

ANNEX 4.8/I

THE WORLD BANK

## THE WORLD BANK

The World Banks projects are listed below under three headings; Appropriate Technology, Economic Evaluation and Pricing, and General.

## WATER AND WASTES

### Appropriate Technology

From 1976 to 1978, the World Bank conducted a Research Project (RPO 671-46) on Appropriate Technology for Water Supply and Waste Disposal. The project identified a number of technologies less costly than waterborne sewerage, yet able to provide the same health benefits, socially and environmentally acceptable to the user. The project reviewed technologies, social/behavioral factors, economic and financial aspects, suggested technical improvements and new applications for traditional technologies, and developed selection criteria and demonstrated the feasibility of staging sanitation sequences to match demand for improvements reflecting user aspirations and rise in socio-economic status.

As a result of the research project, the following reports have been published:

Appropriate Sanitation Alternatives: A Technical and Economic Appraisal - Summary Report

February 1979 - 37 pages. John M. Kalbermatten, DeAnne S. Julius, and Charles G. Gunnerson (Consultant). (# RES 20)

This paper is a summarized version of report RES 24 in Appropriate Technology for Water Supply and Waste Disposal in Developing Countries. It reports the broad technical, economic, health and social findings of the research and discusses the aspects of program planning necessary to implement the findings.

Appropriate Sanitation Alternatives: A Technical and Economic Appraisal

February 1980 - 120 pages. John M. Kalbermatten, DeAnne S. Julius, and Charles G. Gunnerson (Consultant). (# RES 24)

This paper reports technical, economic, health and social findings of Research Project RPO 671-46, "Appropriate Technology for Water Supply and Waste Disposal in Developing Countries". The report discusses the program planning necessary to implement technologies available to provide socially and environmentally acceptable low cost water supply and waste disposal.

Appropriate Sanitation Alternatives: A Field Manual

February 1980 - 200 pages. John M. Kalbermatten, DeAnne S. Julius, Charles G. Gunnerson (Consultant), and Duncan D. Mara (Consultant) (# RES 25)

This report provides information and instructions on how to design and implement appropriate technology projects based on the findings reported in RES 24. It provides guidelines and design tools to the engineers, sanitarians and community workers responsible for planning and implementing sanitation projects.

Health Aspects of Excreta and Wastewater Management

October 1978 - 1000 pages. R. G. Feachem, D. J. Bradley, H. Garelick and D. D. Mara (Consultants). (# RES 26 a-d)

Public health is of central importance in the design and implementation of improved excreta disposal projects. Improvements in health are the main social and economic benefit which planners and economists hope to achieve by investing in excreta disposal. It is therefore necessary to make available as much information as possible about the interaction between excreta and health in order that engineers and planners may make informed and rational decisions. The information that is required not only concerns the broad epidemiological issues of the impact on disease of improvements in excreta disposal, but also the ways in which particular excreta disposal and reuse technologies affect the survival and dissemination of particular pathogens.

This book sets out to provide such information. It is intended for planners, engineers, economists and health workers and has been written with a minimum of jargon so that it can be readily absorbed by people from differing professional backgrounds.

This book has two parts. Part 1 (# RES 26a) presents a distillation of available knowledge on excreta, nightsoil, sewage and health. The emphasis is on presenting the complex, and sometimes contradictory, evidence as clearly and concisely as possible.

Part 2 (# RES 26 b-d) contains short accounts of each excreta-related infection, stressing the appropriate control methods and the role of improved excreta disposal in any control campaign. Emphasis is also given to the survival of the pathogen outside its host in order that the effect of various waste treatment processes may be clarified.

The three volumes of Part 2 are as follows:

- RES 26 b - Section I: Viruses
- Section II: Bacteria
- RES 26 c - Section III: Protozoa
- Section IV: Helminths (Chapters 15 and 16)
- RES 26 d - Section IV: (cont'd) Helminths (Chapters 17 to 28)
- Section V: Insects and Excreta

The short accounts of each infection are followed by the literature, which is presented in two forms. First comes a collection of fully abstracted key references considered to be of particular importance. These are mostly concerned with the impact of excreta disposal on disease transmission and the survival of the pathogen in waste treatment processes. The abstracted references are followed by a supporting list of other relevant literature to allow those interested to read further on the subject. The literature selected is drawn from throughout the world and a considerable number of Czech, French, German, Japanese, Korean, Russian, Spanish and other non-English language publications have been abstracted or listed.

R Socio-Cultural Aspects of Water Supply and Excreta Disposal  
Prepared for the World Bank Research Project: "Appropriate  
Technology for Water Supply and Waste Disposal in Developing  
Countries"

September 1978 - 54 pages plus annexes. Mary Elmendorf and  
Patricia K. Buckles, Consultants (# RES 15)

Social and cultural factors influencing people's responses to  
water supply and excreta disposal technologies are investigated  
in eight case studies of communities in the rural and urban fringe  
areas of Latin America. Part 1 describes the methodology and  
questionnaire used to investigate how sanitation and water supply  
problems are perceived and to what extent people would be willing  
to participate in projects to improve their existing situation.  
Part 2 summarizes each case study, including the technologies intro-  
duced and community response to them. Part 3 represents the cross-  
community findings on perceptions, preferences, related practices,  
and the use of social science techniques to understand them. In  
Part 4, the report focuses on the implications of the findings and  
suggests an approach which can be used by planners to integrate  
social and cultural factors into project design to ensure the  
introduction of water supply and excreta disposal technologies  
which will be accepted, properly used, and maintained.

This report was prepared as part of the World Bank research project  
on Appropriate Technology for Water Supply and Waste Disposal.  
Complete reports on the eight case studies can be obtained from  
the TWT Department upon request.

R Country Studies in Appropriate Sanitation Alternatives

March 1979 - 176 pages. Richard H. Kuhlthau. (# RES 21)

The empirical data base for the World Bank research project on  
Appropriate Technology for Water Supply and Waste Disposal in  
Developing Countries is composed of 34 case studies which were  
carried out in communities of 11 countries during 1977-78. Countries  
and communities were selected to obtain a diverse sample of existing  
sanitation technologies operating under a variety of physical and  
economic conditions. This report presents the technical and  
economic information collected by the local field consultants at  
each site.

R Alternative Sanitation Technologies for Urban Areas in Africa

February 1979 - 186 pages. Richard G. Feachem, D. Duncan Mara  
and Kenneth O. Iwugo, Consultants. (# RES 22)

This report summarizes the results of field studies carried out  
in five African countries during 1977-78 as part of a World Bank  
Research Project (RP0671-46) on Appropriate Technology for Water  
Supply and Waste Disposal. It describes four sanitation technologies



as they are currently used in urban areas in Africa - pit latrines, composting toilets, bucket latrines and aquaprivies - and discusses their technical, economic, institutional, social and health requirements and constraints. Methods for technology comparison and selection are suggested, and areas for future research are indicated.

Eight Case Studies of Rural and Urban Fringe Areas in Latin America  
May 1979 - 230 pages. M. Elmendorf, P. Buckles, et. al. (Consultants).  
(# RES 23)

This report is a collection of eight case studies of rural and urban fringe areas in Latin America included in the World Bank Research Project on Appropriate Technology for Water Supply and Waste Disposal. The long-range objective of the research is to provide project planners with an understanding of human and behavioral factors which influence whether users will accept, properly use, and maintain water supply and excreta disposal facilities introduced into their communities.

Design of Low-Cost Water Distribution Systems  
September 1977 - 42 pages. Donald T. Lauria, Peter J. Kolsky (Consultants) and Richard Middleton (World Bank). (Replaces # RES 11; # RES 11a)

Designers of water distribution systems have not had available simple analytical tools with which to test the effect on system costs of various design assumptions. In consequence, secondary distribution networks have often been designed by rule of thumb without a full appreciation of the effects of the designer's decisions. The effects of the resulting overdesign can be very serious, particularly where service to the urban poor is concerned and levels of affordability are low. This paper presents the results of rigorous analyses of secondary distribution systems for several urban areas in developing countries; from these analyses, simple mathematical models are developed which permit prediction of total pipe length, average diameter and network cost given decisions on variables such as per capita usage and spacing of public standpipes or house connections. Examples are given of the application of these equations to typical design problems.

Nightsoil Composting  
July 1978 46 pages plus annexes. Hillel I. Shuval, Charles G. Gunnerson (Consultants) and DeAnne Julius (World Bank). (Replaces # RES 12; # RES 12a)

Among the problems facing those who depend on conservancy or other systems which separately dispose of grey water and nightsoil is the lack of a safe, inexpensive treatment method for nightsoil. This paper reviews the public health requirements for successful composting and the state of the art on the two methods for windrow or pile composting which are presently used for sewage sludge in

the United States. The paper concludes that aerobic composting of nightsoil is suited for developing countries because of its simplicity in operation, limited need for mechanical equipment, low cost and its effectiveness in inactivating pathogens, thus assuring that the compost can be used without causing any public health hazard.

Another area of appropriate technology work by the Bank is Village Water Supply. Papers published as a result of this work are:

R A Hand Pump for Rural Areas of Developing Countries

September 1976 - 42 pages. Available in Spanish translation. W. Journey (Consultant), Richard Middleton (EWT), James Edgerton (ARD). (Replaces # RES 9; # RES 9a)

Only 20 percent of the world's rural population has access to safe water. The best way of remedying this situation is to provide shallow wells and hand pumps, wherever possible. However, existing hand pumps are expensive, complicated and have a high failure rate. The report suggests a very simple new pattern of hand pump, in which polyvinyl chloride well casing is used as the pump cylinder, and other components can be standardized and mass-produced. The pump is suitable for maintenance by villagers with minimal mechanical skills.

R Development of PVC Well Screens for Local Fabrication in Developing Countries

April 1978 - 8 pages. Yaron Sternberg and Robert Knight, International Rural Water Resources Development Laboratory, University of Maryland (Consultants). (# RES 14)

In rural areas of developing countries, the cheapest and safest source of water is usually groundwater. Pipe suitable for PVC well casings is manufactured in a number of developing countries, but high-efficiency PVC well screens have to be imported. This paper describes the development of a well screen that can be made in most developing countries: PVC is extruded through a special die to form a pipe with internal stiffening ribs. Short sections of pipe are then mounted on a standard lathe and a helical spiral slot cut in the pipe wall, using a small circular saw. The resulting screen has a large open area and appears highly competitive with screens available commercially. It allows screen characteristics to be readily adapted to the actual field conditions. Field trials of the new product are being arranged.

Observations of Rural Water Supply and Sanitation Programs  
in Eight Developing Countries

September 1978 - 58 pages plus appendix. Charles S. Pineo  
(Consultant). (# PUN 42)

Following a survey of rural water supply and sanitation programs in eight developing countries, the report identifies and analyzes those technical, financial, organizational and managerial factors which have contributed to the success or failure of the programs. Recommendations are made on program design and implementation, emphasizing particularly government commitment, community involvement and strong executing agencies.

Testing of Wood Bearings for Hand Pumps

February 1978 - 37 pages. Yaron M. Sternberg,  
International Rural Water Resources Development  
Laboratory, University of Maryland (Consultant). (# RES 13)

The feasibility of using wood handles for hand pumps was investigated in a laboratory study on the behavior of metal/wood interfaces. Eight wood handles equipped with simple pivots were subjected to oscillating motion with a load of 150 lbs. simulating the operation of a hand pump. The results, after  $2 \times 10^6$  cycles, indicate that (1) woods impregnated with oil are more durable than dry ones, (2) galvanized pipe pivots function well, and (3) hardwoods are more durable than softwoods. A design technique for determining the required dimension of a hand pump handle based on the type of wood, load and level of hand pump usage intensity is presented.

\* Village Water Supply

A World Bank, paper published March 1976 from "Issues in Village Water Supply" originally prepared by Harold Shipman and Richard Middleton and distributed to the Board June 30, 1975 as Report No. 793. Copies available for consultation.

In rural areas of developing countries there are probably more than one billion people without an adequate water supply. The paper examines the technical options in extending supply; the contributions in cash and kind that should be expected from the villages; appropriate institutional arrangements; the justification for investment - which must rest primarily on health and productivity benefits although these cannot be adequately quantified; and the criteria for electing villages to be served - the most important of which is village participation. The paper ends with basic guidelines for projects suitable for Bank Group financing.

Village Water Supply and Sanitation in Less Developed Countries

March 15, 1974 - 145 pages. Robert Saunders and Jeremy Warford. (# RES 2)

The great majority of persons in rural areas of the developing world do not have access to a safe and convenient source of water, and where this is available, acceptable sewage disposal facilities are normally lacking. The major difficulties in village water supply and sanitation programs are not technical, but rather administrative and financial.

The authors examine a wide range of factors - physical, social and economic - that are involved in improving the adequacy of water supply and sanitation in the coming years.

An expanded version of this paper was published as Village Water Supply: Economics and Policy in the Developing World by the Johns Hopkins University Press, 1976 - 280 pages.

A Summary and Conclusions of Full Report has been published as RES 2a, March 15, 1974 - 10 pages, Robert Saunders and Jeremy Warford.

Economic Evaluation and Pricing

WP 259 \* Alternative Concepts of Marginal Cost for Public Utility Pricing: Problems of Application in the Water Supply Sector  
May 1977 - 56 pages plus annexes. Robert J. Saunders, Jeremy J. Warford (World Bank) and Patrick C. Mann (Consultant)

In view of the difficulty of applying a standard benefit-cost approach to project evaluation in the water supply and sewerage field, the recommended solution - as in the case of other public utilities such as power and telecommunications - is to emphasize marginal cost pricing as a means of either signalling the justification for system expansion or of establishing a benchmark by which other social or economic objectives may be evaluated.

This paper discusses the rationale and problems of implementing marginal cost pricing for water supply and sewerage facilities. Many of the issues are now fairly well known, as the frequent references to their treatment in Bank operations make clear. However, there remains one critical area in which ambiguity remains. This stems largely from the different ways in which economists have tried to handle the problem of capital indivisibility, for which, by definition, marginal analysis is not well equipped.

The paper examines several frequently used definitions of marginal cost. Using a number of assumptions about long-term trends in costs, output and capital indivisibility, it evaluates

each approach according to its implications for year-to-year price fluctuations, economic efficiency and revenue generation. As a result of these performance tests, the judgment is made that, largely due to the pervasive problem of capital indivisibility, it is not possible to establish a set of precise marginal cost estimation rules which can be followed mechanically in all circumstances. In practice, compromises are required, and the types of compromise that are suitable depend upon the degree of capital indivisibility, the stage of the project and program cycle at which the pricing decision is being made, the relevant elasticities of demand, and, not least, the prices which currently prevail.

Bangkok Water Supply Tariff Study

June 1976 - 30 pages. Robert Saunders. (# PUN 23)

This note is the report of a mission which examined water supply pricing policy in Bangkok, the intention being to provide guidance to both the water utility and Government on both technical and policy issues related to water resource management. The report analyzes the financial, resource allocation, and equity implications of water supply policy with particular emphasis on the estimation of incremental water supply costs, the private use of groundwater, the metering decision, and the ability of low income households to pay for water.

The Costs and Benefits of Water Metering

February 1978 (Replaces PUN 29)

Richard Middleton, Robert Saunders and Jeremy Warford. (# PUN 29a)

The decision on whether or not to meter household water supplies is frequently a subject of debate. Essentially, the decision should be based upon economic consideration, following some type of cost-benefit analysis. While the theoretical economic concepts which are relevant to the metering decision are well established, they are often not understood or accepted by water supply engineers and policy makers, and as a result they are rarely applied in practice.

This paper briefly states the theoretical framework, which can be easily applied by most water supply authorities when making the metering decision, and presents several examples of such an application. In most of the examples presented, the metering of household supplies was found to be generally justified; in one, it was found to be clearly inappropriate.

Finland's Water Pollution Control Program: The Role of Economic Analysis

February 20, 1974 - 24 pages. Jeremy Warford and T. Pellegrini (IBRD) and A. Kneese and K. Maler (consultants). (# PUN 8)

This note is the report of a mission which examined the role that economic analysis should play in the evaluation of a project designed to improve the quality of Finland's lakes and rivers. The project, consisting of the installation of effluent treatment works in industrial plants, is part of the first nationwide environmental improvement program with which the Bank has been involved, and for this reason the report is circulated for the general interest of staff members.

The paper contains some rather controversial recommendations on such issues as the subsidization of polluters, effluent charges versus standards, and the role of benefit-cost analysis in pollution control. As in the case of other notes, the report, which was originally prepared for the DFC's Division of EMENA, is not to be interpreted as a policy statement or as a working instruction.

G Guidelines for Economic Evaluation and Financing of Sewerage Projects

February 18, 1977 - 13 pages. DeAnne Julius and Jeremy Warford. (# GAS 13)

Economic evaluation of sewerage projects involved special problems relating to the demand forecast, choice of the least cost solution, and the comparison of project benefits and costs. As in the case of other utilities, it is normally not possible to calculate an internal economic rate of return for sewerage projects, but, unlike other utilities, the role of price in demonstrating project justification is very limited. Showing that the trade-offs between efficiency, equity, ease of administration, and financial objectives are very complex in the case of sewerage pricing, this note describes methods that are currently used and recommends an approach to be used in LDCs.

N Lahore Water Supply - Tariff Study

August 7, 1974 - 19 pages. Jeremy Warford and R. Turvey. (# PUN 12)

This note is the report of a mission which examined water supply pricing policy in Lahore, the intention being to provide guidance on economic aspects of tariff-setting to the engineering and financial consultants hired by the Lahore Water Supply Authorities. The report analyzes the way in which marginal cost should be estimated, given the reliance of Lahore upon ground water supplies, and indicates the engineering and hydrological data that need to be collected in order that this may be done. It then discusses the implications for tariff policy of illustrative estimates of marginal cost, special emphasis being placed upon the metering decision.

Pricing as a Means of Controlling the Use of Water Resources  
March 31, 1976 - 11 pages. Jeremy Warford. (# PUN 21)

This paper is a contribution made by the World Bank to the UN World Water Resources Conference held in Argentina in 1977. The role of price as a means of controlling the use of water resources is considered with regard to municipal water supply, electric power, irrigation, and water pollution.

Urban Water Supply and Sewerage Pricing

March 22, 1974 - 9 pages. Jeremy Warford and R. Turvey. (# PUN 11)

This note discusses the various objectives of pricing policy as applied to urban water supply and sewerage. Revenue-raising, equity, and administrative simplicity are important criteria to use in evaluating pricing policy, but the paper emphasizes an aspect that is usually neglected, namely, the role of price as means of influencing consumer behavior. The paper outlines an approach to tariff policy that recognizes all four objectives, and indicates the type of compromise that often has to be made between them.

Water Rates in Developing Countries

March 1977 - 9 pages. Jeremy Warford and DeAnne Julius. (# PUN 27)

While utility finance is normally the primary concern in determining water rates in developing countries, other objectives of pricing policy, such as extension of service to the poor and avoidance of wasteful consumption tend to command a higher order of priority than in more affluent societies. In describing some of the efforts made to reconcile these objectives, the paper notes that in certain respects water rate policy in the developed countries would do well to follow the example afforded by experience in the developing world.

General

Evaluation of Solid Waste Projects

June 4, 1975 - 24 pages. Harold Shipman and Robert Saunders.  
(# PUN 18)

This note describes the nature and extent of the solid waste problem in urban centers of the developing world and presents the relevant issues which must be examined if cities are to carry out solid waste collection and disposal in an efficient, equitable, and sanitary manner. This note does not propose a policy for lending for solid waste projects per se, but simply presents guidelines which might be useful in dealing with solid waste projects on an ad hoc basis whenever they arise.

The first sections of this note outline the relevant issues, while the latter section presents an example of an evaluation of a specific solid waste project.

G Guidelines for Sector Work in the Water Supply and Waste Disposal Sector  
November 9, 1973 - 18 pages plus annexes. (Available in French and Spanish translation.) Public Utilities Department staff. (# GAS 4)

These guidelines suggest the means of acquiring the information about the water supply and waste disposal sector needed in order to prepare plans for its development. Sector studies are primarily for the benefit of decision makers at the national and local level, but they also benefit outside agencies interested in efficient development of the sector. To be effective, sector work must involve both appropriate officials and the sector specialist in the country in question, and be seen as part of a continuous sector process for building up knowledge and improving decisions in the sector. Several typical sector issues are discussed, along with a number of practical considerations for organizing sector work. Detailed planning of sector work is emphasized. Annexes provide, among other things, checklists which help to assure that important aspects are not overlooked.

N Manpower Development and Training in the Water Sector:  
Responsibilities of the World Bank

June 1977 - 40 pages. Daniel A. Okun (Consultant). (# PUN 28)

A principal constraint to providing water supply and sanitation in developing countries is scarcity of skilled manpower: hundreds of thousands of trained personnel will be required if these basic services are to be made available to everyone. Comprehensive plans for manpower development are just as important in ensuring the success of a project as engineering feasibility or sound financial management. This report examines the Bank's role in manpower development through the project development process. It concludes that greater emphasis should be placed on manpower development and training from an early stage in project formulation, that every project should include a training component, and that the Bank's borrowers should commit themselves to clearly defined training programs so that an adequate number of trained personnel is available by the time the project is commissioned. Finally, the report stresses that the Bank must demonstrate its real commitment to manpower development if it expects its borrowers to do the same.

N Manual on Pipeline Materials and Specifications

March 1979. Bookman-Edmonston Engineering, Inc., Richard M. Middleton and Harold Shipman. (# PUN 46)

This manual provides a state of the art overview of pipeline materials and specifications relative to their use in water supply and waste disposal projects of the type of concern to the World



Bank. The various factors which surround design, installation, protection, testing and procurement of pipe are touched on. Separate chapters deal with concrete asbestos cement, steel, cast iron and ductile, and clay pipe. Advantages and disadvantages experienced with each type of pipe under varying conditions are described and an extensive bibliography is included as an annex. A final chapter concerns difficulties incorporated in procurement of pipe on certain Bank financed projects in the past. Approaches are proposed on how to avoid or deal with problems stemming from differences between various pipe standards and from peculiarities of quality control on projects in development areas.

Measurement of the Health Benefits of Investments in Water Supply  
January 1976 - 10 pages. Harold Shipman, Jeremy Warford, Robert Saunders, Richard Middleton (A. Wolman and five other consultants). (# PUN 20)

While it has been well established that water can be a vector of disease and that the provision of a safe and adequate supply is one of the essentials for protection of the public health, efforts over many years to quantify the health benefits to permit prediction of the likely effects on health of such supplies have been unsuccessful. In May 1975 the Bank convened a panel of experts in medical epidemiology, sanitary engineering and economics to advise whether the impact of water supply investments on health could be reliably predicted and quantified so as to assist in development planning, and, if so, what field studies and methodologies would be appropriate. The panel, whose report is presented in this paper, concluded that the benefits could not be quantified given the present state of knowledge, and that studies to establish a rigorous relationship between water supply and health would be extremely expensive and their conclusions would be of doubtful application. The panel recommended that, in order to gradually build up knowledge in this area, the Bank might be associated with initially modest impact studies, in which one or two diseases are closely analyzed.

Ozone  
April 1978 - 92 pages. (# PUN 36)

This report is a collection of the papers presented during the World Bank Water Supply Staff Training Course held in Washington, D.C. on January 9-13, 1978: What is Ozone?, William J. Lacy; The Current Status of Ozone Treatment Technology in the United States, William J. Lacy and Rip G. Rice; Biological Activated Carbon, Rip G. Rice, G. Wade Miller, C. Michael Robson and Wolfgang Kuhn; Chlorination and Ozonization of Drinking Water, Cyroil Gomella; and Capital and Operating Costs of Ozone Systems, G. Wade Miller.

- G UNDP/Special Interest Project Procedures: Water and Sewerage  
August 1973 (Reissued June 1974) - 5 pages. Harold Shipman.  
(# GAS 2)

This note sets out briefly the procedures to be followed on UNDP-financed studies in the water and waste disposal sector for which WHO has been designated executing agency and in which the Bank has expressed 'special interest'. (For internal distribution only.)

- N Water Desalination  
February 20, 1974 - 11 pages. Harold Shipman. Also issued as a Board Paper SecM74-6. (# PUN 9)

Desalination is increasing in importance in areas of the world where the need for domestic and industrial water approaches or outstrips economically available fresh water supplies. At present there are about 800 desalting plants in operation; they produce an aggregate of four million m<sup>3</sup>/d, equivalent to the daily consumption of 20 to 30 million people. The paper reviews salinity tolerance levels for various water uses, desalination technology, operation and maintenance problems, and the importance of the cost of energy on overall production costs. Noting that desalination costs are 10 to 15 times greater than the cost of conventional water production processes and that scientific breakthroughs to dramatically reduce costs are unlikely, it discusses the prospects of effecting savings through dual purpose plants, better plant utilization and economies of scale. Criteria for evaluating desalting processes and comparing them with alternative water supply projects are presented along with guidelines suggesting that desalination may be a viable option if alternative fresh water must be piped more than 200 km. Because of the high costs and the large quantities required, the paper concludes that desalination for irrigation is unlikely to prove economic except for a very few specialized situations.

- G Water Supply and Waste Disposal Sector Appraisal Handbook  
September 1978 - 46 pages. Brian Grover and  
Harold Shipman (Consultants). (# GAS 16)

The purpose of this handbook is to provide sector specific guidelines to assist staff in project appraisal and the preparation of Staff Appraisal Reports (SAR) for which basic instructions are outlined in Operational Manual Statement 3.05.

- N Water Supply Service for the Urban Poor: Issues  
August 1977 - 42 pages. Gilbert F. White (Consultant). (# PUN 31)

The World Water Conference held in Argentina in March 1977 re-affirmed the HABITAT targets of providing safe drinking water

to all the world's population by 1990. The World Bank, through its support of water supply projects, is equally concerned that all people, whatever their income levels, obtain a potable supply. The paper, used as a discussion paper at Bank staff seminars, examines the implication of this policy: the selection of the target population; the various types of service that could be considered; appropriate standards of quality and quantity in relation to the net health hazard to which the population is exposed; pricing policies which ensure affordability and replicability; the potential for increased community involvement in water supply activities; and the associated research needs.

WHO/IBRD Cooperative Program

May 1973 (reissued May 1974) - 4 pages plus annexes. Harold Shipman (# GAS 1)

The WHO/IBRD Cooperative Program in Water and Wastes was formally established in October 1971. This note describes the scope of work that may be executed under the program (principally sector studies) and the procedures to be followed by WHO and by the various IBRD departments in connection with the program. (For internal distribution only.)

Municipal-Industrial Wastewater Reuse - Opportunities and Methods of Encouragement: A Primer

January 1980 - 75 pages. Development Sciences Incorporated (Consultants) (# PUN 50-T)

In many areas, security of water is becoming an ever greater problem. Despite that fact, reuse of used water is rarely considered. This paper examines, on the basis of actual case studies, the potential water use and reuse requirements of industries. Finally, the paper suggests how to discover and encourage wastewater reuse opportunities.

Domestic Wastewater Reuse for Agriculture Opportunities and Methods: A Primer

December 1979 - 154 pages. S. Dan Goldberg (Consultant). (# PUN 51-T)

This document describes techniques for the use of wastewater for irrigation. It is intended primarily for the sanitary engineer and includes basic information on soils, crop production and irrigation deemed necessary for a better understanding of agricultural wastewater reuse.

Social and Behavioral Aspects of Project Work in Water Supply and Waste Disposal

February 1980 - 72 pages. Heli Parrett (Consultant). (# PUN 52T)

This paper highlights questions in the water supply and waste disposal sector which social information and social techniques could help resolve in project work in order that the full benefits of projects and the equitable distribution of these benefits will be obtained and that project risks will be minimized. This paper includes instruction and terms of reference for "Social Techniques" work.

SP

Water Supply and Waste Disposal  
February 1980 - 34 pages.

The principal purpose of improvements in water supply and waste disposal is to help overcome the scourge of debilitating and killing disease which afflicts developing country peoples and to provide water and waste disposal services for commercial and industrial development. This paper examines existing water supply and waste disposal sector conditions, reviews techniques and methods available to overcome technical, institutional, social, manpower and financial constraints and recommends Bank actions which would help developing countries overcome these constraints at least cost. Factors affecting the satisfaction of basic needs in water supply and sanitation are emphasized.

ANNEX 4.26/I

(DANIDA)

List of Water Research Activities Financed by DANIDA

(DANIDA)

List of Water Research Activities Financed by DANIDAList of water Research Activities Financed by DANIDA1974-1980

- Danmarks tekniske højskole ved professor, civilingeniør Svend Aage Andersen:  
Forsøg med anlæg til fremstilling af ferskvand.  
Rapport over forskningens gennemførelse foreligger.
- Aarhus Universitet, Geologisk Institut ved kandidatinstruktør, cand.scient Niels Schrøder:  
Undersøgelse af elektriske modstandsmålingers anvendelighed ved grundvandsforskning i det øst-afrikanske område.  
"Resistivity Sounding in the Sudan (preliminary report)".
- Civilingeniør Jens Hansen:  
Utraditionelle løsninger på spildevandsproblemer i større bysamfund i udviklingslandene.  
Report: "Alternative Sanitary Waste Removal Systems for Low-income Urban Areas in Developing Countries".
- Cowiconsult ved civ.ing. J. Hebo Nielsen:  
Kloakering i udviklingslande.  
(Undersøgelsen er endnu ikke afsluttet).
- Cand.polyt. B. Pulawski:  
Lokalisering af grundvandsforekomster i udviklingslande ved hjælp af kombineret anvendelse af 2 geofysiske metoder: geoelektrik og refraktionsseismik.  
Report: "Combined Use of Resistivity and Seismic Refraction Methods in Groundwater Prospecting in Crystalline Areas".
- Dr.phil. Thorkild Schiøler:  
Undersøgelse af vandløftningsapparater i Afrika  
(Undersøgelsen er endnu ikke afsluttet).

- Cand.polyt. Jørgen Boldt:  
Udvikling af prototype af soldrevet vandpumpe.  
(Undersøgelsen er endnu ikke afsluttet).
- Entreprenør Erik Nissen-Petersen:  
Wanza Irrigation Scheme  
Report: "Wanza Irrigation Scheme (preliminary report)".
- Landmand Jacob Broegård Nielsen og maskintekniker  
Jørgen Schmidt Dideriksen:  
Forskning, færdiggørelse og opsætning af flodstrømsdrevet  
spiralpumpe (Undersøgelsen er endnu ikke afsluttet).
- Ingeniør Tage Rasmussen:  
Færdigafprøvning samt produktionsmodning af vinddrevne  
vandpumper (Undersøgelsen er ikke afsluttet).
- Vandudviklingsprojekt i Botswana:  
Tilskud til et UNDP/FAO projekt med det formål at foretage en  
hydrologisk undersøgelse af Botswanas to store floder, Limpopo  
og Okavanga, samt at udarbejde en samlet plan for udviklingen af  
landets vandressourcer.
- Mag.scient Kirsten Jørgensen:  
Drikkevandsprojekters betydning for kvinder i landområder.  
(Undersøgelsen er endnu ikke afsluttet).
- Civilingeniør Mogens Henze og civilingeniør Torben Sevel:  
Vandkvalitet i drikkevandsreservoirer.  
(Undersøgelsen er endnu ikke afsluttet).
- Cand.scient Leo Larsen:  
Registrering af basisdata som grundlag for vandplanlægning  
i udviklingslande. Skitse til vandplanlægningsmodel for Kenya.  
(Undersøgelsen er endnu ikke afsluttet).
- Instituttet for Teknisk Geologi, Danmarks tekniske Højskole.  
Vandforsyningsanlæg til lokalsamfund i landdistrikterne  
i udviklingslande. (Undersøgelsen er netop startet).
- Mag.scient Kirsten Jørgensen:  
Drikkevandsprojekters betydning for befolkningen i land-  
distrikterne i Kenya med specielt henblik på kvinderne.  
(Undersøgelsen er netop startet).
- Cand.polyt B. Pulawski:  
Investigation of the Physical Properties of Tropical  
Weathered Rocks in Relation to Hydrogeological Data from  
Groundwater Prospecting in Crystalline Areas.  
(Undersøgelsen er netop startet).

ANNEX 4.27/I

ROYAL INSTITUTE OF TECHNOLOGY, SECTION OF DEVELOPING COUNTRIES,  
STOCKHOLM



ROYAL INSTITUTE OF TECHNOLOGY, SECTION OF DEVELOPING COUNTRIES,  
STOCKHOLM

The following water research projects have been or are undertaken  
by the Institute.

Department of Land Improvement and Drainage

- \* 1. Genesis of high fluoride ground waters in Botswana (dr. Gunnar Jacks).
- 2. Pilot projekt for underground storage of water in fractured hard rock areas in India (Prof. Ingemar Larsson).
- 3. Ground water development project in Kerala State, India, and establishment of an Institute for rational conservation of water for agricultural purposes (Prof. Yngve Gustafsson and Prof. Gert Knutsson).
- \* 4. Seminars/Text-book on ground water in hard rocks (Prof. Yngve Gustafsson, Prof. Ingemar Larsson and Mr. Øke Nilsson).
- 5. "Supraakvatiska deltabildningars grundvattenförhållande och då främst 'alluvial fans' i arida och semiarida områden" (Dr. Åke Fleetwood).
- \* 6. Composting latrines. A cultural, social and technical problem (Dr. Åke Fleetwood).
- 7. Water resources planning in China (Mr. Jan-Erik Gustafsson).
- \* 8. "Vattenstrategi/SIDA" (Prof. Yngve Gustafsson).
- 9. Assistance in reconstruction and flood protection to flood stricken villages in Upper Egypt (Dr. Lars-Yngve Nilsson and Mr. P.-O. Johansson).

Department of Hydraulics

- 10. Methodology for water resources evaluation in arid and semiarid areas, especially Mali (Prof. Klas Cederwall and Mr. Abdulaye Diawara).
- 11. Storage as a water treatment method (Prof. Klas Cederwall).

