KINGDOM OF MOROCCO

MINISTRY OF TERRITORY MANAGEMENT,
WATER AND ENVIRONMENT

Directorate for Surveillance
And Risk Prevention

NATIONAL IMPLEMENTATION PLAN FOR STOCKHOLM CONVENTION ON PERSISTENT ORGANIC POLLUTANTS (POPs)

GEF
Global Environment Facility

UNDP
United Nations
Development Programme

May 2006

FOREWORD

In his book "The Silent Summer", Rachel Carson has denounced, at the beginning of the 60s of the last century, the excessive use of organo-chlorinated pesticides in the industrial countries, and has demonstrated their effects on fauna. The publication of this book has urged scientists to direct their research towards analysis of certain chemicals behaviour in the environment and their impact on human health. Today, it has been proved that the use of persistent organic pollutants (POPs), may seriously affect the health of human beings and continuously disrupt the environment.

Being aware of the risks that POPs engender against populations, the government throughout the world, and Morocco among them, have met in Sweden in view to adopt a treaty allowing limitation, then total prohibition of production, sale, use and storage of most hazardous POPs. This treaty which objective is to protect human health and the environment against persistent organic pollutants, was signed by Morocco on 23 May 2001, and ratified on 21 April 2004.

The ratification of the agreement has stimulated a series of actions aiming at the reinforcement of the country capacities in the management of chemical product in general, and POPs in particular. Therefore, various studies and concrete projects have been launched, among which we will mention the "National Chemical Profile", the "National Inventory for Hazardous Chemical Products", "Inventories of Equipment containing PCBs", as well as the setting up of important projects such as the one regarding elimination of expired pesticides stockpiles, in framework of the African Project for the Elimination of Expired Pesticide Stockpiles. The achievement of the "National Centre for the Elimination of Hazardous Wastes", now under elaboration, will certainly allow the country to set up the required technical basis for an optimal and environmentally sound management of wastes and chemical substances.

In order to particularly fulfil the Stockholm Convention obligations, Morocco has also initiated, with the support of the United Nations Development Programme (UNDP) and the Global Environment Fund (GEF), the Morocco-POP project which main objectives were the elaboration of the National Implementation Plan (NIP) for Stockholm Convention, and the preparation of the National Plan of Action (NPA) for reduction of unintentional POPs releases. These two plans, which constitute the main subject of this document, are the result of a participative process, coordinated by our Ministry and to which have taken part the concerned public administrations, professional associations, scientists, international experts and several NGOs.

This project has particularly allowed Morocco to reinforce its capacities with regard to POPs management, namely thanks to the elaboration of several studies, among which the survey on "National needs regarding POPs management" and the "National inventory for POPs". The project has also permitted the achievement of various actions of sensitization, information and communication around the issue of POPs, in view of obtaining adherence of stakeholders to the Plan of Action.

The National Implementation Plan (NIP), which will be presented during the second Conference of the Parties (COP2), in May 2006 in Geneva, was approved by all concerned parties and sustained by stakeholders. It constitutes Morocco's confirmation of its commitments with regard to Stockholm Convention, presents the national policy concerning POPs and main actions that the country intends to achieve in accordance with the Convention provisions.

The present document was elaborated thanks to UNDP Rabat support and the active collaboration of members of the National Coordination Board for Morocco-POP project, professionals from the different concerned departments, experts and national scientists. I wish to here express my sincere thanks to all those who have contributed to this exercise, for their consented efforts and the excellent quality of the work achieved.

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The success of this document is due to the precious collaboration of all members of the National Coordination Board for POPs, and the support of UNDP Office in Rabat

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ACRONYMS AND ABBREVIATIONS

ADP	Air Dried Pulp
APCS	Air Pollution Control System
APD	Agriculture Provincial Directorate
APEPS	African Programme for Elimination of Pesticides Stockpiles
AL	Arab League
ARIC	African Regional Information Centre
ASP	African Stockpile Programme
BAT	Best Available Techniques
BEP	Best Environmental Practices
CAS	Chemical Abstract Service
COP	Conference of the Parties
DSRP	Directorate for Surveillance and Risk Prevention
ERC	Environment Regional Council
GAM	Great Arab Maghreb
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
HCB	Hexachlorobenzene
HCWC	Higher Council for Water and Climate
I-TEF	International Toxicity Equivalency Factor
MAFHS	Moroccan Agency for Food Health Security
MOET	Ministry of Equipment and Transport
MOCI	Ministry of Commerce and Industry
MOH	Ministry of Health
MOI	Ministry of Interior
MTMWE	Ministry of Territory Management, Water and Environment
NC	National Coordinator
NCIS	National Committee for Impact Studies
NCP	National Chemical Profile
NCESW	National Centre for Elimination of Special Wastes
NCB-POP	National Co ordination Board for POPs
NCCL	National Centre to Combat Locusts
NCP	National Commission for POPs
NEP	National Environment Plan
NEC	National Environment Council
NFC	National Forest Council

