

**COUNTRY PROFILE
ON
ENVIRONMENT**

MOROCCO

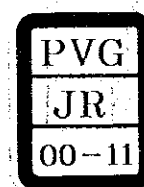
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JAPAN INTERNATIONAL COOPERATION AGENCY



USERS GUIDE: Contents of the Report

This report consisted of the following Chapters on environmental information of the country.

1. Keywords of the Environment

Various features and principal environmental issues and their related matters of the country are schematized within 1 page to easily understand the country's natural and social environmental issues on the whole.

2. Fact Sheet

Principal indices and natural and social environmental characteristics of the country such as economy, demographic statistics, socio-economic conditions, various important resources available in the country are described.

3. Institutional Context

3.1 Environmental Agency

Matrix table on governmental agencies related to the environmental issues in the Chapter 4 is described to grasp the role of the agencies easily. Responsibilities and organizational structure of the principal responsible agency for the environment, and responsibilities of related agencies are explained. Main activities of the various environmental non-governmental organizations are described in the table.

3.2 National Environmental Policy

Environmental policy of the country such as national environmental action plan is explained.

3.3 Environmental Laws and Regulations

Environmental laws and regulations of the country including their status of applications are described.

4. State of the Environment

In this Chapter, status of the various environmental issues as follows are covered with information on related agencies, related standards, laws and regulations, examples of the issue are explained. In the section 4.3, other kind of considerable environmental issues in the country are described based on the report which local consultant prepared.

4.1 Air Pollution	4.7 Waste Water Management
4.2 Water Pollution	4.8 Forest Conservation/Desertification
4.3 Other Pollution	4.9 Biodiversity
4.4 Waste Management	4.10 Natural Resource Management
4.5 Energy Conservation and Alternative Energy	4.11 Natural Disaster
4.6 Water Supply	4.12 Environmental Education

5. International Relationship

Status of the implementation of the economic and technical assistance projects in the country are outlined. International conventions and agreements on environment which the country agreed and ratified are listed up in section 5.1, and environmental projects which are funded and/or implemented in the country by donor countries and international organization in the section 5.2. In addition, location map of the project funded and implemented by using the Official Development Assistance (ODA) of Japanese government are showed.

6. Sources of Information

Governmental environmental agencies related institutions and NGOs are listed with the some information such as contact address and e-mail address.

7. References

References used in the report are listed.



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1. KEYWORDS OF THE ENVIRONMENT

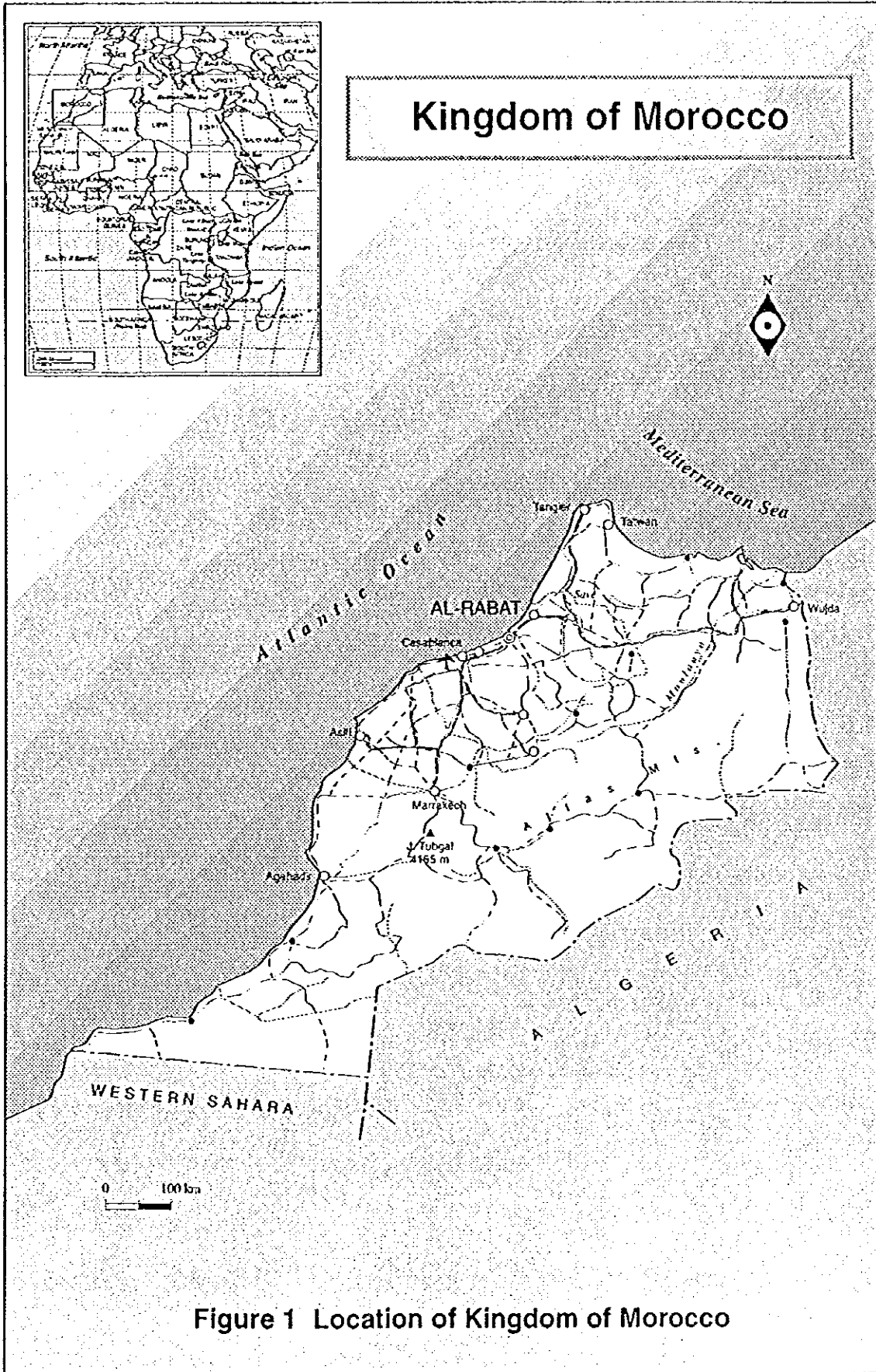
1.1 Features of the Country

	Related pages
① Gross Domestic Production(GDP) US\$1,027 per capita (Japan : US\$33,857, China : US\$361) Total : US\$26 billion	• 2. Fact Sheet p.3
② High-concentrated Urban Population Urban population rate: 48% Total population: 27 million, Urban population: 13 million	• 2. Fact Sheet p.3 • 4.1, 4.2, 4.4

1.2 Keyword of Environmental Issues

	Related page
① Water pollution	4.2 Water pollution p. 9
② Air pollution	4.1 Air pollution p. 8
③ Solid waste	4.4 Waste management p. 11
④ Urban environment	
⑤ Soil degradation	
⑥ Coastal environment	

Source a)



Source: Data Atlas 1994 - 1997

2. FACT SHEET

2.1 Socio-economic Index

Index	Data	Data year	Reference
Population	27.0 million (annual average incremental rate : 2.1% (1990~95))	1995	b)
Race	Arabian 64%, others 35%	no information	d)
Religion	Islam (national religion) 99%, Christianity, Judaism	no information	d)
Literacy rate	Adult female: 26% Adult male: 52%	1990	b)
Urban Population rate	48% (13.1 million)	1995	b)
Life expectancy	63 (1990~1995 average)	1990-95	b)
Under-5 mortality rate	59 (per 1,000)	1993	b)
GNP ^{*1}	\$36,100 million (\$1,301/person)	1998	b)
GDP ^{*1}	\$26,635 million (\$1,027/person)	1993	b)
GDP structure	Agriculture: 14% Industry: 32% Service industry & others: 53%	1993	b)
Prime industry	Carpet, garments, leather product, tourism, fishery	1996	d)
Prime resource	Phosphorus ore, silver, manganese, lead, iron, grain, fruit	1996	d)
Safe water (% of population with access) ^{*2}	Urban: 98% Rural: 14%	1980-1995	b)
% of sewerage population ^{*3}	Urban: 67% Rural: 18%	1980-1995	b)
Human Development Index (HDI)	0.566 (World rank 119, GDP per capita rank 93 in same year)	1994	c)

*1 : The estimated value of the GNP was exchanged and adjusted from local currency into US\$ by means of 3-year average of exchange rates. The estimated value of the GDP was presented in US\$ of 1993 based on the exchange rate.

*2 : "Safe water" includes treated surface water, and untreated water which is pumped up from protected spring / excavated well and sanitary well.

*3 : "Sewerage population" should be met conditions that the population in urban area can use public sewerage and indoor facility such as dug hole outdoor toilet, pouring water toilet, private sewerage system, public community toilet, and similar facilities, and that the population in rural area can use dug hole outdoor toilet, pouring water toilet, or other proper treatment methods.

2.2 Geographical Characteristics

Area : (no information)
Geographical features : Long coastline (3,500 km)
Highest place : Tubgal (4,165 m)

Source: a)

2.3 Meteorological Characteristics

Climate : Mediterranean in the north, Atlantic in the west
Season : (no information)
Average temperature : Depends on the maritime influence and altitude at the location. (maximum in July, minimum in January)
Average annual rainfall : Tangier (700 mm), Rabat (500 mm), Safi (300 mm), Agadir (200 mm), Laayoun (less 100 mm)
Climatic classification : Bioclimatic stage (Saharian, Arid, Semi-arid, Sub-humid, and high mountain)

Source: a)

2.4 Ecological Characteristics

Biogeographical feature: (no information)
Identified animals and plants : (no information)
Protected area : (see Section 4.9)

Source: a)

2.5 Hydrological Characteristics

Main river : Moulouya, Save
Lakes : (no information)

Source: a)

3. INSTITUTIONAL CONTEXT

3.1 Environmental Agency

3.1.1 Governmental Agency

(see "6. SOURCES OF INFORMATION" on each agencies and its contact address.)

Governmental Agency	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8	4.9	4.10	4.11	4.12
	Air pollution	Water pollution	Noise	Waste	Energy	Water Supply	Waste Water	Forest	Biodiversity	Resources	Disaster	Education
Ministry of the Environment	○	○	—	—	—	—	—	—	—	—	na	○
Ministry of Commerce and of Industry	○	—	○	—	—	—	—	—	—	—	na	—
Ministry of Transports (ONT, ONCF and ONDA)	○	—	○	—	—	—	—	—	—	—	na	—
Public Laboratory of Tests and Studies (LPEE)	○	—	—	—	—	—	—	—	—	—	na	—
Ministry of the Public Health	○	○	—	—	—	—	—	—	—	—	na	—
Ministry of Public Labour	—	○	—	—	—	—	—	—	—	—	na	—
Ministry of Interior	—	○	—	—	—	—	—	—	—	—	na	—
Ministry of Agriculture	—	○	—	—	—	—	—	○	—	—	na	—
Ministry of Maritime Fishing	—	○	—	—	—	—	—	—	○	—	na	—
National Office of the Supply Water (ONEP)	—	○	—	—	—	—	○	—	—	—	na	—
Ministry of Energy and Mines	—	—	—	—	○	—	—	—	—	—	na	—
National Office of Electricity (ONE)	—	—	—	—	○	—	—	—	—	—	na	—
Center of Development of Renewed Energy (CDER)	—	—	—	—	○	—	—	—	—	—	na	—
Ministry of Water and Forests	—	—	—	—	—	—	—	○	○	—	na	—
Ministry of the National Education	—	—	—	—	—	—	—	—	—	—	na	○
Others	○	○	—	○	○	○	○	—	—	○	na	○

Note:1) : ○ → related — → no relation na → no information

2) : 4.4 Waste management, 4.5 Energy conservation and alternative energy, 4.7 Waste water management, 4.8 Forest conservation / desertification, 4.10 Natural resource management, 4.11 Natural disasters, 4.12 Environmental education

3) : Refer to each section related to other agencies when column "Others" is filled by ○.