ANNEX 4.4/I

UNITED NATION DEVELOPMENT PROGRAMME  
(UNDP)

The whole Range of Water Projects UNDP is involved in

UNDP

1.	AFG 64 009 G 01 12	STARTING DATE: 01 1970	DURATION: 2 YEARS 9 MONTH	UNDP: 230,730	GOVT: 0
	MINIK IRRIGATION PROJECT				
2.	AFG 68 518 H 01 01	STARTING DATE: 12 1970	DURATION: 9 YEARS 1 MONTH	UNDP: 1,232,931	GOVT: 81,520,100
	ESTABLISHMENT OF A WATER MANAGEMENT DEPARTMENT				
3.	AFG 69 520 C 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 3 MONTH	UNDP: 638,615	GOVT: 21,763,600
	KUMOND KHAMABD IRRIGATION FEASIBILITY STUDY				
4.	AFG 71 010 G 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 6 MONTH	UNDP: 10,072	GOVT: 0
	WATER RESOURCES DEVELOPMENT				
5.	AFG 71 019 G 01 01	STARTING DATE: 12 1971	DURATION: 5 YEARS 1 MONTH	UNDP: 363,435	GOVT: 0
	GROUNDWATER INVESTIGATION				
6.	AFG 74 033 C 01 12	STARTING DATE: 04 1975	DURATION: 2 YEARS 9 MONTH	UNDP: 456	GOVT: 0
	MASTER PLAN AND STORAGE FEASIBILITY STUDIES FOR THE KARUE RIVER BASIN				
7.	AFG 75 015 C 01 31	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP: 6,126	GOVT: 0
	IRRIGATION AND POWER DEVELOPMENT				
8.	AFG 78 005 H 01 12	STARTING DATE: 06 1978	DURATION: 1 YEARS 6 MONTH	UNDP: 53,500	GOVT: 0
	IRRIGATION DEVELOPMENT IN KUNAR REGION				
9.	ALG 75 037 F 01 13	STARTING DATE: 09 1977	DURATION: 4 YEARS 4 MONTH	UNDP: 135,900	GOVT: 4,932,600
	ASSISTANCE TO CENTRE NATIONAL DE RECHERCHES SUR LES ZONES ARIDES (CONRZA)				
10.	ALG 77 014 A 01 12	STARTING DATE: 06 1978	DURATION: 1 YEARS 7 MONTH	UNDP: 60,000	GOVT: 0
	ASSISTANCE A L'ELABORATION D'UN PROGRAMME DE DEVELOPPEMENT DE LA PETITE HYDRAULIQUE				
11.	ALG 77 031 C 01 42	STARTING DATE: 06 1979	DURATION: 1 YEARS 7 MONTH	UNDP: 329,000	GOVT: 574,000
	ETUDE RENOVATION BAS-CHELIFF				
12.	ALG 77 053 R 01 12	STARTING DATE: 07 1979	DURATION: 1 YEARS 6 MONTH	UNDP: 10,000	GOVT: 0
	ASSISTANCE A L'ELABORATION D'UN PROGRAMME DE LUTTE CONTRE LA DESERTIFICATION ET LA CREATION D'UN BARRAGE VERT FRUITIER				
13.	ANG 77 001 C 01 31	STARTING DATE: 05 1977	DURATION: 1 YEARS 8 MONTH	UNDP: 6,500	GOVT: 0
	ASSESSMENT OF THE PROBLEMS OF THE WATER TREATMENT PLANT (LUANDA)				
14.	ARG 66 521 L 01 13	STARTING DATE: 10 1970	DURATION: 8 YEARS 6 MONTH	UNDP: 1,500,637	GOVT: 3,151,959
	NATIONAL CENTRE FOR HYDRAULIC AND APPLIED HYDROLOGICAL RESEARCH, EZEIZA				

WITH ECONOMIC SECTOR CODE 0320

15.	ARG 65 010 F 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS 6 MONTH	UNDP: 131,506	GOVT: 0
	SOIL SURVEY OF PAMPA REGION				
16.	ARG 68 526 I 01 12	STARTING DATE: 10 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 719,311	GOVT: 0
	ESTABLISHMENT OF A SOIL CONSERVATION PROGRAMME				
✓ 17.	ARG 70 013 F 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 3 MONTH	UNDP: 53,350	GOVT: 0
	DEVELOPMENT AND CONTROL OF GROUNDWATER HYDRAULIC BASINS				
18.	ARG 70 017 D 01 12	STARTING DATE: 03 1972	DURATION: 2 YEARS 6 MONTH	UNDP: 6,929	GOVT: 0
	SOIL STUDIES				
19.	ARG 70 019 G 01 12	STARTING DATE: 08 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 35,263	GOVT: 0
	EVALUATION OF THE DRAINAGE AND SALINATION CONDITIONS IN THE IRRIGATED AREA OF THE RIO NEGRO VALLEY				
20.	ARG 71 544 N 01 01	STARTING DATE: 12 1970	DURATION: 9 YEARS 1 MONTH	UNDP: 585,662	GOVT: 29,493,199
	WATER ECONOMY, LAW AND ADMINISTRATION RESEARCH AND TRAINING INSTITUTE				
✓ 21.	ARG 73 008 I 01 01	STARTING DATE: 08 1975	DURATION: 4 YEARS 5 MONTH	UNDP: 205,687	GOVT: 436,479,879
	WATER RESOURCES DEVELOPMENT				
22.	ARG 73 023 L 01 01	STARTING DATE: 01 1974	DURATION: 6 YEARS 0 MONTH	UNDP: 778,257	GOVT: 633,992,364
	IMPROVEMENT OF NAVIGATION IN THE PARANA RIVER - PHASE II				
23.	ARG 74 008 C 01 01	STARTING DATE: 11 1975	DURATION: 0 YEARS 1 MONTH	UNDP: 57	GOVT: 314,937,516
	INSTITUTO DE INVESTIGACIONES SOBRE USO Y CONSERVACION DEL AGUA				
24.	ARG 75 009 E 01 12	STARTING DATE: 01 1976	DURATION: 2 YEARS 3 MONTH	UNDP: 393,959	GOVT: 0
	INTEGRACION DE LOS ESTUDIOS DE FERTILIDAD Y MANEJO DE SUELOS EN LA PAMPA				
25.	ARG 78 005 D 01 01	STARTING DATE: 11 1978	DURATION: 4 YEARS 0 MONTH	UNDP: 420,000	GOVT: 0
	NOROESTE ARGENTINO HIDRICO, FASE II				
26.	RAK 74 001 D 01 01	STARTING DATE: 07 1974	DURATION: 1 YEARS 3 MONTH	UNDP: 13,979	GOVT: 16,450
	LAND VALUATION				
27.	BOL 65 010 F 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 3 MONTH	UNDP: 202,889	GOVT: 0
	IRRIGATION AND DRAINAGE				
29.	ROI 73 003 E 01 12	STARTING DATE: 10 1974	DURATION: 4 YEARS 3 MONTH	UNDP: 352,971	GOVT: 1,038,000
	ETUDE DE FACILITE DE LA BASSE VALLEE DE LA GUAYI				

WITH ECONOMIC SECTOR CODE 0320

29.	891 76 013 F 01 12	STARTING DATE: 09 1975	DURATION: 3 YEARS 4 MONTH	UNDP:	537,118	GOVT:	1,551,000
	ASSISTANCE AU PROGRAMME ENGRAIS						
30.	BEN 71 003 D 01 12	STARTING DATE: 06 1971	DURATION: 2 YEARS 7 MONTH	UNDP:	47,822	GOVT:	0
	CULTURES IMPLIQUEES ET AGRONOMIE GENERALE						
31.	BEN 72 001 I 01 12	STARTING DATE: 07 1972	DURATION: 2 YEARS 6 MONTH	UNDP:	174,901	GOVT:	11,213,300
	DEVELOPPEMENT DE LA VALLEE DE LOUEME-PHASE II						
32.	BEN 72 010 M 01 12	STARTING DATE: 09 1972	DURATION: 7 YEARS 4 MONTH	UNDP:	706,368	GOVT:	87,330,000
	SMALL IRRIGATION SCHEMES IN NORTH DANUMEY						
33.	BEN 73 002 C 01 01	STARTING DATE: 01 1973	DURATION: 1 YEARS 6 MONTH	UNDP:	3,130	GOVT:	0
	AMENAGEMENT DU TERRITOIRE						
34.	BEN 79 004 A 01 01	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	262,200	GOVT:	12,960,000
	COORDINATION DU PLAN NATIONAL D'APPROVISIONNEMENT EN FARIN DE MILLETO RURAL						
35.	BEN 79 006 B 01 12	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	836,487	GOVT:	143,062,615
	PROJET D'AGRO-PEDOLOGIE (PHASE II)						
36.	BER 79 002 B 01 01	STARTING DATE: 08 1979	DURATION: 2 YEARS 0 MONTH	UNDP:	47,750	GOVT:	0
	GROUNDWATER RESOURCES AND MANAGEMENT						
37.	BGD 72 009 F 01 01	STARTING DATE: 04 1977	DURATION: 3 YEARS 5 MONTH	UNDP:	1,033,945	GOVT:	22,798,200
	HYDROLOGICAL SURVEY						
38.	BGD 72 019 F 01 01	STARTING DATE: 04 1977	DURATION: 3 YEARS 9 MONTH	UNDP:	86,809	GOVT:	76,150
	WATER RESOURCES DEVELOPMENT						
39.	BGD 72 019 H 01 12	STARTING DATE: 07 1974	DURATION: 6 YEARS 6 MONTH	UNDP:	658,402	GOVT:	3,659,569
	SOIL SURVEY INTERPRETATION						
40.	BGD 72 019 C 45 12	STARTING DATE: 01 1977	DURATION: 1 YEARS 0 MONTH	UNDP:	170,689	GOVT:	0
	SOIL SURVEY INTERPRETATION						
41.	BGD 74 005 E 01 01	STARTING DATE: 01 1974	DURATION: 3 YEARS 0 MONTH	UNDP:	37,785	GOVT:	0
	EARTH RESOURCES TECHNOLOGY SATELLITE PROGRAMME-PHASE I						
42.	BGD 74 003 E 01 01	STARTING DATE: 03 1977	DURATION: 4 YEARS 10 MONTH	UNDP:	2,011,177	GOVT:	25,000
	GROUND WATER SURVEY						

43.	BGD 75 029 5 01 12	STARTING DATE: 09 1976	DURATION: 3 YEARS 0 MONTH	UNDP:	+84,786	GOVT:	5,039,276
	APPLIED REMOTE SENSING TECHNOLOGY						
44.	BGD 75 029 D 45 12	STARTING DATE: 01 1977	DURATION: 2 YEARS 0 MONTH	UNDP:	259,935	GOVT:	0
	APPLIED REMOTE SENSING TECHNOLOGY						
45.	BGD 76 005 B 01 01	STARTING DATE: 04 1977	DURATION: 2 YEARS 9 MONTH	UNDP:	90,901	GOVT:	3,658,000
	ASSISTANCE TO THE RIVER RESEARCH INSTITUTE						
46.	BGD 76 010 C 01 31	STARTING DATE: 11 1977	DURATION: 4 YEARS 2 MONTH	UNDP:	446,200	GOVT:	1,206,000
	PLANNING CELL FOR THE MINISTRY OF FLOOD CONTROL WATER RESOURCES AND POWER.						
47.	BGD 77 002 B 01 31	STARTING DATE: 07 1977	DURATION: 1 YEARS 6 MONTH	UNDP:	10,354	GOVT:	8,000
	FEASIBILITY STUDY FOR THE SUPPLY OF FRESH WATER TO MINGLA PORT						
48.	BGD 78 014 A 01 12	STARTING DATE: 04 1979	DURATION: 2 YEARS 0 MONTH	UNDP:	320,323	GOVT:	4,234,546
	LAND USE POLICY						
49.	BGD 79 004 A 01 12	STARTING DATE: 08 1979	DURATION: 1 YEARS 5 MONTH	UNDP:	151,500	GOVT:	451,000
	LANDSAT LAND ACCRETION STUDY						
50.	BGD 79 022 A 01 31	STARTING DATE: 06 1979	DURATION: 0 YEARS 3 MONTH	UNDP:	15,850	GOVT:	500,000
	STUDY FOR DEVELOPMENT OF OFFSHORE AND COASTAL AREAS OF BANGLADESH						
51.	BHA 74 004 H 01 01	STARTING DATE: 07 1974	DURATION: 4 YEARS 6 MONTH	UNDP:	170,425	GOVT:	228,420
	WATER RESOURCES DEVELOPMENT						
52.	BHA 78 003 E 01 01	STARTING DATE: 07 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	655,559	GOVT:	500,420
	WATER RESOURCES DEVELOPMENT AND MANAGEMENT						
53.	BHU 75 001 R 01 12	STARTING DATE: 10 1975	DURATION: 1 YEARS 3 MONTH	UNDP:	0	GOVT:	6,000
	DEVELOPMENT OF IRRIGATION PROJECT						
54.	BOL 68 514 H 01 01	STARTING DATE: 02 1970	DURATION: 6 YEARS 5 MONTH	UNDP:	1,618,893	GOVT:	13,425,300
	GROUNDWATER DEVELOPMENT IN THE ALTIPLANO						
55.	BOL 73 008 K 01 01	STARTING DATE: 12 1973	DURATION: 6 YEARS 1 MONTH	UNDP:	1,106,835	GOVT:	13,744,426
	HYDROLOGY STUDY COCHARAMA						
56.	POT 67 501 F 01 12	STARTING DATE: 01 1970	DURATION: 6 YEARS 0 MONTH	UNDP:	1,175,244	GOVT:	0
	SURVEYS AND TRAINING FOR DEVELOPMENT OF WATER RESOURCES AND AGRICULTURAL PRODUCTION						

57.	ROT 68 004 D 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 77,025	GOVT: 0
	LAND AND WATER DEVELOPMENT				
58.	ROT 68 011 A 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 77,460	GOVT: 0
	DICTION OF WATER AFFAIRS				
59.	ROT 70 006 F 01 12	STARTING DATE: 01 1971	DURATION: 5 YEARS 0 MONTH	UNDP: 73,670	GOVT: 0
	LAND UTILIZATION				
60.	ROT 71 017 L 01 12	STARTING DATE: 01 1972	DURATION: 7 YEARS 0 MONTH	UNDP: 332,220	GOVT: 0
	HYDROLOGY				
61.	ROT 71 506 K 01 12	STARTING DATE: 11 1972	DURATION: 6 YEARS 2 MONTH	UNDP: 697,407	GOVT: 709,585
	INVESTIGATION OF THE OKAVANGO DELTA AS A PRIMARY WATER RESOURCE				
62.	ROT 71 506 C 15 12	STARTING DATE: 01 1974	DURATION: 2 YEARS 7 MONTH	UNDP: 26,383	GOVT: 0
	INVESTIGATION OF THE OKAVANGO DELTA AS A PRIMARY WATER SOURCE FOR BOSTWANA				
63.	ROT 72 001 G 01 12	STARTING DATE: 01 1973	DURATION: 7 YEARS 0 MONTH	UNDP: 174,243	GOVT: 20,436
	LAND DEVELOPMENT				
64.	ROT 72 019 J 01 12	STARTING DATE: 08 1973	DURATION: 8 YEARS 5 MONTH	UNDP: 370,787	GOVT: 66,190
	RESEARCH ON THE SWAMP AND DRYLAND SOILS OF OKAVANGO				
65.	ROT 72 021 D 01 01	STARTING DATE: 04 1973	DURATION: 3 YEARS 9 MONTH	UNDP: 56,499	GOVT: 10,440
	HYDROELECTRICITY				
66.	ROT 74 004 G 01 31	STARTING DATE: 06 1975	DURATION: 6 YEARS 7 MONTH	UNDP: 139,035	GOVT: 19,000
	ASSISTANCE TO THE WATER UTILITIES CORPORATION				
67.	ROT 74 009 F 01 12	STARTING DATE: 01 1975	DURATION: 6 YEARS 0 MONTH	UNDP: 144,315	GOVT: 58,472
	WATER ENGINEER (OPERATION AND MAINTENANCE)				
68.	ROT 78 010 A 01 32	STARTING DATE: 06 1979	DURATION: 2 YEARS 7 MONTH	UNDP: 14,811	GOVT: 0
	ENVIRONMENTAL HYDROLOGIST				
69.	PAR 68 521 L 01 13	STARTING DATE: 11 1970	DURATION: 5 YEARS 3 MONTH	UNDP: 1,352,961	GOVT: 7,083,800
	HYDROLOGICAL STUDIES OF THE UPPER PARAGUAY RIVER BASIN				
70.	PAR 67 527 M 01 13	STARTING DATE: 06 1970	DURATION: 6 YEARS 7 MONTH	UNDP: 1,789,209	GOVT: 8,994,046
	CENTRE FOR APPLIED HYDROLOGY, PORTO ALEGRE				

71.	BRA 70 015 F 01 12	STARTING DATE: 01 1971	DURATION: 4 YEARS 0 MONTH	UNDP: 168,360	GOVT: 0
	IRRIGATION AND LAND AND WATER DEVELOPMENT				
72.	BRA 71 561 J 01 01	STARTING DATE: 01 1972	DURATION: 4 YEARS 1 MONTH	UNDP: 199,936	GOVT: 600,000
	MULTIPURPOSE WATER DEVELOPMENT OF THE YAGUARON RIVER BASIN				
73.	BRA 72 010 M 01 31	STARTING DATE: 06 1972	DURATION: 9 YEARS 7 MONTH	UNDP: 1,876,334	GOVT: 16,000,000
	PLANNING OF A HYDROLOGICAL NETWORK FOR THE AMAZON RIVER BASIN				
74.	BRA 74 007 I 01 31	STARTING DATE: 10 1974	DURATION: 7 YEARS 2 MONTH	UNDP: 946,295	GOVT: 0
	YAGUARON RIVER BASIN PHASE II				
75.	PRA 74 009 J 01 12	STARTING DATE: 01 1975	DURATION: 7 YEARS 0 MONTH	UNDP: 1,046,066	GOVT: 12,226,600
	DEVELOPMENT OF THE SAN FRANCISCO RIVER VALLEY				
76.	BRA 74 028 D 01 31	STARTING DATE: 12 1976	DURATION: 4 YEARS 1 MONTH	UNDP: 1,307,114	GOVT: 24,640,220
	INTEGRATED DEVELOPMENT OF THE PARAGUAY RIVER BASIN IN BRAZIL				
77.	BPA 78 007 A 01 42	STARTING DATE: 07 1979	DURATION: 4 YEARS 6 MONTH	UNDP: 660,936	GOVT: 61,625,000
	INTEGRATED RURAL DEVELOPMENT, LOWER SAN FRANCISCO VALLEY				
78.	BUL 69 506 L 01 12	STARTING DATE: 07 1970	DURATION: 6 YEARS 0 MONTH	UNDP: 1,074,799	GOVT: 8,272,000
	ASSISTANCE TO THE NIKOLA POUZHKAROV INSTITUTE OF SOIL SCIENCE				
79.	BUL 71 045 E 01 01	STARTING DATE: 01 1972	DURATION: 2 YEARS 2 MONTH	UNDP: 2,525	GOVT: 0
	GROUND WATER RESOURCES				
80.	BUL 71 063 C 01 12	STARTING DATE: 01 1972	DURATION: 1 YEARS 4 MONTH	UNDP: 4,534	GOVT: 0
	SURFACE IRRIGATION AND SPRINKLING				
81.	BUL 71 077 D 01 12	STARTING DATE: 07 1972	DURATION: 1 YEARS 3 MONTH	UNDP: 2,117	GOVT: 0
	COMPLEX IRRIGATION SYSTEMS				
82.	BUL 72 029 E 01 12	STARTING DATE: 07 1972	DURATION: 1 YEARS 10 MONTH	UNDP: 2,235	GOVT: 0
	STUDY SOIL CONDITIONS				
83.	BUL 72 038 D 01 01	STARTING DATE: 01 1973	DURATION: 3 YEARS 0 MONTH	UNDP: 600	GOVT: 600
	METHODS OF STUDYING, DESIGNING AND STRENGTHENING OF LANDSLIDE TERRAINS				
84.	BUL 72 041 C 01 01	STARTING DATE: 05 1973	DURATION: 1 YEARS 4 MONTH	UNDP: 2,608	GOVT: 2,020
	PROBLEMS SPECIFIQUES DE LA CONSTRUCTION DE BARRAGES				



## WITH ECONOMIC SECTION CODE 0320

- 7 -

<del>85.</del>	<del>BUL 74 000 X 01 12</del>	<del>STARTING DATE: 03 1974</del>	<del>DURATION: 4 YEARS 10 MONTH</del>	<del>UNDP: 348,007</del>	<del>GOVT: 455,800</del>
	<del>ASSISTANCE TO N. POUCHKAKOV INSTITUTE OF SOIL SCIENCE</del>				
86.	BUL 74 036 D 01 13	STARTING DATE: 06 1974	DURATION: 0 YEARS 7 MONTH	UNDP: 1,397	GOVT: 1,000
	HYDROLOGY-HYDROGEOLOGY				
✓87.	BUL 74 059 D 01 01	STARTING DATE: 01 1975	DURATION: 1 YEARS 3 MONTH	UNDP: 1,515	GOVT: 1,000
	EVALUATION-DES-RESSOURCES-DES-EAUX-SOUTHERAINES				
<del>88.</del>	<del>BUR 62 505 C 01 01</del>	<del>STARTING DATE: 05 1970</del>	<del>DURATION: 2 YEARS 0 MONTH</del>	<del>UNDP: 1,137,306</del>	<del>GOVT: 1,726,939</del>
	<del>MU RIVER IRRIGATION SURVEY</del>				
89.	BUR 68 023 F 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 0 MONTH	UNDP: 302,990	GOVT: 0
	IRRIGATION EXPANSION				
90.	BUR 68 513 O 01 01	STARTING DATE: 01 1970	DURATION: 9 YEARS 0 MONTH	UNDP: 3,146,424	GOVT: 5,465,514
	DEVELOPMENT-OF-THE-SITTANG-RIVER-VALLEY				
<del>91.</del>	<del>BUR 70 014 C 01 01</del>	<del>STARTING DATE: 01 1970</del>	<del>DURATION: 4 YEARS 0 MONTH</del>	<del>UNDP: 7,339</del>	<del>GOVT: 0</del>
	<del>WATER RESOURCES DEVELOPMENT TRAINING (UNIVERSITY OF KOLKATA, INDIA)</del>				
92.	BUR 71 002 C 01 12	STARTING DATE: 04 1972	DURATION: 1 YEARS 1 MONTH	UNDP: 1,504	GOVT: 0
	SOIL CONSERVATION				
93.	BUR 74 034 F 01 01	STARTING DATE: 09 1975	DURATION: 4 YEARS 10 MONTH	UNDP: 197,094	GOVT: 100,000
	WATER-RESOURCES-MANAGEMENT-AND-PROJECT-DEVELOPMENT				
<del>94.</del>	<del>CAF 75 003 9 01 01</del>	<del>STARTING DATE: 05 1975</del>	<del>DURATION: 3 YEARS 8 MONTH</del>	<del>UNDP: 3,101</del>	<del>GOVT: 0</del>
	<del>ETUDE NATIONALE DES RESSOURCES HYDRAULIQUES EN REPUBLIQUE CENTRAFRICAINE</del>				
95.	CHA 70 006 B 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 10 MONTH	UNDP: 10,562	GOVT: 0
	IMPROVEMENT OF INSTRUMENTS AND METHODS OF HYDROLOGICAL OBSERVATION AND MEASUREMENTS				
96.	CHA 70 007 9 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 0 MONTH	UNDP: 26,000	GOVT: 0
	GROUNDWATER HYDROLOGIST				
✓97.	CHA 70 009 E 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 6 MONTH	UNDP: 5,010	GOVT: 0
	HYDRAULIC MODEL STUDIES OF FLOOD CONTROL				
98.	CHD 71 510 I 01 01	STARTING DATE: 10 1972	DURATION: 5 YEARS 3 MONTH	UNDP: 597,560	GOVT: 64,636,000
	APPROVISIONNEMENT EN EAU DES ZONES RURALES				

WITH ECONOMIC SECTOR CODE 0320

99.	CHD 73 002 B 42 42	STARTING DATE: 06 1973	DURATION: 2 YEARS 6 MONTH	UNDP: 152,736	GOVT: 0
	SATEGUI-DERESSIA PRE-INVESTMENT IRRIGATION STUDY				
100.	CHD 76 004 F 01 01	STARTING DATE: 01 1977	DURATION: 5 YEARS 0 MONTH	UNDP: 1,648,471	GOVT: 215,909,000
	RENFORCEMENT DU SERVICE DES AMENAGEMENTS RURAUX D'HYDRAULIQUE (SERARHY)				
101.	CHD 75 009 D 45 01	STARTING DATE: 01 1978	DURATION: 2 YEARS 0 MONTH	UNDP: 16,229	GOVT: 0
	ASSISTANCE AU SERVICE DES AMENAGEMENTS RURAUX D'HYDRAULIQUE (SERARHY)				
102.	CHI 64 518 C 01 12	STARTING DATE: 10 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 903,596	GOVT: 47,274,780
	CHILEAN SOIL SURVEY AND RESEARCH PROJECT				
103.	CHI 69 535 P 01 01	STARTING DATE: 07 1970	DURATION: 9 YEARS 6 MONTH	UNDP: 1,600,321	GOVT: 20,430,049
	WATER RESOURCES DEVELOPMENT IN THE NORTE GRANDE				
104.	CHI 71 549 J 01 12	STARTING DATE: 01 1972	DURATION: 6 YEARS 6 MONTH	UNDP: 1,182,030	GOVT: 4,457,149
	IRRIGATION AND CONSERVATION OF THE RIO-BIJO RIVER WATERSHED				
105.	CHI 72 021 C 01 01	STARTING DATE: 12 1972	DURATION: 1 YEARS 1 MONTH	UNDP: 5,555	GOVT: 0
	HYDRAULIC RESOURCES PLANNING				
106.	CKI 72 004 K 01 12	STARTING DATE: 09 1972	DURATION: 3 YEARS 4 MONTH	UNDP: 19,197	GOVT: 4,554
	SOIL SCIENCE				
107.	CKI 72 013 D 01 12	STARTING DATE: 01 1973	DURATION: 3 YEARS 0 MONTH	UNDP: 51,573	GOVT: 1,650
	TRAINING IN LAND SURVEYING				
108.	CKI 72 017 E 01 01	STARTING DATE: 12 1972	DURATION: 2 YEARS 1 MONTH	UNDP: 5,918	GOVT: 61,000
	INTERNATIONAL SYMPOSIUM ON WATER RESOURCES PLANNING				
109.	CKI 72 021 F 01 12	STARTING DATE: 08 1972	DURATION: 2 YEARS 5 MONTH	UNDP: 38,097	GOVT: 174,862
	LAND MANAGEMENT				
110.	CMR 68 001 D 01 01	STARTING DATE: 01 1970	DURATION: 3 YEARS 6 MONTH	UNDP: 114,525	GOVT: 0
	NATURAL RESOURCES DEVELOPMENT AND POWER				
111.	CMR 71 516 K 01 01	STARTING DATE: 01 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 769,084	GOVT: 40,040,639
	GROUNDWATER INVESTIGATION AND PILOT DEVELOPMENT				
112.	CMR 72 004 H 01 12	STARTING DATE: 02 1974	DURATION: 7 YEARS 0 MONTH	UNDP: 323,453	GOVT: 64,960,000
	RENFORCEMENT DU DEPARTEMENT DE LA PEDOLOGIE ET DES SOLS				

113.	CHR 74 013 C 01 01	STARTING DATE: 11 1974	DURATION: 4 YEARS 2 MONTH	UNDP: 17141977	GOVT: 397927000
	DRILLING AND EXPLORATION OF GROUNDWATER (CRYSTALLINE ZONE)				
114.	CHR 78 002 B 01 12	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP: 427,770	GOVT: 76,540,000
	DEVELOPPEMENT DU SERVICE DES SOLS DE L'ONAREST				
115.	COI 68 001 E 01 12	STARTING DATE: 01 1971	DURATION: 4 YEARS 0 MONTH	UNDP: 89,142	GOVT: 11,110
	GENEPRURAL				
116.	COI 74 012 A 45 12	STARTING DATE: 10 1979	DURATION: 0 YEARS 6 MONTH	UNDP: 1317500	GOVT: 45,000
	CONSTRUCTION DES CITRANS POUR LE STOCKAGE D'EAU				
117.	COI 79 005 A 01 01	STARTING DATE: 10 1979	DURATION: 1 YEARS 0 MONTH	UNDP: 317,420	GOVT: 565,000
	RECHERCHE ET MISE EN VALEUR DES EAUX				
118.	COL 74 006 F 01 16	STARTING DATE: 01 1975	DURATION: 3 YEARS 3 MONTH	UNDP: 246,956	GOVT: 11,265,750
	EVALUATION DE RESSOURCES HYDRIQUES EN COLOMBIE				
119.	COS 05 502 G 01 01	STARTING DATE: 01 1970	DURATION: 3 YEARS 5 MONTH	UNDP: 877,216	GOVT: 5,471,074
	GROUNDWATER SURVEYS IN THREE SELECTED AREAS				
120.	COS 70 007 F 01 12	STARTING DATE: 01 1971	DURATION: 2 YEARS 2 MONTH	UNDP: 34,171	GOVT: 11,110
	SOILS CLASSIFICATION AND MANAGEMENT				
121.	COS 71 509 L 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS 6 MONTH	UNDP: 437,034	GOVT: 1,243,027
	ORGANIZATION OF IRRIGATION DISTRICTS IN THE ILLINOIS RIVER BASIN				
122.	COS 74 007 J 01 12	STARTING DATE: 10 1974	DURATION: 3 YEARS 3 MONTH	UNDP: 171,501	GOVT: 3,767,700
	IMPLEMENTATION OF THE ILLINOIS RIVER IRRIGATION DISTRICT				
123.	CPP 79 014 A 01 12	STARTING DATE: 10 1979	DURATION: 1 YEARS 3 MONTH	UNDP: 70,000	GOVT: 11,110
	EXPERT SERVICES AND FELLOWSHIPS FOR LAND RECLAMATION				
124.	CUB 71 002 B 01 12	STARTING DATE: 06 1971	DURATION: 1 YEARS 7 MONTH	UNDP: 2,353	GOVT: 11,110
	SOILS MICROBIOLOGY				
125.	CUE 71 008 D 01 13	STARTING DATE: 12 1971	DURATION: 3 YEARS 4 MONTH	UNDP: 72,502	GOVT: 11,110
	HYDROLOGY OF BHOA BAY				
126.	CUB 76 005 F 01 12	STARTING DATE: 03 1977	DURATION: 4 YEARS 10 MONTH	UNDP: 566,320	GOVT: 2,811,352
	CENTRAL IRRIGATION AND DRAINAGE RESEARCH STATION				

WITH ECONOMIC SECTION CODE 0320

127.	CUB 76 001 A 01 99	STARTING DATE: 02 1979	DURATION: 3 YEARS 7 MONTH	UNDP: 1,025,278	GOVT: 2,021,866
	RESEARCH AND CONTROL OF MAKINE POLLUTION				
128.	CVI 75 001 G 01 01	STARTING DATE: 01 1975	DURATION: 5 YEARS 0 MONTH	UNDP: 770,609	GOVT: 0
	RECHERCHE ET MISE EN VALEUR DES EAUX SOUTERRAINES				
129.	CVI 75 011 C 01 12	STARTING DATE: 08 1975	DURATION: 1 YEARS 5 MONTH	UNDP: 43,246	GOVT: 1,419,000
	SOIL AND WATER CONSERVATION				
130.	CVI 75 015 B 01 01	STARTING DATE: 06 1975	DURATION: 0 YEARS 1 MONTH	UNDP: 3,490	GOVT: 0
	CONSULTATION EN DESALINATION				
131.	CVI 75 025 F 01 12	STARTING DATE: 01 1975	DURATION: 4 YEARS 0 MONTH	UNDP: 163,647	GOVT: 0
	CONSERVATION DES SOLS ET DES EAUX				
132.	CVI 77 002 D 01 31	STARTING DATE: 01 1977	DURATION: 2 YEARS 0 MONTH	UNDP: 0	GOVT: 0
	RECHERCHE ET MISE EN VALEUR DES EAUX SOUTERRAINES				
133.	CVI 75 001 A 01 01	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP: 673,345	GOVT: 54,650
	RECHERCHE ET AMENAGEMENT DES RESSOURCES EN EAUX				
134.	CYP 66 506 G 01 12	STARTING DATE: 08 1970	DURATION: 4 YEARS 0 MONTH	UNDP: 1,425,747	GOVT: 339,542
	SURVEYS, DEMONSTRATION AND PLANNING OF WATER RESOURCE UTILIZATION				
135.	CYP 71 513 H 01 12	STARTING DATE: 06 1971	DURATION: 4 YEARS 3 MONTH	UNDP: 829,312	GOVT: 314,000
	FEASIBILITY STUDIES FOR IRRIGATION DEVELOPMENT IN THE MORPHOU-VYLLIKIA AREA				
136.	CYP 72 006 C 01 12	STARTING DATE: 04 1973	DURATION: 1 YEARS 9 MONTH	UNDP: 7,750	GOVT: 1,000
	LAND CONSOLIDATION				
137.	CYP 72 017 H 01 12	STARTING DATE: 02 1973	DURATION: 3 YEARS 0 MONTH	UNDP: 89,000	GOVT: 11,700
	IRRIGATION ENGINEER				
138.	CYP 75 016 H 01 12	STARTING DATE: 10 1975	DURATION: 4 YEARS 0 MONTH	UNDP: 266,776	GOVT: 136,180
	PAPHOS IRRIGATION PROJECT (SAPS)				
139.	CYP 77 006 D 01 12	STARTING DATE: 07 1973	DURATION: 4 YEARS 0 MONTH	UNDP: 359,274	GOVT: 200,000
	KHRYSOCHOU WATERSHED IRRIGATION PROJECT				
140.	CYP 78 003 P 01 12	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 25,050	GOVT: 0
	USE OF SEWAGE EFFLUENT FOR IRRIGATION				