NGO	Non-Governmental Organisation
NIP	National Implementation Plan
NLMC	National Laboratory for Medicines Control
NLN	National Laboratory Network
NODW	National Office for Drinking Water
NSC-POP	National Study Committee for POPs
OLCAR	Official Laboratory for Chemical Analyses and Research
PCB	Polychlorinated Biphenyls
PCO	Phosphates Cherifian Office
POP	Persistent Organic Pollutant
POPRC	Persistent Organic Pollutants Review Committee
TPE	Ton Petrol Equivalent
UNO	United Nations Organisation
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFPA	United Nations Population Fund
UNIDO	United Nations Industrial Development Organisation
WC	Works Centres
WEF	World Environment Fund
WHO	World Health Organisation
WTO	World Trade Organisation

INTRODUCTION

During the first half of the twentieth century, the chemical industry has improved thousands of products earmarked at agriculture and industry. While certain of these substances have really contributed to improve human life conditions, others were revealed highly toxic, particularly those products which persist for years in environment, migrate across long distances, concentrate along the food production line and consequently, have serious toxic effects on human health and natural ecosystems.

Therefore, since the beginning of the 60s, scientific proofs have demonstrated the hazardous effects of these products which are known under the generic of Persistent Organic Pollutants (POPs). Facing the danger of these chemicals, the international public opinion has mobilised to ask nations, throughout the world, to prohibit production and use of them.

In view of protecting the human health, an international convention on Persistent Organic Pollutants, negotiated and prepared under the auspices of the United Nations Environment Programme (UNEP), was adopted at a Conference of Plenipotentiaries, held from 22 to 23 May 2001, in Stockholm, Sweden. According to this international agreement, the signatory members are engaged to implement adequate means to protect human health and environment from dangers linked to POPs.

By signing this convention, on 23 May 2001, and ratifying it on 21 April 2004, Morocco was willing to contribute to the international community efforts in view to fight against negative effects of POPs. Therefore, the country is engaged in the elaboration and execution of a national plan for the implementation of Stockholm Convention, according to Article 7.1.b of the Convention.

In order to reinforce its capacities in POPs management and prepare a plan of action aiming at reduction, and later, elimination of POPs, Morocco has implemented, with financial support of the World Environment Fund, the Morocco-POP project of which the present National Implementation Plan (NIP) constitutes the result.

As a result of two years of discussion between different stakeholders, the NIP expresses the initiatives that Morocco has taken or intends to take in order to fulfil its obligations vis-à-vis Stockholm Convention.

Document Components

The introductory Chapter One presents the great lines and objectives of the National Implementation Plan for Stockholm Convention, the steps adopted for its elaboration, as well as means employed during the process of dialogue with all stakeholders. The question of POPs is summarized in a way to define the context and provide general information on these chemicals, their use and the problems they raise. In the end, a brief analysis of Stockholm Convention and Morocco's obligations is presented.

The second Chapter presents the Moroccan profile, which comprises a descriptive of the national geographic and socio-economic context and a global view of the institutional, political and

legislative environment with regard to the objective of Stockholm Convention.

The third Chapter presents the situation of POPs in Morocco, namely the present legislative frame, data collected along the preparation phases of the National Implementation Plan (NIP), results of POPs inventories and evaluation of national capacities in the management of POPs.

The fourth Chapter exposes the NIP for the elimination of POPs, as well as the intention declaration, the implementation strategy, the actions and necessary means to achieve the objectives. This Chapter also integrates the national plan of action for the reduction of unintentional POPs' releases.

ANALYTICAL SUMMARY

Persistent Organic Pollutants (POPs)

The POPs are complex organic molecules which, unlike other pollutants, are not defined from their chemical nature, but from four characteristics: toxicity, persistence in environment, bioaccumulation and long distance transport.

In order to protect human health, the governments throughout the world adopted in Stockholm, a treaty that allows limitation, then total elimination, of production, sale, use and storage of the most dangerous POPs.

The 12 POPs listed in the Convention when entered into force, on 17 May 2004, are 9 organo-chlorinated pesticides (aldrin, dieldrin, chlordane, toxaphene, endrin, heptachlor, DDT, hexachlorobenzene and mirex) , industrial products (polychlorinated Biphenyls or PCB) and unintentional products (dioxins and furans).