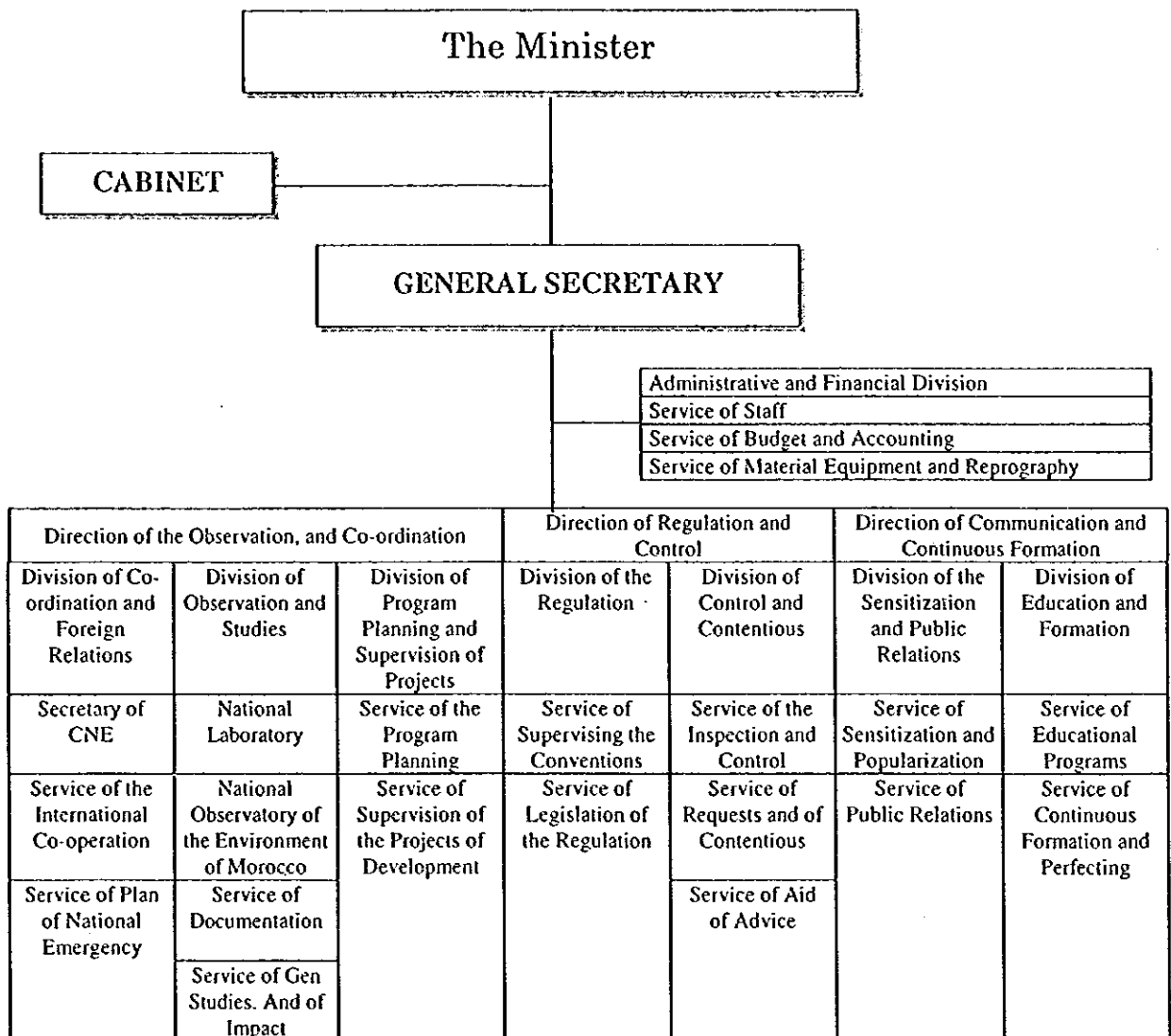
Source: a)

(1) Ministry of Environment (established in March 1995)

Since its establishment, the Ministry of Environment, in collaboration with the ministerial departments and the public or private entities, of which the NGO, has undertaken the development projects of law in several sectors in order to review the existing texts and to adopt them to the imperatives of present socio-economic and technological development, and make the institutional device dynamic.

Number of staff: (no information)

Annual budget: (no information)



Source: a)

Organisation Chart of Ministry of Environment

(2) Governmental organization related to environmental issues

Organization / Outline of activities	Annual budget	Number of staff
(1) National Environmental Council (CNE) (established in 1995) / (no information)	(no information)	(no information)
(2) Regional (CRE) and Provincial (CPE) Councils of the Environment / (no information)	(no information)	(no information)
(3) Interdepartmental Committee of Norms and Standard (CNS) (established in 1995) / The committee is composed of 4 groups (water, air, navies water and soil.	(no information)	(no information)
(4) National Observatory of the Environment of Morocco (inaugurated in 1994) / (no information)	(no information)	(no information)
(5) National Laboratory of Study and of Supervision of the Pollution and Nuisances / (no information)	(no information)	(no information)
(6) Laboratory of Supervision of the Hygiene of the Environment (will open in 2001. Ministry of the Public Health will assure its management.) / (no information)	(no information)	(no information)
(7) The Maghreb Center of Struggle against Maritime Pollution / (no information)	(no information)	(no information)
(8) The security Centers of Maritime Navigation (located in Nador, Larache, Essaouira, Laayoune, Dakhla, Casablanca, Safi, Tangier, and Tan-Tan) / (no information)	(no information)	(no information)
(9) The National Center of Studies and Oceanographic Researches (CNERO) / (no information)	(no information)	(no information)
(10) The Center of Struggle against the Pollution by the Hydrocarbon / (no information)	(no information)	(no information)

Source: a)

(3) Organized network related to environmental issues

Network
(1) The National Network of Observation of the Quality of Marine Environment (PNOM) <ul style="list-style-type: none"> accomplished by the Ministry of Marine Fishing and Merchant Navy thanks to the financing of the CCE.
(2) The Network of the Actors Partners in Information and Environmental Data (RAPIDE) <ul style="list-style-type: none"> The network is part of some works led at the level of the National Environmental Observatory of Morocco (ONEM). PNUD project/UNESCO MOR/90/001
(3) The Network of Durable Development (RDD) in Morocco <ul style="list-style-type: none"> its constitution is planned within the framework of PANE led by the ONEM with the contest of Program Capacity 21 of PNUD.
(4) Permanent Structure of the Organization and Diffusion of the Demographic and Social Information <ul style="list-style-type: none"> it is a project financed by the FNUAP for the count of Delegate Ministry to the Prime minister responsible for the Economy Incitement.
(5) The Global Network for the Applied Research relative to the Problems of the Purification and of the Drinking water <ul style="list-style-type: none"> it will be financed by the USAID, the PNUD and the World Bank on the behalf of the ONEP

Source: a)

3.1.2 Non-governmental Organization (NGO)

Name of NGO	Established year	Main activities
Moroccan Association for the protection of the environment (ASMAPE)	(no information)	(no information)
Moroccan Association for the Right of the Environment (SOMADE)	(no information)	(no information)
Moroccan Ecological Association	(no information)	(no information)
Moroccan Club for Education, Population and Environment	(no information)	(no information)

Name of NGO	Established year	Main activities
Louada Association for the Protection of the Environment and Neighbourhood	(no information)	(no information)
Association for Preventing Erosion, Drought and Desertification in Morocco- (ALCESDAM)	(no information)	(no information)
Association of the Treatment of Wastes	(no information)	(no information)
Maghreban Forum for the Environment and the Development	(no information)	(no information)
Moroccan Association for the Sea (ASMER)	(no information)	(no information)
Site and Environment Association	(no information)	(no information)
Association of the Protection of the Environment and Nature	(no information)	(no information)
Association of Protection of the Environment	(no information)	(no information)
Association for a Healthy Environment (SALAMAT EL BIAI)	(no information)	(no information)
Casablancablanca Association of Hunt	(no information)	(no information)
Moroccan Association of the Amateurs of Pigeons	(no information)	(no information)
Association of the Inhabitants of Anfa for the Protection of the Environment	(no information)	(no information)
Group of Study and Research about Renewed Energies (GERERE)	(no information)	(no information)
Man and Environment	(no information)	(no information)
Energy Forum	(no information)	(no information)
National Movement of Moroccan Ecologists	(no information)	(no information)
Struggle against Desertification, Protection of Green and Blue Areas- FMED	(no information)	(no information)
Association Women, Youth and Environment	(no information)	(no information)
Movement TWIZA	(no information)	(no information)

Source: a)

3.2 National Environmental Policy

Policy/Project Name and Contents	Funding or Implementing Agency
(no information)	(no information)

Source: a)

3.3 Environmental Laws & Regulations

Laws & Regulations	Status	Related Sections
(no information)		

Source: a)

4. STATE OF THE ENVIRONMENT

4.1 Air Pollution

Currently, atmospheric pollution and its impact on the health of the population have problems of the environment, particularly in urban areas where there is an intense road traffic and an industrial concentration.

In fact, three types of pollution act on the quality of the air:

- The emanation of gas and smoke containing chemicals materials (CO, NO_x, SO_x), particular materials in suspension (MPS) and heavy metals such as lead (Pb).

This pollution, mainly due to the combustion of oil products, is felt at the level of the big cities and industrial units, but it prevails in the sector of Casablanca/ Mohammadia where the number of cars on the roads is about 0.4 million vehicles on the about 1.2 million that counts the number of cars circulating in the roads of the whole country, and the presence of 3,000 industrial units on 6,200 registered at the national level (as of 1994).

- The presence of matter in suspension (MES), due to dusts, prevailing in the zones of extraction of the phosphates (Khouribga, Youssoufia, Benguérir and Boukraâ) and at the level of the cement works and quarries.
- The transmission of bad odours in the vicinities of particular industries (the cellulose in Sidi Slimane, the sugar-basin refineries (Casablanca, Tétouan, Souk Sebt in the province of Beni Mellal, the chemical complex of Safi and Jorf Lasfar.) and some discharges of effluents or solid wastes).