## WITH ECONOMIC SECTION CODE 0320

141.	CZE 70 011 E 01 01	STARTING DATE: 01 1972	DURATION: 2 YEARS 2 MONTH	UNDP:	0	GOVT:	0
	MULTIPURPOSE EXPLOITATION OF WATER RESOURCES						
142.	CZE 73 003 C 01 12	STARTING DATE: 05 1974	DURATION: 1 YEARS 8 MONTH	UNDP:	2,043	GOVT:	24,000
	SOIL CONSERVATION						
143.	CZE 74 002 B 01 12	STARTING DATE: 01 1975	DURATION: 1 YEARS 0 MONTH	UNDP:	0	GOVT:	0
	INTEGRATED DEVELOPMENT OF THE EAST-SLOVAKIAN LOWLANDS						
144.	CZE 77 602 C 01 16	STARTING DATE: 10 1977	DURATION: 1 YEARS 3 MONTH	UNDP:	7,980	GOVT:	0
	OPERATIONAL HYDROLOGY						
145.	DOM 68 006 E 01 01	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	131,241	GOVT:	0
	NATURAL RESOURCES DEVELOPMENT						
146.	DOM 69 003 I 01 01	STARTING DATE: 02 1970	DURATION: 6 YEARS 11 MONTH	UNDP:	173,185	GOVT:	0
	HYDROLOGY						
147.	DOM 74 009 G 01 12	STARTING DATE: 01 1974	DURATION: 3 YEARS 0 MONTH	UNDP:	90,929	GOVT:	143,700
	SOIL CLASSIFICATION						
148.	DOM 74 004 B 01 01	STARTING DATE: 04 1979	DURATION: 1 YEARS 6 MONTH	UNDP:	373,800	GOVT:	232,600
	FORTALECIMIENTO INSTITUCIONAL DE LA DIRECCION GENERAL DE MINERIA						
149.	ECU 69 013 G 01 13	STARTING DATE: 03 1970	DURATION: 5 YEARS 7 MONTH	UNDP:	128,750	GOVT:	0
	CONSERVATION OF NATURAL RESOURCES						
150.	ECU 72 005 F 01 31	STARTING DATE: 11 1974	DURATION: 0 YEARS 6 MONTH	UNDP:	7,746	GOVT:	0
	STUDY OF THE PUYUNGO TUNDES AND CATAMAYO CHIRA WATERSHEDS						
151.	EGY 70 541 I 01 13	STARTING DATE: 10 1970	DURATION: 6 YEARS 3 MONTH	UNDP:	1,098,402	GOVT:	532,840
	ASSISTANCE IN THE STUDY OF PROBLEMS OF COASTAL EROSION						
152.	EGY 71 007 E 01 01	STARTING DATE: 04 1972	DURATION: 2 YEARS 0 MONTH	UNDP:	2,500	GOVT:	0
	WATER CONTROL AND DEVELOPMENT OF ITS WATER						
153.	EGY 71 561 M 01 12	STARTING DATE: 09 1971	DURATION: 8 YEARS 4 MONTH	UNDP:	850,631	GOVT:	1,269,450
	PILOT PROJECT FOR GROUNDWATER UTILIZATION, NEW VALLEY, WESTERN DESERT						
154.	EGY 73 023 H 01 01	STARTING DATE: 01 1974	DURATION: 8 YEARS 0 MONTH	UNDP:	1,435,912	GOVT:	0
	ASSISTANCE TO THE HYDRAULIC RESEARCH AND EXPERIMENT STATION, DELTA MARRAGE						

WITH ECONOMIC SECTOR CODE 0320

154.	EGY 73 004 C 01 42	STARTING DATE: 04 1977	DURATION: 5 YEARS 6 MONTH	UNDP: 1,279,750	GOVT: 408,300
	MASTER PLAN FOR WATER RESOURCE DEVELOPMENT				
156.	EGY 73 049 I 01 12	STARTING DATE: 01 1974	DURATION: 5 YEARS 0 MONTH	UNDP: 1,296,319	GOVT: 725,660
	CONTROL OF WATER LOGGING AND SALINITY IN THE NEWLY RECLAIMED AREA				
157.	EGY 73 063 F 01 13	STARTING DATE: 01 1975	DURATION: 5 YEARS 0 MONTH	UNDP: 964,200	GOVT: 70,000,000
	COASTAL PROTECTION STUDIES				
158.	EGY 77 007 C 01 12	STARTING DATE: 01 1978	DURATION: 2 YEARS 0 MONTH	UNDP: 637,583	GOVT: 97,378
	CO-ORDINATED DEVELOPMENT OF AREAS WEST OF NUBARIA CANAL				
159.	ELS 65 502 E 01 01	STARTING DATE: 07 1970	DURATION: 2 YEARS 8 MONTH	UNDP: 727,875	GOVT: 2,289,595
	GROUNDWATER SURVEY OF THE METROPOLITAN AREA OF SAN SALVADOR				
160.	ELS 71 506 H 01 12	STARTING DATE: 12 1970	DURATION: 3 YEARS 11 MONTH	UNDP: 304,165	GOVT: 1,173,300
	WATERSHED PROTECTION AND AGROFOREST DEVELOPMENT IN THE NORTHERN ZONE				
161.	ELS 74 011 C 01 12	STARTING DATE: 11 1974	DURATION: 0 YEARS 8 MONTH	UNDP: 9,700	GOVT: 0
	LAND USE SURVEY				
162.	ELS 78 004 B 01 12	STARTING DATE: 01 1978	DURATION: 3 YEARS 0 MONTH	UNDP: 105,000	GOVT: 0
	PROYECTO PILOTO DE ORDENACION DE CUENCAS HIDROGRAFICAS				
163.	ELS 78 005 D 01 01	STARTING DATE: 01 1979	DURATION: 5 YEARS 0 MONTH	UNDP: 827,000	GOVT: 2,274,400
	PLAN MAESTRO DE DESARROLLO Y USO MULTIPLE DE LOS RECURSOS HIDRAULICOS				
164.	ETH 67 519 C 01 12	STARTING DATE: 07 1973	DURATION: 3 YEARS 3 MONTH	UNDP: 0	GOVT: 0
	ASSISTANCE TO THE MINISTRY OF LAND REFORM AND ADMINISTRATION				
165.	ETH 70 525 G 01 12	STARTING DATE: 04 1970	DURATION: 4 YEARS 5 MONTH	UNDP: 1,021,568	GOVT: 0
	DEVELOPMENT OF THE AWASH VALLEY (PHASE II)				
166.	ETH 72 001 J 01 01	STARTING DATE: 02 1973	DURATION: 3 YEARS 11 MONTH	UNDP: 381,402	GOVT: 678,000
	ACTIVATION OF THE NATIONAL WATER RESOURCES COMMISSION				
167.	ETH 72 006 I 01 12	STARTING DATE: 04 1972	DURATION: 4 YEARS 0 MONTH	UNDP: 1,195,093	GOVT: 623,860
	DEVELOPMENT OF THE AWASH VALLEY, PHASE III				
169.	ETH 73 002 H 01 12	STARTING DATE: 05 1973	DURATION: 5 YEARS 8 MONTH	UNDP: 214,703	GOVT: 63,200
	LAND TENURE				

WITH ECONOMIC SECTOR CODE 0320

169.	ETH 74 009 C 01 13 01	STARTING DATE: 10 1974	DURATION: 4 YEARS 3 MONTH	UNDP: 222,482	GOVT: 571,500
	REGIONAL WATER DEVELOPMENT OFFICE-WULLO & TIGRE PROVINCES				
170.	ETH 75 001 E 01 12	STARTING DATE: 04 1975	DURATION: 3 YEARS 9 MONTH	UNDP: 649,052	GOVT: 2,560,000
	DEVELOPMENT OF THE AWASH VALLEY - PHASE IV				
171.	ETH 75 001 D 45 12	STARTING DATE: 01 1977	DURATION: 1 YEARS 0 MONTH	UNDP: 0	GOVT: 0
	DEVELOPMENT OF THE AWASH VALLEY - PHASE-IV				
172.	ETH 75 004 H 01 01	STARTING DATE: 07 1975	DURATION: 5 YEARS 6 MONTH	UNDP: 2,404,811	GOVT: 2,186,160
	STRENGTHENING OF THE EXECUTIVE ORGAN OF THE NATIONAL WATER RESOURCES COMMISSION - PHASE II				
173.	ETH 77 005 C 01 12	STARTING DATE: 09 1977	DURATION: 5 YEARS 4 MONTH	UNDP: 294,580	GOVT: 581,300
	ASSISTANCE TO SOIL AND WATER CONSERVATION PROGRAMME (EPID)				
174.	ETH 77 006 R 01 01	STARTING DATE: 11 1977	DURATION: 4 YEARS 2 MONTH	UNDP: 548,700	GOVT: 1,549,000
	TECHNICAL ASSISTANCE TO THE WULLO REGIONAL OFFICE OF THE ETHIOPIAN WATER RESOURCES AUTHORITY				
175.	ETH 77 012 D 01 27	STARTING DATE: 09 1977	DURATION: 3 YEARS 4 MONTH	UNDP: 160,465	GOVT: 726,500
	RESEARCH AND DEVELOPMENT IN WATER PUMPING TECHNOLOGY FOR RURAL AREAS				
176.	ETH 77 020 C 01 11	STARTING DATE: 09 1977	DURATION: 3 YEARS 4 MONTH	UNDP: 250,768	GOVT: 121,600
	RURAL WATER SUPPLY OPERATION AND MAINTENANCE TRAINING PROGRAMME				
177.	ETH 78 003 C 01 12	STARTING DATE: 01 1979	DURATION: 5 YEARS 0 MONTH	UNDP: 2,048,310	GOVT: 48,000
	ASSISTANCE TO LAND USE PLANNING				
178.	FIJ 69 001 D 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 11 MONTH	UNDP: 59,303	GOVT: 0
	HYDRO-GEOLOGICAL SURVEY				
179.	FIJ 71 004 K 01 12	STARTING DATE: 08 1971	DURATION: 7 YEARS 5 MONTH	UNDP: 307,932	GOVT: 0
	IRRIGATION AND DRAINAGE ENGINEER				
180.	FIJ 71 006 N 01 01	STARTING DATE: 01 1972	DURATION: 9 YEARS 0 MONTH	UNDP: 686,449	GOVT: 0
	HYDROGRAPHIC SURVEY UNIT				
181.	FIJ 75 011 G 01 12	STARTING DATE: 09 1973	DURATION: 7 YEARS 4 MONTH	UNDP: 558,718	GOVT: 19,500
	SENIOR DRAINAGE AND IRRIGATION ENGINEER (UPAS)				
182.	FIJ 73 012 D 01 01	STARTING DATE: 09 1973	DURATION: 3 YEARS 4 MONTH	UNDP: 2,091	GOVT: 0
	PRELIMINARY STUDY OF THE FLOOD PROBLEMS OF THE REWA RIVER DELTA				

WITH ECONOMIC SECTOR CODE 0320

183.	FIJ 74 003 I 01 01 FELLOWSHIP IN HYDROGEOLOGY	STARTING DATE: 09 1974	DURATION: 6 YEARS 6 MONTH	UNDP:	34,061	GOVT:	0
184.	FIJ 74 004 D 01 01 GEOPHYSICAL TRAINING	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP:	49,666	GOVT:	3,597
185.	GAM 72 005 C 01 12 IRRIGATION AGRONOMY	STARTING DATE: 09 1972	DURATION: 4 YEARS 0 MONTH	UNDP:	105	GOVT:	77,258
186.	GAM 74 007 G 01 01 RURAL WATER SUPPLY	STARTING DATE: 01 1975	DURATION: 4 YEARS 0 MONTH	UNDP:	246,699	GOVT:	700,000
187.	GAM 74 007 B 45 01 RURAL WATER SUPPLY	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	578,300	GOVT:	0
188.	GBS 75 024 E 01 01 RIVER BASIN DEVELOPMENT	STARTING DATE: 10 1975	DURATION: 2 YEARS 3 MONTH	UNDP:	51,497	GOVT:	319,200
189.	GBS 75 034 E 01 01 MISE EN VALEUR DES FAUX SOUTERRAINES	STARTING DATE: 10 1975	DURATION: 2 YEARS 3 MONTH	UNDP:	83,284	GOVT:	2,174,500
190.	GBS 77 002 D 01 01 HYDRAULIQUE RURALE	STARTING DATE: 03 1977	DURATION: 4 YEARS 10 MONTH	UNDP:	706,663	GOVT:	23,750
191.	GBS 78 003 B 01 12 ASSISTANCE POUR LA CREATION D'UN DEPARTEMENT POUR L'ETUDE DES SOLS DE LA GUINEE-BISSAU	STARTING DATE: 07 1978	DURATION: 0 YEARS 6 MONTH	UNDP:	0	GOVT:	350,000
192.	GHA 65 574 F 01 12 PILOT IRRIGATION DEVELOPMENT SCHEME, ASUTSUARE	STARTING DATE: 02 1970	DURATION: 4 YEARS 0 MONTH	UNDP:	933,450	GOVT:	2,445,030
193.	GHA 67 510 H 01 12 VOLTA LAKE RESEARCH	STARTING DATE: 07 1970	DURATION: 4 YEARS 6 MONTH	UNDP:	1,302,160	GOVT:	0
194.	GHA 71 016 E 01 01 HYDROLOGY AND WATER RESOURCES	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP:	24,091	GOVT:	0
195.	GHA 71 531 B 01 31 RESERVOIR MANAGEMENT	STARTING DATE: 11 1972	DURATION: 0 YEARS 1 MONTH	UNDP:	894	GOVT:	0
196.	GHA 71 533 O 01 12 VOLTA LAKE RESEARCH (PHASE II)	STARTING DATE: 06 1971	DURATION: 8 YEARS 7 MONTH	UNDP:	1,037,964	GOVT:	1,241,340



197.	CHA 73-001-J 01 12	STARTING DATE: 09 1973	DURATION: 5 YEARS	4 MONTH	UNDP: 513,103	GOVT: 96,450
	IRRIGATION DEVELOPMENT					
198.	CHA 74 020 F 01 12	STARTING DATE: 12 1975	DURATION: 3 YEARS	1 MONTH	UNDP: 54,568	GOVT: 563,500
	ASSISTANCE TO THE SOIL RESEARCH INSTITUTE OF THE COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH					
199.	CHA 78 002 B 01 12	STARTING DATE: 06 1979	DURATION: 1 YEARS	6 MONTH	UNDP: 97,190	GOVT: 10,000
	ASSISTANCE TO THE IRRIGATION DEVELOPMENT AUTHORITY					
200.	GEO 78-004-R 01 31	STARTING DATE: 08 1978	DURATION: 1 YEARS	6 MONTH	UNDP: 300,000	GOVT: 0
	RESEARCH PROJECT FOR SCIENTIFIC PLANNING FOR IMPLEMENTATION OF PLAN TO COMBAT DESERTIFICATION IN SUDANO-SAHELIAN REGION					
201.	GRE 69 005 B 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS	0 MONTH	UNDP: 48,019	GOVT: 0
	STUDY OF WATER RESOURCES IN EASTERN CRETE					
202.	GRE 71 531 F 01 12	STARTING DATE: 09 1970	DURATION: 3 YEARS	8 MONTH	UNDP: 463,990	GOVT: 37,770,000
	STUDY OF WATER RESOURCES AND THEIR EXPLOITATION FOR IRRIGATION IN EASTERN CRETE (PHASE II)					
203.	GRE 72-002-H 01 12	STARTING DATE: 09 1972	DURATION: 7 YEARS	4 MONTH	UNDP: 63,598	GOVT: 12,312,000
	STUDIES AND EXPERIMENTS FOR CAPTURING FRESH WATER FROM THE ALMYRUS SPRING OF IRAKLION					
204.	GRE 74 004 B 01 12	STARTING DATE: 09 1974	DURATION: 0 YEARS	1 MONTH	UNDP: 1,207	GOVT: 10,000
	HYDROLOGICAL INVESTIGATIONS IN THE MESSARA PLAIN					
205.	GRE 74 007 B 01 12	STARTING DATE: 11 1974	DURATION: 0 YEARS	1 MONTH	UNDP: 2,692	GOVT: 40,000
	SOIL CLASSIFICATION					
206.	GRE 74-014-D 01 12	STARTING DATE: 01 1975	DURATION: 0 YEARS	3 MONTH	UNDP: 16,996	GOVT: 175,000
	SUPPLEMENTARY STUDIES OF THE GROUNDWATER RESOURCES OF THE MIRE'S BASIN					
207.	GRE 77 023 C 01 12	STARTING DATE: 08 1978	DURATION: 2 YEARS	5 MONTH	UNDP: 450,031	GOVT: 24,754,800
	WATER RESOURCES DEVELOPMENT OF THE MOLAI AREA IN LAKONIA					
208.	GRE 79 006 A 01 12	STARTING DATE: 09 1979	DURATION: 2 YEARS	4 MONTH	UNDP: 304,180	GOVT: 101,460,000
	SOIL SURVEY AND LAND RECLAMATION					
209.	GKN 74-021-E 01 12	STARTING DATE: 06 1974	DURATION: 1 YEARS	7 MONTH	UNDP: 94,105	GOVT: 47,200
	WATERSHED DEMONSTRATION UNIT					
210.	GUA 72 011 L 01 01	STARTING DATE: 04 1973	DURATION: 8 YEARS	0 MONTH	UNDP: 1,061,987	GOVT: 633,860
	GROUNDWATER STUDY					

WITH ECONOMIC SECTOR CODE 0320

211.	GUI 72 004 S 01 12	STARTING DATE: 01 1976	DURATION: 5 YEARS 0 MONTH	UNDP: 890,433	GOVT: 6,000,000
	DEVELOPPEMENT DU SERVICE NATIONAL DES SOLS				
212.	GUI 74 014 F 01 16	STARTING DATE: 01 1975	DURATION: 7 YEARS 0 MONTH	UNDP: 2,032,699	GOVT: 12,242,340
	ASSISTANCE AU SERVICE HYDROLOGIQUE NATIONAL ET AMENAGEMENTS DES BASSINS VERSANTS DE LA MOYENNE GUINEE				
213.	GUI 78 011 B 01 12	STARTING DATE: 01 1976	DURATION: 5 YEARS 0 MONTH	UNDP: 177,957	GOVT: 0
	PETITE HYDROELECTRIQUE AGRICOLE ET CONSERVATION DES EAUX ET DU SOL EN MOYENNE-GUINEE				
214.	GUI 79 004 A 01 42	STARTING DATE: 02 1979	DURATION: 0 YEARS 2 MONTH	UNDP: 13,500	GOVT: 0
	PLANIFICATION DES RESSOURCES HYDRAULIQUES				
215.	HAI 62 503 I 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 1 MONTH	UNDP: 1,873,158	GOVT: 3,890,690
	LAND AND WATER SURVEYS IN THE GONAIVES PLAIN AND THE NORTHWEST DEPARTMENT				
216.	HAI 77 065 E 01 12	STARTING DATE: 01 1977	DURATION: 6 YEARS 0 MONTH	UNDP: 1,550,424	GOVT: 2,255,600
	PROTECTION ET AMENAGEMENT DU BASSIN MONTAGNEUX DU LIMBE				
217.	HAI 77 016 S 01 42	STARTING DATE: 01 1979	DURATION: 1 YEARS 0 MONTH	UNDP: 0	GOVT: 5,000
	FORAGE EXPLORATOIRE DE LA NAPPE AQUIFERE DE ST MARC ET DES CAYES				
218.	HAI 78 008 C 01 16	STARTING DATE: 02 1978	DURATION: 0 YEARS 1 MONTH	UNDP: 5,883	GOVT: 0
	OBSERVATION DES VENTS UTILISATION DES EOLIENNES POUR SCHEMA DE PETITES IRRIGATIONS				
219.	HAI 79 001 A 01 01	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 82,200	GOVT: 0
	REINFORCEMENT OF GROUNDWATER SERVICES				
220.	HON 75 109 G 13 12	STARTING DATE: 09 1975	DURATION: 3 YEARS 0 MONTH	UNDP: 218,227	GOVT: 1,127,525
	PLANIFICACION Y EJECUCION DE LA CUBRECCION DE LAS CUENCAS AFECTADAS POR EL HURACAN FIFI				
221.	HON 77 006 B 01 12	STARTING DATE: 04 1978	DURATION: 3 YEARS 9 MONTH	UNDP: 674,340	GOVT: 1,449,463
	ORDENACION INTEGRADA DE CUENCAS HIDROGRAFICAS				
222.	HUN 69 503 F 01 12	STARTING DATE: 11 1970	DURATION: 3 YEARS 4 MONTH	UNDP: 327,350	GOVT: 7,929,540
	IRRIGATED AGRICULTURE IN THE TISZA RIVER VALLEY				
223.	HUN 70 007 E 01 12	STARTING DATE: 01 1971	DURATION: 4 YEARS 0 MONTH	UNDP: 3,902	GOVT: 0
	SECONDARY SALINIZATION OF IRRIGATED LANDS				
224.	HUN 71 012 D 01 01	STARTING DATE: 03 1972	DURATION: 1 YEARS 3 MONTH	UNDP: 7,325	GOVT: 0
	WATER MANAGEMENT				

## WITH ECONOMIC SECTOR CODE 0320

225.	HUN 71 507 N 01 12	STARTING DATE: 05 1971	DURATION: 7 YEARS 8 MONTH	UNDP: 1,137,194	GOVT: 150,859,990
	IRRIGATED AGRICULTURE IN THE HISA RIVER VALLEY (PHASE II)				
226.	ICE 73 003 I 01 12	STARTING DATE: 09 1973	DURATION: 4 YEARS 8 MONTH	UNDP: 200,400	GOVT: 0
	UTILIZATION AND CONSERVATION OF GRASSLANDS				
227.	IND 65 549 B 01 01	STARTING DATE: 07 1970	DURATION: 2 YEARS 7 MONTH	UNDP: 806,300	GOVT: 5,277,675
	GROUNDWATER SURVEYS IN RAJASTHAN AND UTTAR PRADESH				
228.	IND 64 548 B 01 01	STARTING DATE: 07 1970	DURATION: 2 YEARS 6 MONTH	UNDP: 976,342	GOVT: 4,423,750
	GROUNDWATER INVESTIGATIONS IN MADRAS STATE				
229.	IND 66 560 F 01 12	STARTING DATE: 03 1970	DURATION: 2 YEARS 11 MONTH	UNDP: 1,240,947	GOVT: 4,542,998
	LAND AND WATER USE AND MANAGEMENT IN THE CHAMBAL-IRRIGATED AREA, RAJASTHAN				
230.	IND 69 598 G 01 01	STARTING DATE: 06 1970	DURATION: 3 YEARS 7 MONTH	UNDP: 706,550	GOVT: 4,589,586
	GROUNDWATER INVESTIGATIONS IN MADRAS STATE (PHASE II)				
231.	IND 64 010 D 01 12	STARTING DATE: 08 1971	DURATION: 3 YEARS 6 MONTH	UNDP: 30,884	GOVT: 0
	LAND AND WATER DEVELOPMENT				
232.	IND 70 019 H 01 13	STARTING DATE: 06 1971	DURATION: 5 YEARS 7 MONTH	UNDP: 42,604	GOVT: 0
	SOIL PHYSICS AND AGRICULTURAL METEOROLOGY				
233.	IND 70 044 H 01 01	STARTING DATE: 04 1971	DURATION: 2 YEARS 4 MONTH	UNDP: 6,566	GOVT: 0
	NEW TECHNIQUES IN DESIGN AND CONSTRUCTION OF HIGH EARTH AND ROCKFILL DAMS				
234.	IND 71 005 C 01 01	STARTING DATE: 07 1971	DURATION: 2 YEARS 6 MONTH	UNDP: 16,818	GOVT: 0
	CAVITATION RESEARCH CENTRE, POONA				
235.	IND 71 038 D 01 01	STARTING DATE: 01 1971	DURATION: 2 YEARS 8 MONTH	UNDP: 7,990	GOVT: 0
	SOIL IN-SITU FOUNDATION AND EARTH DAMS				
236.	IND 71 050 C 01 01	STARTING DATE: 10 1971	DURATION: 2 YEARS 2 MONTH	UNDP: 15,250	GOVT: 0
	NATIONAL WATER GRID PROJECT				
237.	IND 72 005 F 01 12	STARTING DATE: 07 1972	DURATION: 4 YEARS 7 MONTH	UNDP: 6,983	GOVT: 0
	TRAINING IN SOIL MICROBIOLOGY				
238.	IND 72 013 C 01 12	STARTING DATE: 09 1974	DURATION: 1 YEARS 4 MONTH	UNDP: 7,124	GOVT: 0
	TRAINING IN HYDROLOGY RESEARCH				

WITH ECONOMIC SECTOR CODE 0320

239.	IND 72 020 L 01 12	STARTING DATE: 07 1972	DURATION: 5 YEARS 6 MONTH	UNDP: 342,436	GOVT: 1,451,000
	SOIL AND WATER MANAGEMENT PROJECT IN THE CHAMBAL AREA (PHASE II)				
240.	IND 73 024 D 01 01	STARTING DATE: 05 1973	DURATION: 1 YEARS 7 MONTH	UNDP: 986	GOVT: 0
	FOURTH PACEM IN MAKINUS CONVOCATION, MALTA				
241.	IND 73 034 D 01 12	STARTING DATE: 10 1976	DURATION: 3 YEARS 3 MONTH	UNDP: 83,450	GOVT: 282,500
	STUDIES ON GROUNDWATER DRAINAGE PROBLEM AT TEA RESEARCH ASSOCIATION JORHAT				
242.	IND 73 041 G 01 01	STARTING DATE: 09 1977	DURATION: 4 YEARS 0 MONTH	UNDP: 1,506,425	GOVT: 4,816,981
	APPLIED EARTH SCIENCES DIVISIONS				
243.	IND 73 042 F 01 01	STARTING DATE: 09 1977	DURATION: 6 YEARS 3 MONTH	UNDP: 1,691,050	GOVT: 6,181,185
	HYDROMECHANICS DIVISION AT THE CENTRAL WATER AND POWER RESEARCH STATION				
244.	IND 73 043 C 01 01	STARTING DATE: 09 1977	DURATION: 4 YEARS 0 MONTH	UNDP: 530,789	GOVT: 2,734,001
	EXTENSION OF THE COASTAL ENGINEERING RESEARCH CENTRE AT THE CENTRAL WATER AND POWER RESEARCH STATION				
245.	IND 74 004 C 01 13	STARTING DATE: 06 1975	DURATION: 0 YEARS 7 MONTH	UNDP: 954	GOVT: 0
	EXPANSION OF THE DOCUMENTATION CENTRE OF THE CENTRAL WATER AND POWER COMMISSION				
246.	IND 74 004 L 01 01	STARTING DATE: 10 1974	DURATION: 6 YEARS 3 MONTH	UNDP: 1,791,652	GOVT: 0
	GROUNDWATER STUDIES IN THE CHAGGAR RIVER BASIN IN PUNJAB, HARYANA, AND RAJASTHAN				
247.	IND 74 045 E 01 13	STARTING DATE: 09 1977	DURATION: 7 YEARS 4 MONTH	UNDP: 500,550	GOVT: 7,282,000
	NATIONAL INSTITUTE OF HYDROLOGY				
248.	IND 74 061 B 01 12	STARTING DATE: 06 1975	DURATION: 0 YEARS 1 MONTH	UNDP: 17,797	GOVT: 0
	WATERSHED MANAGEMENT				
249.	IND 74 089 G 01 12	STARTING DATE: 01 1975	DURATION: 5 YEARS 0 MONTH	UNDP: 134,949	GOVT: 0
	COMMAND AREA DEVELOPMENT PROJECT				
250.	IND 75 020 F 01 01	STARTING DATE: 09 1977	DURATION: 4 YEARS 1 MONTH	UNDP: 1,548,955	GOVT: 4,214,942
	EXTENSION OF HYDRAULIC INSTRUMENTATION CENTRE				
251.	IND 75 076 A 01 01	STARTING DATE: 02 1979	DURATION: 0 YEARS 1 MONTH	UNDP: 10,000	GOVT: 0
	ADVANCED TECHNIQUES IN RESERVOIR ENGINEERING				
252.	IND 75 003 B 01 19	STARTING DATE: 06 1973	DURATION: 0 YEARS 1 MONTH	UNDP: 1,782	GOVT: 1,500
	TRAINING PROGRAMME ON METHODS DEALING WITH WAKINE POLLUTION				

WITH ECONOMIC SECTOR CODE 0320

253. ~~INS 78-047-A-01-42~~ STARTING DATE: 09-1979 DURATION: 3 YEARS 4 MONTH UNDP: 361,500 GOVT: 1,500,000  
 ADVISORY SERVICES FOR MODERNISATION OF LAND AND WATER MANAGEMENT SCHEMES

254. INS 69-023-B-01-12 STARTING DATE: 01-1970 DURATION: 3 YEARS 3 MONTH UNDP: 50,489 GOVT: 0  
 LAND AND WATER DEVELOPMENT - SOIL SURVEY

255. INS 69-002-C-01-12 STARTING DATE: 06-1970 DURATION: 3 YEARS 6 MONTH UNDP: 63,235 GOVT: 0  
 WATERSHED MANAGEMENT

~~256. INS 69-518-N-01-12~~ STARTING DATE: 11-1970 DURATION: 8 YEARS 2 MONTH UNDP: 1,693,435 GOVT: 384,497,500  
 LAND AND WATER RESOURCES DEVELOPMENT IN SOUTH-EASTERN SUMATRA

257. INS 72-006-P-01-12 STARTING DATE: 11-1972 DURATION: 7 YEARS 2 MONTH UNDP: 1,319,462 GOVT: 221,763,000  
 UPPER SOLO WATERSHED MANAGEMENT AND UPLAND DEVELOPMENT

258. INS 72-011-M-01-12 STARTING DATE: 04-1972 DURATION: 5 YEARS 9 MONTH UNDP: 1,206,668 GOVT: 41,597,000  
 LAND CAPABILITY APPRAISAL

~~259. INS 72-014-P-01-10~~ STARTING DATE: 01-1973 DURATION: 3 YEARS 0 MONTH UNDP: 64,180 GOVT: 5,250,000  
 ISOTOPE HYDROLOGY

260. INS 73-025-B-01-31 STARTING DATE: 01-1974 DURATION: 0 YEARS 2 MONTH UNDP: 31,397 GOVT: 0  
 REGIONAL RESOURCE SURVEYS- PROVINCE OF IRIAN JAYA

261. INS 73-006-A-01-12 STARTING DATE: 01-1979 DURATION: 5 YEARS 0 MONTH UNDP: 2,105,220 GOVT: 1059,170,000  
 LAND RESOURCES EVALUATION WITH EMPHASIS ON OUTER ISLANDS

~~262. INT 70-371-G-01-01~~ STARTING DATE: 01-1971 DURATION: 3 YEARS 3 MONTH UNDP: 99,816 GOVT: 0  
 INTERREGIONAL SEMINAR ON CURRENT ISSUES OF WATER ADMINISTRATION

263. INT 72-059-B-01-01 STARTING DATE: 02-1975 DURATION: 2 YEARS 0 MONTH UNDP: 27,202 GOVT: 0  
 INTER-REGIONAL SEMINAR ON DEVELOPMENT AND MANAGEMENT OF RESOURCES OF COASTAL AREAS

264. INT 72-109-E-01-01 STARTING DATE: 08-1974 DURATION: 3 YEARS 4 MONTH UNDP: 55,716 GOVT: 0  
 INTERREGIONAL SEMINAR ON MIVU BASIN AND INTERBASIN DEVELOPMENT

~~265. INT 74-907-C-01-13~~ STARTING DATE: 10-1975 DURATION: 1 YEARS 1 MONTH UNDP: 0 GOVT: 0  
 GENEVA MEETING ON CASE STUDIES TO COMBAT DESERTIFICATION

266. INT 75-907-B-15-13 STARTING DATE: 10-1975 DURATION: 2 YEARS 0 MONTH UNDP: 33,913 GOVT: 0  
 MEETINGS ON CASE STUDIES TO COMBAT DESERTIFICATION

LISTING OF UNDP PROJECTS IN FILE AT 31 DECEMBER 1979  
WITH ECONOMIC SECTION CODE 0320

267.	INT 76 010 C 01 01	STARTING DATE: 05 1977	DURATION: 2 YEARS 7 MONTH	UNDP:	97,416	GOVT:	0
	STUDY TOUR ON WATER RESOURCES MANAGEMENT IN CHINA						
268.	INT 76 901 C 15 31	STARTING DATE: 07 1976	DURATION: 1 YEARS 6 MONTH	UNDP:	59,051	GOVT:	0
	TRANSNATIONAL FEASIBILITY STUDIES						
269.	INT 77 001 D 01 16	STARTING DATE: 10 1977	DURATION: 1 YEARS 3 MONTH	UNDP:	14,362	GOVT:	0
	TRAINING SEMINAR ON FLOOD FORECASTING						
270.	IRA 68 518 J 01 12	STARTING DATE: 03 1970	DURATION: 3 YEARS 10 MONTH	UNDP:	1,754,326	GOVT:	441,029,150
	SOIL INSTITUTE AND ASSOCIATED PILOT DEVELOPMENT PROJECT						
271.	IRA 68 013 G 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	194,647	GOVT:	0
	LAND AND WATER DEVELOPMENT						
272.	IRA 69 527 D 01 13	STARTING DATE: 08 1970	DURATION: 1 YEARS 11 MONTH	UNDP:	198,762	GOVT:	6,717,625
	INSTITUTE FOR HYDRO-SCIENCES AND WATER RESOURCES TECHNOLOGY						
273.	IRA 71 015 L 01 12	STARTING DATE: 04 1972	DURATION: 5 YEARS 4 MONTH	UNDP:	99,371	GOVT:	3,062,300
	IRRIGATION PRACTICES						
274.	IRA 71 537 K 01 12	STARTING DATE: 12 1970	DURATION: 3 YEARS 9 MONTH	UNDP:	327,698	GOVT:	144,675,200
	TRAINING AND INSTITUTIONAL SERVICES FOR LAND REFORM						
275.	IRA 72 014 M 01 12	STARTING DATE: 11 1972	DURATION: 9 YEARS 2 MONTH	UNDP:	370,578	GOVT:	77,224,884
	WATERSHED MANAGEMENT DEVELOPMENT AND COORDINATION						
276.	IRA 72 027 F 01 12	STARTING DATE: 09 1972	DURATION: 2 YEARS 4 MONTH	UNDP:	23,982	GOVT:	0
	ASSISTANCE TO MINISTRY OF WATER AND POWER MANAGE CONSULTING ENGINEER COMPANY						
277.	IRA 73 014 C 01 01	STARTING DATE: 04 1973	DURATION: 1 YEARS 9 MONTH	UNDP:	1,274	GOVT:	0
	WATER RESOURCES DEPARTMENT (PLAN AND BUDGET ORGANIZATION)						
278.	IRA 73 015 E 01 01	STARTING DATE: 04 1974	DURATION: 5 YEARS 9 MONTH	UNDP:	225,060	GOVT:	44,169,047
	COORDINATION OF WATER RESOURCES DEVELOPMENT						
279.	IRA 73 034 E 01 12	STARTING DATE: 03 1974	DURATION: 4 YEARS 10 MONTH	UNDP:	3,917	GOVT:	44,000
	SOIL SURVEY AND RELATED MATTERS						
280.	IRA 74 040 F 01 01	STARTING DATE: 10 1974	DURATION: 2 YEARS 3 MONTH	UNDP:	20,556	GOVT:	0
	NATURAL RESOURCE PLANNING						