The Stockholm Convention

The Convention anticipates the prohibition of production and use of endrin and toxaphene products, just after entry into force, prohibition of production of aldrin, dieldrin, heptachlore and polychlorinated Biphenyls (PCB), prohibition to use any equipment containing PCB after 2025, destruction of all PCB stocks before 2028, limitation of production and use of chlordane, hexachlorobenzene and mirex at strictly defined ends, limitation of production and use of DDT in fight against disease vectors. Concerning emission of unintentional POPs, the Convention urges the Parties to set up measures allowing reduction of dioxins and furans releases.

The Convention authorises Parties to obtain exemptions applying to a chemical substance, to a country and to a particular use. These derogations have a maximum duration of five years after the date of the Convention entry into force.

Morocco signed the Convention on 23 May 2001, and ratified it on 21 April 2004. Therefore, for Morocco, the Convention entered into force on 13 September 2004, meaning 90 days after submission of ratification instruments. The only derogation required by Morocco concerns the use of DDT in the fight against disease vectors, for an initial period of five years.

Morocco-POPs Project

In view of reinforcing its capacities in management of POPs, and facing its obligations vis-à-vis Stockholm Convention, Morocco has set up the Morocco-POPs project. Its main objective is the achievement of the National Implementation Plan (NIP) and the Plan of Action for reduction of unintentional releases. The elaboration process of the NIP was engaged in conformity with UNEP recommendations, and was prepared according to the following steps:

- **Phase 1:** Setting up of coordination mechanisms and work groups;
- **Phase 2:** Study of requirements and preparation of POPs' inventories;
- **Phase 3:** Elaboration of national priorities and definition of objectives;
- **Phase 4:** Formulation of the NIP:

- **Phase 5:** Validation and submission of the NIP

At the beginning of the project, a National Coordination Board for POPs (NCB-POPs) was created. It is composed of concerned Administrations' representatives, professional associations and other stakeholders. The NCB-POPs has allowed collection of information on POPs as well as proposals for action. It also constituted a frame of consultation for setting priorities and validation of the NIP.

POPs Inventory

The inventories have concerned POPs pesticides, PCB equipment and unintentional releases of dioxins and furans. This study came up with the following results:

- The stockpiles of POPs pesticides in Morocco are around 39.2 tons, almost exclusively composed of DDT. They are administered by the Ministry of Health (MOH), and are used in certain regions against "anophel" mosquito, vector of malaria;
- The number of PCB power transformers amounted to 573 units, in 2005, containing around 200 tons of PCB. Also, the volume of transformer contaminated oils, in the sense of the Convention (i.e. more than 50 ppm of PCB), is around 3500 tons;
- The annual releases of dioxins and furans were estimated to 235 g-TEQ, through UNEP standard method. The procedures of uncontrolled burning are 70 percent responsible of these releases.

National Priorities

In the framework of the NCB-POPs, a wide consultation took place among the stakeholders, to identify national priorities regarding POPs management and propose appropriate measures for each problem. The priority fields for Morocco are the following:

- Updating the national legislation in order to take Stockholm Convention obligations into account;
- Development of a strategy for identification and destruction of non-identifiable pesticides stocks, obsolete or subject to contain POPs;
- Development of an integrated strategy for management of chemicals used in the fight against disease vectors, including DDT;
- Elaboration of a strategy to eliminate PCB equipment from the national environment, and destroy PCB contaminated oils ecologically;
- Promote implementation of best available techniques in industry units subject to release unintentional POPs, and help the local communities better manage their rubbish dumps;
- Develop a strategy for sensitization and communication with the public, in view to reduce POPs generator practices;
- Develop national technical capacities regarding POPs management.

Actions

The actions foreseen by the NIP were identified and classified taking into account the following criteria: requirement with regard to Stockholm Convention, benefits for public health and environment, technical and economic feasibility, perception of the problem by stakeholders and the public.

Because of limited economic resources in the country, the implementation strategy takes the financial constraints into consideration and gives priority to actions that allow reduction of POPs direct negative impacts on health and environment. In particular, the NIP insists on less costly actions that are achieved at short term and which are likely to benefit from the support of national economic operators and NGOs.

Monitoring and Evaluation

The implementation of the NIP will be subject of regular evaluations by the National Commission for POPs (NCP), services of the Ministry of Territory Management, Water and Environment (MTMWE), and once every three years, by an independent expert known at international scale.

The results of different evaluations will lead to adjustments the NIP components in terms of real impacts of each action and changes intervened during the implementation.

Programmes of action by sector will be established, when needed, and implemented according to the objectives and strategy of the NIP.