Source: a)

Related Agency
① Ministry of the Environment (National Observatory of the Environment of Morocco)
② Ministry of Commerce and of Industry (Direction of the Industry)
③ Ministry of Transports (ONT-ONDA)
④ Local Authority (Prefectures, Provinces)
⑤ Public Laboratory of Tests and Studies (LPEE)
⑥ Ministry of the Public Health (Division of the Hygiene of Middle)

Source: a)

Related Problems
① Deterioration of natural environment by the fallout of the matters in suspension in the air
② Various Illnesses (cutaneous and ophthalmic irritations, allergies, difficulty of breathing, and cardiovascular unrest.)
③ Major Hindrance for the population (olfactory nuisance, dusts)

Source: a)

Possible Solutions
① Improvement of vehicles by technical controls,
② Organization of campaign so as to arise public awareness for a good upkeeping of vehicles,
③ Equipment of the industrial units of anti-pollution systems,
④ Improvement of procedures of production and manufacture,
⑤ Development of more appropriate legislation and regulation,
⑥ Continuous control of the atmospheric pollution.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Law on air pollution	?	
② Ambient air quality standard	?	
③ Emission standard (stationary and/or mobile sources)	?	
④ Environmental monitoring results	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.2 Water Pollution

The degree of pollution in water reached a worrying situation in Morocco. Indeed, about 22 million m³/year of waste water of various natures slop in nature, mostly without previous treatment. Of this volume, 32% reaches the surface waters, mainly the courses of water and the waters of coastline.

The pollution prevails in Kenitra, Rabat, and Casablanca, where there is a great urban agglomeration and a strong industrial concentration. It also invades other big cities of Morocco and in the sites of industrial complex: the cellulose of Morocco, the refineries, Morocco Chemistry I and II, Maroc-phosphore I and II and Maroc-phosphore III and IV.

Source: a)

Related Agency
① Ministry of the Environment (National Observatory of the Environment of Morocco)
② Ministry of Public Labour (Direction of the Hydraulic)
③ Ministry of Interior (General Direction of Local Communities)
④ Ministry of Agriculture (Direction of the Plant Production)
⑤ Ministry of Maritime Fishing (Scientific Institute of Maritime Fishing)
⑥ Ministry of Public Health (Division of the Hygiene of Middle)
⑦ The National Office of the Supply Water (ONEP)
⑧ The Administration of the Distribution of drinking water
⑨ Municipalities and Communities Responsible for Waste Water

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Law on water pollution	?	
② Water quality standard	?	
③ Effluent standard	?	
④ Drinking water standard	?	
⑤ Water quality monitoring	?	
⑥ Guidelines on water quality	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.3 Other Pollution

(1) Noise

Currently less important, because limited spatially, the actual state reflected mainly:

- in the agglomerations, along highways, in some places such as bus stations and passengers stations.
- along road axes of heavy traffic,
- along the railroads,
- in the neighbourhood of thick industrial units,
- in the surroundings of airports receiving big planes

Source: a)

Related Agency
① Ministry of Transports (ONT, ONCF and ONDA)
② Ministry of Commerce
③ Ministry of the Industry (Direction of the Industry)

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Law on soil pollution	?	
② Regulation on soil pollution	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.4 Waste Management

Currently in Morocco, distinction is not made between different various kinds of wastes except for the medical wastes that are incinerated in the establishments that produce them.

Valued to about 8,000 ton/day in 1990 for an urban population of 13 million of inhabitants, the solid wastes would reach 13,000 ton/day in the year 2000 for an urban population of nearly 16 million of inhabitants.

The household wastes are characterized by their elevated percentage in organic matters (67%), their high humidity (60 to 70%), their high density (0.4 to 0.6).

The plastics appear from 2 to 3% of the mass of household wastes but represent until 45% of non ferment. Materials.

Contrarily to plastic containers (bottles, cans), plastic bags lighter around discharges are taken away by the wind disfiguring the aesthetics of panoramas.

The collect of wastes generally, insured to 70 - 80% in most of the cities, is taken in charge by municipalities urban communities. In the case where the collecting is deficient, the population creates spontaneously important deposits in order to cause substantial nuisances for the neighbourhood.

Installed generally on common land, the discharges are not theoretically illegal dumping but present, most of the inconveniences.

Source: a)

Related Agency
① Municipalities (Service of cleaning)

Source: a)

Related Problems
① Distortion of panorama of visual nuisances
② Olfactive Nuisances by gas fermentation
③ Sanitary Nuisances because of the pollution of the underground and surrounding water
④ Proliferation of germs and bacteria
⑤ Proliferation of insects potential of illnesses
⑥ Contamination of the market garden products amended with cool dirt

Source: a)

Possible Solution
① Qualified Staff in sufficient number
② Means materials in number and in quality
③ Installation of public trash cans in sufficient number, with a means of distinction of the kind of wastes for a previous sorting
④ Harnessing of specific regroupings points for every kind of wastes
⑤ Heightening public awareness to the respect of the use of the intended infrastructures for collecting wastes
⑥ Regulation of the management of solid wastes
⑦ Creation of facilities of treatment of the wastes in taking into account of their specificities

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on waste	?	
② Laws on hazardous waste	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.5 Energy Conservation and Alternative Energy

a) Conventional Energies

Morocco depends, for more than 85%, on the outside, concerning its provision of energizing products. The oil bill sponges nearly 25% of the returns of export (data of 1995).

The consumption of primary energies reached 7.9 millions of T.E.P. (tons equivalents oil) in 1994. It distributed between the oils products and gas 80.2%, the coal 17.0% and the hydraulic electricity 2.8%.

The potential hydraulic exploitable appraises to 5 milliards of Kwh, but only 40% are equipped currently to the aide of twenty hydro-electric factories. The thermal equipment, with thirty of factories, assures more than 85% of the total production and uses the fuel and the coal.

However, the use of the traditional forms of energy like the wood and charcoal remains extensively prevalent, but it is difficult to quantify the global consumption.

b) Non Conventional Energies

In Morocco, both the wind and solar energies are weakly exploited in the production of the electricity.

As far as the use of the solar energy is concerned, it is limited to some household or private needs: particular dwellings, small isolated installations.

The wind energy is also weakly exploited. There is only a small field of wind in the region of Tangier. Nevertheless, the studies of realization of a field of wind containing 84 units are in the stage of project of execution. This field is planned to be in Koudia Blanco in the north of Melloussa in the region of Tétouan.

Source: a)

Related Agency
① Ministry of Energy and Mines (Direction of the Energy)
② The National Office of Electricity (ONE)
③ Office of the Distribution of Electricity
④ Center of Development of Renewed Energy (CDER)

Source: a)

Possible Solution for Energy Consumption
① Adoption of a continuous timetable <ul style="list-style-type: none"> • Reduction in the consumption of fuel (administration) • Reduction in the consumption of electricity (administration)
② Encourage the public transport in order to reduce the exaggerated use of private cars
③ Develop the potential hydraulic exploited
④ Exploitation of the favourable climatic conditions for the development of renewed energies
⑤ Construction of the nuclear power station for the production of electricity, planned in the Maâmora.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on energy use and conservation	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.6 Water Supply

In Morocco, drinking water proceeds for the 2/3 of surface water, and for 1/3 of underground water.

The national production of drinking water is provided by the National Office of Drinking Water (ONEP) to the height of 74%, the remainder being insured by Elyo (ex. Moroccan Company of Distribution (SMD)), and the administrations. The total production was in 1992 of 940 millions of 3,804 millions for the urban population.

- Currently, one can estimate that the whole of the urban middle is appropriately nourished. The service of water is generally insured without cutting off except in rush hours in some agglomerations. The control of the quality is generalized and its level of cover is related to the international norms. One estimated in 1991 that, 77% of the urban population have drinking water, the remainder being satisfied by public drinking fountains and by some private wells. The raw endowment by inhabitant was of 171 l/j for the consumption of 110 l/j. The difference consisting of the global output of adduction and of distribution.

It is necessary to signal that about 150,000 m³ by year of drinking water are produced by the desalination of sea water. This water is aimed to some Saharian regions like Boujdour, Tarfaya, Laâyoune and Smara.

Source: a)

Related Agency	
Production:	
①	National Office of Drinking Water (ONEP): producer to height of 74% of needs
②	Elyo (SMD (ex)): 26% of needs.
Distribution	
①	ONEP in the middle and small cities and the farming world
②	Water Lyons of Casablanca (LYDEC) in the Big Casablanca
③	Administrations in big cities.

Source: a)

Possible Solution :Water Supply for Agricultural Use	
①	Leaving different problems caused by the lack drinking water in the farming world, a plan of development of the provision in drinking water of the farming populations was worked out in 1993 by the National Council of Water. The aimed goal is of carrying to 80% in the year 2010 the servicing in public points answering the usual rations and to the sanitary norms: the particular branchings 10%, the boundaries fountains 40% and the collective waterholes 30%.
②	This plan, in 4 phases of 5 years, is valued to 18.5 milliards of dirhams distributed to the yearly rhythm of 625 MDH financed to 50% by the farming communes, 45% by the State and the public organisms and 5% by the users. The average cost by inhabitant will be 1312 DH.
③	This plan of development is already put into application.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on water resources and supply	?	
② Laws on use of water resources	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.7 Wastewater Management

In Morocco the management of waste water is in phase of transition. Indeed, before the years 1990, the management of waste water was an exclusive task of municipalities and communes. Since the beginning of the decade, with the development of director diagrams of sanitation (S.D.A.), the responsibilities are shared

- Development of S.D.A. for the big agglomerations confided to administrations called for relieve, but in collaboration with the municipalities.
- Development of S.D.A. for the middle and small agglomerations confided to the ONEP but always with the contest of municipalities and communes.
- Management of the system of improving the sanitation of waste water insured generally by municipalities and communes except in Casablanca where this task is confided to the Lyons of water of Casablanca (LYDEC)
- In progress Project in order to assign the management of the system of sanitation of the wilaya of Rabat-Salé to a specialized foreign company. Some similar projects would be considered for the other big cities of the kingdom.
- All big project of sanitation is managed, currently, together with the administration or the ONEP (up to the city) with the municipality or the concerned urban commune.
- Insufficiency of system sewer water in a lot of big cities, middle or small,
- Ignorance of the system by lack of graphic documents (drown in correct plan with all the features of the sewer system)
- Shared Responsibilities, in most cases, between the administration and the municipalities where the ONEP and municipalities where there is divergence of opinions and decisions,
- Insufficiency of the staff and of means for the upkeep of the system,
- Multiplicity in the management of sewer system in the big cities such as the wilaya of Rabat-Salé where:
 - The big collectors (primary and secondary) are managed by the urban communities of Rabat, Sale and Témara according to their territory,
 - The remainder of the system (tertiary collectors) is managed by the municipalities in the space of their territory,
 - The management of the whole of a sewer system of Karia Oulad Moussa in Sale is exclusively insured by the R.E.D.

Source: a)

Related Agency
Except for Casablanca where the LYDEC (Lyons of waters of Casablanca), private foreign operator, took in charge the former R.A.D. with the management of the waste water, the official or unofficial managers through the Moroccan territory are: <ol style="list-style-type: none"> ① Administrations in big cities. ② ONEP in the average and small cities ③ Urban communities, ④ Municipalities or urban communities.