291.	IRA 74 057 E 01 12	STARTING DATE: 01 1979	DURATION: 4 YEARS 0 MONTH	UNDP:	0	GOVT:	0
	FARM DEVELOPMENT SERVICES WITH PARTICULAR REFERENCE TO IRRIGATION DEVELOPMENT						
292.	IRA 77 029 A 01 01	STARTING DATE: 06 1978	DURATION: 4 YEARS 7 MONTH	UNDP:	697,161	GOVT:	21,990,000
	WATER RESOURCES DEVELOPMENT						
293.	IRO 67 512 F 01 13	STARTING DATE: 12 1970	DURATION: 4 YEARS 0 MONTH	UNDP:	926,267	GOVT:	516,297
	INSTITUTE FOR APPLIED RESEARCH ON NATURAL RESOURCES						
294.	IRQ 71 010 E 01 12	STARTING DATE: 01 1972	DURATION: 2 YEARS 5 MONTH	UNDP:	60,199	GOVT:	0
	LAND RECLAMATION						
295.	IRQ 71 545 J 01 13	STARTING DATE: 01 1972	DURATION: 6 YEARS 0 MONTH	UNDP:	361,200	GOVT:	211,738
	INSTITUTE FOR APPLIED RESEARCH ON NATURAL RESOURCES						
296.	IRO 73 015 F 01 12	STARTING DATE: 02 1974	DURATION: 5 YEARS 11 MONTH	UNDP:	371,180	GOVT:	2,313,339
	THE STATE ORGANIZATION FOR SOILS AND LAND RECLAMATION						
297.	ISR 66 410 F 01 01	STARTING DATE: 01 1970	DURATION: 4 YEARS 3 MONTH	UNDP:	645,711	GOVT:	4,354,000
	ELECTRODIALYSIS PILOT PLANT, MASHABEI SADE						
298.	ISR 71 014 B 01 01	STARTING DATE: 01 1972	DURATION: 0 YEARS 3 MONTH	UNDP:	1,698	GOVT:	0
	LAND REGISTRATION AND LAND SETTLEMENT						
299.	ISR 73 004 B 01 01	STARTING DATE: 05 1973	DURATION: 1 YEARS 3 MONTH	UNDP:	7,500	GOVT:	12,000
	WATER PRE-TREATMENT AND EQUIPMENT IMPROVEMENT FOR MEMBRANE PROCESSES						
290.	ISR 76 005 C 01 01	STARTING DATE: 07 1975	DURATION: 0 YEARS 2 MONTH	UNDP:	5,213	GOVT:	10,000
	REMOTE SENSING APPLICATIONS						
291.	IVC 69 520 F 01 31	STARTING DATE: 12 1970	DURATION: 4 YEARS 4 MONTH	UNDP:	89,021	GOVT:	0
	PANDAMA VALLEY AUTHORITY						
292.	JAM 70 512 H 01 12	STARTING DATE: 09 1970	DURATION: 6 YEARS 4 MONTH	UNDP:	1,147,459	GOVT:	1,297,396
	DEVELOPMENT AND MANAGEMENT OF WATER RESOURCES						
293.	JAM 74 011 0 01 12	STARTING DATE: 08 1973	DURATION: 2 YEARS 5 MONTH	UNDP:	77,500	GOVT:	46,400
	IRRIGATION DEVELOPMENT						
294.	JAM 73 012 0 01 01	STARTING DATE: 08 1973	DURATION: 3 YEARS 5 MONTH	UNDP:	72,429	GOVT:	112,292
	WATER RESOURCES PLANNING						

WITH ECONOMIC SECTOR CODE 0320

295.	JAM 78 006 C 01 12	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 436,180	GOVT: 442,900
	STRENGTHENING OF THE NATIONAL SOIL CONSERVATION PROGRAMME				
296.	JAM 79 018 A 01 01	STARTING DATE: 11 1979	DURATION: 1 YEARS 2 MONTH	UNDP: 8,130	GOVT: 32,360
	ASSISTANCE TO THE SURVEY DEPARTMENT				
297.	JOR 69 004 I 01 12	STARTING DATE: 01 1972	DURATION: 9 YEARS 5 MONTH	UNDP: 279,916	GOVT: 61,760
	IRRIGATION				
298.	JOR 71 009 F 01 12	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP: 9,090	GOVT: 0
	SOIL RECLAMATION				
299.	JOR 71 525 H 01 12	STARTING DATE: 04 1971	DURATION: 4 YEARS 9 MONTH	UNDP: 567,899	GOVT: 91,419
	DEVELOPMENT AND USE OF THE GROUNDWATER RESOURCES OF EAST JORDAN (PHASE II)				
300.	JOR 72 019 D 01 12	STARTING DATE: 08 1974	DURATION: 1 YEARS 2 MONTH	UNDP: 8,600	GOVT: 0
	IRRIGATION				
301.	JOR 73 013 C 01 31	STARTING DATE: 03 1974	DURATION: 1 YEARS 9 MONTH	UNDP: 828	GOVT: 0
	ASSISTANCE TO THE LANDS AND SURVEYS DEPARTMENT				
302.	JOR 74 001 C 01 12	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP: 60,815	GOVT: 35,005
	SOIL AND LAND RESOURCES APPRAISAL PROJECT				
303.	JOR 74 004 G 01 12	STARTING DATE: 12 1974	DURATION: 4 YEARS 0 MONTH	UNDP: 205,768	GOVT: 41,040
	GROUNDWATER IRRIGATION IN EAST JORDAN				
304.	JOR 75 013 F 01 01	STARTING DATE: 09 1975	DURATION: 8 YEARS 0 MONTH	UNDP: 1,048,929	GOVT: 0
	ASSISTANCE TO THE LANDS AND SURVEY DEPARTMENT				
305.	KAM 07 509 G 01 13	STARTING DATE: 04 1970	DURATION: 4 YEARS 9 MONTH	UNDP: 439,353	GOVT: 0
	NATIONAL HYDRAULICS LABORATORY, PHNOM-PENH				
306.	KAM 68 068 G 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 6 MONTH	UNDP: 181,724	GOVT: 0
	LAND AND WATER DEVELOPMENT				
307.	KAM 68 511 B 01 13	STARTING DATE: 09 1970	DURATION: 1 YEARS 5 MONTH	UNDP: 144,446	GOVT: 4,010,930
	FLOOD WARNING SYSTEM				
308.	KAM 68 512 I 01 12	STARTING DATE: 10 1970	DURATION: 7 YEARS 3 MONTH	UNDP: 1,203,146	GOVT: 0
	IRRIGATION AND DRAINAGE NETWORK OF THE PREK THNOM RIVER				



9.	<del>KEN 74 01 12</del>	<del>STARTING DATE: 01 1975</del>	<del>DURATION: 2 YEARS 0 MONTH</del>	<del>UNDP: 35,105</del>	<del>GOVT: 0</del>
	<del>DEVELOPMENT OF THE PREK THNOI RIVER BASIN</del>				
0.	KEN 67 516 G 01 12	STARTING DATE: 12 1970	DURATION: 4 YEARS 2 MONTH	UNDP: 647,743	GOVT: 1,220,000
	IRRIGATION RESEARCH STATION, AHRO				
1.	KEN 71 009 D 01 31	STARTING DATE: 01 1972	DURATION: 2 YEARS 2 MONTH	UNDP: 700	GOVT: 0
	NATIONAL MASTER PLAN FOR WATER DEVELOPMENT				
2.	<del>KEN 72 007 C 01 12</del>	<del>STARTING DATE: 05 1972</del>	<del>DURATION: 2 YEARS 0 MONTH</del>	<del>UNDP: 30,102</del>	<del>GOVT: 0</del>
	<del>IRRIGATION ENGINEERING- ASSISTANCE TO THE NATIONAL IRRIGATION BOARD</del>				
3.	KEN 74 019 D 01 12	STARTING DATE: 01 1975	DURATION: 4 YEARS 0 MONTH	UNDP: 786,751	GOVT: 10,180,000
	IRRIGATION IN ARID REGIONS				
4.	KEN 74 015 A 01 12	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP: 1,812,080	GOVT: 1,533,386
	IRRIGATION IN ARID AREAS - PHASE II				
5.	<del>KUW 64 502 C 01 01</del>	<del>STARTING DATE: 06 1970</del>	<del>DURATION: 4 YEARS 2 MONTH</del>	<del>UNDP: 487,370</del>	<del>GOVT: 517,755</del>
	<del>WATER RESOURCES CENTRE, KUWAIT CITY</del>				
6.	KUW 79 006 A 01 01	STARTING DATE: 09 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 0	GOVT: 333,010
	IMPROVEMENT IN SUPPLY MANAGEMENT				
7.	LAD 71 009 F 01 01	STARTING DATE: 01 1971	DURATION: 3 YEARS 8 MONTH	UNDP: 6,956	GOVT: 0
	LAND DEVELOPMENT AND PLANNING AND TIDES				
9.	<del>LAD 74 014 H 01 12</del>	<del>STARTING DATE: 03 1975</del>	<del>DURATION: 4 YEARS 10 MONTH</del>	<del>UNDP: 342,656</del>	<del>GOVT: 5,217,225</del>
	<del>SUPPORT TO SOILS SURVEY.</del>				
9.	LAD 76 009 D 01 12	STARTING DATE: 01 1979	DURATION: 5 YEARS 0 MONTH	UNDP: 960,578	GOVT: 45,304
	ASSISTANCE AU DEVELOPEMENT HYDRAULIQUE AGRICOLE ET DE L'IRRIGATION				
0.	LAD 77 021 B 01 42	STARTING DATE: 01 1979	DURATION: 4 YEARS 0 MONTH	UNDP: 412,750	GOVT: 3,033,000
	AGRICULTURAL DEVELOPMENT OF THE SE BANG FAY FLOOD PLAIN				
1.	<del>LAD 76 003 C 01 12</del>	<del>STARTING DATE: 11 1978</del>	<del>DURATION: 3 YEARS 0 MONTH</del>	<del>UNDP: 255,391</del>	<del>GOVT: 9,904,000</del>
	<del>ASSISTANCE A L'ETABLISSEMENT ET AU FONCTIONNEMENT D'UN ATELIER D'ENTRETIEN ET DE REPARATION DE POMPES HYDRAULIQUES</del>				
2.	LAD 76 005 B 01 12	STARTING DATE: 03 1978	DURATION: 1 YEARS 10 MONTH	UNDP: 66,306	GOVT: 0
	ASSISTANCE A L'IRRIGATION PROGRAMME D'URGENCE				

WITH ECONOMIC SECTOR CCDF 0320

323.	LAO 78 007 B 01 12	STARTING DATE: 06 1978	DURATION: 1 YEARS 6 MONTH	UNDP:	131,470	GOVT:	393,000
	ASSISTANCE A LA CREATION D'UN ATELIER DE PRODUCTION DE TUBES POUR L'IRRIGATION						
324.	LAO 78 010 B 01 12	STARTING DATE: 06 1978	DURATION: 1 YEARS 3 MONTH	UNDP:	399,500	GOVT:	37,600,000
	INSTALLATION DE POMPES POUR ALIMENTER DES RESERVOIRS D'IRRIGATION						
325.	LAO 78 019 C 01 12	STARTING DATE: 11 1978	DURATION: 1 YEARS 2 MONTH	UNDP:	444,250	GOVT:	244,018,000
	AMENAGEMENT HYDRAULIQUE DE QUATRE BASSINS DANS LA PROVINCE DE VIANTIANE						
326.	LAO 78 019 B 45 12	STARTING DATE: 11 1978	DURATION: 1 YEARS 2 MONTH	UNDP:	0	GOVT:	0
	AMENAGEMENT HYDRAULIQUE DE QUATRE BASSINS DANS LA PROVINCE DE VIANTIANE						
327.	LEB 70 014 E 01 01	STARTING DATE: 04 1971	DURATION: 3 YEARS 3 MONTH	UNDP:	93,200	GOVT:	0
	ADVISER IN GROUNDWATER AND CONNECTED SUBJECTS						
328.	LEB 72 003 E 01 12	STARTING DATE: 09 1972	DURATION: 4 YEARS 0 MONTH	UNDP:	142,833	GOVT:	600,000
	DRAINAGE DE LA VEQA						
329.	LEB 73 004 F 01 12	STARTING DATE: 07 1973	DURATION: 4 YEARS 6 MONTH	UNDP:	106,590	GOVT:	4,442,000
	IRRIGATION DE KOURA-ZCHARITA						
330.	LEB 73 007 E 01 12	STARTING DATE: 07 1973	DURATION: 1 YEARS 5 MONTH	UNDP:	11,124	GOVT:	300,000
	CHARROUH DAM						
331.	LEB 77 008 C 01 12	STARTING DATE: 11 1977	DURATION: 2 YEARS 3 MONTH	UNDP:	102,000	GOVT:	900,000
	BARRAGE SUR L'OUADI CHARROUH						
332.	LES 71 005 D 01 12	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP:	47,661	GOVT:	0
	LAND USE PLANNING						
333.	LES 72 007 C 01 01	STARTING DATE: 07 1972	DURATION: 1 YEARS 1 MONTH	UNDP:	7,500	GOVT:	0
	WATER LAW						
334.	LES 72 029 D 01 42	STARTING DATE: 08 1972	DURATION: 2 YEARS 0 MONTH	UNDP:	0	GOVT:	4,260
	FEASIBILITY STUDY ON THE EXTENSION OF URBAN POTABLE WATER SUPPLY						
335.	LES 72 032 F 01 12	STARTING DATE: 10 1972	DURATION: 1 YEARS 5 MONTH	UNDP:	30,000	GOVT:	600
	SOIL CONSERVATION						
336.	LES 72 033 C 01 01	STARTING DATE: 09 1972	DURATION: 1 YEARS 0 MONTH	UNDP:	14,044	GOVT:	2,172
	WATER LAW						

WITH ECONOMIC SECTION CODE 0320

337.	LFS 72 034 C 01 12	STARTING DATE: 09 1972	DURATION: 1 YEARS 10 MONTH	UNDP:	31235	GOVT:	1,260
	SOIL AND WATER ENGINEERING						
338.	LES 72 056 D 01 13	STARTING DATE: 10 1972	DURATION: 1 YEARS 6 MONTH	UNDP:	31522	GOVT:	0
	HYDROGEOLOGY						
339.	LFS 72 057 C 01 01	STARTING DATE: 03 1972	DURATION: 1 YEARS 4 MONTH	UNDP:	10,100	GOVT:	0
	WATER LAW LEGISLATION AND ADMINISTRATION RESEARCH AND DRAFTING						
340.	LES 74 044 B 01 13	STARTING DATE: 09 1976	DURATION: 1 YEARS 4 MONTH	UNDP:	37727	GOVT:	313
	CONFERENCE INTERNATIONAL HYDROLOGICAL DECADE						
341.	LES 77 044 A 01 01	STARTING DATE: 01 1979	DURATION: 1 YEARS 0 MONTH	UNDP:	298	GOVT:	0
	ASSISTANCE TO WATER RESOURCES DEVELOPMENT						
342.	LES 77 044 B 45 01	STARTING DATE: 01 1978	DURATION: 2 YEARS 0 MONTH	UNDP:	79,374	GOVT:	200,492
	ASSISTANCE FOR WATER RESOURCES DEPARTMENT - HEAD OF WATER RESOURCES BRANCH (OPAS)						
343.	LIP 68 004 B 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP:	307379	GOVT:	0
	LAND AND WATER DEVELOPMENT						
344.	LIP 72 002 E 01 12	STARTING DATE: 09 1972	DURATION: 3 YEARS 8 MONTH	UNDP:	72,668	GOVT:	101,850
	SOIL SURVEY IN LIBERIA						
345.	LIR 77 003 F 01 01	STARTING DATE: 01 1977	DURATION: 4 YEARS 0 MONTH	UNDP:	345,930	GOVT:	245,500
	NINE COUNTY WELL DRILLING PROGRAMME (PHASE I)						
346.	LIR 77 004 D 01 01	STARTING DATE: 06 1979	DURATION: 4 YEARS 7 MONTH	UNDP:	8007274	GOVT:	90,440
	WATER RESOURCES POLICY, MANAGEMENT AND LEGISLATION						
347.	MAG 71 004 B 01 12	STARTING DATE: 09 1971	DURATION: 1 YEARS 4 MONTH	UNDP:	2,772	GOVT:	0
	WATER IMPROVEMENT						
349.	MAG 74 004 C 01 01	STARTING DATE: 08 1974	DURATION: 1 YEARS 5 MONTH	UNDP:	13,658	GOVT:	0
	HYDROGEOLOGY						
349.	MAG 77 005 0 01 01	STARTING DATE: 11 1977	DURATION: 2 YEARS 2 MONTH	UNDP:	14,677	GOVT:	0
	HYDROGEOGRAPHY						
350.	MAG 77 008 D 01 12	STARTING DATE: 04 1978	DURATION: 2 YEARS 9 MONTH	UNDP:	344,962	GOVT:	0
	RESTAURATION ET REVISÉ FN VALSEUR DES SAVOKA						

WITH ECONOMIC SECTOR CODE 0320

351.	MAL 71 01 G 01 13	STARTING DATE: 01 1972	DURATION: 4 YEARS 0 MONTH	UNDP:	21,259	GOVT:	0
	HYDROLOGY AND WATER RESOURCES						
352.	MAL 76 011 9 01 12	STARTING DATE: 10 1979	DURATION: 3 YEARS 3 MONTH	UNDP:	259,250	GOVT:	798,675
	WATER MANAGEMENT PILOT SCHEME						
353.	MAR 69 014 G 01 12	STARTING DATE: 03 1970	DURATION: 5 YEARS 2 MONTH	UNDP:	100,438	GOVT:	0
	SOIL PHYSICS						
354.	MAT 78 004 B 01 01	STARTING DATE: 09 1978	DURATION: 1 YEARS 0 MONTH	UNDP:	395	GOVT:	97,200
	WATER RESOURCES MANAGEMENT						
355.	MAT 78 006 H 01 01	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	121,400	GOVT:	70,000
	DEVELOPMENT AND CONSERVATION OF WATER RESOURCES						
356.	MAU 67 502 K 01 01	STARTING DATE: 03 1970	DURATION: 8 YEARS 10 MONTH	UNDP:	1,905,929	GOVT:	0
	STRENGTHENING OF THE GROUNDWATER SERVICE						
357.	MAU 69 503 J 01 12	STARTING DATE: 04 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	1,045,097	GOVT:	7,199,927
	STUDIES FOR THE DEVELOPMENT OF THE GORGOL RIVER BASIN						
358.	MAU 73 005 F 13 01	STARTING DATE: 10 1973	DURATION: 4 YEARS 3 MONTH	UNDP:	500,222	GOVT:	0
	PROGRAMME DE TRAVAUX HYDRAULIQUES D'URGENCE ET MOYEN TERME EN MAURITANIE						
359.	MAU 75 002 C 01 31	STARTING DATE: 03 1975	DURATION: 1 YEARS 10 MONTH	UNDP:	14,072	GOVT:	0
	STUD. DE PRE-INVESTISSEMENT D'UN PROGRAMME DE FORAGES D'EAU						
360.	MAU 76 001 4 01 01	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP:	83,649	GOVT:	0
	ASSISTANCE COMPLEMENTAIRE AU PROGRAMME DES TRAVAUX HYDRAULIQUES D'URGENCE						
361.	MAU 77 002 G 01 01	STARTING DATE: 08 1977	DURATION: 4 YEARS 5 MONTH	UNDP:	432,905	GOVT:	3,162,000
	PLANIFICATION DE L'UTILISATION DES EAUX						
362.	MEX 71 005 B 01 1R	STARTING DATE: 12 1971	DURATION: 0 YEARS 4 MONTH	UNDP:	6,750	GOVT:	0
	HYDROLOGY						
363.	MEX 71 034 L 01 42	STARTING DATE: 02 1972	DURATION: 4 YEARS 11 MONTH	UNDP:	1,008,520	GOVT:	0
	NATIONAL WATER PLAN						
364.	MEX 72 015 G 01 10	STARTING DATE: 06 1972	DURATION: 3 YEARS 0 MONTH	UNDP:	44,970	GOVT:	0
	APPLICATION OF ISOTOPES TO HYDROLOGY						

WITH ECONOMIC SECTION CODE 0320

365.	MEX 72 023 C 01 01	STARTING DATE: 09 1972	DURATION: 1 YEARS 1 MONTH	UNDP:	2,587	GOVT:	0
	HYDRAULIC PROBLEMS						
366.	MEX 75 023 B 01 31	STARTING DATE: 01 1976	DURATION: 1 YEARS 0 MONTH	UNDP:	50,733	GOVT:	6,675,005
	NATIONAL-WATER PLAN (EXTENSION)						
367.	MEX 77 013 R 01 12	STARTING DATE: 11 1978	DURATION: 3 YEARS 3 MONTH	UNDP:	384,500	GOVT:	6,885,100
	NATURAL-RESEARCH-DEVELOPMENT-OF-ARID-AND-SEMI-ARID-ZONES						
368.	MEX 07 007 J 01 01	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP:	1,011,079	GOVT:	12,460,702
	STRENGTHENING GOVERNMENT SERVICES FOR GROUNDWATER EXPLORATION AND DEVELOPMENT						
369.	MLI 73 007 D 01 31	STARTING DATE: 04 1974	DURATION: 3 YEARS 9 MONTH	UNDP:	423,040	GOVT:	0
	HYDRO-AGRICULTURAL STUDIES RELATED TO THE SELINGUE DAM						
370.	MLI 73 901 H 45 31	STARTING DATE: 09 1973	DURATION: 3 YEARS 0 MONTH	UNDP:	6,061	GOVT:	0
	STRUCTURAL MISSION-ON-WATER-RESOURCES-POLICY						
371.	MLI 74 001 0 45 01	STARTING DATE: 01 1974	DURATION: 4 YEARS 0 MONTH	UNDP:	1,704,915	GOVT:	0
	GROUNDWATER EXPLORATION						
372.	MLI 75 002 C 01 31	STARTING DATE: 03 1975	DURATION: 1 YEARS 9 MONTH	UNDP:	150,000	GOVT:	0
	CONSTRUCTION DE GARAGES, ATELIERS ET MAGASINS						
373.	MLI 76 004 F 01 01	STARTING DATE: 01 1977	DURATION: 6 YEARS 0 MONTH	UNDP:	6,354,762	GOVT:	0
	EXPLOITATION DES EAUX SOUTERRAINES EN MILIEU RURAL						
374.	MLI 76 009 C 01 16	STARTING DATE: 11 1977	DURATION: 3 YEARS 2 MONTH	UNDP:	377,297	GOVT:	692,059,000
	REINFORCEMENT DES SERVICES AGROMETEOROLOGIQUE ET HYDROLOGIQUE						
375.	MLW 66 502 J 01 12	STARTING DATE: 01 1970	DURATION: 7 YEARS 0 MONTH	UNDP:	1,647,003	GOVT:	0
	LAND AND WATER RESOURCES DEVELOPMENT IN SOUTHERN MALAWI						
376.	MLW 71 009 H 01 12	STARTING DATE: 01 1972	DURATION: 4 YEARS 0 MONTH	UNDP:	123,056	GOVT:	0
	IRRIGATION-ENGINEERING						
377.	MLW 71 216 M 01 16	STARTING DATE: 01 1973	DURATION: 9 YEARS 0 MONTH	UNDP:	411,610	GOVT:	223,250
	WATER RESOURCES ASSESSMENT OF THE LAKE MALAWI CATCHMENT						
378.	MLW 72 005 J 01 01	STARTING DATE: 01 1972	DURATION: 6 YEARS 0 MONTH	UNDP:	127,811	GOVT:	0
	NATURAL RESOURCES						

WITH ECONOMIC SECTOR CODE 0320

379.	MLW 72 006 F 01 01	STARTING DATE: 09 1972	DURATION: 3 YEARS	4 MONTH	UNDP:	93,502	GOVT:	0
	STUDY TO DEFINE THE IRRIGABLE AREAS OF THE LAKE MALAWI CATCHMENT							
380.	MLW 77 012 B 01 16	STARTING DATE: 09 1978	DURATION: 4 YEARS	4 MONTH	UNDP:	385,245	GOVT:	776,200
	ADVANCEMENT OF HYDROLOGICAL SERVICES IN MALAWI							
391.	MLW 78 002 A 01 12	STARTING DATE: 12 1978	DURATION: 0 YEARS	2 MONTH	UNDP:	0	GOVT:	0
	STUDY OF THE ACCESS TO THE CHAMBE BASIN, MULANJE MOUNTAIN							
392.	MW 75 006 C 01 01	STARTING DATE: 09 1978	DURATION: 4 YEARS	4 MONTH	UNDP:	986,075	GOVT:	0
	DEVELOPMENT OF WATER WIND AND SOLAR ENERGY IN THE EXPERIMENTAL "SOURIS"							
393.	MOR 70 015 C 01 19	STARTING DATE: 11 1971	DURATION: 2 YEARS	1 MONTH	UNDP:	40,027	GOVT:	0
	SOIL SCIENTIST SPECIALISED IN THE USE OF RADIOISOTOPES							
394.	MOR 71 536 K 01 12	STARTING DATE: 04 1972	DURATION: 7 YEARS	4 MONTH	UNDP:	1,703,286	GOVT:	7,447,400
	LUTTE CONTRE L'EROSION ET CONSERVATION DES SOLS							
395.	MOR 72 007 F 01 12	STARTING DATE: 05 1972	DURATION: 0 YEARS	4 MONTH	UNDP:	977	GOVT:	9,600
	NATURAL RESOURCES							
396.	MOR 78 014 B 01 12	STARTING DATE: 09 1978	DURATION: 0 YEARS	4 MONTH	UNDP:	6,598	GOVT:	0
	CONSULTATION IN THE FIELD OF HYDROGEOLOGY							
397.	MOR 78 015 B 01 12	STARTING DATE: 01 1979	DURATION: 4 YEARS	0 MONTH	UNDP:	584,300	GOVT:	2,519,600
	AMENAGEMENT DES BRASSINS VERSANTS							
398.	MOT 74 008 F 01 01	STARTING DATE: 02 1975	DURATION: 1 YEARS	0 MONTH	UNDP:	3,575	GOVT:	4,000
	WATER RESOURCES INVENTORY AT SOUFRIERE HILLS AREA							
399.	MOZ 75 004 G 01 31	STARTING DATE: 01 1975	DURATION: 5 YEARS	0 MONTH	UNDP:	112,028	GOVT:	0
	EMERGENCY REHABILITATION OF THE SOURCE OF WATER SUPPLY OF THE CITY OF FITE							
390.	MOZ 75 011 H 01 12	STARTING DATE: 01 1975	DURATION: 7 YEARS	0 MONTH	UNDP:	21,791,010	GOVT:	9,134,000
	LAND USE EVALUATION SPECIALIST							
391.	NAM 75 004 H 01 12	STARTING DATE: 10 1978	DURATION: 2 YEARS	3 MONTH	UNDP:	207,600	GOVT:	0
	ASSESSMENT OF POTENTIAL LAND SUITABILITY IN NAMIBIA							
392.	NAM 72 004 D 01 12	STARTING DATE: 10 1972	DURATION: 2 YEARS	3 MONTH	UNDP:	2,500	GOVT:	0
	GROUND WATER EXPERT							

407.	NFR 74 013 C 45 01	STARTING DATE: 01 1977	DURATION: 3 YEARS 0 MONTH	UNDP:	142,125	GOVT:	0
	ASSISTANCE AU SERVICE LOGISTIQUE DE L'OFFICE DES EAUX DU SOUS-SOL (OPEDES)						
408.	NER 75 015 C 45 13	STARTING DATE: 01 1976	DURATION: 3 YEARS 0 MONTH	UNDP:	33,981	GOVT:	0
	COOPERATION INTERNATIONALE POUR COMBATTRE LA DESERTIFICATION RESOLUTION 3337 (XXIX) DE L'ASSEMBLEE GENERALE						
409.	NFR 79 006 A 01 01	STARTING DATE: 06 1979	DURATION: 0 YEARS 3 MONTH	UNDP:	13,900	GOVT:	0
	APPROVISIONNEMENT EN FAU						
410.	NTC 67 508 K 01 01	STARTING DATE: 07 1970	DURATION: 5 YEARS 9 MONTH	UNDP:	960,860	GOVT:	13,949,600
	GROUNDWATER INVESTIGATIONS IN THE PACIFIC COASTAL REGION (CHINANDEGA AREA)						
411.	NIC 70 511 G 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 10 MONTH	UNDP:	769,132	GOVT:	2,268,000
	PRE-INVESTMENT STUDY FOR THE REGIONAL DEVELOPMENT OF THE KID ESCUNDIDO RIVER BASIN						
412.	NIC 73 007 I 13 01	STARTING DATE: 05 1973	DURATION: 3 YEARS 6 MONTH	UNDP:	145,933	GOVT:	1,173,675
	UNDERGROUND WATERS-REHABILITATION OF WATER SUPPLIES TO AFFECTED AREAS						
413.	NIC 74 001 H 01 12	STARTING DATE: 03 1975	DURATION: 4 YEARS 10 MONTH	UNDP:	5,933	GOVT:	981,600
	SOIL CONSERVATION AND WATERSHED MANAGEMENT						
414.	NIR 66 524 O 01 12	STARTING DATE: 07 1970	DURATION: 8 YEARS 6 MONTH	UNDP:	1,630,044	GOVT:	281,540
	KAINJI LAKE RESEARCH PROJECT						
415.	NIR 68 017 B 01 12	STARTING DATE: 01 1970	DURATION: 2 YEARS 6 MONTH	UNDP:	133,290	GOVT:	0
	LAND AND WATER RESOURCES OF SOKOTO VALLEY IRRIGATION SCHEM NORTH-WEST						
416.	NIR 71 027 D 01 12	STARTING DATE: 04 1972	DURATION: 2 YEARS 0 MONTH	UNDP:	19,605	GOVT:	0
	RANGE MANAGEMENT AND WATER DEVELOPMENT						
417.	NIR 71 543 K 01 12	STARTING DATE: 11 1970	DURATION: 8 YEARS 2 MONTH	UNDP:	952,419	GOVT:	127,542
	INVESTIGATIONS AND FEASIBILITY STUDY OF AN IRRIGATION PROJECT SOUTH OF LAKE CHAD						
418.	NIR 73 008 G 01 12	STARTING DATE: 07 1974	DURATION: 6 YEARS 6 MONTH	UNDP:	292,558	GOVT:	19,012
	RANGE MANAGEMENT AND STOCK WATER DEVELOPMENT						
419.	NIR 74 011 A 01 19	STARTING DATE: 07 1974	DURATION: 0 YEARS 2 MONTH	UNDP:	5,000	GOVT:	3,710
	MARINE POLLUTION CONTROL						
420.	NIR 75 030 B 01 12	STARTING DATE: 03 1978	DURATION: 2 YEARS 10 MONTH	UNDP:	110,745	GOVT:	942,630
	SOIL CONSERVATION (PLATEAU STATE)						

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979  
WITH ECONOMIC SECTOR CODE 0320

421.	NIA 75-042-C-61-12	STARTING DATE: 10-1977	DURATION: 2 YEARS	3 MONTH	UNDP:	33,091	GOVT:	33,000
	EROSION CONTROL AND WATERSHED MANAGEMENT							
422.	NIR 76 002 D 01 12	STARTING DATE: 01 1976	DURATION: 3 YEARS	0 MONTH	UNDP:	29,686	GOVT:	0
	INVESTIGATION AND FEASIBILITY STUDY OF AN IRRIGATION PROJECT SOUTH OF LAKE CHAD - PHASE II							
423.	NIU 78 006 R 01 14	STARTING DATE: 02 1979	DURATION: 1 YEARS	11 MONTH	UNDP:	20,300	GOVT:	9,550
	MINERAL PROSPECTING AND WATER RESOURCES							
424.	DMA 73-009-F-01-12	STARTING DATE: 04-1974	DURATION: 3 YEARS	9 MONTH	UNDP:	209,324	GOVT:	49,350
	WATER RESOURCES CENTRE							
425.	DMA 73 010 E 01 12	STARTING DATE: 01 1975	DURATION: 3 YEARS	0 MONTH	UNDP:	139,969	GOVT:	50,300
	SOIL AND WATER MANAGEMENT							
426.	PAK 59 506 D 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS	0 MONTH	UNDP:	1,423,842	GOVT:	15,953,499
	SOIL SURVEY-PROJECT							
427.	PAK 68-016-C-15-12	STARTING DATE: 01-1970	DURATION: 4 YEARS	0 MONTH	UNDP:	31,150	GOVT:	0
	LAND AND WATER DEVELOPMENT SOIL FERTILITY							
428.	PAK 68 022 D 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS	5 MONTH	UNDP:	49,509	GOVT:	0
	LAND AND WATER DEVELOPMENT- DATE PROCESSING							
429.	PAK 70 034 F 01 12	STARTING DATE: 01 1971	DURATION: 3 YEARS	5 MONTH	UNDP:	91,593	GOVT:	0
	SOIL SURVEY-INTERPRETATION							
430.	PAK 71-019-F-01-12	STARTING DATE: 01-1971	DURATION: 3 YEARS	4 MONTH	UNDP:	13,561	GOVT:	0
	SOILS AND IRRIGATION							
431.	PAK 73 032 S 01 01	STARTING DATE: 12 1973	DURATION: 8 YEARS	1 MONTH	UNDP:	4,132,964	GOVT:	31,357,000
	GROUNDWATER INVESTIGATIONS IN SELECTED AREAS OF BALUCHISTAN							
432.	PAK 74 001 E 01 31	STARTING DATE: 06 1974	DURATION: 1 YEARS	7 MONTH	UNDP:	0	GOVT:	44,470,000
	FLOOD REMEDIATION/RURAL WATER SUPPLY							
433.	PAK 74 001 F 15 21	STARTING DATE: 01 1975	DURATION: 3 YEARS	0 MONTH	UNDP:	930,924	GOVT:	0
	FLOOD REMEDIATION/RURAL WATER SUPPLY							



LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979  
WITH ECONOMIC SECTOR CODE 0320

434.	PAN 74 018 E 01 12	STARTING DATE: 07 1975	DURATION: 1 YEARS 6 MONTH	UNDP: 31,502	GOVT: 330,000
	SEMINAR ON WATERLOGGING AND SALINITY				
435.	PAN 65 505 D 01 12	STARTING DATE: 12 1970	DURATION: 3 YEARS 0 MONTH	UNCP: 731,889	GOVT: 170,730
	SURVEY OF IRRIGATION DEVELOPMENT IN THE VALLEY OF THE LA VILLA RIVER				
437.	PAN 71 006 F 01 12	STARTING DATE: 09 1971	DURATION: 3 YEARS 0 MONTH	UNDP: 44,141	GOVT: 0
	IRRIGATION ENGINEERING				
438.	PAN 74 023 E 01 16	STARTING DATE: 09 1975	DURATION: 2 YEARS 4 MONTH	UNDP: 80,080	GOVT: 121,535
	HYDROLOGY				
439.	PAN 76 003 F 01 31	STARTING DATE: 07 1977	DURATION: 3 YEARS 6 MONTH	UNDP: 726,330	GOVT: 573,600
	ESTUDIO DE FACTIBILIDAD PARA EL DESARROLLO HIDROELECTRICO DE LAS CUENCAS DE LOS RIOS IERIBE Y CHANGUINDOLA				
440.	PAN 75 004 C 01 12	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 93,832	GOVT: 145,894
	FORTALECIMIENTO TECNICO-INSTITUCIONAL DE UNA UNIDAD DE RIEGO				
441.	PAN 69 516 J 01 01	STARTING DATE: 01 1970	DURATION: 4 YEARS 4 MONTH	UNDP: 877,774	GOVT: 70,320,400
	INVESTIGACION OF GROUNDWATER RESOURCES IN CENTRAL AND NORTHWESTERN CHACO				
442.	PAR 72 004 I 01 01	STARTING DATE: 07 1973	DURATION: 5 YEARS 6 MONTH	UNDP: 730,966	GOVT: 9,125,019
	GROUNDWATER DEVELOPMENT IN THE CHACO				
443.	PAR 73 004 D 01 12	STARTING DATE: 10 1973	DURATION: 0 YEARS 6 MONTH	UNDP: 2,871	GOVT: 0
	SOIL MOISTURE CONSERVATION AND MANAGEMENT				
444.	PDY 68 007 C 01 12	STARTING DATE: 05 1970	DURATION: 4 YEARS 8 MONTH	UNDP: 125,668	GOVT: 0
	LAND AND WATER DEVELOPMENT				
445.	PDY 71 508 L 01 12	STARTING DATE: 04 1970	DURATION: 6 YEARS 11 MONTH	UNDP: 1,499,067	GOVT: 250,620
	SOIL AND WATER UTILIZATION AND CONSERVATION IN THE MAUI UMAN WATERSHED AREA				
446.	PDY 75 003 F 01 12	STARTING DATE: 09 1975	DURATION: 3 YEARS 4 MONTH	UNDP: 32,224	GOVT: 2,657
	FELLOWSHIPS FOR SOIL AND WATER UTILIZATION AND CONSERVATION				
447.	PER 64 521 C 01 12	STARTING DATE: 07 1970	DURATION: 2 YEARS 7 MONTH	UNDP: 1,472,185	GOVT: 93,476,040
	DEVELOPMENT OF THE CENTRAL HUALLAGA, CHIRIYACU AND NIUVAS RIVER BASINS				
448.	PER 74 004 9 01 31	STARTING DATE: 11 1974	DURATION: 1 YEARS 4 MONTH	UNDP: 6,688	GOVT: 0

WITH ECONOMIC SECTOR CODE 0320

449.	PHI 66 519 0 01 01	STARTING DATE: 07 1970	DURATION: 2 YEARS 6 MONTH	UNDP: 5057,475	GOVT: 1,903,800
	FEASIBILITY SURVEY FOR THE HYDRAULIC CONTROL OF THE LAGUNA DE BAY COMPLEX AND RELATED DEVELOPMENTAL ACTIVITIES				
450.	PHI 70 004 Y 01 01	STARTING DATE: 07 1970	DURATION: 4 YEARS 6 MONTH	UNDP: 141,379	GOVT: 0
	TECHNICAL ADVISER TO THE LAGUNA LAKE DEVELOPMENT AUTHORITIES				
451.	PHI 70 008 D 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 109,615	GOVT: 0
	WATERWAYS MANAGEMENT RESEARCH				
452.	PHI 70 531 J 01 12	STARTING DATE: 06 1970	DURATION: 7 YEARS 6 MONTH	UNDP: 2,090,344	GOVT: 10,280,151
	IMPROVEMENT OF IRRIGATION FACILITIES THROUGH GROUNDWATER DEVELOPMENT				
453.	PHI 71 004 G 01 12	STARTING DATE: 09 1971	DURATION: 3 YEARS 0 MONTH	UNDP: 93,004	GOVT: 0
	SOIL AND LAND CLASSIFICATION				
454.	PHI 72 003 I 01 45	STARTING DATE: 09 1972	DURATION: 5 YEARS 4 MONTH	UNDP: 1,163,951	GOVT: 1,760,454
	LAGUNA DE BAY WATER RESOURCE DEVELOPMENT				
455.	PHI 74 005 L 01 12	STARTING DATE: 06 1974	DURATION: 6 YEARS 7 MONTH	UNDP: 2,725,745	GOVT: 57,555,734
	SOIL AND LAND CAPABILITY APPRAISAL AND TRAINING				
456.	PHI 74 014 C 01 12	STARTING DATE: 12 1974	DURATION: 1 YEARS 1 MONTH	UNDP: 41,000	GOVT: 211,164
	ASSISTANCE TO THE EXPANDED DRILLING PROGRAMME FOR GROUNDWATER DEVELOPMENT				
457.	PHI 74 015 E 13 01	STARTING DATE: 04 1975	DURATION: 4 YEARS 9 MONTH	UNDP: 512,128	GOVT: 1,211,357
	PEMPANSA DISTRICT/CANDABA SWAMP AREA DEVELOPMENT				
458.	PHI 74 016 C 01 01	STARTING DATE: 03 1975	DURATION: 1 YEARS 10 MONTH	UNDP: 311,979	GOVT: 260,755
	ASSISTANCE TO THE NATIONAL WATER RESOURCES COUNCIL				
459.	PHI 77 003 D 01 99	STARTING DATE: 08 1978	DURATION: 2 YEARS 6 MONTH	UNDP: 1,014,105	GOVT: 2,745,414
	ASSISTANCE TO THE NATIONAL WATER RESOURCE COUNCIL PHASE II				
460.	PNG 73 010 D 01 31	STARTING DATE: 09 1973	DURATION: 1 YEARS 5 MONTH	UNDP: 8,000	GOVT: 3,150
	COMPREHENSIVE RIVER BASIN DEVELOPMENT (PURAJI)				
461.	PNG 74 021 S 01 31	STARTING DATE: 07 1974	DURATION: 1 YEARS 5 MONTH	UNDP: 9,164	GOVT: 0
	PURAJI RIVER DEVELOPMENT-INDUSTRY STUDY REQUIREMENTS CONSULTANTS				
462.	PNG 74 022 C 01 31	STARTING DATE: 08 1974	DURATION: 1 YEARS 5 MONTH	UNDP: 12,831	GOVT: 0
	PURAJI RIVER DEVELOPMENT - ENVIRONMENTAL STUDIES				

463.	PNG 75 009 E 01 12	STARTING DATE: 12 1975	DURATION: 1 YEARS 1 MONTH	UNDP:	0	GOVT:	0
	HYDROLOGICAL RESOURCES SIMULATION OF THE PURARI RIVER SYSTEM						
464.	PNG 75 018 C 01 12	STARTING DATE: 07 1975	DURATION: 0 YEARS 1 MONTH	UNDP:	300	GOVT:	0
	VILLAGE LEVEL IRRIGATION CONSULTANT						
465.	PNG 77 004 D 01 03	STARTING DATE: 11 1977	DURATION: 2 YEARS 11 MONTH	UNDP:	277,768	GOVT:	205,500
	ASSISTANCE IN THE IMPLEMENTATION OF A WATER DEVELOPMENT POLICY						
466.	POL 68 509 F 01 01	STARTING DATE: 07 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	1,128,502	GOVT:	60,992,112
	PLANNING THE COMPREHENSIVE DEVELOPMENT OF THE VISTOLA PIVK SYSTEM						
467.	POL 70 007 C 01 01	STARTING DATE: 10 1970	DURATION: 3 YEARS 0 MONTH	UNDP:	4,925	GOVT:	0
	DEVELOPMENT OF NATURAL RESOURCES						
468.	POR 77 010 C 01 12	STARTING DATE: 10 1977	DURATION: 4 YEARS 3 MONTH	UNDP:	189,006	GOVT:	49,713,000
	DRAINAGE IN THE ALENTEJOU REGION						
469.	POP 77 011 D 01 15	STARTING DATE: 05 1978	DURATION: 2 YEARS 3 MONTH	UNDP:	255,000	GOVT:	31,500,000
	ETUDE DES RESSOURCES EN EAUX SOUTH-KRAINES DE LA PENINSULE DE SFUBAL						
470.	QAT 73 007 G 01 12	STARTING DATE: 03 1974	DURATION: 4 YEARS 4 MONTH	UNDP:	203,500	GOVT:	4,935,327
	INTEGRATED WATER AND LAND USE PLANNING						
471.	RAB 74 003 C 01 13	STARTING DATE: 01 1976	DURATION: 2 YEARS 2 MONTH	UNDP:	34,557	GOVT:	0
	DESERTIFICATION CONTROL CASE STUDIES IN IRAQ AND TURKIA						
472.	RAR 75 023 B 01 13	STARTING DATE: 12 1977	DURATION: 1 YEARS 0 MONTH	UNDP:	600	GOVT:	0
	WATER BALANCE OF THE WESTERN LIMESTONE COMPLEX IN THE MIDDLE EAST						
473.	RAR 77 009 C 01 16	STARTING DATE: 12 1977	DURATION: 1 YEARS 1 MONTH	UNDP:	13,948	GOVT:	0
	TRAINING SEMINAR ON FLOOD FORECASTING						
474.	RAR 79 004 A 01 16	STARTING DATE: 10 1978	DURATION: 0 YEARS 1 MONTH	UNDP:	11,200	GOVT:	0
	TRAINING SEMINAR ON FLOOD FORECASTING						
475.	RAB 78 014 A 01 01	STARTING DATE: 09 1979	DURATION: 0 YEARS 4 MONTH	UNDP:	30,000	GOVT:	0
	WATER RESOURCES DEVELOPMENT AND MANAGEMENT						
476.	RAR 79 001 A 01 01	STARTING DATE: 05 1980	DURATION: 0 YEARS 1 MONTH	UNDP:	22,760	GOVT:	0
	INTERREGIONAL MEETING OF INTERNATIONAL RIVER ORGANIZATIONS (ICOR)						

WITH ECONOMIC SECTION CODE 0320

477.	RAB 79 011 A 01 01	STARTING DATE: 10 1979	DURATION: 0 YEARS 1 MONTH	UNDP: 4,000	GOVT: 342,300
	INTERNATIONAL SEMINAR ON KARST HYDROGEOLOGY				
479.	RAB 79 019 A 01 12	STARTING DATE: 08 1979	DURATION: 0 YEARS 2 MONTH	UNDP: 30,000	GOVT: 0
	ARID ZONES AND PASTURE MANAGEMENT				
479.	RAF 65 052 D 01 01	STARTING DATE: 05 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 951,937	GOVT: 145,000
	FEASIBILITY SURVEY FOR THE REGULATION OF THE SENEGAL RIVER				
480.	RAF 65 061 E 01 12	STARTING DATE: 09 1970	DURATION: 6 YEARS 4 MONTH	UNDP: 3,971,979	GOVT: 711,000
	HYDRO-AGRICULTURAL SURVEY OF THE SENEGAL RIVER BASIN				
481.	RAF 65 071 D 01 13	STARTING DATE: 05 1970	DURATION: 4 YEARS 0 MONTH	UNDP: 474,032	GOVT: 105,698
	STUDY OF WATER RESOURCES IN THE CHAD BASIN				
482.	RAF 66 079 E 01 12	STARTING DATE: 05 1970	DURATION: 2 YEARS 11 MONTH	UNDP: 3,030,151	GOVT: 128,950
	SURVEY OF THE WATER RESOURCES OF THE CHAD BASIN FOR DEVELOPMENT PURPOSES				
483.	RAF 66 080 E 01 01	STARTING DATE: 09 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 1,069,279	GOVT: 820,000
	DESIGN OF A SYSTEM OF WATER MANAGEMENT IN THE UPPER SENEGAL RIVER CATCHMENT				
484.	RAF 68 114 J 01 12	STARTING DATE: 10 1970	DURATION: 5 YEARS 3 MONTH	UNDP: 2,346,664	GOVT: 605,164
	DEVELOPMENT OF AGRICULTURAL RESEARCH AND ITS APPLICATION IN THE SENEGAL RIVER BASIN				
485.	RAF 68 554 G 01 13	STARTING DATE: 06 1970	DURATION: 6 YEARS 6 MONTH	UNDP: 208,772	GOVT: 0
	ECOLOGICAL RESEARCH IN AFRICA				
486.	RAF 70 060 J 01 01	STARTING DATE: 05 1970	DURATION: 5 YEARS 5 MONTH	UNDP: 667,970	GOVT: 161,516
	HYDROLOGICAL AND TOPOGRAPHICAL STUDIES OF THE GAMBIA RIVER BASIN				
487.	RAF 70 141 E 01 12	STARTING DATE: 03 1970	DURATION: 4 YEARS 0 MONTH	UNDP: 204,740	GOVT: 71,250
	DOCUMENT CENTRE FOR THE SENEGAL BASIN DEVELOPMENT PROGRAMME				
488.	RAF 70 190 K 01 13	STARTING DATE: 11 1970	DURATION: 6 YEARS 2 MONTH	UNDP: 623,980	GOVT: 33,741
	DOCUMENTATION CENTRE FOR THE NIGER BASIN COMMISSION				
489.	RAF 70 640 G 01 12	STARTING DATE: 01 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 152,678	GOVT: 0
	REGIONAL TA PROJECTS ON SOIL RESOURCES FOR AFRICA				
490.	RAF 70 520 R 01 13	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP: 4,383	GOVT: 0
	REGIONAL SEMINAR ON ECOLOGICAL METHODOLOGY AND CONSERVATION IN TROPICAL AFRICA, NIGERIA				

WITH ECONOMIC SECTOR CODE 0320

491.	RAF 71 147 F 01 01	STARTING DATE: 12 1971	DURATION: 6 YEARS	1 MONTH	UNDP: 2,063,236	GOVT: 341,000	PLANNING THE DEVELOPMENT OF THE KAGERA RIVER BASIN
492.	RAF 71 257 J 01 31	STARTING DATE: 06 1971	DURATION: 7 YEARS	7 MONTH	UNDP: 489,258	GOVT: 300,000	INSTITUTIONAL SUPPORT TO THE ORGANISATION DES ETATS RIVERAINS DU SENEGAL
493.	RAF 73 050 C 01 31	STARTING DATE: 05 1975	DURATION: 3 YEARS	8 MONTH	UNDP: 85,902	GOVT: 0	FEASIBILITY STUDY FOR HARNESSING THE LOGONE RIVER
494.	RAF 73 059 C 01 31	STARTING DATE: 10 1973	DURATION: 1 YEARS	3 MONTH	UNDP: 562,200	GOVT: 0	PROGRAMME INTEGRE DE MISE EN VALEUR DU BASSIN DU FLEUVE SENEGAL
495.	RAF 73 063 C 01 31	STARTING DATE: 06 1974	DURATION: 4 YEARS	7 MONTH	UNDP: 50,195	GOVT: 0	REGIONAL STRATEGY OF WATER RESOURCES DEVELOPMENT IN THE CONVENTIONAL LAKE CHAD BASIN
496.	RAF 74 009 H 01 12	STARTING DATE: 02 1975	DURATION: 1 YEARS	0 MONTH	UNDP: 3,586	GOVT: 0	IDENTIFICATION MISSION FOR ESTABLISHMENT OF REGIONAL REMOTE SENSING SATELLITE GROUND RECEIVING CENTRES
497.	RAF 74 026 A 01 13	STARTING DATE: 01 1975	DURATION: 2 YEARS	0 MONTH	UNDP: 47,307	GOVT: 0	REGIONAL TRAINING COURSE HYDROLOGY SPECIALISTS
498.	RAF 74 036 E 01 01	STARTING DATE: 06 1974	DURATION: 4 YEARS	7 MONTH	UNDP: 437,635	GOVT: 0	DEVELOPMENT OF THE MANDI RIVER BASIN
499.	RAF 74 044 E 01 31	STARTING DATE: 01 1974	DURATION: 6 YEARS	0 MONTH	UNDP: 214,214	GOVT: 0	OCCUPATION DES SOLS DE L'AMENAGEMENT DU SAY- PRISES DE VUES AERIENNES ET PHOTO-INTERPRETATION
500.	RAF 74 069 E 01 12	STARTING DATE: 10 1974	DURATION: 6 YEARS	3 MONTH	UNDP: 1,186,094	GOVT: 131,700	DEVELOPMENT OF WATER RESOURCES FOR PASTURE LANDS IN THE YAKLES
501.	RAF 74 067 F 01 12	STARTING DATE: 10 1974	DURATION: 6 YEARS	3 MONTH	UNDP: 935,529	GOVT: 42,750	WELL DRILLING IN THE CONVENTIONAL LAKE CHAD BASIN
502.	RAF 74 042 F 01 01	STARTING DATE: 10 1975	DURATION: 4 YEARS	3 MONTH	UNDP: 502,092	GOVT: 0	ETUDE DE L'AMENAGEMENT INTEGRE DU BASSIN DU FLEUVE CAMBIE
503.	RAF 74 075 C 01 31	STARTING DATE: 03 1975	DURATION: 1 YEARS	10 MONTH	UNDP: 52,563	GOVT: 0	ETUDE DE PREFACTIBILITE DE L'AMENAGEMENT DU MONO
504.	RAF 74 305 A 01 12	STARTING DATE: 10 1973	DURATION: 0 YEARS	7 MONTH	UNDP: 122,845	GOVT: 0	DEVELOPMENT OF THE GURGOL RIVER VALLEY SUPPLEMENTARY STUDIES

PGM=SPECLIST(GAIL)

LISTING OF UNDP PROJECTS ON FILE AS OF 31 DECEMBER 1979

WITH ECONOMIC SECTION CODE 0320

505.	RAF 74 309 0 01 01	STARTING DATE: 11-1973	DURATION: 4 YEARS 2 MONTH	UNDP: 292,311	GOVT: 0
	SAHEL DROUGHT EMERGENCY AND MID-TERM GROUNDWATER SUPPLEMENTARY ASSISTANCE				
506.	RAF 74 313 0 01 12	STARTING DATE: 01 1976	DURATION: 3 YEARS 0 MONTH	UNDP: 240,688	GOVT: 0
	UTILISATION DE LA SOURCE DAVEY (NER-72-006)				
507.	RAF 74 997 A 01 12	STARTING DATE: 01 1974	DURATION: 2 YEARS 0 MONTH	UNDP: 0	GOVT: 0
	ACCOUNTING ADJUSTMENT FOR RAF-73-083-OPE				
508.	RAF 75 025 0 01 12	STARTING DATE: 06 1975	DURATION: 3 YEARS 7 MONTH	UNDP: 185,690	GOVT: 0,920,000
	ETUDES PEDOLOGIQUES DES VALLEES DE LA ROUGOURISA ET DU PONI				
509.	RAF 75 024 C 01 31	STARTING DATE: 01 1976	DURATION: 2 YEARS 0 MONTH	UNDP: 6,573	GOVT: 0
	ETUDES HYDROGEOLOGIQUES - ARRONDISSEMENT DE SAX				
510.	RAF 75 038 F 01 31	STARTING DATE: 01 1975	DURATION: 5 YEARS 0 MONTH	UNDP: 63,640	GOVT: 0
	PLAN DE DEVELOPPEMENT DU BASSIN DU FLEUVE NIGER				
511.	RAF 76 034 B 01 31	STARTING DATE: 01 1979	DURATION: 1 YEARS 0 MONTH	UNDP: 58,761	GOVT: 0
	PLANNING THE DEVELOPMENT OF THE KAGERA RIVER BASIN - PHASE II				
512.	RAF 76 034 C 45 31	STARTING DATE: 01 1973	DURATION: 2 YEARS 0 MONTH	UNDP: 48,047	GOVT: 0
	PLANNING THE DEVELOPMENT OF THE KAGERA RIVER BASIN, PHASE II				
513.	RAF 76 317 0 01 01	STARTING DATE: 01 1976	DURATION: 2 YEARS 0 MONTH	UNDP: 317,188	GOVT: 0
	APPROVISIONNEMENT EN EAU DES ZONES RURALES - NYOJAMENA (CHP-71-510)				
514.	RAF 77 007 A 01 21	STARTING DATE: 05 1977	DURATION: 1 YEARS 0 MONTH	UNDP: 47,500	GOVT: 0
	UNITAR/STATE OF CALIFORNIA CONFERENCE UN ALTERNATIVE STRATEGIES FOR DESERT DEVELOPMENT AND MANAGEMENT				
515.	RAF 77 037 B 01 31	STARTING DATE: 06 1978	DURATION: 1 YEARS 7 MONTH	UNDP: 450,600	GOVT: 0
	INSTITUTIONAL SUPPORT TO UNSO IN IMPLEMENTING THE PLAN OF ACTION TO COMBAT DESERTIFICATION				
516.	RAF 77 044 A 01 01	STARTING DATE: 04 1973	DURATION: 0 YEARS 9 MONTH	UNDP: 88,901	GOVT: 0
	STUDY OF FRESH-WATER RESOURCES MANAGEMENT IN CHINA				
517.	RAF 77 064 A 01 16	STARTING DATE: 05 1979	DURATION: 3 YEARS 7 MONTH	UNDP: 76,725	GOVT: 0
	PROGRAMME DE RENFORCEMENT DES SERVICES AGRICULTURALS ET HYDROLOGIQUES DES PAYS SAHILIENS-SFNEGAL (SSUA)				
518.	RAF 79 001 C 01 16	STARTING DATE: 07 1979	DURATION: 2 YEARS 6 MONTH	UNDP: 498,700	GOVT: 0
	PLANNING AND DEVELOPMENT OF HYDROMETEOROLOGICAL NETWORKS AND RELATED SERVICES IN AFRICA				

WITH ECONOMIC SECTION CODE 0320

519.	PAF 79 044 A 01 12	STARTING DATE: 10 1979	DURATION: 0 YEARS 2 MONTH	UNDP:	9,052	GOVT:	0
	MAND RIVER UNION: AGRICULTURE, FORESTRY AND FISHERY DEVELOPMENT						
520.	RAF 79 053 B 01 01	STARTING DATE: 07 1979	DURATION: 1 YEARS 6 MONTH	UNDP:	470,000	GOVT:	104,500,000
	ETUDE SOCIO-ECONOMIQUE DU BASSIN DU FLUVE SENEGAL ET MISE EN PLACE D'UN SYSTEME D'EVALUATION DU DEVELOPPEMENT						
521.	RAS 71 269 G 01 42	STARTING DATE: 01 1972	DURATION: 5 YEARS 0 MONTH	UNDP:	843,689	GOVT:	1,172,000
	FORMULATION OF A PIONEER PROJECTS PROGRAMME FOR THE LOWER MEKONG BASIN						
522.	RAS 72 033 E 01 12	STARTING DATE: 01 1973	DURATION: 2 YEARS 0 MONTH	UNDP:	60,051	GOVT:	0
	REGIONAL WATER MANAGEMENT						
523.	RAS 72 079 P 01 01	STARTING DATE: 10 1972	DURATION: 7 YEARS 3 MONTH	UNDP:	6,918,758	GOVT:	445,000
	INSTITUTIONAL SUPPORT TO THE MEKONG COMMITTEE, PHASE IV - UNDP PREPARATION OF REQUEST						
524.	RAS 72 122 K 01 01	STARTING DATE: 03 1973	DURATION: 5 YEARS 10 MONTH	UNDP:	682,017	GOVT:	0
	SOUTH-PACIFIC OFFSHORE PROSPECTING						
525.	RAS 75 002 D 01 31	STARTING DATE: 04 1975	DURATION: 3 YEARS 9 MONTH	UNDP:	50,520	GOVT:	0
	REVISION OF THE MATHEMATICAL MODELS OF THE MEKONG DELTA						
526.	RAS 75 063 F 01 13	STARTING DATE: 01 1976	DURATION: 3 YEARS 0 MONTH	UNDP:	52,200	GOVT:	0
	INTERNATIONAL COOPERATION TO COMBAT DESERTIFICATION						
527.	RAS 74 019 B 01 53	STARTING DATE: 09 1978	DURATION: 1 YEARS 1 MONTH	UNDP:	47,481	GOVT:	0
	WORKSHOP ON EFFICIENT USE AND MAINTENANCE OF IRRIGATION SYSTEMS AT THE FARM LEVEL IN CHINA						
528.	RAS 78 026 E 01 99	STARTING DATE: 01 1979	DURATION: 4 YEARS 0 MONTH	UNDP:	4,483,000	GOVT:	5,047,460
	INSTITUTIONAL SUPPORT TO THE MEKONG COMMITTEE.						
529.	RAS 79 009 A 01 16	STARTING DATE: 10 1979	DURATION: 0 YEARS 1 MONTH	UNDP:	90,000	GOVT:	0
	TRAINING SEMINAR ON HYDROLOGICAL FORECASTING						
530.	RAS 79 036 A 01 53	STARTING DATE: 08 1979	DURATION: 0 YEARS 1 MONTH	UNDP:	127,085	GOVT:	0
	SEMINAR ON MEASURES TO IMPROVE IRRIGATION EFFICIENCY AT THE FARM LEVEL						
531.	RAS 79 045 A 01 01	STARTING DATE: 05 1980	DURATION: 0 YEARS 1 MONTH	UNDP:	22,760	GOVT:	0
	INTERREGIONAL MEETING OF INTERNATIONAL RIVER ORGANIZATIONS, TCDC						
532.	REM 67 100 H 01 13	STARTING DATE: 03 1970	DURATION: 4 YEARS 3 MONTH	UNDP:	1,253,628	GOVT:	1,710,000
	SURVEY OF GROUNDWATER RESOURCES IN THE NORTHERN SERRA						

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979

WITH ECONOMIC SECTOR CODE 0120

547.	RLA 71 290 T 01 93	STARTING DATE: 05 1973	DURATION: 4 YEARS 0 MONTH	UNDP: 567,235	GOVT: 1,553,400
	WATER RESOURCES OF THE PILCOMAYO RIVER BASIN				
548.	RLA 72 019 C 01 10	STARTING DATE: 11 1973	DURATION: 1 YEARS 1 MONTH	UNDP: 12,757	GOVT: 4,000
	REGIONAL SEMINAR ON THE USE OF ISOTOPES TECHNIQUES IN WATER RESOURCES INVENTORY, PLANNING AND DEVELOPMENT				
549.	RLA 73 031 D 01 13	STARTING DATE: 09 1974	DURATION: 0 YEARS 4 MONTH	UNDP: 44,219	GOVT: 0
	REGIONAL TRAINING COURSE ON MODELLING AND APPLICATION OF COMPUTERS IN HYDROLOGY, LATIN AMERICA				
550.	RLA 74 018 P 01 43	STARTING DATE: 04 1974	DURATION: 0 YEARS 9 MONTH	UNDP: 1,705,514	GOVT: 1,658,220
	APPLICATION OF AGRICULTURAL RESEARCH TO SEMI-ARID AND ARID ZONE DEVELOPMENT				
551.	RLA 74 032 B 01 31	STARTING DATE: 08 1974	DURATION: 1 YEARS 0 MONTH	UNDP: 1,580	GOVT: 0
	HYDRAULIC RESEARCH CENTRE, PORTO ALEGRE				
552.	RLA 77 016 C 01 16	STARTING DATE: 10 1977	DURATION: 1 YEARS 3 MONTH	UNDP: 14,180	GOVT: 0
	TRAINING SEMINAR ON FLOOD FORECASTING				
553.	RLA 78 015 A 01 12	STARTING DATE: 12 1978	DURATION: 0 YEARS 0 MONTH	UNDP: 2,500	GOVT: 0
	IRRIGATION DEVELOPMENT IN CENTRAL AMERICA				
554.	RLA 78 021 A 01 16	STARTING DATE: 09 1978	DURATION: 3 YEARS 0 MONTH	UNDP: 100,000	GOVT: 146,000
	PREVISION DE CAUDALES E INUNDACIONES EN EL ISTMO CENTROAMERICANO				
555.	RLA 78 031 A 01 16	STARTING DATE: 10 1978	DURATION: 0 YEARS 1 MONTH	UNDP: 15,000	GOVT: 0
	TRAINING SEMINAR ON FLOOD FORECASTING				
556.	RLA 78 036 A 01 01	STARTING DATE: 04 1979	DURATION: 0 YEARS 1 MONTH	UNDP: 99,170	GOVT: 0
	STUDY TOUR ON WATER RESOURCES MANAGEMENT IN CHINA PHASE III				
557.	ROK 67 522 I 01 12	STARTING DATE: 10 1970	DURATION: 5 YEARS 4 MONTH	UNDP: 2,125,957	GOVT: 1260,305,690
	UPLANDS DEVELOPMENT AND WATERSHED MANAGEMENT				
558.	ROK 69 524 D 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 10 MONTH	UNDP: 739,038	GOVT: 0
	TUBEWELL IRRIGATION PROJECT				
559.	ROK 70 005 H 01 01	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 10,184	GOVT: 0
	WATER WORKS				
560.	ROK 72 003 C 01 12	STARTING DATE: 03 1972	DURATION: 0 YEARS 5 MONTH	UNDP: 573	GOVT: 0
	NATIONAL SEMINAR ON WATER MANAGEMENT AT THE FARM LEVEL				



561.	ROK 72 065 F 01 12	STARTING DATE: 10 1972	DURATION: 2 YEARS 3 MONTH	UNDP:	837025	GOVT:	57,500,000
	NAKTONG RIVER BASIN DELTA AND TRIBUTARY STUDIES						
562.	ROK 72 006 H 01 12	STARTING DATE: 01 1974	DURATION: 6 YEARS 0 MONTH	UNDP:	1,096,496	GOVT:	90,000,000
	NAKONG RIVER BASIN DELTA STUDIES						
563.	ROK 75 005 F 01 12	STARTING DATE: 04 1975	DURATION: 6 YEARS 9 MONTH	UNDP:	1,567,435	GOVT:	11,250,000
	CULTURAL HERITAGE CREDITORY FOR AGRICULTURAL LAND AND WATER RESOURCES DEVELOPMENT						
564.	ROK 72 006 H 01 12	STARTING DATE: 04 1975	DURATION: 5 YEARS 4 MONTH	UNDP:	171667842	GOVT:	20,000,000
	THE DRAINAGE IMPROVEMENT PROJECT						
565.	POK 75 017 D 12 45	STARTING DATE: 10 1975	DURATION: 2 YEARS 3 MONTH	UNDP:	292,924	GOVT:	50,000,000
	FEASIBILITY STUDY FOR NAKONG RIVER BASIN DEVELOPMENT PROJECT						
566.	ROM 65 501 E 01 12	STARTING DATE: 10 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	1,784,000	GOVT:	246,592,900
	ESTABLISHMENT AND OPERATION OF PILOT IRRIGATION STATIONS IN THE DANURE PLAIN						
567.	ROM 70 016 F 01 12	STARTING DATE: 01 1972	DURATION: 2 YEARS 2 MONTH	UNDP:	57201	GOVT:	0
	LAND IMPROVEMENT						
568.	ROM 72 003 E 01 12	STARTING DATE: 05 1972	DURATION: 3 YEARS 0 MONTH	UNDP:	6,327	GOVT:	24,928,000
	OPERATION OF THE IRRIGATION AND DRAINAGE PILOT STATION OF BARREASA-GIURGIN						
569.	ROM 73 001 C 01 12	STARTING DATE: 06 1973	DURATION: 1 YEARS 7 MONTH	UNDP:	16,947	GOVT:	0
	ASSISTANCE FOR THE ELIMINATION OF EXCESS WATER ON AGRICULTURAL LANDS						
570.	ROM 76 032 G 01 01	STARTING DATE: 10 1978	DURATION: 1 YEARS 0 MONTH	UNDP:	157346	GOVT:	122,000
	TECHNICAL ASSISTANCE FOR "GURA APELOR" DAM DESIGN						
571.	ROM 76 035 B 01 12	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP:	10,200	GOVT:	4,000,000
	COMPLEX DEVELOPMENT OF THE NATURAL RESOURCES OF THE DANURE DELTA						
572.	RWA 68 005 G 01 12	STARTING DATE: 01 1970	DURATION: 6 YEARS 0 MONTH	UNDP:	205,087	GOVT:	0
	FLUOROLOGY INVENTORY						
573.	RWA 71 511 F 03 14	STARTING DATE: 01 1976	DURATION: 2 YEARS 0 MONTH	UNDP:	174,465	GOVT:	0
	ETUDE D'UN PLAN DIRECTEUR POUR L'APPROVISIONNEMENT EN EAUX DES VILLES DE KIGALI ET BUTARE						
574.	RWA 74 003 C 01 12	STARTING DATE: 07 1974	DURATION: 3 YEARS 6 MONTH	UNDP:	409,970	GOVT:	13,400,000
	CONSERVATION DES SOLS ET LUTTE CONTRE L'ERUSION						