Source: a)

Related Problems
<ol style="list-style-type: none"> ① Multiplicity of the complaints particularly in rainy periods, ② Stagnation of water sometimes flooding without the low points, ③ Fast Deterioration of conducts by the carrossions, ④ Overflowing of works ⑤ Nuisances for the population

Source: a)

Possible Solution
① Application of the recommendations given out at the level of the S.D.A.
② Scheduling of the intervening and actions to be taken according to the emergencies by using a precise program
③ Avoid the multiplicity of the managers and the sectorial or partial management by the designation of one person responsible in the case of Casablanca (with the LYDEC)
④ Puts into application, the initiative taken by the state for the management of waste water used to the administrations of big cities and to the ONEP in average and small cities
⑤ Delegation, in the future, of the management of waste water to private operations.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on sewerage system	?	
② Laws and regulations on industrial effluent	?	
③ Effluent standard	?	
④ Results of monitoring	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.8 Forest Conservation/Desertification

The fact that nearly a third of the population live directly or indirectly forests products prove that the socio-economic pressure exercised on the forests resources is very marked. The result of this pressure appears at the manifest deterioration of some forests massifs, such as the Maâmora in the Rharb and the argan in Souss, the nearly total disappearance of others like the ceder of Rif and a yearly deforestation valued to 32,000 ha.

Furthermore, the ineffective management of the natural resources (water, soil, vegetation) conjugated to unsuitable agricultural practices and rages lead yearly to a failure in arable earth valued to 22,000 ha.

The irregularity of the climate, notably the rainfall, followed by years of drought of lasting an anticipated period, the divestment of the vegetation and the deterioration of the soils encourages an active erosion more or less generalized and an increased desertification in the zones of sensitization.

In addition to losses in forest and in soil caused by the human activities, the erosion and the desertification that ensues of these last compete the disappearance of 4 millions of fodder units annually and to the silting up, at occurrence of 5% by year, of the capacity of storage of the dams.

Source: a)

Related Agency
① Ministry of Water and Forests (Service of forests Amenities)
② Ministry of Agriculture (Direction of the Agricultural Production)

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on forest conservation	?	
② Laws and regulation on protection area	?	
③ Laws on desertification	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.9 Biodiversity

a) Continental Biodiversity

The Moroccan biodiversity is ranked in the 2nd among those of the Mediterranean basin. It shelters 2/3 of plants and 1/3 of animal kinds. The rate of floristic endemic species (unique plants that does not appear elsewhere) goes beyond 20%.

For a better management of the patrimony "Biodiversity", Morocco, through its service of water and forests, put into places a National Network of Protected Areas charged with SIBE (Sites of Biologic and Ecological interests).

All big types of natural ecosystems (more than 40) are covered by the national network of SIBE, the national and natural parks cover an area superior to 85%. About forty of terrestrial ecosystems shelter more than 4,000 plants, close to 550 species of vertebrates and thousands of invertebrates.

The rates of rare and endemic species reach 60% for the richest SIBE, all the remarkable species of the fauna and of the flaire being protected by the national network.

This system spreads on the 22 biogeographic sectors of Morocco the strongest concentrations are situated within the mountainous and coastal zones (genetic reservoir), with maxima for the Middle-Atlas, the Rharb- Mamora- Middle Sebou and the Rif.

The 154 spacious units constituent of the national network of SIBE distributed like follows: 6 national parks (20,000 km²), 2 natural parks (1,200 km²), 19 dominant biologic reserves (670 km²), 127 nature reserves (70,000 km²).

The spaces supervised by the national network of SIBE distinguishes in 2 big units: - National and natural park, - Natural reserves.

b) Maritime Biodiversity.

Between the continental and maritime domains, exists the line of beach formed of a multitude of ecosystems that, despite their weak surface, present an ecological interest. They are

Coastal continental ecosystems (rocky cliffs, halophil areas)

At the same time terrestrial and maritime, these ecosystems present a big ecological interest in the fact that they protect specific communities and play an important role in the conservation of coastline. Constituted of semi-closed areas (lagoons, estuaries, bays) in contact with the sea, they present a productivity and an important biologic diversity.

Maritime coastal ecosystems

They protect biotopes populating the neretic zone ,the frayers of various biologic kind as well as some nurseries and some benches of sedentary fish of coastline.

Source: a)

Related Agency
① Ministry of Water and Forests (continental biodiversity) (National system of Protected Areas)
② Ministry of the Maritime Fishing (maritime biodiversity) (Scientific Institution of Maritime Fishing)

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on protection for fauna and flora	?	
② Laws and regulations for protection for specific species	?	
③ Laws and regulations on hunting	?	
④ Laws and regulations on protection area	?	
⑤ Listed species in the Red Data Book	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.10 Natural Resource Management

The management of the natural resources in Morocco is currently shared between different ministerial departments. And the relations between these various entities suffer from insufficiency of communication and of open circuits of information.

Concerning human resources, the management of natural resources suffers especially from insufficiency of personnel and adequate material.

By elsewhere, the financial system foresees only reduced categories for some environmental sectors, the most consistent are destined to the current substructure (electrification, sanitation, water adduction).

As for the pertaining legislation to the preservation of the natural resources, it is currently, insufficient, divided, decayed, little known and hardly accessible. This legislation doesn't allow to face up, with a required efficiency, the copious problems of the preservation of natural resources.

Source: a)

Related Agency
① All the Ministries

Source: a)

Possible Solution
① Designation of an active unique co-ordinator which will act in co-ordination and in co-ordination with the other administrative entities, namely the Ministry of the environment.
② Development of adequate studies for a best management of natural resources ,
③ Foresee some efficient measures for a better preservation of natural resources,
④ Fill in the needs in equipment and in substructure,
⑤ Institute a legislation which meets the present needs and see again the initiative measurements for the protection of the environment,
⑥ Education and sensitisation of the population.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on conservation of natural resources	?	
② Laws on use and conservation of mining resources	?	
③ Laws on underground resources	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.11 Natural Disasters

Morocco underwent natural disasters in the past, like the earthquake which destroyed the city of Agadir in 1960 and the one, less serious which hit years ago the city of Al Hoceima.

Morocco also knew serious floods (1963), particularly in the Rharb where thousands of hectares were flooded.

Concerning earthquakes, it is necessary to note that 2 regions are easily exposed to these natural phenomenon: Agadir in the Souss and Al Hoceima in the North.

Since the policy of dams, floods, though always present in periods of strong rains, have increasingly reduced. However, the swellings risk to occur after strong storms (even in summer season) and cause considerable damages: Case of Ourika in the region of Marrakech, to the piedmont of High-Atlas (August 1994) and El Hajeb in the Middle-Atlas at end of the summer season in 1997.

Finally, result of the strong human pressure on natural resources, laws of nature being unchanging, the big disaster that risks Morocco is its environmental unbalance with real and concrete signals. Indeed, the Rif denuded of its plant cover, bruised by bad weather, lost yearly about 4,500 ton/km² of soil, and also lost its power of water tower. The wild deforestation (more than 300 km²/year), the loss of arable lands (more than 220 km²/year), of a general way, the excessive pressure inflicted to natural resources lead to the deterioration of the natural balance and activate the non functioning of ecosystems.

Source: a)

Institutions: Availability and capacity
<ul style="list-style-type: none"> • Through its meteorological service in Casablanca, Morocco dispose of an efficient tool in order to detect and warn the atmospheric disturbances. This service is as much well equipped as framed. Besides its various regional stations of observations and measurements, it is linked by satellite to the international network of meteorology. • In the domain of the sismology, Morocco has a specialised department in the Scientific Institution of Rabat. Having different stations of observation and measurement, this department work in co-ordination with other similar foreign centers.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on natural disaster	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

4.12 Environmental Education

It is premature to speak about an environmental education, yet with consciousness rather encouraging, on this topic, translated by the organization of an occasional way, of campaign of information, of sensitization, and also of recommendations of connections to maintain towards the environment. In the same way, audio-visual broadcasts about the same themes, are programmed for the big public.

The environment being a universal preoccupation, the idea of inserting the environmental education in the school basic programs, give rise of intense interest on the level of Moroccan responsables.

Source: a)

Related Agency
① The Ministry of Environment (Division of Education and Formation)
② The Ministry of the National Education (Division of Programming)
③ Non Governmental Organizations (NGO).

Source: a)

Related Problems
① Creation of specialized centers in environmental education
② Insertion of the environmental theme in school basic programs
③ Make the big public aware of the role of ecosystems in the balance of the nature.

Source: a)

Laws and Regulations	Presence	Name of Laws or Regulations (Reference)
① Laws on education	?	
② Guidelines on environmental education	?	

Note: ○ : Issued, × : None, △ : Under planning, ? : Unknown

5. INTERNATIONAL RELATIONSHIP

The National Observatory of the Environment of Morocco (ONEM) has registered, on the last 10 years, at least 151 projects and studies dealing with the environment, 50 of them are already achieved, 78 are in course of achievement and 23 are planned for the future.

Source: a)

5.1 International Convention

Name of International Convention	Year
(no information)	

Source: a)

5.2 International Cooperation Project

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
National Observatory of the Environment (Project) PNUD/ UNESCO, MOR/90/001 <ul style="list-style-type: none"> - Set in the SEE of the national observation of the environment - Having at one's disposal a technical instrument for the supervision and evaluation of the conditions of the environment - Carry out studies and audits on the environment on local, regional and national levels - Produce a periodical report on the conditions of environment in Morocco 	Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environment: DES PNUD/UNESCO	in course
Project of the management of the environment (PGE/GTZ): National Laboratory of the study and the supervision of Pollution and nuisance <ul style="list-style-type: none"> - Butting at SSE/PE'S disposal an institution of measures, continuous supervision and the control of pollution (water, air, soil) and this is an institution of reference. - Elaboration of a plan of environmental development for a pilot region - Elaboration of the proposition for setting up the norms and standards for transmission (Air, water) - Setting a unity of data processing related to the environment (models of stimulation, visualization of conditions of the environment) - Continuous training of SSE/PE staff and that of other departments 	Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environment: DES 350 million dirhams	in course
Center of security of maritime navy in Nador, Larache, Essaouira, Laâyoune and Dakhla <ul style="list-style-type: none"> - Insure the technical control of ships - See to the application of the international regulations concerning matter of security and the prevention of pollution in sailing 	Ministry of maritime fishing and of merchant navy	in course
System of lasting development (RDD) in Morocco <ul style="list-style-type: none"> - Facilitate the access on the national level, to informations having to do with lasting development - Facilitate communication among different institution entities and organisms concerned with different domains of lasting development - Reinforcement of the existent capacities, punctulary at the level of certain governmentated organisations si that it can play a more important rôle in the matter of lasting development 	Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environment: DES	expected
System of partners actors in information and data on the Environment (RAPIDE) (Project PNUD/ UNESCO MOR/90/001) <ul style="list-style-type: none"> - Create a system of partners holders of information in the environment in the environment matter - Setting a base of data on the environment integrating the principle actors implied in that domain - Setting a system of control of the environmental state 	Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environment: DES PNUD/UNESCO	in course