WITH ECONOMIC SECTOR CODE 0320

575.	SAM 74 006 F 01 01	STARTING DATE: 01 1977	DURATION: 5 YEARS 0 MONTH	UNDP:	274,144	GOVT:	0
	HYDRO DATA COLLECTION						
576.	SAM 74 006 E 42 01	STARTING DATE: 10 1974	DURATION: 4 YEARS 3 MONTH	UNDP:	103,549	GOVT:	45,600
	HYDRO DATA COLLECTION						
577.	SAU 66 518 N 01 12	STARTING DATE: 04 1970	DURATION: 7 YEARS 9 MONTH	UNDP:	927,675	GOVT:	13,684,004
	IRRIGATION DEVELOPMENT IN THE WADI JIZAN						
578.	SAU 74 001 E 01 12	STARTING DATE: 09 1974	DURATION: 3 YEARS 5 MONTH	UNDP:	100,382	GOVT:	142,625
	SENIOR IRRIGATION ADVISER						
579.	SEN 73 003 H 13 01	STARTING DATE: 10 1973	DURATION: 5 YEARS 3 MONTH	UNDP:	534,239	GOVT:	0
	PROGRAMME DE TRAVAUX HYDRAULIQUES D'URGENCE ET MOYEN TERME AU SENEGAL						
580.	SEN 73 012 G 01 12	STARTING DATE: 01 1977	DURATION: 4 YEARS 0 MONTH	UNDP:	139,220	GOVT:	0
	FIXATION DES DUNES, PROTECTION DES NAIYES ET DES SOCS DIKRS DE LA GRANDE COTE						
581.	SEN 75 024 J 11 37	STARTING DATE: 01 1977	DURATION: 1 YEARS 0 MONTH	UNDP:	0	GOVT:	0
	CREATION D'ATELIERS DE REPARATION DE POMPES D'IRRIGATION DANS LA REGION DU FLEUVE SENEGAL						
582.	SEN 75 824 B 51 37	STARTING DATE: 01 1977	DURATION: 3 YEARS 0 MONTH	UNDP:	49,410	GOVT:	0
	ESTABLISHMENT OF MECHANICAL WORKSHOPS FOR SEPARATION AND MAINTENANCE FOR THE SENEGAL RIVER						
583.	SEN 79 012 B 45 12	STARTING DATE: 04 1979	DURATION: 0 YEARS 3 MONTH	UNDP:	10,500	GOVT:	14,700,000
	SOCIETE D'AMENAGEMENT ET D'EXPLOITATION DES TERRES DU DELTA (SAED) - FORMATION						
584.	SEN 75 014 A 13 37	STARTING DATE: 02 1979	DURATION: 0 YEARS 1 MONTH	UNDP:	10,900	GOVT:	0
	ASSISTANCE A LA SAED POUR L'ETABLISSEMENT D'UN SYSTEME DE MAINTENANCE DE POMPES D'IRRIGATION						
585.	SIL 69 005 D 01 12	STARTING DATE: 05 1970	DURATION: 4 YEARS 0 MONTH	UNDP:	15,400	GOVT:	0
	LAND AND WATER DEVELOPMENT AND RURAL INDUSTRIES						
586.	SIL 72 007 I 01 01	STARTING DATE: 04 1972	DURATION: 6 YEARS 4 MONTH	UNDP:	751,048	GOVT:	76,670
	PILOT PROJECT FOR THE DETERMINATION OF THE SURFACE WATER RESOURCES						
587.	SIL 71 002 H 01 12	STARTING DATE: 09 1973	DURATION: 8 YEARS 4 MONTH	UNDP:	2,365,704	GOVT:	0
	LAND RESOURCES SURVEY						
589.	SIL 79 009 A 01 01	STARTING DATE: 02 1980	DURATION: 1 YEARS 0 MONTH	UNDP:	266,670	GOVT:	45,100
	RURAL WATER SUPPLY						

WITH ECONOMIC SECTION CODE 0320

589.	SOM 60 510 C 01 12	STARTING DATE: 12 1970	DURATION: 2 YEARS 1 MONTH	UNDP: 557,373	GOVT: 892,116
	WATER CONTROL AND MANAGEMENT OF THE SHERELLI RIVER				
590.	SOM 69 002 C 01 01	STARTING DATE: 01 1971	DURATION: 1 YEARS 6 MONTH	UNDP: 63,342	GOVT: 0
	NATURAL RESOURCES DEVELOPMENT				
591.	SOM 69 006 C 01 12	STARTING DATE: 02 1970	DURATION: 3 YEARS 11 MONTH	UNDP: 80,252	GOVT: 0
	HYDROLOGY				
592.	SOM 72 013 F 01 12	STARTING DATE: 01 1973	DURATION: 4 YEARS 0 MONTH	UNDP: 99,714	GOVT: 0
	APPLICATION AND CONSERVATION				
593.	SOM 74 006 C 45 01	STARTING DATE: 09 1975	DURATION: 1 YEARS 4 MONTH	UNDP: 59,563	GOVT: 185,000
	GROUNDWATER INVESTIGATION AND EXPLORATION				
594.	SOM 74 020 E 13 01	STARTING DATE: 12 1974	DURATION: 3 YEARS 1 MONTH	UNDP: 385,967	GOVT: 6,431,560
	EMERGENCY WATER DRILLING				
595.	SOM 75 001 E 13 31	STARTING DATE: 02 1975	DURATION: 0 YEARS 3 MONTH	UNDP: 20,000	GOVT: 1,375,653
	EMERGENCY WATER SUPPLY DEVELOPMENT				
596.	SOM 75 003 C 45 12	STARTING DATE: 09 1975	DURATION: 2 YEARS 5 MONTH	UNDP: 55,828	GOVT: 538,600
	STRENGTHENING OF THE WATER AND LAND DEPARTMENT				
597.	SPA 69 515 J 01 13	STARTING DATE: 12 1970	DURATION: 6 YEARS 1 MONTH	UNDP: 754,390	GOVT: 0
	SCIENTIFIC STUDY OF WATER RESOURCES IN THE CANARY ISLANDS				
598.	SPA 69 516 S 01 12	STARTING DATE: 02 1970	DURATION: 4 YEARS 11 MONTH	UNDP: 719,452	GOVT: 115,356,000
	PILOT PROJECT OF GROUNDWATER UTILIZATION FOR AGRICULTURAL DEVELOPMENT IN THE GUADALQUIVIR RIVER BASIN (PHASE II)				
599.	SPA 71 001 E 01 12	STARTING DATE: 09 1971	DURATION: 2 YEARS 10 MONTH	UNDP: 59,060	GOVT: 0
	UNDERGROUND SURVEY				
600.	SPA 71 003 H 01 12	STARTING DATE: 03 1972	DURATION: 3 YEARS 10 MONTH	UNDP: 106,275	GOVT: 0
	GROUNDWATER UTILIZATION OF THE GUADALQUIVIR RIVER BASIN				
601.	SPA 75 002 H 01 12	STARTING DATE: 09 1973	DURATION: 4 YEARS 4 MONTH	UNDP: 101,212	GOVT: 51,335,600
	NATIONAL PROGRAMME FOR UNDERGROUND WATER SURVEY				
602.	SPA 74 001 C 01 31	STARTING DATE: 01 1975	DURATION: 0 YEARS 2 MONTH	UNDP: 4,657	GOVT: 0
	PLANIFICACION Y EXPLOTACION DE LOS RECURSOS DE AGUAS EN LAS ISLAS CANARIAS				

PGM=SPECPLIST(GAIL)

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979

WITH ECONOMIC SECTOR CODE 0320

603*	SPA 74 001 0 01 71	STARTING DATE: 07 1975	DURATION: 3 YEARS 6 MONTH	UNDP:	9,839	GOVT:	198,500,000
	PLANIFICATION DU CONTROL ET DE L'AMELIORATION DE LA QUALITE DES EAUX SOUTERRAINES						
604.	SRL 70 020 C 01 12	STARTING DATE: 11 1970	DURATION: 2 YEARS 0 MONTH	UNDP:	55,744	GOVT:	0
	SPECIALIST IN WATER RESOURCES DEVELOPMENT						
605.	SRL 72 009 F 01 01	STARTING DATE: 07 1973	DURATION: 2 YEARS 6 MONTH	UNDP:	6,420	GOVT:	11,040
	TREATING IN DRUGGING OPERATIONS						
606.	SRL 73 047 C 01 01	STARTING DATE: 06 1974	DURATION: 0 YEARS 7 MONTH	UNDP:	7,500	GOVT:	4,500
	EXPERT IN COASTAL ENGINEERING						
607.	SRL 74 030 D 01 01	STARTING DATE: 09 1975	DURATION: 3 YEARS 4 MONTH	UNDP:	24,240	GOVT:	4,500
	GROUNDWATER EXPLORATION AND DEVELOPMENT						
608.	SRL 74 079 B 01 12	STARTING DATE: 04 1975	DURATION: 0 YEARS 9 MONTH	UNDP:	2,100	GOVT:	5,525
	TRAINING IN IMPLEMENTATION OF LAND REFORM PROGRAMME						
609.	SRL 75 007 0 01 01	STARTING DATE: 07 1975	DURATION: 1 YEARS 6 MONTH	UNDP:	8,102	GOVT:	3,240
	FELLOWSHIPS TO ATTEND THE NINTH CONGRESS OF THE ICID IN MUSCOW IN JULY 75						
610.	SRL 78 027 A 01 12	STARTING DATE: 09 1970	DURATION: 0 YEARS 1 MONTH	UNDP:	1,000	GOVT:	0
	IRRIGATION AGRONOMY AND WATER MANAGEMENT IN THE MAHARELI AREA						
611.	STK 74 015 F 01 01	STARTING DATE: 04 1975	DURATION: 3 YEARS 9 MONTH	UNDP:	11,130	GOVT:	35,000
	QUANTITATIVE ASSESSMENT OF GROUNDWATER RESOURCES IN PASSEVERRE VALLEY						
612.	SIL 72 010 0 01 12	STARTING DATE: 01 1973	DURATION: 1 YEARS 4 MONTH	UNDP:	4,932	GOVT:	0
	SOIL AND WATER CONSERVATION						
613.	SIL 72 012 F 01 12	STARTING DATE: 11 1972	DURATION: 2 YEARS 3 MONTH	UNDP:	19,750	GOVT:	0
	LAND TENURE EXPERT						
614.	SUD 64 515 C 01 12	STARTING DATE: 09 1970	DURATION: 2 YEARS 0 MONTH	UNDP:	688,800	GOVT:	649,500
	STRENGTHENING OF THE SOIL SURVEY DIVISION						
615.	SUD 69 001 N 01 01	STARTING DATE: 02 1970	DURATION: 8 YEARS 11 MONTH	UNDP:	243,025	GOVT:	0
	WATER DRILLING						
616.	SUD 71 011 B 01 12	STARTING DATE: 01 1972	DURATION: 0 YEARS 3 MONTH	UNDP:	7,542	GOVT:	0
	HYDROGEOLOGICAL DATA ANALYSIS						

617.	SUD 71 544 0 01 01	STARTING DATE: 02 1972	DURATION: 1 YEARS 4 MONTH	UNDP: 8,000	GOVT: 0
	ESTABLISHMENT OF HYDRAULIC RESEARCH STATION				
618.	SUD 71 523 K 01 12	STARTING DATE: 10 1972	DURATION: 6 YEARS 0 MONTH	UNDP: 694,125	GOVT: 0
	STRENGTHENING OF THE SOIL SURVEY DEPARTMENT				
619.	SUD 72 003 G 01 01	STARTING DATE: 10 1973	DURATION: 3 YEARS 3 MONTH	UNDP: 81,813	GOVT: 0
	STRENGTHENING GOVERNMENT SERVICES FOR WATER RESOURCES PLANNING, EXPANSION AND DEVELOPMENT				
620.	SUD 72 003 0 01 12	STARTING DATE: 04 1974	DURATION: 0 YEARS 2 MONTH	UNDP: 13,138	GOVT: 0
	HYDRO-AGRICULTURAL INVESTIGATIONS FOR TOKAR DELTA-RED SEA HILLS DEVELOPMENT				
621.	SUD 72 549 K 01 13	STARTING DATE: 01 1974	DURATION: 9 YEARS 0 MONTH	UNDP: 1,774,607	GOVT: 1,500,000
	HYDRAULIC RESEARCH STATION				
622.	SUD 73 001 P 01 12	STARTING DATE: 04 1973	DURATION: 6 YEARS 9 MONTH	UNDP: 3,182,289	GOVT: 398,665
	LAND DEVELOPMENT, SOUTHERN REGION				
623.	SUD 74 007 0 4 31	STARTING DATE: 01 1975	DURATION: 3 YEARS 0 MONTH	UNDP: 167,000	GOVT: 0
	LAND DEVELOPMENT - LOGISTICAL SUPPORT				
624.	SUD 74 040 0 01 21	STARTING DATE: 10 1974	DURATION: 1 YEARS 3 MONTH	UNDP: 15,349	GOVT: 0
	WATER REVIFW MISSION FOR THE SOUTH				
625.	SUD 77 011 G 01 12	STARTING DATE: 08 1977	DURATION: 2 YEARS 1 MONTH	UNDP: 258,327	GOVT: 0
	NATIONAL REMOTE SENSING CENTRE				
626.	SUD 78 024 A 01 01	STARTING DATE: 01 1979	DURATION: 1 YEARS 0 MONTH	UNDP: 65,100	GOVT: 0
	ASSISTANCE TO THE MAD EL MAGAOUL INSTITUTE FOR KUKAL WATER TECHNICIANS				
627.	SWA 67 502 B 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 657,399	GOVT: 131,840
	SURVEY AND PLANNING OF THE USUTU RIVER BASIN				
628.	SWA 73 002 F 01 01	STARTING DATE: 03 1973	DURATION: 4 YEARS 10 MONTH	UNDP: 12,125	GOVT: 700
	STUDY OF THE SWAZILAND GOVERNMENT WATER ACT				
629.	SWA 73 006 I 01 01	STARTING DATE: 01 1974	DURATION: 2 YEARS 0 MONTH	UNDP: 373,039	GOVT: 74,332
	WATER AND SEWERAGE MANAGEMENT PERSONNEL				
630.	SWA 77 001 B 01 12	STARTING DATE: 01 1977	DURATION: 1 YEARS 0 MONTH	UNDP: 1,799	GOVT: 0
	WATER RESOURCES PLANNING FELLOWSHIP				

WITH ECONOMIC SECTOR CUDF 0320

631.	SYR 67 522 W 01 11	STARTING DATE: 05 1970	DURATION: 6 YEARS 8 MONTH	UNDP: 1,693,375	GOVT: 3,948,650
	EUPHRATES PILOT IRRIGATION PROJECT				
632.	SYR 68 524 I 01 12	STARTING DATE: 04 1970	DURATION: 5 YEARS 9 MONTH	UNDP: 1,390,026	GOVT: 4,607,110
	AGRICULTURAL DEVELOPMENT OF THE GHAB REGION, PHASE II				
633.	SYR 71 546 N 01 12	STARTING DATE: 12 1971	DURATION: 8 YEARS 1 MONTH	UNDP: 1,996,995	GOVT: 12,056,400
	SURVEYS OF THE BALIKH BASIN				
634.	SYR 72 003 H 01 12	STARTING DATE: 10 1972	DURATION: 5 YEARS 0 MONTH	UNDP: 78,696	GOVT: 1,150,460
	IRRIGATION PLANNING ADVISER, EUPHRATES				
635.	SYR 78 003 A 01 12	STARTING DATE: 06 1978	DURATION: 3 YEARS 0 MONTH	UNDP: 1,000,000	GOVT: 0
	TECHNICAL SUPPORT FOR RESEARCH AND DEVELOPMENT OF THE EUPHRATES BASIN				
636.	TCI 71 001 E 01 01	STARTING DATE: 07 1971	DURATION: 3 YEARS 4 MONTH	UNDP: 0	GOVT: 1,110,000
	PRODUCTION OF FRESH WATER BY SUGAR DISTILLATION				
637.	THA 67 523 H 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS 1 MONTH	UNDP: 1,142,070	GOVT: 33,131,300
	STRENGTHENING SOIL SURVEY AND LAND CLASSIFICATION				
638.	THA 68 024 F 01 12	STARTING DATE: 07 1970	DURATION: 4 YEARS 6 MONTH	UNDP: 51,379	GOVT: 0
	WATERFISH MANAGEMENT				
639.	THA 70 028 C 01 12	STARTING DATE: 07 1971	DURATION: 2 YEARS 0 MONTH	UNDP: 11,776	GOVT: 0
	WATER RESOURCES DEVELOPMENT AND MANAGEMENT				
640.	THA 72 003 D 01 12	STARTING DATE: 03 1972	DURATION: 2 YEARS 1 MONTH	UNDP: 1,702	GOVT: 0
	FIRST NATIONAL SEMINAR ON WATER MANAGEMENT AT THE FARM LEVEL				
641.	THA 74 011 R 01 12	STARTING DATE: 01 1975	DURATION: 1 YEARS 0 MONTH	UNDP: 0	GOVT: 790,400
	ACID SULPHATE SOILS IMPROVEMENT				
642.	THA 74 014 A 01 45	STARTING DATE: 09 1979	DURATION: 0 YEARS 7 MONTH	UNDP: 200,000	GOVT: 25,102,500
	FEASIBILITY STUDY OF KOO MULTIPURPOSE PROJECT				
643.	THA 75 004 A 01 31	STARTING DATE: 07 1979	DURATION: 3 YEARS 6 MONTH	UNDP: 1,157,000	GOVT: 4,141,600
	AERIAL SURVEY OF NORTHERN THAILAND WATERSHEDS				
644.	THA 62 504 F 01 01	STARTING DATE: 10 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 1,326,074	GOVT: 128,297,000
	SURVEY OF GROUNDWATER AND MINERAL RESOURCES				

WITH ECONOMIC SECTION CODE 0320

645.	TGG 71 511 1 01 01	STARTING DATE: 06-1970	DURATION: 5 YEARS	7 MONTH	UNDP: 5257577	GOVT: 65,330,000
GROUNDWATER EXPLORATION IN THE COASTAL REGION						
646.	TGG 72 022 C 01 31	STARTING DATE: 01 1974	DURATION: 3 YEARS	0 MONTH	UNDP: 121,300	GOVT: 0
RECHERCHES EN EAUX SOUTERRAINES						
647.	TGG 74 012 C 01 12	STARTING DATE: 10 1975	DURATION: 3 YEARS	3 MONTH	UNDP: 47	GOVT: 5,000,000
INVENTAIRE DES RESSOURCES ET PROGRAMMATION DU DEVELOPPEMENT DE LA VALLEE DU MO ET SES AFFLUENTS						
648.	TGG 74 014 0 01 01	STARTING DATE: 08-1975	DURATION: 2 YEARS	5 MONTH	UNDP: 7244	GOVT: 1,450,000
PROGRAMME D'EVALUATION DES RESSOURCES EN EAUX SOUTERRAINES ET DE SURFACE DANS LE CENTRE ET LE NORD DU TOGO						
649.	TGG 75 002 F 01 12	STARTING DATE: 11 1974	DURATION: 4 YEARS	2 MONTH	UNDP: 138,035	GOVT: 0
MISE EN VALEUR DES TERRES LIBREES DE L'ONCHOCENCEUSE DEVELOPPEMENT DE LA VALLEE DE L'OTI ET DE SES AFFLUENTS						
650.	TGG 75 009 D 01 01	STARTING DATE: 05 1973	DURATION: 3 YEARS	8 MONTH	UNDP: 1,709,430	GOVT: 120,100,000
STRATEGIE D'AMENAGEMENT DES EAUX DU TOGO - PREMIERE PHASE						
651.	TGG 76 004 C 01 12	STARTING DATE: 02-1977	DURATION: 1 YEARS	11 MONTH	UNDP: 11,985	GOVT: 0
ETUDE POUR LE DEVELOPPEMENT DE PEQUETES PILOTES D'AMENAGEMENT HYDRO-AGRICOLE DANS LA VALLEE DU MONO						
652.	TGN 72 002 F 01 01	STARTING DATE: 10 1972	DURATION: 4 YEARS	3 MONTH	UNDP: 7,920	GOVT: 0
GEOELECTRIC SURVEY						
653.	TGN 73 003 D 01 01	STARTING DATE: 07 1973	DURATION: 4 YEARS	6 MONTH	UNDP: 500	GOVT: 200
MAPPING SURVEY						
654.	TGN 75 004 E 01 14	STARTING DATE: 05 1976	DURATION: 6 YEARS	0 MONTH	UNDP: 224,314	GOVT: 22,200
TONCA WATER BOARD DEVELOPMENT						
655.	TUN 69 004 E 01 12	STARTING DATE: 01 1970	DURATION: 4 YEARS	5 MONTH	UNDP: 84,211	GOVT: 0
LAND AND WATER DEVELOPMENT						
656.	TUN 69 528 G 01 01	STARTING DATE: 09 1970	DURATION: 3 YEARS	10 MONTH	UNDP: 310,974	GOVT: 424,400
INTENSIFICATION OF GROUNDWATER EXPLOITATION IN NORTHERN AND CENTRAL TUNISIA						
657.	TUN 70 529 M 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS	6 MONTH	UNDP: 171,5265	GOVT: 1,019,500
IMPROVEMENT OF IRRIGATION AND DRAINAGE TECHNIQUES						
658.	TUK 69 006 D 01 12	STARTING DATE: 01 1970	DURATION: 5 YEARS	0 MONTH	UNDP: 101,330	GOVT: 0
LAND AND WATER DEVELOPMENT						

WITH ECONOMIC SECTION CODE 0320

659.	TUR 71 006 D 01 12	STARTING DATE: 07 1971	DURATION: 2 YEARS 6 MONTH	UNDP:	4,491	GOVT:	0
	IRRIGATION						
660.	TUR 71 011 C 01 03	STARTING DATE: 07 1971	DURATION: 1 YEARS 7 MONTH	UNDP:	1,741	GOVT:	0
	DEVELOPMENT OF THE WATER RESOURCES						
661.	TUR 71 016 C 01 18	STARTING DATE: 10 1971	DURATION: 2 YEARS 1 MONTH	UNDP:	2,000	GOVT:	0
	USE OF RADIOISOTOPE TECHNIQUES IN HYDROLOGY						
662.	TUR 73 036 C 01 18	STARTING DATE: 10 1973	DURATION: 1 YEARS 1 MONTH	UNDP:	750	GOVT:	0
	RADIOISOTOPES IN HYDROLOGY						
663.	TUR 74 042 E 01 01	STARTING DATE: 07 1975	DURATION: 2 YEARS 0 MONTH	UNDP:	55,436	GOVT:	0
	STRENGTHENING GROUNDWATER INVESTIGATIVE CAPABILITY OF USI						
664.	TUR 74 053 G 01 18	STARTING DATE: 03 1975	DURATION: 4 YEARS 0 MONTH	UNDP:	79,912	GOVT:	303,320
	ASSISTANCE FOR UTILIZATION OF ISOTOPES IN HYDROLOGY						
665.	TUR 74 064 F 01 01	STARTING DATE: 06 1975	DURATION: 3 YEARS 7 MONTH	UNDP:	98,937	GOVT:	0
	ASSISTANCE IN HYDRAULIC BACKFILLING FOR ETIBANK						
666.	TUR 75 119 C 01 16	STARTING DATE: 10 1975	DURATION: 0 YEARS 11 MONTH	UNDP:	7,500	GOVT:	0
	FELLOWSHIP IN HYDROLOGY						
667.	TUR 77 006 D 01 01	STARTING DATE: 01 1973	DURATION: 5 YEARS 0 MONTH	UNDP:	525,768	GOVT:	12,500,000
	TRAINING OF AND SUPPORT FOR OSI PERSONNEL						
668.	TUR 77 035 H 01 01	STARTING DATE: 01 1977	DURATION: 3 YEARS 0 MONTH	UNDP:	254,799	GOVT:	9,135,000
	STRENGTHENING OSI GROUNDWATER INVESTIGATIVE CAPABILITY PHASE II						
669.	TUR 78 029 A 01 01	STARTING DATE: 08 1979	DURATION: 0 YEARS 5 MONTH	UNDP:	39,270	GOVT:	0
	STRENGTHENING OSI RESEARCH AND DEVELOPMENT CAPABILITY						
670.	UAE 73 009 L 01 12	STARTING DATE: 11 1973	DURATION: 4 YEARS 2 MONTH	UNDP:	935,400	GOVT:	10,167,307
	WATER RESOURCES MANAGEMENT FOR HYDRO-AGRICULTURAL POTENTIALS						
671.	UAE 75 007 R 01 01	STARTING DATE: 05 1975	DURATION: 0 YEARS 1 MONTH	UNDP:	1,750	GOVT:	0
	SURVEY OF COASTAL AREAS						
672.	UGA 64 007 C 01 12	STARTING DATE: 06 1970	DURATION: 2 YEARS 1 MONTH	UNDP:	71,607	GOVT:	0
	LANG AND WATER DEVELOPMENT						



673.	UGA 70 006 0 01 12	STARTING DATE: 05 1971	DURATION: 3 YEARS 3 MONTH	UNDP: 1217333	GOVT: 0
	MABUKU IRRIGATION SETTLEMENT				
674.	UGA 70 007 0 01 18	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP: 15,000	GOVT: 0
	SOIL PHYSICS				
675.	UGA 72 017 0 01 12	STARTING DATE: 01 1975	DURATION: 3 YEARS 0 MONTH	UNDP: 6,515	GOVT: 0
	LAND-USE EVALUATION				
676.	UPV 71 095 0 01 16	STARTING DATE: 03 1972	DURATION: 2 YEARS 10 MONTH	UNDP: 35797	GOVT: 0
	STRENGTHENING OF THE NATIONAL HYDROLOGICAL NETWORK				
677.	UPV 72 039 0 01 01	STARTING DATE: 01 1974	DURATION: 4 YEARS 0 MONTH	UNDP: 393,980	GOVT: 0
	FAU ET HYDRAULIQUE				
679.	UPV 74 007 0 01 12	STARTING DATE: 02 1975	DURATION: 5 YEARS 0 MONTH	UNDP: 471,970	GOVT: 0
	CREATION D'UN SERVICE D'SOLS				
679.	UPV 74 022 0 01 01	STARTING DATE: 07 1975	DURATION: 4 YEARS 6 MONTH	UNDP: 495,646	GOVT: 51,790,355
	ETUDES DES EAUX SOUTERRAINES DANS LES BASSINS DE LA HIUGOURIRA ET DU PONI				
680.	UPV 75 007 0 01 01	STARTING DATE: 07 1975	DURATION: 0 YEARS 9 MONTH	UNDP: 11,596	GOVT: 0
	ETUDES EN VUE DE L'AMENAGEMENT INTEGRE DU BASSIN DE LA VOLTA NOIRE				
681.	UPV 75 007 0 01 45	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP: 13,231	GOVT: 0
	AMENAGEMENT INTEGRE BASSIN DE LA VOLTA NOIRE				
682.	UPV 77 002 0 01 12	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 245,281	GOVT: 0,928,800
	ETUDES PEDOLOGIQUES DE LA VALLEE DE LA BOUGOURIRA				
683.	UPV 77 104 0 01 14	STARTING DATE: 09 1977	DURATION: 3 YEARS 4 MONTH	UNDP: 105,903	GOVT: 0
	BOURSES DE FORMATION - ENTRETIEN DES AERONEFS				
684.	UPV 79 007 0 01 01	STARTING DATE: 07 1979	DURATION: 0 YEARS 6 MONTH	UNDP: 9,677	GOVT: 550,000
	FORMATION TOPOGRAPHIQUE				
685.	URT 64 011 0 01 12	STARTING DATE: 04 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 517358	GOVT: 0
	LAND AND WATER DEVELOPMENT				
686.	URT 68 013 0 01 12	STARTING DATE: 04 1970	DURATION: 4 YEARS 0 MONTH	UNDP: 27,148	GOVT: 0
	LAND AND WATER DEVELOPMENT (SOIL SURVEYS)				

WITH ECONOMIC SECTION CODE 0320

687.	URT 72 018 B 01 18	STARTING DATE: 06 1973	DURATION: 0 YEARS 1 MONTH	UNDP:	2,500	GOVT:	0
	ISOTOPE WATER SURVEY						
688.	URT 73 004 G 45 01	STARTING DATE: 10 1973	DURATION: 3 YEARS 0 MONTH	UNDP:	55,505	GOVT:	0
	COORDINATION OF WATER MASTER PLANNING						
689.	URT 72 006 F 01 12	STARTING DATE: 12 1974	DURATION: 8 YEARS 1 MONTH	UNDP:	1,631,316	GOVT:	0
	NATIONAL SOIL SERVICE						
690.	URT 73 006 D 45 12	STARTING DATE: 01 1974	DURATION: 6 YEARS 0 MONTH	UNDP:	253,420	GOVT:	0
	NATIONAL SOIL SERVICE						
691.	URT 75 004 S 01 01	STARTING DATE: 01 1975	DURATION: 1 YEARS 0 MONTH	UNDP:	3,654	GOVT:	0
	RECONNAISSANCE SURVEY OF GEOTHERMAL RESOURCES AND POWER AND WATER DEVELOPMENT						
692.	URT 78 021 D 01 12	STARTING DATE: 10 1978	DURATION: 3 YEARS 3 MONTH	UNDP:	705,460	GOVT:	1,500,000
	MULTIPURPOSE WATER DEVELOPMENT						
693.	URU 70 512 F 01 12	STARTING DATE: 01 1970	DURATION: 7 YEARS 0 MONTH	UNDP:	61,357	GOVT:	173,500,000
	ECONOMIC FEASIBILITY AND ORGANIZATION OF THE OLIMAK RIVER IRRIGATION SYSTEM						
694.	URU 71 009 G 01 13	STARTING DATE: 01 1972	DURATION: 3 YEARS 6 MONTH	UNDP:	55,272	GOVT:	0
	HYDROLOGY (INTERNATIONAL HYDROLOGICAL DECADE)						
695.	URU 71 514 L 01 12	STARTING DATE: 01 1970	DURATION: 7 YEARS 0 MONTH	UNDP:	495,660	GOVT:	399,878
	EXPERIMENT STATION IN THE MERIN LAGOON BASIN						
696.	URU 71 518 L 01 01	STARTING DATE: 01 1972	DURATION: 4 YEARS 3 MONTH	UNDP:	277,791	GOVT:	147,375
	MULTIPURPOSE WATER DEVELOPMENT OF THE YAGUAPON RIVER BASIN						
697.	URU 73 007 J 01 13	STARTING DATE: 09 1974	DURATION: 5 YEARS 4 MONTH	UNDP:	313,907	GOVT:	1,185,288
	FLOOD CONSERVATION AND IMPROVEMENT						
698.	URU 74 021 L 01 31	STARTING DATE: 10 1974	DURATION: 6 YEARS 4 MONTH	UNDP:	625,124	GOVT:	3,946,153
	YAGUAPON RIVER BASIN PHASE II						
699.	URU 77 002 C 01 14	STARTING DATE: 03 1979	DURATION: 2 YEARS 4 MONTH	UNDP:	300,000	GOVT:	3,148,855
	DEVELOPMENT OF THE STATE DRINKING WATER SUPPLY AND SANITATION ADMINISTRATION						
700.	URU 78 010 C 01 16	STARTING DATE: 08 1979	DURATION: 1 YEARS 4 MONTH	UNDP:	38,500	GOVT:	94,500
	HIDROLOGIA OPERATIVA						

WITH ECONOMIC SECTION CUDE 0320

701.	VIE 71 002 F 01 12	STARTING DATE: 06 1971	DURATION: 4 YEARS 7 MONTH	UNDP:	84,443	GOVT:	0
	IRRIGATION AND RURAL ENGINEERING						
702.	VIE 73 034 E 01 45	STARTING DATE: 01 1974	DURATION: 2 YEARS 0 MONTH	UNDP:	204,518	GOVT:	25,000,000
	IRRIGATION DEVELOPMENT PROJECT						
703.	VIE 74 010 D 01 12	STARTING DATE: 01 1975	DURATION: 2 YEARS 1 MONTH	UNDP:	21,322	GOVT:	23,500,000
	IRRIGATION REHABILITATION PROJECT						
704.	VIE 76 003 F 01 01	STARTING DATE: 02 1977	DURATION: 4 YEARS 0 MONTH	UNDP:	5,054,559	GOVT:	0
	ETUDES D'OUVRAGES HYDRAULIQUES						
705.	VIE 76 004 A 01 01	STARTING DATE: 01 1977	DURATION: 4 YEARS 9 MONTH	UNDP:	4,181,115	GOVT:	0
	GROUNDWATER EXPLORATION						
706.	VIE 76 008 G 01 12	STARTING DATE: 04 1977	DURATION: 4 YEARS 9 MONTH	UNDP:	2,181,040	GOVT:	0
	REINFORCEMENT DE L'INSTITUT DES SOUS-SOLDES ENGRATS DU VIETNAM						
707.	VIE 76 011 S 01 12	STARTING DATE: 01 1978	DURATION: 2 YEARS 0 MONTH	UNDP:	7,200	GOVT:	0
	REMOTE SENSING						
708.	YEH 73 001 E 01 12	STARTING DATE: 01 1973	DURATION: 2 YEARS 0 MONTH	UNDP:	41,815	GOVT:	306,350
	LAND AND WATER DEVELOPMENT IN THE WADI ZABID						
709.	YEH 74 005 A 01 14	STARTING DATE: 01 1979	DURATION: 1 YEARS 0 MONTH	UNDP:	0	GOVT:	1,592,154
	RURAL WATER SUPPLY PHASE II						
710.	YUG 66 507 C 01 01	STARTING DATE: 06 1970	DURATION: 3 YEARS 7 MONTH	UNDP:	961,578	GOVT:	20,344,575
	REGULATION AND MANAGEMENT OF THE SAVA RIVER						
711.	YUG 64 013 H 01 12	STARTING DATE: 09 1970	DURATION: 4 YEARS 2 MONTH	UNDP:	155,384	GOVT:	0
	LAND RECLAMATION AND ORGANIZATION OF AGRICULTURAL PRODUCTION IN THE MIRNA RIVER BASIN						
712.	YUG 69 014 J 01 12	STARTING DATE: 06 1970	DURATION: 4 YEARS 3 MONTH	UNDP:	283,462	GOVT:	0
	LAND RECLAMATION AT THE COMYRSKI FIELD AND THE COASTAL BELT OF SIMONOV LAKE FOR INTENSIVE AGRICULTURAL PRODUCTION						
713.	YUG 69 506 C 01 12	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP:	571,591	GOVT:	16,506,250
	LAND RECLAMATION AND DEVELOPMENT IN THE SAVA RIVER BASIN						
714.	YUG 72 019 J 01 01	STARTING DATE: 07 1973	DURATION: 6 YEARS 6 MONTH	UNDP:	301,368	GOVT:	20,435,000
	COMPUTER CONTROL OF THE WATER RESOURCES SYSTEM OF THE MURAVA						

WITH ECONOMIC SECTION CODE 0320

715.	YUG 73 009 A 01 12	STARTING DATE: 08 1973	DURATION: 6 YEARS 5 MONTH	UNDP:	249,793	GOVT:	20,635,355
	STUDY OF WATER RESOURCES AND THEIR EXPLOITATION						
716.	YUG 73 012 C 01 10	STARTING DATE: 01 1974	DURATION: 2 YEARS 1 MONTH	UNDP:	54,604	GOVT:	595,000
	APPLICATION OF ISOTOPES IN HYDROLOGY, SKOPJE						
717.	YUG 74 004 C 01 12	STARTING DATE: 01 1975	DURATION: 1 YEARS 1 MONTH	UNDP:	7,056	GOVT:	0
	DEVELOPMENT IN HILLY AND MOUNTAINOUS REGIONS						
718.	YUG 75 021 B 01 12	STARTING DATE: 04 1975	DURATION: 0 YEARS 1 MONTH	UNDP:	2,300	GOVT:	0
	LAND RECLAMATION OF THE CEMOVSKO FIELD AND THE COASTAL BELT OF THE SKADAR LAKE FOR INTENSIVE AGRICULTURAL DEVELOPMENT.						
719.	YUG 78 003 C 01 12	STARTING DATE: 04 1979	DURATION: 3 YEARS 9 MONTH	UNDP:	273,000	GOVT:	0
	WATER RESOURCES PLANNING AND IRRIGATION DEVELOPMENT IN ISTRIA						
720.	YUG 78 005 C 01 31	STARTING DATE: 03 1979	DURATION: 3 YEARS 10 MONTH	UNDP:	440,000	GOVT:	56,900,000
	COMPREHENSIVE RESOURCES DEVELOPMENT OF THE MOSTARSKO SLATO KARST REGION						
721.	YUG 78 105 A 01 12	STARTING DATE: 07 1978	DURATION: 0 YEARS 6 MONTH	UNDP:	2,245	GOVT:	0
	COMPREHENSIVE RESOURCES DEVELOPMENT OF THE MOSTARSKO SLATO KARST REGION						
722.	ZAI 78 004 A 01 42	STARTING DATE: 02 1979	DURATION: 2 YEARS 0 MONTH	UNDP:	870,000	GOVT:	460,000
	ALIMENTATION EN FAU FAU ET ASSAINISSEMENT DE MATADI, BUKAVU ET LIKASI						
723.	ZAM 67 508 F 01 12	STARTING DATE: 12 1970	DURATION: 3 YEARS 6 MONTH	UNDP:	922,735	GOVT:	542,357
	SMALL-SCALE IRRIGATION DEVELOPMENT AND TRAINING						
724.	ZAM 65 510 G 01 12	STARTING DATE: 07 1970	DURATION: 6 YEARS 6 MONTH	UNDP:	1,105,147	GOVT:	1,628,060
	LUANGWA VALLEY CONSERVATION AND DEVELOPMENT						
725.	ZAM 70 013 F 01 12	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP:	43,675	GOVT:	0
	SOIL SCIENCE						
726.	ZAM 71 523 I 01 12	STARTING DATE: 04 1972	DURATION: 7 YEARS 3 MONTH	UNDP:	756,630	GOVT:	700
	KAFUL IRRIGATION RESEARCH STATION						
727.	ZEM 72 025 A 01 01	STARTING DATE: 04 1973	DURATION: 1 YEARS 9 MONTH	UNDP:	4,300	GOVT:	0
	RURAL WATER SUPPLY DRILLING						
728.	ZAM 74 019 E 01 12	STARTING DATE: 11 1974	DURATION: 1 YEARS 2 MONTH	UNDP:	7,323	GOVT:	0
	GROUND AND SURFACE WATER RESOURCES						



UNITED NATION DEVELOPMENT PROGRAMME

(UNDP)

The Status of the Planning for the Water Decade at 31st December, 1979.

UNDP

→ 25/1/75

23/1/75

1.	AFG 71 527 K 01 14	STARTING DATE: 01 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 702,423	GOVT: 20,099,000
	WATER SUPPLY, SEWERAGE AND DRAINAGE FOR GREATER KABUL				
2.	ALG 71 527 R 01 14	STARTING DATE: 07 1971	DURATION: 6 YEARS 6 MONTH	UNDP: 1,916,354	GOVT: 0
	NATIONAL WATER SUPPLY AUTHORITY				
3.	ALG 75 624 F 01 14	STARTING DATE: 09 1977	DURATION: 5 YEARS 0 MONTH	UNDP: 593,320	GOVT: 0
	TRAINING OF SANITARY ENGINEERS				
4.	ANT 75 008 D 01 14	STARTING DATE: 10 1974	DURATION: 1 YEARS 4 MONTH	UNDP: 0	GOVT: 0
	WATER ADMINISTRATION, PLANT OPERATIONS AND REGULATION				
5.	APG 76 664 H 01 14	STARTING DATE: 10 1975	DURATION: 0 YEARS 3 MONTH	UNDP: 0,359	GOVT: 0
	CAPACITACION DE PERSONAL DEL COMANDO GENERAL EN CONFLICTO CON LA CONTAMINACION POR VERTIMIENTOS DE HIDROCARBUROS DESDE CUERO				
6.	BAH 72 001 A 01 31	STARTING DATE: 04 1972	DURATION: 1 YEARS 9 MONTH	UNDP: 0	GOVT: 0
	SEWERAGE DISPOSAL SCHEME				
7.	BAH 72 101 J 01 14	STARTING DATE: 01 1973	DURATION: 6 YEARS 0 MONTH	UNDP: 141,432	GOVT: 0
	SEWERAGE DISPOSAL SCHEME				
8.	BAR 74 012 B 01 11	STARTING DATE: 10 1975	DURATION: 1 YEARS 0 MONTH	UNDP: 45,604	GOVT: 20,000
	OCCUPATIONAL HEALTH				
9.	BDI 68 007 F 01 14	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 78,150	GOVT: 0
	POTABLE WATER SUPPLY				
10.	BDI 71 002 J 01 14	STARTING DATE: 01 1972	DURATION: 5 YEARS 0 MONTH	UNDP: 100,597	GOVT: 0
	SANITARY ENGINEERING				
11.	BEN 73 023 F 01 14	STARTING DATE: 10 1974	DURATION: 3 YEARS 3 MONTH	UNDP: 81,921	GOVT: 16,700,000
	DEVELOPPEMENT DU SERVICE D'EDUCATION SANITAIRE				
12.	BEN 75 011 F 44 31	STARTING DATE: 03 1975	DURATION: 3 YEARS 6 MONTH	UNDP: 10,220	GOVT: 7,609,300
	ASSISTANCE AU DEMARRAGE DE LA COMMISSION DE L'ENVIRONNEMENT				
13.	BGU 72 024 D 01 14	STARTING DATE: 02 1975	DURATION: 0 YEARS 2 MONTH	UNDP: 10,000	GOVT: 3,000
	SANITARY LATRINE FEASIBILITY STUDY, DACCRA				
14.	BGO 73 048 D 01 14	STARTING DATE: 11 1974	DURATION: 1 YEARS 3 MONTH	UNDP: 9,522	GOVT: 3,000
	GARBAGE DISPOSAL STUDY				

WITH ECONOMIC SECTOR CODE 1030

15.	BGR 74 028 0 01 14	STARTING DATE: 12-1976	DURATION: 6 MONTH	UNDP:	4,127,293	GOVT:	520,000
	ASSISTANCE TO WATER AND SEWAGE AUTHORITY DACCA AND CHITTAGONG						
16.	BGD 78 017 A 42 45	STARTING DATE: 04 1979	DURATION: 2 YEARS 0 MONTH	UNDP:	230,000	GOVT:	1,500,000
	FEASIBILITY STUDY FOR WATER SUPPLY SYSTEMS IN FIVE DISTRICT TOWNS						
17.	BHA 74 002 C 01 14	STARTING DATE: 05 1974	DURATION: 1 YEARS 8 MONTH	UNDP:	70,573	GOVT:	38,600
	STRENGTHENING OF THE DEPARTMENT OF ENVIRONMENTAL SERVICES						
18.	BOT 72 012 0 01 14	STARTING DATE: 10-1972	DURATION: 4 YEARS 0 MONTH	UNDP:	22,192	GOVT:	28,800
	ASSISTANCE TO THE WATER UTILITIES CORPORATION						
19.	BRA 04 514 E 01 14	STARTING DATE: 04 1970	DURATION: 4 YEARS 0 MONTH	UNDP:	493,893	GOVT:	6,425,449
	INSTITUTE OF SANITARY ENGINEERING OF SUKSAN, GUANAHARA, BRAZIL						
20.	BRA 71 547 R 01 14	STARTING DATE: 07 1971	DURATION: 8 YEARS 4 MONTH	UNDP:	1,223,024	GOVT:	30,637,470
	DEVELOPMENT OF RESEARCH AND ENVIRONMENTAL POLLUTION CONTROL PROGRAMMES FOR THE STATE OF SAO PAULO						
21.	BRA 75 010 8 01 11	STARTING DATE: 03-1979	DURATION: 0 YEARS 5 MONTH	UNDP:	30,000	GOVT:	0
	ASISTENCIA A LA "FUNDACAO CENTRO NACIONAL DE SEGURANCA, HIGIENE E MEDICINA DO TRABALHO-FUNDACENTRO"						
22.	BRA 75 033 E 01 14	STARTING DATE: 08 1976	DURATION: 3 YEARS 4 MONTH	UNDP:	78,535	GOVT:	9,309,382
	ENVIRONMENTAL STUDIES FOR PARANDA AND DESCUBERTO WATERSHEDS						
23.	BUL 70 029 9 01 14	STARTING DATE: 10 1970	DURATION: 2 YEARS 2 MONTH	UNDP:	8,155	GOVT:	0
	SANITARY HYGIENIC AND ENVIRONMENTAL PROBLEMS						
24.	BUL 71 077 8 01 14	STARTING DATE: 01-1972	DURATION: 0 YEARS 3 MONTH	UNDP:	1,773	GOVT:	0
	CONSTRUCTION OF WASTE TREATMENT UNITS						
25.	BUL 71 073 D 01 11	STARTING DATE: 01 1972	DURATION: 1 YEARS 4 MONTH	UNDP:	1,774	GOVT:	0
	HYGIENE IN MINES						
26.	BUL 71 093 D 01 14	STARTING DATE: 08 1972	DURATION: 0 YEARS 9 MONTH	UNDP:	2,306	GOVT:	0
	EICOLOGICAL ASPECTS OF NOISE AND VIBRATION						
27.	BUL 71 087 0 01 14	STARTING DATE: 09-1972	DURATION: 0 YEARS 9 MONTH	UNDP:	1,760	GOVT:	0
	PROBLEMS OF THE ELECTROSTATIC DUST						
28.	BUL 72 012 C 01 14	STARTING DATE: 12 1972	DURATION: 0 YEARS 3 MONTH	UNDP:	768	GOVT:	0
	MICROPOLLUTION OF WATER RESOURCES						



WITH ECONOMIC SECTOR CODE 1030

29.	BUC 74 003 C 01 37	STARTING DATE: 05 1974	DURATION: 1 YEARS 8 MONTH	UNDP:	3,750	GOVT:	1,450
	PURIFICATION OF WASTE INDUSTRIAL WATER						
30.	BUR 79 002 A 01 45	STARTING DATE: 10 1979	DURATION: 0 YEARS 10 MONTH	UNDP:	90,000	GOVT:	203,000
	FEASIBILITY STUDY FOR WATER SUPPLY SYSTEM IN MANDALAY						
31.	BZE 71 006 D 01 14	STARTING DATE: 01 1973	DURATION: 2 YEARS 0 MONTH	UNDP:	65,934	GOVT:	56,200
	SANITARY ENGINEER						
32.	CAF 68 009 X 01 14	STARTING DATE: 01 1970	DURATION: 10 YEARS 0 MONTH	UNDP:	233,555	GOVT:	0
	SANITATION						
33.	CAF 69 506 L 01 14	STARTING DATE: 07 1970	DURATION: 6 YEARS 6 MONTH	UNDP:	505,098	GOVT:	0
	SANITATION AND DRAINAGE, BANGUI						
34.	CAR 74 003 G 01 14	STARTING DATE: 12 1974	DURATION: 4 YEARS 1 MONTH	UNDP:	312,237	GOVT:	158,000
	WATER UTILITY DEVELOPMENT AND TRAINING						
35.	CHA 68 028 C 01 14	STARTING DATE: 01 1970	DURATION: 3 YEARS 0 MONTH	UNDP:	34,453	GOVT:	0
	COMMUNITY ENVIRONMENTAL ENGINEERING PLANNING AND CONTROL						
36.	CHA 68 527 C 01 14	STARTING DATE: 06 1970	DURATION: 2 YEARS 1 MONTH	UNDP:	471,670	GOVT:	20,680,000
	SEWERAGE PLANNING IN THE GREATER TAIPEI AREA						
37.	CHA 70 005 C 01 14	STARTING DATE: 01 1971	DURATION: 2 YEARS 0 MONTH	UNDP:	32,984	GOVT:	0
	COMPREHENSIVE WATER SUPPLY AND SEWERAGE DEVELOPMENT PROGRAMME						
38.	CHI 74 012 B 01 19	STARTING DATE: 08 1974	DURATION: 0 YEARS 1 MONTH	UNDP:	2,250	GOVT:	0
	OIL POLLUTION STRAIT OF MAGALLANE						
39.	CHI 74 004 A 01 19	STARTING DATE: 09 1979	DURATION: 1 YEARS 4 MONTH	UNDP:	54,700	GOVT:	0
	MARINE POLLUTION						
40.	CKI 73 003 D 01 14	STARTING DATE: 01 1973	DURATION: 9 YEARS 0 MONTH	UNDP:	266,459	GOVT:	65,110
	ENVIRONMENTAL HEALTH ENGINEERING ADVISORY SERVICES						
41.	CMR 68 011 F 01 14	STARTING DATE: 01 1970	DURATION: 6 YEARS 0 MONTH	UNDP:	125,500	GOVT:	0
	ENVIRONMENTAL SANITATION						
42.	CUR 77 006 D 01 21	STARTING DATE: 11 1977	DURATION: 1 YEARS 3 MONTH	UNDP:	17,700	GOVT:	0
	INVESTIGACION Y CONTROL DE LA CONTAMINACION MARINA						

WITH ECONOMIC SECTOR CODE 1030

43.	CYP 72 012 A 01 11	STARTING DATE: 06 1972	DURATION: 2 YEARS	7 MONTH	UNDP:	7,500	GOVT:	1,000
	EXPERT IN INDUSTRIAL HYGIENE							
44.	CYP 73 003 B 11 37	STARTING DATE: 01 1974	DURATION: 0 YEARS	2 MONTH	UNDP:	5,000	GOVT:	0
	INDUSTRIAL POLLUTION AND INDUSTRIAL WASTE TREATMENT							
45.	CYP 79 001 A 01 14	STARTING DATE: 04 1979	DURATION: 0 YEARS	4 MONTH	UNDP:	8,000	GOVT:	0
	TRAINING OF OPERATORS FOR THE NICOSIA SEWERAGE SYSTEM							
46.	CZE 70 502 M 01 14	STARTING DATE: 09 1970	DURATION: 9 YEARS	4 MONTH	UNDP:	1,154,552	GOVT:	141,700,000
	FEDERAL RESEARCH AND DEVELOPMENT CENTRE FOR ENVIRONMENTAL POLLUTION CONTROL							
47.	DMI 68 004 H 01 14	STARTING DATE: 04 1970	DURATION: 4 YEARS	0 MONTH	UNDP:	52,336	GOVT:	0
	WATER SUPPLIES							
48.	EGY 73 850 H 51 37	STARTING DATE: 01 1977	DURATION: 2 YEARS	0 MONTH	UNDP:	967	GOVT:	0
	EGYPT FIRE PROTECTION IN ACRYLON-PRODUCTION WAREHOUSE, CAIRO							
49.	EGY 74 017 A 01 14	STARTING DATE: 12 1979	DURATION: 0 YEARS	1 MONTH	UNDP:	13,300	GOVT:	0
	HEALTH HAZARDS IN LAKE NASSER AREA							
50.	ELS 71 007 O 01 14	STARTING DATE: 01 1972	DURATION: 2 YEARS	0 MONTH	UNDP:	30,000	GOVT:	0
	ENVIRONMENTAL SANITATION							
51.	ELS 73 002 C 01 14	STARTING DATE: 01 1974	DURATION: 2 YEARS	0 MONTH	UNDP:	76,281	GOVT:	540,000
	ENVIRONMENTAL SANITATION							
52.	ELS 74 015 A 01 14	STARTING DATE: 07 1979	DURATION: 1 YEARS	0 MONTH	UNDP:	49,200	GOVT:	0
	RURAL BASIC SANITATION IN THE EASTERN REGION							
53.	ETH 68 024 I 01 14	STARTING DATE: 03 1970	DURATION: 6 YEARS	10 MONTH	UNDP:	214,697	GOVT:	0
	COMMUNITY WATER SUPPLY							
54.	ETH 70 530 M 01 14	STARTING DATE: 12 1970	DURATION: 9 YEARS	1 MONTH	UNDP:	427,213	GOVT:	468,947
	PUBLIC AND ENVIRONMENTAL HEALTH CONTROL, AWASH VALLEY							
55.	ETH 74 011 G 13 14	STARTING DATE: 11 1974	DURATION: 2 YEARS	2 MONTH	UNDP:	69,535	GOVT:	31,500
	SANITARY AND WATER SUPPLY ENGINEER-DROUGHT RELIEF							
56.	ETH 78 025 A 01 14	STARTING DATE: 12 1979	DURATION: 0 YEARS	1 MONTH	UNDP:	20,000	GOVT:	0
	SANITARY ENGINEERING TRAINING PROGRAMME							

WITH ECONOMIC SECTION CODE 1030

57.	FIJ 75 014 E 01 14	STARTING DATE: 10 1975	DURATION: 5 YEARS 0 MONTH	UNDP:	102,913	GOVT:	1,440,000
	RURAL SANITATION FACILITY PROGRAMME.						
58.	GAB 71 515 G 01 14	STARTING DATE: 05 1973	DURATION: 3 YEARS 8 MONTH	UNDP:	750,406	GOVT:	56,052,240
	TREATMENT, DRAINAGE AND DISPOSAL OF LIQUID AND SOLID WASTES, LIBREVILLE						
59.	GAM 72 003 H 01 14	STARTING DATE: 04 1973	DURATION: 6 YEARS 9 MONTH	UNDP:	145,835	GOVT:	37,500
	SURVEY OF BASIC ENVIRONMENTAL PROBLEMS IN THE BATHURST AND KOMBO ST. MARY AREA						
60.	GHA 65 519 G 01 14	STARTING DATE: 01 1970	DURATION: 4 YEARS 9 MONTH	UNDP:	1,752,250	GOVT:	721,140
	PREPARATION OF A MASTER PLAN FOR WATER SUPPLY AND SEWERAGE FOR THE ACCRA-TEMA METROPOLITAN AREA (PHASE II)						
61.	GHA 71 527 Q 01 14	STARTING DATE: 08 1971	DURATION: 9 YEARS 5 MONTH	UNDP:	1,094,372	GOVT:	4,999,296
	RURAL WATER SUPPLY AND ENVIRONMENTAL HEALTH						
62.	GHA 74 027 P 01 14	STARTING DATE: 06 1976	DURATION: 0 YEARS 1 MONTH	UNDP:	8,250	GOVT:	0
	MASTER PLAN SEWERAGE AND DRAINAGE SYSTEMS FOR SEKONGI/TAKURADI						
63.	GHA 76 009 F 01 31	STARTING DATE: 01 1977	DURATION: 5 YEARS 0 MONTH	UNDP:	142,573	GOVT:	39,934
	GPAS SANITARY ENGINEER/PLANNING						
64.	GLO 74 001 E 01 14	STARTING DATE: 05 1974	DURATION: 4 YEARS 7 MONTH	UNDP:	57,979	GOVT:	0
	RURAL POTABLE WATER SUPPLY AND SANITATION						
65.	GLO 78 006 E 01 42	STARTING DATE: 08 1978	DURATION: 2 YEARS 5 MONTH	UNDP:	976,000	GOVT:	0
	LOW-COST WATER AND SANITATION TECHNIQUES/DEVELOPMENT OF DEMONSTRATION PROJECTS						
66.	GRE 66 008 H 01 14	STARTING DATE: 11 1970	DURATION: 4 YEARS 6 MONTH	UNDP:	25,278	GOVT:	0
	ENVIRONMENTAL HYGIENE						
67.	GRE 72 001 J 01 14	STARTING DATE: 07 1972	DURATION: 7 YEARS 0 MONTH	UNDP:	1,080,941	GOVT:	0
	ENVIRONMENTAL POLLUTION CONTROL IN THE METROPOLITAN AREA OF ATHENS						
68.	GRE 79 003 A 01 14	STARTING DATE: 07 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	321,000	GOVT:	50,000,000
	ASSISTANCE TO THE SECRETARIAT FOR PHYSICAL PLANNING AND THE ENVIRONMENT						
69.	GRN 69 002 E 01 14	STARTING DATE: 01 1970	DURATION: 4 YEARS 2 MONTH	UNDP:	71,045	GOVT:	0
	WATER SUPPLY						
70.	GRN 72 002 D 01 14	STARTING DATE: 01 1973	DURATION: 3 YEARS 0 MONTH	UNDP:	37,477	GOVT:	70,000
	SANITARY DISPOSAL ADVISER (SEWERAGE)						

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979

WITH ECONOMIC SECTOR CODE 1030

71.	GUA 70 000 C 01 14	STARTING DATE: 03 1972	DURATION: 1 YEARS 6 MONTH	UNDP: 147500	GOVT: 0	
	OCCUPATIONAL DISEASES					
72.	GUA 75 015 D 01 12	STARTING DATE: 07 1975	DURATION: 1 YEARS 6 MONTH	UNDP: 12,396	GOVT: 0	
	AVALUO DE LOS DAÑOS CAUSADOS POR UN DEBARRAMIENTO DE ACEITE EN LA COSTA ATLANTICA Y POSIBLE REMEDIO					
73.	GUI 68 017 E 01 14	STARTING DATE: 01 1970	DURATION: 6 YEARS 0 MONTH	UNDP: 77,100	GOVT: 0	
	ENVIRONMENTAL HYGIENE					
74.	GUI 73 001 F 01 14	STARTING DATE: 05 1973	DURATION: 4 YEARS 8 MONTH	UNDP: 4757800	GOVT: 2,114,670	
	ASSAINISSEMENT DE CONAKRY					
75.	GUI 73 002 F 01 14	STARTING DATE: 01 1973	DURATION: 2 YEARS 0 MONTH	UNDP: 32,750	GOVT: 2,564,400	
	ASSAINISSEMENT ET HYGIENE DU MILIEU					
76.	GUY 71 518 K 01 14	STARTING DATE: 01 1972	DURATION: 4 YEARS 9 MONTH	UNDP: 959,857	GOVT: 0	
	DEVELOPMENT OF PORTABLE WATER SUPPLY, SANITARY SEWERAGE AND STORM DRAINAGE					
77.	HAI 75 003 L 01 14	STARTING DATE: 10 1975	DURATION: 5 YEARS 3 MONTH	UNDP: 234,209	GOVT: 270,800	
	APPROVISIONNEMENT ET/OU AMELIORATION DES SERVICES D'EAU DANS DIX VILLES MOYENNES EN HAITI					
78.	HAI 77 802 A 51 37	STARTING DATE: 10 1977	DURATION: 0 YEARS 1 MONTH	UNDP: 1,250	GOVT: 0	
	I.C.P.C. - SANITATION AND TREATMENT OF GARBAGE					
79.	HOK 73 017 G 01 14	STARTING DATE: 11 1973	DURATION: 3 YEARS 3 MONTH	UNDP: 4,653	GOVT: 0	
	TREATMENT OF AGRICULTURE WASTES					
80.	HUN 71 603 H 01 14	STARTING DATE: 06 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 924,473	GOVT: 0	
	PILOT ZONES FOR WATER QUALITY MANAGEMENT					
81.	HUN 74 012 C 11 37	STARTING DATE: 01 1975	DURATION: 0 YEARS 2 MONTH	UNDP: 7,000	GOVT: 0	
	EXPERT ON INDUSTRIAL WASTE WATER TREATMENT					
82.	HUN 78 801 C 51 37	STARTING DATE: 09 1978	DURATION: 1 YEARS 4 MONTH	UNDP: 36,600	GOVT: 0	
	WIND TUNNEL DEVELOPMENT FOR INDUSTRIAL ENVIRONMENT PROTECTION					
83.	IND 74 014 C 01 01	STARTING DATE: 03 1974	DURATION: 1 YEARS 10 MONTH	UNDP: 6,913	GOVT: 0	
	IULA COURSE IN MANAGEMENT OF LOCAL ENVIRONMENT					
84.	IND 74 016 C 01 14	STARTING DATE: 07 1975	DURATION: 1 YEARS 6 MONTH	UNDP: 12,300	GOVT: 0	
	RURAL WATER SUPPLY					

85.	IND 75 009 B 01 19	STARTING DATE: 10 1974	DURATION: 0 YEARS 2 MONTH	UNDP:	3,542	GOVT:	0
	ASSISTANCE TO CONTAIN OIL POLLUTION						
86.	IND 75 008 I 01 14	STARTING DATE: 01 1976	DURATION: 5 YEARS 0 MONTH	UNDP:	3,253,793	GOVT:	0
	TAMILNADU WATER SUPPLY AND SEWERAGE PRE INVESTMENT STUDIES						
87.	IND 75 029 D 01 01	STARTING DATE: 01 1976	DURATION: 3 YEARS 0 MONTH	UNDP:	8,193	GOVT:	0
	PREVENTION AND CONTROL OF OFFSHORE OIL SPILLS						
88.	IND 75 044 G 01 14	STARTING DATE: 11 1975	DURATION: 4 YEARS 2 MONTH	UNDP:	65,249	GOVT:	65,000
	POLLUTION INVESTIGATION AND CONTROL						
89.	IND 75 061 E 01 01	STARTING DATE: 09 1975	DURATION: 2 YEARS 4 MONTH	UNDP:	3,285	GOVT:	0
	ECE SEMINARS ON TREATMENT AND RECYCLING OF SOLID WASTES AND PROTECTION OF COASTAL WATERS AGAINST POLLUTION						
90.	IND 74 003 R 01 19	STARTING DATE: 10 1979	DURATION: 0 YEARS 1 MONTH	UNDP:	14,000	GOVT:	0
	PREVENTION AND CONTROL OF OFFSHORE OIL SPILLS						
91.	INS 72 068 K 01 14	STARTING DATE: 07 1973	DURATION: 5 YEARS 6 MONTH	UNDP:	701,930	GOVT:	104,525,600
	JAKARTA SEWERAGE MASTER PLAN INCLUDING PRELIMINARY ENGINEERING AND FEASIBILITY STUDIES						
92.	INS 73 003 J 01 14	STARTING DATE: 09 1974	DURATION: 6 YEARS 4 MONTH	UNDP:	1,203,926	GOVT:	0
	RURAL WATER SUPPLY PROJECT FOR EAST JAVA PROVINCE						
93.	INT 68 755 C 01 14	STARTING DATE: 01 1970	DURATION: 4 YEARS 0 MONTH	UNDP:	204,315	GOVT:	0
	COMMUNITY WATER SUPPLY CONSULTANT SERVICES						
94.	INT 70 758 R 01 14	STARTING DATE: 01 1971	DURATION: 2 YEARS 0 MONTH	UNDP:	38,802	GOVT:	0
	TRAVELLING SEMINAR ON THE PURIFICATION AND DISINFECTION OF DRINKING WATER						
95.	INT 73 016 D 01 14	STARTING DATE: 10 1975	DURATION: 2 YEARS 1 MONTH	UNDP:	49,632	GOVT:	0
	COURSE ON THE COLLECTION, ANALYSIS AND EVALUATION OF DATA ON COMMUNITY WATER SUPPLY AND WASTE DISPOSAL SERVICES						
96.	INT 73 017 D 01 14	STARTING DATE: 10 1975	DURATION: 2 YEARS 1 MONTH	UNDP:	36,628	GOVT:	0
	TRAINING COURSE ON PUBLIC HEALTH ASPECTS OF POLLUTANTS OF INTERNATIONAL SIGNIFICANCE						
97.	INT 78 016 F 01 14	STARTING DATE: 09 1978	DURATION: 2 YEARS 4 MONTH	UNDP:	560,000	GOVT:	135,000
	DEVELOPMENT OF DRINKING WATER SUPPLY AND SANITATION PROGRAMMES						
98.	INT 79 006 B 01 21	STARTING DATE: 04 1979	DURATION: 3 YEARS 0 MONTH	UNDP:	275,360	GOVT:	0
	CO-ORDINATOR FOR UNDP ON THE INTERNATIONAL DRINKING WATER SUPPLY AND SANITATION DECADE						

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979  
WITH ECONOMIC SECTION CODE 1030

PCM=SPECIALIST(GAIL)

99.	IRA 70-520-N-01-14	STARTING DATE: 05-1970	DURATION: 6 YEARS 11 MONTH	UNDP: 1,005,457	GOVT: 42,928,750
	PRE-INVESTMENT SURVEY OF SEWERAGE NEEDS AND FACILITIES IN TEHRAN				
100.	IRA 73 024 R 01 01	STARTING DATE: 11 1973	DURATION: 1 YEARS 1 MONTH	UNDP: 2,500	GOVT: 0
	PREPARATORY ASSISTANCE IN THE FIELD OF HUMAN ENVIRONMENT				
101.	IRA 74 007 E 01 14	STARTING DATE: 06 1974	DURATION: 1 YEARS 10 MONTH	UNDP: 4,900	GOVT: 0
	WATER AND SEWAGE IN URBAN AREAS				
102.	IRA 74-020-G-01-14	STARTING DATE: 08-1974	DURATION: 6 YEARS 1 MONTH	UNDP: 83,424	GOVT: 0
	INDUSTRIAL POLLUTION SURVEY				
103.	IRQ 71 527 K 01 14	STARTING DATE: 06 1971	DURATION: 4 YEARS 7 MONTH	UNDP: 633,778	GOVT: 227,550
	RURAL WATER SUPPLY PROGRAMME				
104.	IRQ 73 016 I 01 14	STARTING DATE: 04 1974	DURATION: 4 YEARS 9 MONTH	UNDP: 120,050	GOVT: 231,422
	RURAL WATER SUPPLY PROGRAMME-PHASE II				
105.	IRQ 75 019 D 11 27	STARTING DATE: 08-1975	DURATION: 1 YEARS 2 MONTH	UNDP: 9,360	GOVT: 0
	INDUSTRY-CAUSED ENVIRONMENTAL POLLUTION				
106.	IRQ 77 002 C 01 14	STARTING DATE: 03 1973	DURATION: 3 YEARS 10 MONTH	UNDP: 354,033	GOVT: 131,640
	ENVIRONMENTAL HEALTH PROGRAMME				
107.	ISR 74 003 D 01 14	STARTING DATE: 06 1974	DURATION: 0 YEARS 9 MONTH	UNDP: 2,980	GOVT: 60,000
	QUALITY OF THE ENVIRONMENT				
108.	IVC 70-419-F-01-14	STARTING DATE: 01-1970	DURATION: 4 YEARS 6 MONTH	UNDP: 459,523	GOVT: 0
	WATER SUPPLY AND SEWERAGE FOR ABIOJAN				
109.	IVC 74 007 R 01 14	STARTING DATE: 01 1975	DURATION: 1 YEARS 0 MONTH	UNDP: 9,600	GOVT: 0
	PROBLEMES SANITAIRES DE LA VALLEE DU RANGAMA				
110.	IVC 74 015 R 01 14	STARTING DATE: 11 1975	DURATION: 1 YEARS 3 MONTH	UNDP: 51,529	GOVT: 102,565,000
	RECHERCHE EN EAU SOUTERRAINE ET AMENAGEMENT DU SCHEMA D'ADDUCTION D'EAU DE LA VILLE D'ABIDJAN				
111.	JAM 63 009 D 01 14	STARTING DATE: 10 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 101,299	GOVT: 0
	RURAL WATER SUPPLIES				
112.	JOR 63 012 E 01 14	STARTING DATE: 11 1970	DURATION: 3 YEARS 10 MONTH	UNDP: 23,239	GOVT: 0
	SANITARY ENGINEER				

WITH ECONOMIC SECTOR CODE 1030

113. JOR 74 007 J 01 14 STARTING DATE: 01 1973 DURATION: 4 YEARS 9 MONTH UNDP: 23,641 GOVT: 1,305  
SANITARY ENGINEERING

114. KAM 70 516 F 01 14 STARTING DATE: 01 1970 DURATION: 5 YEARS 0 MONTH UNDP: 238,314 GOVT: 0  
WATER SUPPLY FOR SIHANOUKVILLE

115. KAM 72 016 H 01 14 STARTING DATE: 07 1972 DURATION: 4 YEARS 6 MONTH UNDP: 100,906 GOVT: 8,579,600  
PHNOM PENH MASTER PLAN - (WATER SUPPLY, SEWAGE AND DRAINAGE SYSTEMS)

116. KEN 71 523 J 01 14 STARTING DATE: 07 1970 DURATION: 6 YEARS 6 MONTH UNDP: 716,243 GOVT: 153,196  
SEWERAGE AND GROUNDWATER SURVEY, NAIROBI

117. LEB 71 520 G 01 14 STARTING DATE: 01 1973 DURATION: 5 YEARS 5 MONTH UNDP: 111,858 GOVT: 1,516,225  
NATIONAL WASTE MANAGEMENT PLAN

118. LEB 74 004 C 11 37 STARTING DATE: 01 1975 DURATION: 0 YEARS 6 MONTH UNDP: 0 GOVT: 0  
ASSISTANCE TO THE WATER TREATMENT INDUSTRY (METITO)

119. LEB 77 073 A 01 14 STARTING DATE: 09 1979 DURATION: 3 YEARS 0 MONTH UNDP: 2,150,580 GOVT: 3,400,000  
NATIONAL WASTE MANAGEMENT PLAN

120. LES 72 024 F 01 01 STARTING DATE: 04 1973 DURATION: 4 YEARS 6 MONTH UNDP: 51,783 GOVT: 50,086  
SEWERAGE DESIGN

121. LES 72 044 I 01 01 STARTING DATE: 10 1972 DURATION: 4 YEARS 3 MONTH UNDP: 139,278 GOVT: 161,000  
WATER AND SEWAGE ENGINEERING

122. MAG 71 575 N 01 14 STARTING DATE: 01 1970 DURATION: 9 YEARS 0 MONTH UNDP: 962,055 GOVT: 0  
WATER SUPPLY AND SEWERAGE SURVEY OF TANANARIVE

123. MAL 71 533 E 01 14 STARTING DATE: 03 1972 DURATION: 0 YEARS 2 MONTH UNDP: 9,000 GOVT: 0  
FEASIBILITY STUDY FOR SEWERAGE PLANNING, KUALA LUMPUR METROPOLITAN AREA

124. MAL 76 021 D 01 01 STARTING DATE: 11 1976 DURATION: 1 YEARS 2 MONTH UNDP: 15,500 GOVT: 9,600  
CONSULTANCY SERVICES TO DEPARTMENT OF ENVIRONMENT

125. MAR 72 010 F 01 14 STARTING DATE: 09 1973 DURATION: 3 YEARS 4 MONTH UNDP: 174,273 GOVT: 48,000  
ENVIRONMENTAL AND OCCUPATIONAL HEALTH TRAINING

126. MAT 66 505 G 01 14 STARTING DATE: 10 1970 DURATION: 4 YEARS 5 MONTH UNDP: 821,555 GOVT: 236,564  
WASTES DISPOSAL AND WATER SUPPLY