Sector: Environmental Politics

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
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Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Project PNUD/UNESCO 90/001 National strategy for the protection of the environment and lasting development</p> <ul style="list-style-type: none"> - Define a national strategy of protection and the evaluation of the environment. This strategy will allow the integration of stakes of development and those of the environment - Setting a permanent mechanism of continuous supervision of the environment (National observatory of the environment) - Reinforcing the mechanism of the management of the environment 	<p>Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environnement: DES PNUD/UNESCO US\$620,000</p>	in course
<p>Project process of action and reinforcement of capacities (PARC)</p> <ul style="list-style-type: none"> - setting and elaborated process of consultation and of participation of all actors concerned with the environment - Elaborate a plan of national action for the protection of the environment 	<p>Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environnement: DES PNUD US\$570,000</p>	expected
<p>Local monograph of the environment of Rabat, Marrakech, Safi and Essaouira</p> <ul style="list-style-type: none"> - Realization of audits of the environment on the local level - Sensibilize and implying the actors and the elected people on the local level - Elaborate the municipal and local plans of environment 	CUD	in course
<p>Local monographs of the environment of Fes, Meknes, Taza, Salé, Oujda, Agadir and Tétouan</p> <ul style="list-style-type: none"> - Realization of the audits of the environment on the local level. - Making sensitive and implying the actors and the elected people on the local level. - Elaborated local plans of the environment 	<p>Ministry of Interior: Sub Secretary of the Gvt in charge of the protection of Environnement: DES BITS</p>	expected
<p>Project of management of the Environnement (PGE)/World Bank</p> <ul style="list-style-type: none"> - Reinforcement of the institutional and administrative frame of SSE /PE - Reinforcement of the legal frame for the protection of the environment - Redynamisation of the National council of the environment. (CNE) - Setting of financial and economic instruments for the reduction and the control of pollution. - Promotion of Environmental education and activities of increasing public awareness. 	<p>Ministry of Interior Sub-secretary in charge of the environment. responsible World Bank US\$6,000,000</p>	in course
<p>Project MEDGEOBASE Morocco</p> <ul style="list-style-type: none"> - Realisation of a geographical Information system (SIG) on the occupation of soil in the littoral of Morocco. - Having at one's exposed an effective instrument for prevention in the matter of planification and help to the decision. 	<p>Ministry of Interior Sub-secretary of state in charge of the protection of the environment, DES: CCE, Spain, METAP, PNUD/ UNESCO US\$700,000</p>	in course

Sector: Agricultural Soils/distance covered

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Sectorial Study of the impact of irrigation on the Environment</p> <ul style="list-style-type: none"> - To do exhaustive of environmental problems having to do with irrigation. - To clear perspectives and orientation for a better protection of irrigated areas. 	<p>Ministry of Agriculture and of the agrarian reform. Ddirection of Rural:el: Financial Backers: Financial A mount, World Bank Japon (US\$250,000)</p>	realized
<p>Elaboration of a strategy of developing the covered lands</p> <ul style="list-style-type: none"> - To analyze the actual situation of covered lands. - To do propositions and orientations for the elaboration of a strategy of developing the covered areas. 	<p>And of Agraire reform World Bank (3,000,000 DH)</p>	realized
<p>Study and supervision of the vegetation on a large scale from space</p> <ul style="list-style-type: none"> - Study and supervise the parameters that describe vegetation (agricole and forests on a regional scal: hydric and energetic conditions, needs of water - Estimate hydric conditions of farming bassins on a regional sclale 	<p>Royal center for spacial teledetection Ministry of Agriculture and Agraire reform CRPE/France</p>	in course

Sector: Health

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Prediction and supervision of the implications of projects of developing Hydric resources (PDRH) on health (illnesses with vectorial transmission)</p> <ul style="list-style-type: none"> - Study and determine with concerned services the parameters to be evaluated for PD RH on the vectorial density. - Elaborate from a concrete case considerations of technical order loka into consideration by technic order which conceives the works PDRH. Setting the procedures for continuation of the implications of PDRH on the vectorial density. - Reinforcement of the entomologic studies. - Acquisition of the appropriate material. - Training technicians - Acquisition of technical documentation. 	<p>Ministry of public health Division of the hygiene of the environment service of healthiness of the environment Bailleur Fonds : OMS, Montant finance</p>	expected
<p>Programme of Action in the rural surroundings</p> <ul style="list-style-type: none"> - Contribute to struggle against illnesses with hydrique conveyance and with oral transmission focusing on: <ul style="list-style-type: none"> - water places: non-infection and continuation of quality. - The behavior of population: promotion of works of stabilization and of hygiene behavior. - The amelioration of the aptitudes of the technical staff operating in of water and of stabilization in rural areas. - The organization of stabilization of training on information, education and communication on the matter of participation in the level of communities, in the projects of supply of water in rural areas. 	<p>Ministry of Publics health: Division of water and service of the hygiene of the environment world Bank</p>	in course

Sector : Habitat

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Struggling program against shanty towns Bying the surface, harnessing and selling them to the suberbs's inhabitants.</p>	<p>Ministry of habitat Direction World Bank (17,009,000,000 DH)</p>	in course

Sector : Education

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Prototypes course of sensibilisation to Environment's problems designed to students of Agriculture studies.</p> <ul style="list-style-type: none"> - Firstly understands the importance and the wideness of the interaction, at the planetary level of the environment degradation process. - Act on the individuals and collective behaviour as fundamental elements in taking aware and sauvegard actions of the living areas. - Permit future agronomists vi a their formation, to be aware of the citizen and the experienced, especially in the malter of the environment protection. 	<p>Ministry of National Education UNESCO</p>	in course

Sector : Regulation

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Project of law on the protection of the environment Marine - This project of law stems from the maritime code. It covers by a system of responsibility which is adapted and specific, all the sources of pollution originated from maritime and permit competent authorities to interfere at the level of the struggle against pollutions in the marine surroundings.	Ministry of maritime fishing and of merchant navy OMS	in course
Project of texts of regulations for the struggle against pollution caused by Energic settlement and products. - Fixation of norms and struggle against pollution caused by energic settlement and products.	Ministry of Energy and Mines Direction of the economy of the Energy and of the environment. CCE, BIRD	realized
Legal strategy for the protection and the evaluation of the Environment (Project PNUD) UNESCO/Mor/90/001 - Setting up a legal frame (legislation) and statutory, indicative and repressive) assuring equilibrium between economic development and the protection of the Environment. - Insuring the legal coherence of all the environmental texts that exist or that will be created, as well as their permanent adaptation to the evaluation of techniques and the condition of the recipient area. - To permit Morocco to meet its international engagements with its despositive of the international right.	Ministry Interior sub-secretary of the Gvt in charge of the protection of the environment DES, PNUD/UNESCO	realized

Sector: Contiaental Water

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Preservation of the quality of resources in water used for food in drinkable water. Definition of a method of work aiming at the protection of impounding and the elaboration of an adapted role in the matter of protection of the quality of water destined to be consumed by human beings.	Ministry of Public labour and professional training and the formation of executives: ONEP CCCE (800,000 Dhs)	realized
Study of Eutrophisation of the dam Mohammed Ben ABDELKRIM AL KHATABI and struggle against the consequence of this phenomenon on the production of drinkable water. - Study of the causes of Eutrophisation and of the degeneration of the quality of water reserved. - Prediction of the solutions of the struggle against this phenomenon.	Ministry of Public labour and professional training and formation of executives ONEP. KWF (3,000,000 Dhs)	realized
Struggle against pollution of resources in water and Amelioration of the service of approvision of drinkable coater. - Reinforcement of the capacities of ONEP in the matter of the study of Eutrophisation of dams redeption of technical means allowing the minimising of the effects of this phenomenon on the production of drinkable water.	Ministry of Public labour of professional training and formation of executives ONEP. JICA (52,000,000 Dhs)	realized
International program of the supervision of the environment - Following of the quality of six places of water - Superficial water : Sebou and Oum Erbia and the quality kept in the dam Maamora and Dakhla.	Ministry of Public labour of professional training and formation of executives ONEP.OMS	in course

Sector: Biodiversity/parks

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Study of definition of a system of areas and protection of sites & the elaboration of plans of management of National Parkin Morocco. - Identification and general study of a new work of areas and protected sites to conserve representative of the biological and ecological diversity in Morocco. - Establishment of plans of Management of national existent parks, those in course of creation and those that are expected.	Ministry of Agriculture and Agrarian Reform Direction of water and forests and soil conservation Division of hunting, fishing and of the protection of nature	in course
Environmental management Souss-Massa Parks. - Protect, preserve and develop local natural and cultural resources as well as ecological process of regions. Clear up a zone and resource that can make the laboratory fuction for forest environmental essay and demonstration.	Ministry of Agriculture and Agrarian Reform World Bank	expected

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Project of Conservation of natural resources and creation of national parks MOR/AGR/0049	Ministry of Agriculture and Agrarian Reform China (US\$93,000)	in course
National study of Biodiversity in Morocco. - Establish the faunistic and floristic inventory - Check the condition of biodiversity in Morocco Identify the height of social economic and environmental objectives, the basic needs for a real preservation and a rational use of the biodiversity as well as the necessary cost to cover these needs.	Ministry of Interior Sub-Secretary of State responsible for the Environment. PNEU (US\$298,500)	in course

Sector: Littoral

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Study of harnessing of the coastal zone of Martil - To evaluate the quality of marine water and its capacity of auto purifying , Evaluate the impact of sanitation of the cites of Tetouan and of Martil on marine water, - Evaluation of the impact of different scenarios of development of the coastal zone ,	Ministry of interior sub-secretary of the government in charge of the environment DES,	in course
Protection of the beach of Tanger (second term) proposed at an average term . - Continuation of the protection of the beach of tangers, conforming to a project elaborated for a total protection .	Ministry of tourism : Ministry of public labour, of professional training and of executives formation . (50,000,000 DHs)	expected
Study related to the appearance of colored water in the sea of river Laou region - The study aims to determine the origin of the phenomenon of coloured water and the predication of soutions to such problem .	Ministry of maritime fishing and of merchant navy ISPM PNUÉ	in course
Project of the protection of the beach in the south of Agadir - Protection and consolidation of the beach of Agadir	Ministry of interior local collectivity of Agadir . Ministry of public labour of professional training and of the formation of executives PNUÉ	expected
Study and supervision of chemical pollution of the littoral by solid metals in the framework of MEDPOL program - Make a study and establish a system of supervision of chemical pollution of the littoral by solid metals - This study done in the framework of MEDPOL Program was spreading to the Atlantic littoral.	Ministry of interior sub-secretary of state in charge of the protection of environment DES PNUÉ	in course
Pollution by the Hydro cabures on the Moroccan littoral - Evaluate the degree of pollution of the littoral of Morocco by petrol residues - Determine practical possibilities of realising an ocean graphic campaign along the Moroccan coast so as to estimate the level of pollution of Marine surroundings by hydrocarbures.	Ministry of maritime fishing and of merchant navy ISPM IFRE, MER/ACCT	realized

Sector: Water sanitation

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Evaluation of the conditions of the environment in Casablanca. - Establish a inventory of the sources of pollution and nuisances affection of environment of the wilaya. - proposing solutions for the amelioration of the situation by agitation en urban holyness of the wilaya.	Ministry of maritime fishing and of the merchant navy ISPM (5,000,000 Dh)	in course