LISTING OF UNDP PROJECTS ON FILE AT 31 DECEMBER 1979  
WITH ECONOMIC SECTOR CODE 1030

PGHSPECLIST(GALL)

127.	MAT 70 007 G 01 14	STARTING DATE: 05 1979	DURATION: 2 YEARS 3 MONTH	UNDP: 238,700	GOVT: 231,820
	MAINTENANCE AND IMPROVEMENT OF THE SEWERAGE NETWORK				
128.	MDV 72 007 G 01 14	STARTING DATE: 02 1974	DURATION: 5 YEARS 11 MONTH	UNDP: 143,271	GOVT: 151,300
	WATER SUPPLY AND SEWERAGE FOR MALE				
129.	MEX 73 002 H 01 14	STARTING DATE: 09 1973	DURATION: 4 YEARS 5 MONTH	UNDP: 2,091,968	GOVT: 140,870,250
	ENVIRONMENTAL IMPROVEMENT				
130.	MCI 71 512 K 01 14	STARTING DATE: 12 1970	DURATION: 8 YEARS 1 MONTH	UNDP: 420,462	GOVT: 0
	A STUDY OF A DRAINAGE SYSTEM FOR BAMAHO AND WATER SUPPLY FOR SELECTED PROVINCIAL TOWNS				
131.	MON 68 006 E 01 14	STARTING DATE: 04 1970	DURATION: 4 YEARS 9 MONTH	UNDP: 40,318	GOVT: 0
	ENVIRONMENTAL HEALTH (COMMUNITY WATER SUPPLY)				
132.	MOR 69 530 G 01 14	STARTING DATE: 07 1970	DURATION: 4 YEARS 6 MONTH	UNDP: 1,332,376	GOVT: 4,414,688
	WATER SUPPLY STUDY PHASE II				
133.	MOR 71 002 M 01 14	STARTING DATE: 03 1971	DURATION: 3 YEARS 0 MONTH	UNDP: 100,000	GOVT: 0
	ENVIRONMENTAL HYGIENE				
134.	MOR 73 008 F 01 37	STARTING DATE: 11 1973	DURATION: 5 YEARS 1 MONTH	UNDP: 168,497	GOVT: 72,000
	SOLID WASTE DISPOSAL				
135.	MOR 74 009 H 01 14	STARTING DATE: 07 1974	DURATION: 6 YEARS 6 MONTH	UNDP: 1,179,233	GOVT: 4,146,500
	WATER SUPPLY STUDIES PHASE III				
136.	MOR 74 002 K 01 37	STARTING DATE: 03 1975	DURATION: 1 YEARS 4 MONTH	UNDP: 25,061	GOVT: 16,000
	ASSISTANCE POUR LE FONCTIONNEMENT, L'ENTRETIEN ET LA REPARAT DES USINES DE TRAITEMENT D'ORDURES MENAGERES				
137.	MOR 75 017 C 11 37	STARTING DATE: 09 1975	DURATION: 1 YEARS 4 MONTH	UNDP: 22,278	GOVT: 0
	ETUDE DE LA REORGANISATION DE LA COLLECTE DES ORDURES MENAGERES DE CASABLANCA				
138.	MOR 75 029 B 11 37	STARTING DATE: 01 1976	DURATION: 0 YEARS 6 MONTH	UNDP: 0	GOVT: 0
	ASSISTANCE AU FONCTIONNEMENT DES USINES D'ORDURES MENAGERES - INGENIEURS ELECTRICIEN ET MECANICIEN				
139.	MOR 75 017 K 01 37	STARTING DATE: 10 1977	DURATION: 0 YEARS 3 MONTH	UNDP: 10,356	GOVT: 0
	STUDY OF THE COLLECTION OF HOUSEHOLD WASTE IN CASABLANCA				
140.	MOR 77 003 C 01 37	STARTING DATE: 12 1977	DURATION: 2 YEARS 1 MONTH	UNDP: 53,172	GOVT: 54,000
	TRAIITEMENT DES ORDURES MENAGERES - PHASE II				



WITH ECONOMIC SECTOR CODE 1030

41.	MOR 75 016 B 01 37	STARTING DATE: 12 1978	DURATION: 1 YEARS 0 MONTH	UNDP: 58,341	GOVT: 96,000
	TRAITEMENT DES ORDURES MENAGERES-PHASE III				
42.	MOR 79 005 A 01 14	STARTING DATE: 07 1979	DURATION: 3 YEARS 0 MONTH	UNDP: 299,960	GOVT: 2,094,000
	PROTECTION DE LA QUALITE DES EAUX DES LACS-RESERVOIRS				
43.	MOT 69 007 E 01 14	STARTING DATE: 04 1972	DURATION: 2 YEARS 0 MONTH	UNDP: 5,924	GOVT: 0
	WATER SUPPLIES				
44.	MOZ 75 004 A 01 14	STARTING DATE: 01 1979	DURATION: 5 YEARS 0 MONTH	UNDP: 1,379,400	GOVT: 75,976,000
	ENVIRONMENTAL HEALTH AND SANITATION				
45.	NEP 70 509 M 01 14	STARTING DATE: 05 1970	DURATION: 6 YEARS 9 MONTH	UNDP: 804,962	GOVT: 1,760,000
	DEVELOPMENT OF WATER SUPPLY AND SEWERAGE, GREATER KATHMANDU AND BHAKTAPUR				
46.	NIC 73 021 0 13 14	STARTING DATE: 07 1974	DURATION: 2 YEARS 6 MONTH	UNDP: 94,976	GOVT: 520,500
	ENVIRONMENTAL SANITATION DURING THE PERIOD OF REHABILITATION				
47.	NIR 71 551 I 01 14	STARTING DATE: 01 1971	DURATION: 4 YEARS 0 MONTH	UNDP: 623,232	GOVT: 49,637
	WASTES DISPOSAL AND DRAINAGE IN IBADAN (PHASE II)				
48.	NIR 72 026 B 01 13	STARTING DATE: 01 1975	DURATION: 1 YEARS 0 MONTH	UNDP: 10,256	GOVT: 0
	INSTITUTE FOR INTEGRATED ECOLOGY				
49.	NIP 75 101 0 01 31	STARTING DATE: 07 1977	DURATION: 3 YEARS 6 MONTH	UNDP: 1,049,713	GOVT: 336,090
	MASTER PLAN AND DETAILED DESIGNS FOR SEWERAGE, STORM DRAINAGE AND SOLID WASTES SYSTEMS - KADUNA METROPOLITAN AREA				
50.	NIR 75 102 F 01 31	STARTING DATE: 11 1975	DURATION: 6 YEARS 2 MONTH	UNDP: 1,117,192	GOVT: 3,000
	MASTERPLAN FOR SEWERAGE AND WASTES DISPOSAL				
51.	OMA 74 001 F 01 14	STARTING DATE: 10 1974	DURATION: 4 YEARS 3 MONTH	UNDP: 12,179	GOVT: 4,065
	PORT SANITATION				
52.	PAK 71 006 K 01 14	STARTING DATE: 01 1971	DURATION: 10 YEARS 0 MONTH	UNDP: 92,949	GOVT: 0
	PESHAWAR WATER SUPPLY				
53.	PAK 77 001 H 01 11	STARTING DATE: 09 1975	DURATION: 5 YEARS 4 MONTH	UNDP: 349,619	GOVT: 857,176
	STRENGTHENING OF THE FACTORY INSPECTORATE IN SIND AND PUNJAB				
54.	PAK 75 007 H 11 37	STARTING DATE: 10 1975	DURATION: 1 YEARS 3 MONTH	UNDP: 23,514	GOVT: 0
	CONTROL OF POLLUTION OF KABEL RIVER AND NEEDED LEGISLATION				

WITH ECONOMIC SECTOR CODE 1030

159.	PAK 76 000 C 01 37	STARTING DATE: 10 1976	DURATION: 1 YEARS 3 MONTH	UNDP: 29,563	GOVT: 1,357,200
	CONTROL OF POLLUTION OF KABUL RIVER AND NEEDED LEGISLATION				
156.	PDY 71 005 C 01 14	STARTING DATE: 01 1972	DURATION: 3 YEARS 0 MONTH	UNDP: 1,500	GOVT: 0
	SANITARY ENGINEERING				
157.	PDY 72 003 F 01 14	STARTING DATE: 04 1972	DURATION: 2 YEARS 0 MONTH	UNDP: 14,725	GOVT: 8,560
	ADEN SEWERAGE				
158.	PHI 08 013 C 01 14	STARTING DATE: 08 1970	DURATION: 2 YEARS 0 MONTH	UNDP: 81,686	GOVT: 0
	COMMUNITY WATER SUPPLY				
159.	PHI 72 007 B 01 14	STARTING DATE: 07 1972	DURATION: 0 YEARS 2 MONTH	UNDP: 1,500	GOVT: 6,300
	LAGUNA DE BAY WATER-QUALITY LABORATORY DESIGN				
160.	PHI 74 009 G 01 14	STARTING DATE: 09 1974	DURATION: 4 YEARS 4 MONTH	UNDP: 445,627	GOVT: 2,028,140
	COMPREHENSIVE WATER-FACILITY-MANAGEMENT-OF-LAGUNA-DE-BAY				
161.	PNG 74 004 0 01 01	STARTING DATE: 03 1974	DURATION: 0 YEARS 10 MONTH	UNDP: 9,826	GOVT: 0
	MANAGING THE LOCAL ENVIRONMENT				
162.	PNG 74 019 B 01 14	STARTING DATE: 01 1978	DURATION: 3 YEARS 0 MONTH	UNDP: 87,100	GOVT: 751,100
	ENVIRONMENTAL HEALTH DEVELOPMENT				
163.	POL 65 505 D 01 14	STARTING DATE: 12 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 1,251,902	GOVT: 46,512,000
	PROTECTION-OF-RIVER-WATERS-AGAINST-POLLUTION				
164.	POL 70 012 C 01 14	STARTING DATE: 07 1970	DURATION: 2 YEARS 5 MONTH	UNDP: 3,991	GOVT: 0
	WATER AND SEWAGE PURIFICATION				
165.	POL 71 511 0 01 14	STARTING DATE: 07 1971	DURATION: 8 YEARS 6 MONTH	UNDP: 1,667,306	GOVT: 118,876,000
	ENVIRONMENTAL POLLUTION ABATEMENT CENTRE, KATOWICE				
166.	POL 71 514 0 01 14	STARTING DATE: 02 1972	DURATION: 7 YEARS 7 MONTH	UNDP: 943,409	GOVT: 61,453,500
	EVALUATION-OF-THE-TOXICITY-OF-NEW-TECHNOLOGIES-OF-SUBSTANCES-USED-IN-INDUSTRY				
167.	POL 72 002 A 01 14	STARTING DATE: 07 1979	DURATION: 2 YEARS 6 MONTH	UNDP: 330,000	GOVT: 71,000,000
	ENVIRONMENTAL IMPACT ASSESSMENT SYSTEM				
168.	POR 77 009 D 01 14	STARTING DATE: 09 1977	DURATION: 3 YEARS 4 MONTH	UNDP: 250,000	GOVT: 7,650,000
	DEVELOPMENT OF A BASIC SANITATION PROGRAMME				

WITH ECONOMIC SECTOR LOAN 1030

169.	POR 77 012 B 01 14	STARTING DATE: 01 1978	DURATION: 4 YEARS 0 MONTH	UNDP:	100,000	GOVT:	9,040,000
	LUTTE CONTRE LA POLLUTION DE L'AIR DANS LES REGIONS URBAINES ET INDUSTRIALISEES						
170.	POR 77 014 B 01 14	STARTING DATE: 01 1978	DURATION: 4 YEARS 0 MONTH	UNDP:	27,600	GOVT:	2,070,000
	FLOPPATION DE L'EAU POTABLE ET DU SEL DE CUISINE POUR LA PREVENTION DES CARIES - POR-BSM-001						
171.	POR 77 016 F 01 13	STARTING DATE: 09 1977	DURATION: 4 YEARS 4 MONTH	UNDP:	435,000	GOVT:	26,765
	ENVIRONMENTAL STUDY OF THE TESS ESTUARY (BASIC STUDIES OF ESTUARY WATERS)						
172.	RAF 74 034 B 01 10	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP:	61,651	GOVT:	0
	RADIOLOGICAL HEALTH AND SAFETY MEASURES						
173.	RAS 66 771 I 01 14	STARTING DATE: 01 1970	DURATION: 8 YEARS 0 MONTH	UNDP:	449,993	GOVT:	0
	ENVIRONMENTAL HEALTH ADVISORY SERVICES (SOUTH PACIFIC)						
174.	RAS 72 019 F 01 13	STARTING DATE: 07 1973	DURATION: 4 YEARS 6 MONTH	UNDP:	82,314	GOVT:	0
	TRAINING AND RESEARCH IN ECOLOGICAL AND ENVIRONMENTAL STUDIES						
175.	RAS 73 012 J 01 01	STARTING DATE: 07 1973	DURATION: 5 YEARS 6 MONTH	UNDP:	488,271	GOVT:	0
	HUMAN ENVIRONMENT						
176.	RAS 78 049 A 01 18	STARTING DATE: 03 1979	DURATION: 0 YEARS 1 MONTH	UNDP:	50,000	GOVT:	6,451
	TRAINING COURSE ON RADIOIMMUNOASSAY AND RELATED PROCEDURES.						
177.	RER 74 004 C 01 14	STARTING DATE: 01 1977	DURATION: 1 YEARS 0 MONTH	UNDP:	32,912	GOVT:	0
	STUDY AND ASSESSMENT OF THE WATER QUALITY OF THE RIVER DANUGE						
178.	RER 74 013 D 01 14	STARTING DATE: 02 1975	DURATION: 4 YEARS 0 MONTH	UNDP:	17,370	GOVT:	0
	PROGRAMME DEVELOPMENT ON COASTAL POLLUTION AND OTHER ENVIRONMENTAL HEALTH PROBLEMS						
179.	RE4 76 014 B 01 14	STARTING DATE: 02 1979	DURATION: 0 YEARS 11 MONTH	UNDP:	70,000	GOVT:	0
	REGIONAL COOPERATION IN ENVIRONMENTAL HEALTH ASPECTS OF THE CONTROL OF CHEMICALS AND FOOD						
180.	RER 79 013 A 01 14	STARTING DATE: 10 1979	DURATION: 0 YEARS 3 MONTH	UNDP:	39,500	GOVT:	0
	STUDY AND ASSESSMENT OF THE WATER QUALITY OF THE RIVER DANUGE-PRELIMINARY ACTIVITIES						
181.	RLA 69 760 H 01 14	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	244,932	GOVT:	0
	ENVIRONMENTAL SANITATION (CARIBBEAN)						
182.	RLA 68 761 G 01 14	STARTING DATE: 01 1970	DURATION: 5 YEARS 0 MONTH	UNDP:	141,154	GOVT:	0
	STUDIES AND INVESTIGATIONS OF WATER RESOURCES						

WITH ECONOMIC SECTOR CODE 1030

183.	RLA 70 700 5 01 14	STARTING DATE: 01 1970	DURATION: 3 YEARS 6 MONTH	UNDP: 35,806	GOVT: 0
	REGIONAL POLLUTION MONITORING NETWORK				
184.	ROK 74 001 G 01 01	STARTING DATE: 03 1974	DURATION: 5 YEARS 10 MONTH	UNDP: 121,781	GOVT: 8,400,000
	ENVIRONMENTAL IMPROVEMENT FELLOWSHIP				
185.	ROK 75 011 D 01 14	STARTING DATE: 09 1975	DURATION: 6 YEARS 7 MONTH	UNDP: 5,600	GOVT: 20,226,000
	FEASIBILITY STUDY FOR SEWERAGE AND WASTE DISPOSAL FOR THE SEUL METROPOLITAN REGION				
186.	ROM 79 500 F 01 14	STARTING DATE: 07 1970	DURATION: 5 YEARS 6 MONTH	UNDP: 252,288	GOVT: 15,000,000
	WATER POLLUTION CONTROL				
187.	ROM 71 512 L 01 14	STARTING DATE: 07 1971	DURATION: 7 YEARS 11 MONTH	UNDP: 881,200	GOVT: 66,940,000
	ASSISTANCE IN WATER AND AIR POLLUTION CONTROL (PHASE II)				
188.	RWA 71 511 H 01 14	STARTING DATE: 10 1972	DURATION: 4 YEARS 3 MONTH	UNDP: 290,617	GOVT: 1,910,000
	APPROVISIONNEMENT EN EAU DES VILLES				
189.	SAM 78 003 A 01 14	STARTING DATE: 01 1979	DURATION: 2 YEARS 0 MONTH	UNDP: 148,900	GOVT: 240,600
	IMPROVEMENT OF WATER SUPPLY				
190.	SEN 66 509 H 01 14	STARTING DATE: 05 1970	DURATION: 4 YEARS 8 MONTH	UNDP: 2,418,576	GOVT: 272,994,054
	ESTABLISHMENT OF A MASTER PLAN FOR WATER SUPPLY AND SEWERAGE FOR DAKAR AND SURROUNDING AREAS				
191.	SEN 72 004 J 01 14	STARTING DATE: 03 1973	DURATION: 4 YEARS 10 MONTH	UNDP: 797,894	GOVT: 60,605,100
	STUDY OF WATER RESOURCES AND TECHNICAL ASSISTANCE IN SANITATION				
192.	SFN 77 011 E 01 14	STARTING DATE: 10 1977	DURATION: 3 YEARS 3 MONTH	UNDP: 186,239	GOVT: 126,742,000
	PLAN POUR L'APPROVISIONNEMENT EN EAU ET LES ASSAINISSEMENTS DE DAKAR ET LA REGION ENVIRONNANTE				
193.	SIN 68 007 F 01 14	STARTING DATE: 07 1970	DURATION: 3 YEARS 1 MONTH	UNDP: 94,235	GOVT: 0
	SEWERAGE PLANNER				
194.	SIN 72 003 H 01 14	STARTING DATE: 11 1972	DURATION: 3 YEARS 2 MONTH	UNDP: 71,832	GOVT: 259,440
	SEWERAGE SYSTEM DESIGN PROJECT				
195.	SIN 72 007 K 11 57	STARTING DATE: 01 1973	DURATION: 1 YEARS 4 MONTH	UNDP: 107,000	GOVT: 0
	INDUSTRIAL AIR POLLUTION PROBLEMS				
196.	SIN 74 003 A 01 14	STARTING DATE: 04 1980	DURATION: 0 YEARS 6 MONTH	UNDP: 11,000	GOVT: 0
	PRACTICAL TRAINING IN THE FIELD OF INDUSTRIAL TOXICOLOGY				

WITH ECONOMIC SECTOK CODE 1030

197.	SP4 77 002 C 01 14	STARTING DATE: 01 1978	DURATION: 2 YEARS 0 MONTH	UNDP: 113,914	GOVT: 325,200
	MUNICIPAL ENVIRONMENTAL SANITATION ADVISORY SERVICES				
198.	SPA 70 008 E 01 14	STARTING DATE: 04 1971	DURATION: 3 YEARS 0 MONTH	UNDP: 23,563	GOVT: 0
	AIR POLLUTION IN THE BILBAO DISTRICT				
199.	SPA 70 011 F 01 14	STARTING DATE: 01 1972	DURATION: 3 YEARS 6 MONTH	UNDP: 4,922	GOVT: 0
	PURIFICATION OF WATER IN THE RIBARROJA BASIN				
200.	SPA 73 003 I 01 14	STARTING DATE: 04 1974	DURATION: 2 YEARS 1 MONTH	UNDP: 131,860	GOVT: 19,800,000
	LUTTE CONTRE LA POLLUTION DE L'AIR DANS LES REGIONS URAINES INDUSTRIALISEES				
201.	SPA 73 004 G 01 14	STARTING DATE: 04 1974	DURATION: 2 YEARS 3 MONTH	UNDP: 150,998	GOVT: 16,900,000
	LUTTE CONTRE LA POLLUTION DES RIVIERES ET DES EAUX LITHEALES				
202.	SPA 75 002 C 01 01	STARTING DATE: 08 1975	DURATION: 1 YEARS 5 MONTH	UNDP: 2,400	GOVT: 0
	ASSISTANCIA TECNICA EN CONTAMINACION DEL MEDIO AMBIENTE				
203.	SRL 68 516 W 01 14	STARTING DATE: 07 1970	DURATION: 5 YEARS 6 MONTH	UNDP: 1,326,533	GOVT: 6,001,765
	PUBLIC WATER SUPPLY, DRAINAGE AND SEWERAGE FOR THE SOUTH-WEST COASTAL AREA				
204.	SRL 79 023 A 01 14	STARTING DATE: 01 1979	DURATION: 2 YEARS 6 MONTH	UNDP: 357,150	GOVT: 1,295,100
	INSTITUTIONAL SUPPORT TO THE NATIONAL WATER SUPPLY AND DRAINAGE BOARD.				
205.	SPL 79 059 A 01 31	STARTING DATE: 12 1979	DURATION: 0 YEARS 1 MONTH	UNDP: 10,500	GOVT: 0
	LOCAL AUTHORITY STUDY TOUR-CHINA				
206.	STK 68 009 F 01 14	STARTING DATE: 04 1970	DURATION: 5 YEARS 9 MONTH	UNDP: 30,541	GOVT: 34,150
	WATER SUPPLIES				
207.	STL 68 006 F 01 14	STARTING DATE: 03 1970	DURATION: 5 YEARS 10 MONTH	UNDP: 64,151	GOVT: 0
	WATER SUPPLIES				
208.	STL 72 016 D 01 14	STARTING DATE: 04 1973	DURATION: 2 YEARS 9 MONTH	UNDP: 11,425	GOVT: 61,400
	SOLID WASTE MANAGEMENT ADVISER				
209.	STV 68 005 E 01 14	STARTING DATE: 03 1970	DURATION: 5 YEARS 10 MONTH	UNDP: 57,130	GOVT: 0
	WATER SUPPLY				
210.	SUD 73 010 E 01 14	STARTING DATE: 08 1973	DURATION: 4 YEARS 4 MONTH	UNDP: 72,175	GOVT: 0
	SANITARY ENGINEER				

WITH ECONOMIC SECTION CODE F 1030

211.	SUB 79 014 F 01 14	STARTING DATE: 02 1974	DURATION: 3 YEARS 11 MONTH	UNDP: 150,082	GOVT: 0
	ACTIVITY ANALYSIS-RADIOISOTOPE STUDIES OF CONTAMINATION				
212.	SUD 75 013 G 01 14	STARTING DATE: 09 1975	DURATION: 4 YEARS 3 MONTH	UNDP: 363,991	GOVT: 77,130
	ESTABLISHMENT OF RURAL WATER SUPPLY PROGRAMME				
213.	SUR 70 504 I 01 14	STARTING DATE: 09 1970	DURATION: 5 YEARS 0 MONTH	UNDP: 734,431	GOVT: 1,211,868
	PUBLIC WATER SUPPLIES AND SEWERAGE				
214.	SYR 62 020 D 01 14	STARTING DATE: 07 1970	DURATION: 3 YEARS 0 MONTH	UNDP: 13,837	GOVT: 0
	SANITARY ENGINEER SEWERAGE DISPOSAL				
215.	SYR 70 013 B 01 19	STARTING DATE: 01 1972	DURATION: 0 YEARS 6 MONTH	UNDP: 15,000	GOVT: 0
	PROTECTION AGAINST OIL POLLUTION				
216.	SYR 77 003 D 01 37	STARTING DATE: 07 1977	DURATION: 2 YEARS 5 MONTH	UNDP: 133,207	GOVT: 92,200
	ASSISTANCE IN COLLECTION, TRANSPORTATION AND COMPOSITING OF CITY GARBAGE, DAMASCUS				
217.	TCH 78 005 A 01 14	STARTING DATE: 04 1979	DURATION: 2 YEARS 9 MONTH	UNDP: 150,000	GOVT: 41,952
	DEVELOPMENT OF WATER SUPPLY AND ENVIRONMENTAL SANITATION				
218.	THA 68 046 C 01 14	STARTING DATE: 01 1970	DURATION: 3 YEARS 9 MONTH	UNDP: 111,485	GOVT: 0
	NATIONAL COMMUNITY WATER SUPPLY				
219.	THA 71 002 C 01 14	STARTING DATE: 07 1971	DURATION: 1 YEARS 10 MONTH	UNDP: 11,500	GOVT: 0
	BIO-ENVIRONMENTAL ENGINEERING				
220.	THA 72 016 K 01 14	STARTING DATE: 07 1972	DURATION: 4 YEARS 0 MONTH	UNDP: 183,958	GOVT: 25,844,000
	COMMUNITY WATER SUPPLY				
221.	THA 72 022 D 01 14	STARTING DATE: 04 1973	DURATION: 1 YEARS 10 MONTH	UNDP: 20,605	GOVT: 122,600
	IMPROVEMENT OF THE SANITARY ENGINEERING DEPARTMENT CHULALONGKORN UNIVERSITY BANGKOK				
222.	THA 75 006 F 01 14	STARTING DATE: 01 1977	DURATION: 2 YEARS 6 MONTH	UNDP: 202,796	GOVT: 10,011,500
	COMMUNITY WATER SUPPLY AND SANITATION				
223.	THA 76 004 P 01 14	STARTING DATE: 01 1979	DURATION: 3 YEARS 0 MONTH	UNDP: 1,985,520	GOVT: 45,350,080
	ENVIRONMENTAL HEALTH				
224.	TON 74 003 A 01 14	STARTING DATE: 08 1979	DURATION: 1 YEARS 5 MONTH	UNDP: 101,739	GOVT: 7,150
	URBAN SEWERAGE AND DRAINAGE				

## WITH ECONOMIC SECTOR CODE 1030

225.	TUR 75 003 E 01 14	STARTING DATE: 11 1974	DURATION: 6 YEARS 2 MONTH	UNDP: 583,209	GOVT: 502,000
	STRENGTHENING OF TRAINING UNIT OF WATER SUPPLIES AND SEWERAGE AUTHORITY				
226.	TUN 69 015 F 01 14	STARTING DATE: 01 1970	DURATION: 4 YEARS 8 MONTH	UNDP: 99,074	GOVT: 0
	ENVIRONMENTAL HEALTH				
227.	TUR 65 520 D 01 14	STARTING DATE: 07 1970	DURATION: 3 YEARS 3 MONTH	UNDP: 1,691,617	GOVT: 14,700,000
	MASTER PLAN FOR WATER SUPPLY AND SEWERAGE FOR THE ISTANBUL REGION				
228.	TUN 68 016 F 01 14	STARTING DATE: 05 1970	DURATION: 3 YEARS 8 MONTH	UNDP: 85,704	GOVT: 0
	ENVIRONMENTAL SANITATION				
229.	TUR 69 040 E 01 14	STARTING DATE: 05 1970	DURATION: 4 YEARS 9 MONTH	UNDP: 63,364	GOVT: 0
	SANITARY AND ENVIRONMENTAL ENGINEERING				
230.	TUR 72 037 G 01 14	STARTING DATE: 10 1973	DURATION: 2 YEARS 7 MONTH	UNDP: 142,179	GOVT: 2,340,700
	PROMOTION OF TRAINING AND PROGRAMMES IN SANITARY ENGINEERING				
231.	TUR 72 035 F 01 14	STARTING DATE: 10 1973	DURATION: 3 YEARS 3 MONTH	UNDP: 12,289	GOVT: 0
	PROTECTION OF THE ENVIRONMENT AGAINST POLLUTION, ANKARA				
232.	TUR 73 029 B 01 14	STARTING DATE: 07 1973	DURATION: 0 YEARS 2 MONTH	UNDP: 1,114	GOVT: 0
	FELLOWSHIP IN SANITARY ENGINEERING				
233.	TUR 74 020 E 01 11	STARTING DATE: 09 1974	DURATION: 2 YEARS 4 MONTH	UNDP: 201,319	GOVT: 3,716,000
	REGIONAL LABORATORIES OF INDUSTRIAL HYGIENE IN SIX REGIONS				
234.	TUR 75 013 G 01 14	STARTING DATE: 11 1975	DURATION: 7 YEARS 0 MONTH	UNDP: 688,242	GOVT: 97,408,000
	PROMOTION OF TRAINING RESEARCH AND PROGRAMMES IN ENVIRONMENTAL ENGINEERING AND SCIENCES				
235.	TUR 75 096 D 01 14	STARTING DATE: 05 1977	DURATION: 4 YEARS 9 MONTH	UNDP: 328,645	GOVT: 7,253,000
	URBAN WATER SUPPLY AND SEWERAGE				
236.	TUR 76 044 D 01 37	STARTING DATE: 09 1977	DURATION: 4 YEARS 4 MONTH	UNDP: 82,221	GOVT: 0
	POLLUTION INVESTIGATION FOR INDUSTRIAL SITE SELECTION AND CONTROL EQUIPMENT MANUFACTURE				
237.	TUR 76 052 F 01 14	STARTING DATE: 08 1977	DURATION: 3 YEARS 0 MONTH	UNDP: 40,284	GOVT: 4,600,000
	DEVELOPMENT OF WATER POLLUTION CONTROL STANDARDS				
238.	TUR 77 014 D 01 14	STARTING DATE: 07 1977	DURATION: 2 YEARS 6 MONTH	UNDP: 20,400	GOVT: 0
	PROTECTION OF INLAND WATER QUALITY				

WITH ECONOMIC SECTION CODE 1030

1.	TUR 77 022 B 01 14	STARTING DATE: 01 1975	DURATION: 2 YEARS 0 MONTH	UNDP: 15,780	GOVT: 17,667,000
	EMERGENCY MEASURES AND EPIDEMIOLOGICAL STUDIES FOR HEALTH PROTECTION CONCERNING AIR POLLUTION IN ANKARA				
0.	TUR 78 002 9 01 14	STARTING DATE: 04 1978	DURATION: 1 YEARS 9 MONTH	UNDP: 31,072	GOVT: 0
	FORMATION OF A CENTRAL ORGANIZATION FOR ENVIRONMENTAL ACTIVITIES IN TURKEY				
1.	TUR 78 023 B 01 14	STARTING DATE: 02 1979	DURATION: 2 YEARS 11 MONTH	UNDP: 311,900	GOVT: 16,100,000
	SOLID WASTES MANAGEMENT IN ISTANBUL METROPOLITAN AREA				
2.	TUV 77 002 C 01 14	STARTING DATE: 09 1977	DURATION: 1 YEARS 4 MONTH	UNDP: 31,800	GOVT: 3,000
	IMPROVEMENT OF WATER AND SANITATION FACILITIES				
3.	UGA 67 510 E 01 14	STARTING DATE: 03 1970	DURATION: 4 YEARS 4 MONTH	UNDP: 616,644	GOVT: 3,591,720
	MASTER PLANS FOR WATER SUPPLY AND SEWERAGE FOR THE GKAFATEK KAMPALA AND JINJA AREAS				
4.	UGA 72 012 C 01 14	STARTING DATE: 01 1972	DURATION: 2 YEARS 0 MONTH	UNDP: 32,500	GOVT: 64,000
	NATIONAL WATER SUPPLY AND SEWERAGE SERVICES				
5.	UKT 77 026 S 01 13	STARTING DATE: 09 1975	DURATION: 0 YEARS 5 MONTH	UNDP: 4,424	GOVT: 0
	SEMINAR ON ENVIRONMENTAL ENGINEERING				
6.	URU 74 017 D 01 14	STARTING DATE: 01 1975	DURATION: 1 YEARS 6 MONTH	UNDP: 100,592	GOVT: 6,151
	SANITARY EDUCATION				
7.	VEN 71 004 C 01 14	STARTING DATE: 09 1971	DURATION: 3 YEARS 6 MONTH	UNDP: 12,500	GOVT: 0
	CHEMICAL AND INDUSTRIAL CONTAMINATION				
8.	VEN 71 025 I 01 14	STARTING DATE: 01 1971	DURATION: 6 YEARS 0 MONTH	UNDP: 425,062	GOVT: 9,657,816
	SANITARY ENGINEERING EDUCATION (PHASE II)				
9.	VIE 73 005 B 01 14	STARTING DATE: 02 1974	DURATION: 1 YEARS 11 MONTH	UNDP: 23,279	GOVT: 17,640,000
	WATER SUPPLY AND SEWERAGE IN URBAN COMMUNITIES				
0.	VIE 73 014 D 01 14	STARTING DATE: 01 1974	DURATION: 3 YEARS 0 MONTH	UNDP: 8,463	GOVT: 14,585,000
	NATIONAL POLLUTION CONTROL PROGRAMME				
1.	VIF 73 022 C 01 14	STARTING DATE: 11 1973	DURATION: 1 YEARS 2 MONTH	UNDP: 3,000	GOVT: 17,066,000
	SOLID WASTES MANAGEMENT				
2.	YEM 70 507 L 01 14	STARTING DATE: 12 1970	DURATION: 5 YEARS 1 MONTH	UNDP: 917,840	GOVT: 8,000
	WATER SUPPLY SAMAA AND HOUEIDA				



1. ✓ YEM 72 008 P 01 14 STARTING DATE: 11 1972 DURATION: 5 YEARS 2 MONTH UNDP: 720,580 GOVT: 167,000  
 WATER SUPPLY AND SEWERAGE SYSTEMS FOR SANAA AND HODEIDA

2. ✓ YEM 73 017 I 01 14 STARTING DATE: 01 1974 DURATION: 6 YEARS 0 MONTH UNDP: 78,729 GOVT: 1,157,639  
 RURAL WATER SUPPLY

3. ✓ YUG 72 002 T 01 14 STARTING DATE: 07 1972 DURATION: 8 YEARS 6 MONTH UNDP: 1,298,833 GOVT: 4,149,900  
 COMMUNITY WATER SUPPLY, WASTE DISPOSAL AND POLLUTION CONTROL, KOSOVO

4. ✓ YUG 72 004 N 01 01 STARTING DATE: 08 1972 DURATION: 7 YEARS 5 MONTH UNDP: 703,400 GOVT: 50,672,000  
 PROTECTION OF THE HUMAN ENVIRONMENT IN THE YUGOSLAV ADRIATIC REGION

5. YUG 76 003 H 01 14 STARTING DATE: 02 1977 DURATION: 3 YEARS 11 MONTH UNDP: 131,836 GOVT: 0  
 REDUCTION OF WATER STREAM POLLUTION IN BOSNIA AND HERCEGOVINA

6. ✓ ZAI 74 006 E 01 14 STARTING DATE: 05 1975 DURATION: 4 YEARS 8 MONTH UNDP: 93,181 GOVT: 175,350  
 APPROVISIONNEMENT EN EAU ET ASSAINISSEMENT (BUKAVU, MATADI ET LIKASI)