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Amelioration of the hygiene of the area: water and sanitation</p> <ul style="list-style-type: none"> - Amelioration of the special convening in the matter of control and supervision of drinkable water. - Reinforcement of actions in the matter of sanitation. - Special covering of all regions - Elaboration of a national project of norms of liquid wastes - Analysing water in terms of bacteriology, physiochimie and biochimie. - Stratification of area and inomatique treatment. 	<p>Ministry of public health: sanitation service of drinking water: Service of Environmental Salubrity. PNUD (US\$1,525,000 + USD20,000)</p>	in course
<p>Programme of fight against the pollution of water of bathing.</p> <ul style="list-style-type: none"> - Elaborations a national regulation in the matter of control and of the supervision of the quality of water of Bathing and the recreation. - Drawing of the inter sectorial lines in the matter of supervision and of saving of the quality of water of Bathing and the recreation. 	<p>Ministry of Public health: Division of hygiene of the environment. Service of Environmental Salubrity. OMS</p>	in course
<p>Reinforcement of the capacities of ONEP in the matter of sanitation</p> <ul style="list-style-type: none"> - Study of the perimetries of protection for all resources exploited by ONEP. - Elaboration of the procedures of establishing the perimetres of protection - Proposing to public authority the adequate legislative and regulatoryy textes 	<p>Ministry of Public labour and of professional training and of formation of executives ONEP KWF (2,000,000 Dh)</p>	in course
<p>Reusing of waste water for Agriculture</p> <ul style="list-style-type: none"> - The project aims at evaluating different effect of the reuse of used water through - Study of the effect of the use of waste water treated on soil, cultivations and of systems of irrigation. - Definition of sanitary criteria of the use of waste water - Identification of techniques that are more appropriate for a better valorisation of water - The continuation of effects of the reuse of waste water on the environment, - Identification of technics that are more appropriate for a better valorisation of water - The continuation of effects of the reuse of waste water on the environment and particularly on the evaluation of the quality of sheets of water - Elaboration of an approach for the technico-economic evaluation of the quality of water sheets - The reinforcement of national capacities in the domain of reuse of waste water for Agriculture. 	<p>Ministry of Agriculture and Agrarian Reform: Division of Rural harnessing Ministry of health PNUD, FAO, OMS (13,000,000 Dh)</p>	realized
<p>Study of national director diagram of liquid SDNAL MOR/92/020/A/99</p> <ul style="list-style-type: none"> - Analysing, via already effectuated studies and precisig by complementary investigations the general conditions of sanitation at the level of vast geographic and economic zones of the country - Make dependent to the priorities of action in the domain of organization and coordination between administrative authorities of reparing technical documents of orientation making easy the adaquation of studies and projects. - Preparing a decenal plan of works to be enterprized by priority. 	<p>Ministry of Interior: General Direction of Local communities Mr Kessab PNUD, OMS</p>	in course

Sector: Capacity Development

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
<p>Inventory of qualified people that reform activities having to do with the management and protection of the environment</p> <ul style="list-style-type: none"> - Bring a permanent document of identification and localizing each person: scientist, researcher, expert, staff, or technicien having an important experience in the environment 	<p>Ministry of Interior DGUAT FFE</p>	expected
<p>Repertoire of Institutions having activities related to the environment</p> <ul style="list-style-type: none"> - Elaborate a document permitting the identification and the localization of institutions in the domain of the environment, its protection, its management or amelioration, 	<p>Ministry of Interior DGUAT FFE</p>	

Sector: Formation / Sensitization,

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Strategy of increasing public awareness about environmental problems in Morocco, - Inculcate to all actors a real knowledge about environmental problems - Evaluation of the habits and the reflections that are acquired by the population through advocating and developing new values that integrate the notion of respect of the environment,	Ministry of Interior /Sub-secretary of the state in charge of the environmental protection GTZ	expected achieved
Increasing public awareness about the environmental problems - Engage a processus of increasing public awareness about the problem of population / environment,It revolve around two principle axes - Sensitization of the groups that are locally elected, socio-economic actors, administrative and university executives, ONG - An immediate regionalization of a project that is adapted to local realities	Ministry of Interior /Sub-secretary of the state in charge of the environmental protection FNUAP (US\$405,741)	achieved

Sector: Space harnessing

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
National Diagram for Territory Harnessing - Having a technical instrument which aims at : structuring a national space by regionalisation and identification of needs related to the development. - Bringing global orientation and an intersectorial coherence for each of the 7 regions of the kingdom. - Setting up a policy of harnessing territories. This policy is based on the reduction of unbalances and disappearance of inter and intra-regional specificities, and the poles of development so as to play their role of regional dynamism.	Ministry of Interior : DGUAT Direction of Harnessing of territory (DAT) US\$577,654 PNUD (US\$577,654 +1,956,600 Dh)	achieved

Sector: Historical and cultural heritage

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Creation of a National Park of Rupestre graves of high Atlas - Touristic and cultural promotion - Protection of historical an cultural heritage - Knowledge of the history of Moroccan regions containing graves.	Ministry of cultural affairs. Direction of Heritage PNUD, UNESCO	in course

Sector: Forest

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Global inventory of Moroccan wood - Make an inventory of all Moroccan woods and their evaluation on the bases of aerean photographs.	Ministry of Agriculture and Agrarian Reform: Direction of Water, forests and soil conservation. World Bank	in course
Forest Inventory of Morocco - Inventory of forest researches from the 29th parallel (from Goulmime) - Establishment of forests : superfcy, pooping, essence, administrative carving.	Ministry of Agriculture and Agrarian Reform: Direction of Water, forests and soil conservation Division Forestry Researches Banque Mondiale	in course
Forest development and fight against erosion. MOR/AGR/0017 - Promotion of forests development, in weak zone exposed to erosion phenomenon	Ministry of Agriculture and Agrarian Reform: Direction of Water, forests and soil conservation. PAM (US\$19,986,000)	achieved
Valorisation of forest and fauna. MOR/AGR/0079 - Promoting programs for the valuation of forests and fauna	Ministry of Agriculture and Agrarian Reform : France (US\$247,000)	achieved

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Fighting against fires in forests - Optimise the system of prevention and of the fight against fires and this by knowing of what consist the norms.	Ministry of Agriculture and Agrarian Reform: Direction of Water, forests and soil conservation Division Forestry domain. FAO	expected
Project of study of revision of harnessing of the forest of Maamora FAO/GCP/MOR/010/DEA - Adopt a planning for the harnessing of Maamora forest	Ministry of Agriculture and Agrarian Reform: Direction of Water, forests and soil conservation. Division Forestry domain - FAO, Dannemark (US\$1,000,000)	achieved
Ameliorating, multiplying and conserving forest areas. MOR/AGR/0107 - Adopt specific programmes for the amelioration, multiplication and conservation of Forestry areas.	Ministry of Agriculture and Agrarian Reform GTZ (US\$1,808,000)	Achieved

Sector: Important zones

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Project of Development and Protection of Rural Environment of Mountains (Region of Haouz, of High Atlas and of Rif). - Provide economic and commercial opportunities and employment in favour of rural population of mountainous zones in order to help them improve their income - Ameliorate conditions of life - Protect natural ecosystems	Ministry of Agriculture and Agrarian Reform PNUD, USAID, CCCE, FEM	in course
Project of Pastoral development in Oriental regions. - Stop the process of desertification, Ameliorate the income of the population, limit the rural exodus by building dams, and protecting water springs - This project concerns : 4 provinces in Oujda, 2 in Figuig. - Surface: 3 millions Ha.	Ministry of Agriculture and Agrarian Reform: DPA of Figuig FIDA 29%, BAD 41%, FAO 41%	in course
Project PNUD/FAO,RAB 89/034; Establishment of sand duns and deforestation.Stabilisation des Dunes de Sable et Reboisement. - Creation of a national system in charge of problems of desertification. Creation of a periodical bulletin of information. - Promotion, coordination of programmes of applied research, to enterprise at the level of selected sites. - Analysing and evaluating periodically works and results.	Ministry of Agriculture and Agrarian Reform: Forestry Service of Ouarzazate, PNUD, FAO	in course
Struggle against the establishment of Draa: MOR/NAT/0040	Ministry of Agriculture and Agrarian Reform GTZ (US\$2,110000)	achieved

Sector : Atmospheric pollution

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Fight against atmospheric pollution - Control and supervision of the pollution caused by cars and urban centers - Establishment of normes of dismissls bu the escapes of cars Establishment of normes of air quality	Ministry of public health:Division of the hygiene of the environment OMS (US\$70,000)	in course

Sector: Industrial pollution

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Study of the impact of industrial wastes on the quality of Sebou water - Evaluating and characterized industrial wastes - Proposing technological solutions	Ministry of Commerce and Industry 5.000.000 Dh	in course
Audit of the industrial pollution of Mohammadia - Prevention and control of industrial pollution in the region - Institutional development and study of general politics	Ministry of Interior Sub-secretary of state in charge of the environmental protection US\$400,000 METAP (US\$400,000)	realize

Sector: Energetic pollution

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Control of the pollution due to combustible fossil - Evaluation of the degree of atmospheric pollution due to combustible fossil. - Give each year in numbers these wastes. - Reducing these emissions to a certain proportion for a given horizon	Ministry of Energy and of Mines: Direction of the economy of Energy and the environment	in course

Sector: Minimal pollution

Project Name / Objectives	Responsible Organization / Donors (Cost)	Status
Throwing of phosphogyps in the sea: Study of the impact on the physiochemis and biologic characteristics on the marine surrounding. - Objective evaluation of the real impact on the recipient area of phosphogyps and of the element that are susceptiblely related to it.	Ministry of Energy and of Mines CERPHOS FEM (US\$5,053,400)	in course
Emission of dusts and gazes in the industry of phosphates: study of impact. - Realise a study of the impact of emissions caused by the industry of phosphates on the environment	Ministry of Energy and of Mines: Direction of Mines FEM (US\$4,089,000)	expected

Source: a)

6. INFORMATION SOURCE

6.1 Governmental Agency

Name of Organization	Contact Address
1) Ministry of the environment a) National Observatory of the Environment of Morocco b) Division of the sensitization and the Public Relations c) Library and documentation	(no information)
2) Ministry of the Waters and Forests a) Service of the management of the protected areas	(no information)
3) Ministry of the Naval fishings and of the Merchant Navy a) Scientific Institute of Naval fishings	(no information)
4) Ministry of the Public wor a) Direction of the Har b) National Office of the drinking water	(no information)
5) Ministry of the Agriculture and of the Agrarian Reform a) Administration of Farming Genius	(no information)
6) Office of Development and of Exploitation of the Ports	(no information)
7) Direction of the Statistics	(no information)
8) National Center of Documentation	(no information)
9) Pilot Committee a) Ministry of Environment (Direction of Observation, Studies and Co-ordination) b) Ministry of Environment c) PNUD d) FNUAP e) Co-ordinator of RDD f) ONEM «RDD» g) ONEM «RDD» h) Federation of Cabinets of Commerce and Industry i) FNUAP j) Ministry of Agriculture and Agrarian Enhancement k) Ministry of Agriculture and Agrarian Enhancement l) ASMAPE m) National Office of Post and Telecommunications n) Ministry of Foreign Affairs o) Royal Centre of Spatial Teledetection p) Ministry of Population (Direction of Statistics) q) Ministry of Public Health r) Ministry of National Education s) Ministry of Public Labour t) Ministry of Commerce, Industry and Handycraft u) National Centre of Documentation v) National Centre of Documentation w) National Centre of Documentation x) Mohammadia Institution of Engineers y) Mohammadia Institution of Engineers z) Ministry of Population (CERED)	Tel: 68-15-00 Tel: 68-15-02 Tel: 70-35-55 Tel: 70-17-58 Tel: 68-15-79 Tel: 68-15-79 Tel: 68-15-79 Tel: 76-70-51 Tel: 70-17-58 Tel: 76-27-69 Tel: 77-47-86 Tel: 77-29-61 Tel: 73-49-32 Tel: 77-63-05 Tel: 77-31-25 Tel: 77-17-19 Tel: 77-72-47 Tel: 76-59-85 Tel: 76-50-33 Tel: 77-49-44 Tel: 77-31-31 Tel: 77-65-63 Tel: 67-23-41 Tel: 77-36-06
10) Enlarged Committee a) General Direction of Local Communities b) National Centre of Documentation c) Ministry of Public Health d) Ministry of Agriculture and Agrarian Enhancement e) Ministry of Population f) Ministry of Environment g) Ministry of Environment h) Ministry of Environment i) Ministry of Commerce, of Industry and Handcraft j) Federation of the Cabinet of Commerce and Industry of Morocco (FCCIM) k) School of Sciences of Information l) National Centre of Documentation m) ONPT n) ENDA Maghreb o) Ministry of Environment	Tel: 76-87-22 Tel: 77-47-34 Tel: 76-35-85 Tel: 68-15-00 Tel: 68-15-00 Tel: 68-15-00 Tel: 76-50-33 Tel: 77-49-13 Tel: 70-31-15 Tel: 75-64-14 Tel: 68-15-00

Name of Organization	Contact Address
11) Committee of co-ordination	
a) Canadian Agency for International Development (ACDI)	Tel: 67-28-80
b) WHO	Tel: 76-67-44
c) ONUDI	
d) UNICEF	Tel: 77-22-12
e) USAID	Tel: 76-22-65
f) FAO	Tel: 76-57-56
g) PNUD and FNUAP	

Source: a)

6-2 Non-governmental Organization (NGO)

Name	Contact address
Moroccan Association for the protection of the environment (ASMAPE)	PO Box 6331 Rabat Institution Tel: 77-47-86, 74-12-59 Fax: 74-11-53
Moroccan Association for the Right of the Environment (SOMADE)	53 Place Mersultan PO BOX 8110 CASABLANCA Tel: 22-33-97, 26-11-25 Fax: 23-11-00
Moroccan Ecological Association	6 Street Allaouis Rabat Tel: 22-27-27, 29-01-47 Fax: 27-72-56
Moroccan Club for Education, Population and Environment	PO BOX 1072 Rabat Institution Tel: 77-27-41, 67-11-84 Fax: 77-42-89
Louada Association for the Protection of the Environment and Neighbourhood	El Oumouma Avenue Khalid Ibn El Oualid Tétouan Tel: 96-29-50
Association for Preventing Erosion, Drought and Desertification in Morocco- (ALCESDAM)	33 Street Azilal - Casablanca Tel: 30-19-22, 36-15-46
Association of the Treatment of Wastes	54 Street Tensift Agdal Rabat Tel: 77-12-09/08 Fax: 77-56-90
Maghreban Forum for the Environment and the Development	2 Street Zahla Rabat Tel: 72-74-06 Fax: 72-21-27
Moroccan Association for the Sea (ASMER)	PO BOX 4438 Rabat Tel: 74-76-10, 23-07-27
Site and Environment Association	Bloc 68, n° 38 Bernoussi Casablanca
Association of the Protection of the Environment and Nature	13 Street EL MADANI BEN EL HOSNI RABAT
Association of Protection of the Environment	PO BOX 55 Tetouan
Association for a Healthy Environment (SALAMAT EL BIAI)	Wilaya Of Meknes
Casablanca Association of Hunt	10 Street Mounmar district Palmier Casablanca
Moroccan Association of the Amateurs of Pigeons	Delegation of Youth and Sport Casablanca
Association of the Inhabitants of Anfa for the Protection of the Environment	Street Mustapha Shoukri Imm-10, Appt-4 Anfa Casablanca
Group of Study and Research about Renewed Energies (GERERE)	Rabat
Man and Environment	Fes
Energy Forum	Rabat
National Movement of Moroccan Ecologists	7, Street Abdelwahed El Marrakshi Les Orangers Rabat
Struggle against Desertification, Protection of Green and Blue Areas- FMED	
Association Women, Youth and Environment	Rabat
Movement TWIZA	Khemisset
Association ALMA	Faculty of Law Casablanca Tel: 26-11-15, 39-22-25
Association of Women for the Protection of the Environment	18, Street Abou Taïb El Moutanbi Imm Ghninou App-18 Fes
Association Tilkaya for the Rural Development (in region of Agadir)	1, Street Mly Abdelaziz Place Pietri - Rabat
Club of Ecology	Youth House Chefchaouen
CERASE	Rabat
Animal Protection Company (SPA)	Rabat
Moroccan Association of Solidarity and Development	32 B Street Oujda App-4 Hassan CP 10-000 Rabat
Moroccan Association for the Rural Woman Promotion	Residence Irhad Sect- 13 S1 n°3 Hay Riad Rabat
Association of the Protection of the Environment (APE)	PO BOX- 715 Tetouan

Source: a)

6-3 Reference Organizations on the Environmental Profile of Morocco

Subject	Concerned Institutions	Sources of information	Where and how to get other information
Meteorological criteria	Ministry of Public Labour	Atlas of Natural Resources (Documentation of "Maroc Développement")	Service of the National Meteorology
Meteorological maps	Ministry of Public Labour	Atlas de Natural Resources	Service of the National Meteorology
Geological criteria	Ministry of Industry and Mines	Atlas de Natural Resources	Service of Geology
Geological map	Ministry of Industry and Mines	Atlas de Natural Resources	Service of Geology
Ecological criteria	Ministry of Environment	National Strategy for the Protection of Environment and Continuous Development-	<ul style="list-style-type: none"> • Ministry of Public Labour (Service of Technical Affairs) • Ministry of Agriculture (Service of the Conservation of soils) • Ministry of Water and Forests (Service Harnessing)
Map of vegetation	<ul style="list-style-type: none"> • Ministry of Agriculture • Ministry of Water and Forests 	Atlas de Natural Resources	<ul style="list-style-type: none"> • Ministry of Agriculture (Service of the Conservation of soils) • Ministry of Water and Forests (Service Harnessing)
Map of land use	<ul style="list-style-type: none"> • Ministry of Agriculture (Service of the conservation of soils) 	Atlas de Natural Resources	
Solution to problems	<ul style="list-style-type: none"> • Ministry of Environment 	National Strategy for the Protection of Environment and Continuous Development	<ul style="list-style-type: none"> • Ministry of Public Labour • Ministry of Interior • Ministry of Agriculture • Ministry of Transports
Policy	<ul style="list-style-type: none"> • Ministry of Environment 	Document about the Environmental Policy	<ul style="list-style-type: none"> • National Council of Environment (CNE) • National Observatory of Environment of Morocco (ONEM)
Law and regulation	<ul style="list-style-type: none"> • Ministry of Environment (Service of Regulation) 	<ul style="list-style-type: none"> • Document about the Environmental Policy • Inventory of Projects and Studies related to the Environment 	<ul style="list-style-type: none"> • Ministry of Public Labour • Ministry of Agriculture • Ministry of Interior • Ministry of Water and Forests • Ministry of Industry and Mines • Ministry of Transports
Organisation	Ministry of Environment (Division of projects planning and supervision)	Inventory of Projects and Studies relatives to the environment	
Organisation chart	Ministry of Environment (Division of projects planning and supervision)		
Atmospheric pollution	<ul style="list-style-type: none"> • Ministry of Public Labour (Service of National Meteorology: DMN) • Ministry of Commerce and Industry (Service of Protection of the Environment) 	National Strategy for the protection of the Environment and the constant development	<ul style="list-style-type: none"> • Service of the National Meteorology • Public Laboratory of Tests and Studies (LPEE)
Pollution of water	Ministry of Public Labour (Direction de la research and planning Water and National Office of drinking water)	National Strategy for the protection of the Environment and the constant development	<ul style="list-style-type: none"> • National Office of Drinking Water (ONEP)
Other pollution	<ul style="list-style-type: none"> • Ministry of Transports (ONT - ONCF - ONDA) • Ministry of Interior (Inspection of Civilian Protection) 		
Management of wastes	<ul style="list-style-type: none"> • Ministry of Interior (General Direction of Local Communities: DGCL) 	Collect and treatment of household wastes in Morocco	<ul style="list-style-type: none"> • Municipalities • Local Communities

Subject	Concerned Institutions	Sources of information	Where and how to get other information
Conservation of energy/ alternative energy	<ul style="list-style-type: none"> Ministry of Energy and Mines National Office of Electricity: ONE 	Annual Statistic of Morocco 1995	
Alimentation of drinking water	National Office of Drinking Water (ONEP)	Conjuncture – Fortnightly Magazine n°747 of 1st July 1995 (The Management of Water)	<ul style="list-style-type: none"> LYDEC in Casablanca State Management in big cities L'ONEP in the rest of the country
Management of waste water	Ministry of Interior (Service of Local communities and Direction of State Management and et conceded Services)	<ul style="list-style-type: none"> Consultation of the Improving of Sanitation Department of the ONEP- Consultation the Directory Schemes of Sanitation- 	<ul style="list-style-type: none"> LYDEC in Casablanca State Management and Municipalities (in big cities) ONEP and Municipalities (in small and average cities)
Forest conservation	Ministry of Water and Forests (Service of Harnessing)	Consultation of the Forestry Department of "Maroc Développement"	
Biological diversity	<ul style="list-style-type: none"> Ministry of Water and Forests (continent) Ministry of Maritime Fishing and Merchant Navy (sea) 	Consultation of concerned services of the Ministry of Water and et Forests-	Scientific Institution of Maritime Fishing
Management of natural resources	<ul style="list-style-type: none"> Ministry of Agriculture Ministry of Water and Forests Ministry of Public Labour Ministry of Interior Ministry of Maritime Fishing and Merchant Navy 	Consultation of the Service of Conservation of Soils (Ministry of Agriculture)	
Natural disasters	Ministry of Interior (Inspection of Civil Protection)		Service of National Meteorology
Environmental Education	Ministry of Environment (Service of Education and Formation)	Consultation of the Service of Education and Formation	
NGO active in the environment			
International problems	Ministry of Environment (National Laboratory Environment in Morocco: (ONEM))		

Source: a)

6.4 Embassy

Name of Organization	Person in Charge	Contact Address
Ambassade du Japon	(no informatio)	•70 Avenue des Nations Unies, Agdel, Rabat, Maroc
Embassy of Morocco	(no information)	•6F Silver Kingdom Mansion, 3-16-3 Senndagaya, Shibuya-ku, Tokyo 151 Tel: 03-3478-3271

Source: d)

List of Abbreviation			
ASMAPE	Moroccan Association for the Protection of the Environment	NO _x	Nitrogen Oxides
BEI	European Bank of Investment	ONG	Non Governmental Organization
BIRD	International Bank of Reconstruction and Development	ONE	National Office of Electricity
BM	World Bank	ONT	National Office of Transport
CNE	National Council of Environment	ONDA	Office of the Development of Airports
CPE	Provincial Council of the Environment	ONEP	National Office of Drinking Water
CRE	Regional Council of the Environment	ONCF	National Office of the Railroad
CILD	International Convention on the Struggle against Desertification	ODEP	Office of the Development of Ports
CCE	Commission of the European Community	ONEM	National Observatory of the Environment of Morocco
CNS	International Community of Normes and Standards	PNUE	Program of United Nations for the Environment
CNERO	National Center of Oceanographic Studies and Researches	PARC	Processes of Action and Reinforcement of Capacities
CERED	Center of Studies and Demographic Researches	PANE	Plan of National Action for the Environment
CD	Carbon Monoxide	PGE	Project of the Management of the Environment
DGCL	General Direction of Urbanism and the Harnessing of Territory	RED	Autonomous Intercommunal Agency of the Distribution of Water and Electricity
DBOS	General Direction of Local Collectivities	RAD	Autonomous Agency of Distribution
DGUAT	General Direction of Urbanism and the Harnessing of Territory	RAPID	System of Partner Actors in Information and Data about the Environment
DMN	Direction of the National Meteorology	RDD	National Network of Lasting Development
FND	National Fund of the Struggle against Desertification	SIDE	Network of Information and Data about the Environment
GEF	Global Environmental Fund- (FEM) Fund of the International Environment	SSE/PE	Sub-secretary of State in charge of the Protection of the Environment
ISPM	Scientific Institute of Maritime Fishing	SMD	Moroccan Company of Distribution
LPEE	Public Laboratory of Maritime Fishing	SDA	Diagram Director of Sanitation
LYDEC	Water Lyons of Casablanca	SO _x	Sulphur Oxides
MPMMM	Ministry of Waters of Casablanca	TPE	Tonne Equivalent Petrol
MES	Subject in Suspension		
MPS	Particular Subject in Suspension		

Source: a)

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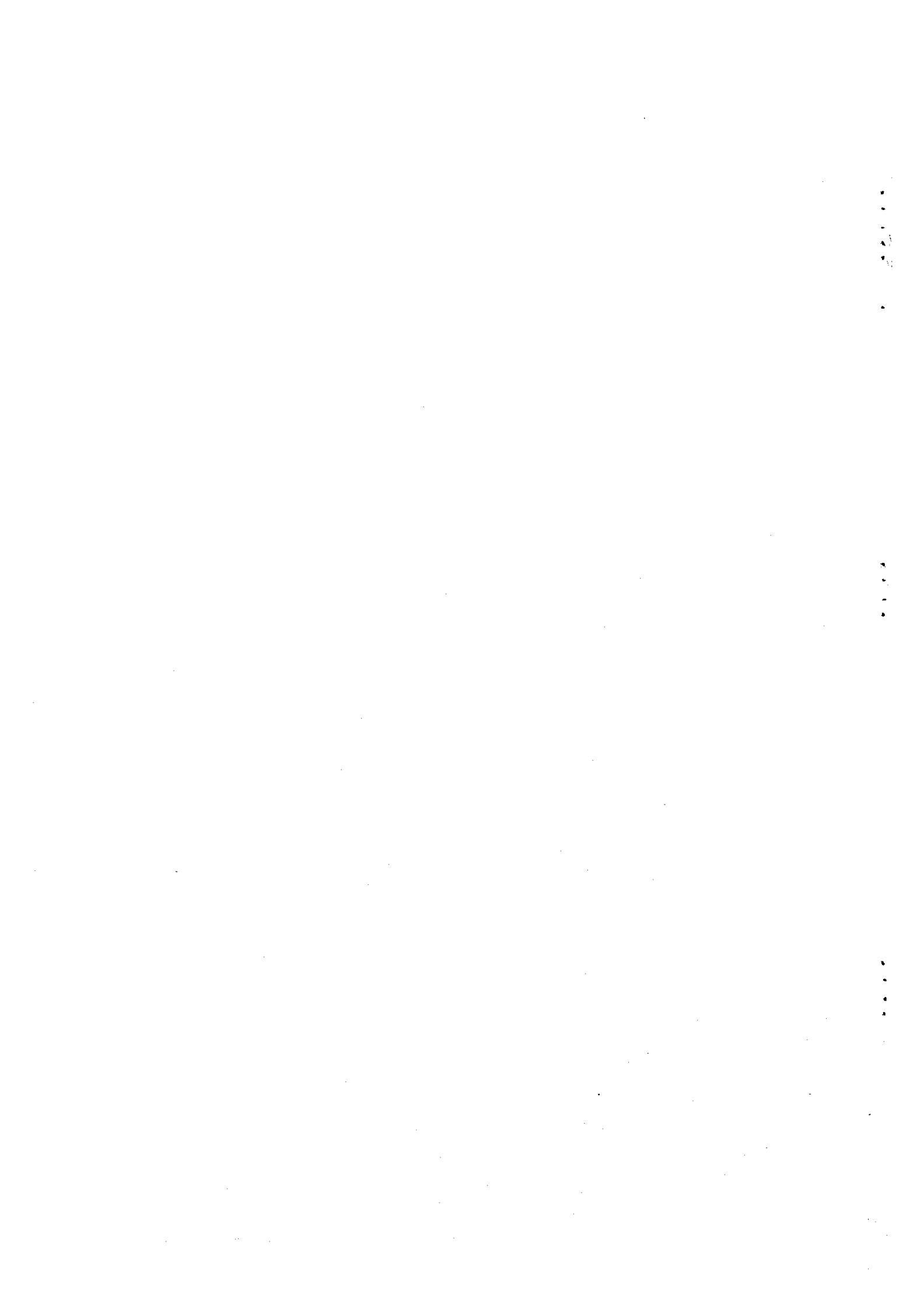
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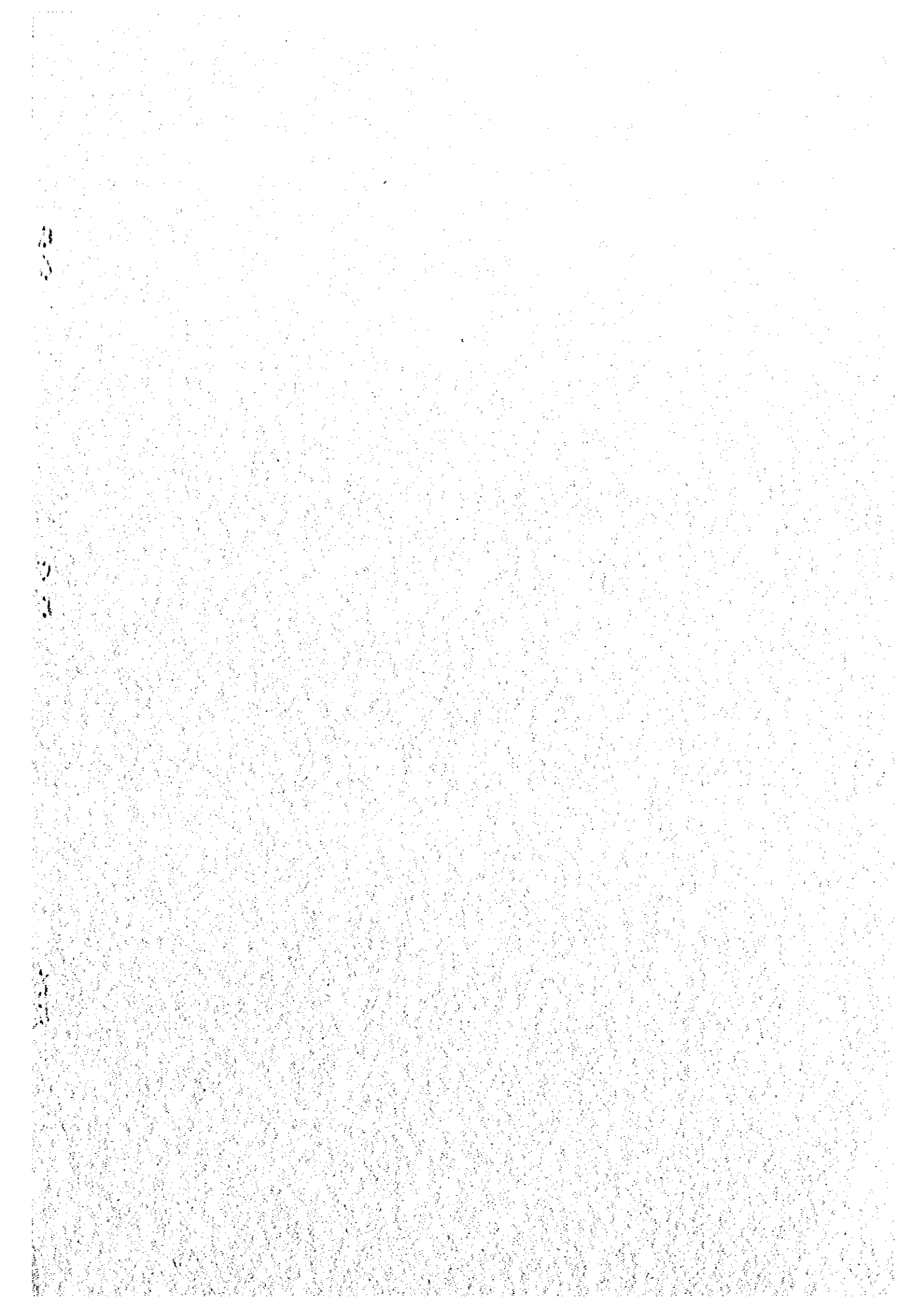
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- a-2) CSE, 1990, Superior Council of Water, Harnessing of basins slopes and protection of dams against the silting up.
- a-3) CSE, 1991, Superior Council of Water, Presentation of hydraulic heritage, protection of the quality of water against pollution. 5th Session.
- a-4) CSE, 1992, Superior Council of Water, The economy of water in the sector of irrigation, 6th Session- January 1992.
- a-5) CSE, 1993, Superior Council of Water, perspectives of hydro-agricultural development.
- a-6) CSEC, 1994, Superior Council of Water and Climate, 1994, Reuse of waste waters in agriculture, January 1994.
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- a-8) DGCL, 1990, Ministry of Interior, General Direction of Local Communities, the collect and the treatment of household wastes in Moroccan cities, 1990.
- a-9) FAO, 1987, Survey for the Integrated Harnessing of high Atlas of Azilal, MARA, Rabat.
- a-10) GTZ, 1992, Technische Zusammenarbeit mit Marokko. Unterstützung of the National Office of drinking water (ONEP) Abwasserbereich im, Projektprüfungsbericht, 2 Volumes.
- a-11) IAD, 1994, Urbanization and Protection of the Environment in the Average Urban Centers in Morocco, German Institute of Development, Berlin, 1994.
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