CHAPTER I: CONTEXT OF THE NIP

I.1- POPs AND STOCKHOLM CONVENTION

Several expert have, some decades ago, attracted the attention of public authorities and the international community on the danger of certain highly toxic chemicals, that resist to all forms of degradation, accumulate in living ecosystems and are transported on long distances to contaminate the entire planet. These products are known as Persistent Organic Pollutants (POPs).

In view of protecting human health, the governments throughout the world adopted, in Stockholm, a treaty allowing restriction, then total elimination of production, sale, use and storage of most dangerous POPs.

I.1.1- POPs ACCORDING TO STOCKHOLM CONVENTION

The POPs are complex organic molecules which, unlike other pollutants, are not defined from their chemical nature but from the following characteristics:

Toxicity: toxic properties are proved on human health

Persistence in environment: POPs resist natural biological degradation and their life duration is counted in decades

Bioaccumulation: they accumulate in living tissues and their concentration increases along the food line

Long distance transport: because of their persistence and bioaccumulation characteristics, POPs are transported on long distances and deposited far from emission places, typically warm environments (with strong human activity) and cold places (the Arctic in particular).

Although several products can enter this category, the experts have identified, in a first step, twelve chemicals which are distinguished by their dangerous effects on man and environment.

The twelve POPs listed in the Convention at the time of its entry into force (on 17 May 2004), belong to three big categories: pesticides, industrial chemical products and unintentionally produced POPs.

POPs PESTICIDES

They are nine products:

Aldrin: pesticide used against termites, locust and other parasitic insects;

Chlordane: this product has been used intensely against termites and, as a wide-spectre insecticide it was used to protect numerous plants;

DDT: No doubt, DDT is the most known of POPs. It was intensely used during the Second World War to protect soldiers and civil population from malaria, typhus and other diseases propagated by insects. It is still used in many countries to fight against malaria vector insects;

Dieldrin: It is mainly used to destroy termites and textile plant parasites. It was also used against insects living in agriculture soil and diseases transmitted by insects;

Endrin: It is vaporised on grains and leaves of cultivated plants, like cotton; it is also used against mice, voles and other rodents;

Heptachlor: It is mainly used as a termiticide, but also against cotton parasites, locust and malaria vector mosquitoes;

Hexachlorobenzene (HCB): It is used against fungus in food crops. HCB is also an industrial chemical product, as well as an unintentional by-product with releases caused by combustion process;

Mirex: Insecticide mainly used against fire ants and other kinds of ants and termites. It is also an industrial chemical product;

Toxaphene: Insecticide to protect cotton, cereal grains, fruit, walnut and vegetables. It was also used against ticks and cattle mites.

INDUSTRIAL CHEMICAL SUBSTANCES

Three industrial chemical products are classified as POPs:

Polychlorinated Biphenyls (BCPs): These composed products are used in industry as fluids and additives to paint, duplicating paper, watertight material and plastics. They are also present in electric transformers and condensers. Moreover, they are unintentional by-products of combustion process.

Hexachlorobenzene (HCB): HCB is used in the production of rubber, aluminium, ammunitions, dyeing and in wood preservation and other manufacturing procedures.

Mirex: This chemical product is used as fire-resistant in plastic, rubber and electric products. It is also a pesticide.

UNINTENTIONALLY MANUFACTURED POPs

The last category of POPs is composed of synthesised products in an unintentional manner, namely:

Dioxins (PCDD) – Chemical substances of which the unintentional production is the result of incomplete combustion, manufacturing of certain pesticides and other chemicals, and recycling procedures of metal and whitening of pulp and paper. They are also found in car exhaust fumes, tobacco smoke, and wood and charcoal fumes.

Furans (PCDF) – These composed products are the unintentional result of the same procedures that are responsible of dioxins releases. They are also found in commercial mixtures of BCP.

Hexachlorobenzene (HCB) – It is a sub-product of manufacturing industrial chemical substances. Its releases are caused by certain thermal processes.

Polychlorinated Biphenyls (PCB) – PCBs can be unintentional sub-products of thermal processes.

The list of POPs is not definitely closed. In its Article 8, Stockholm Convention foresees the possibility of registering new chemicals in one of its annexes A, B or C, on proposal of one of the Parties, if the proposed product is in line with the required conditions in annexes D, E and F of the Convention.

In this respect, Stockholm Convention has previewed the creation of a Persistent Organic Pollutants Review Committee (POPRC), in charge of proposing new products to be included on the list of POPs. This committee was created during the first Conference of Parties, held in Uruguay in May 2005, when Morocco was elected to represent North Africa for a two-year period.

I.1.2- ORIGIN AND TOXICITY OF POPs

POPs are introduced in environment by certain human activities like spreading some composed pesticides against devastators, manufacturing dielectric oils, containing PCB, for power transformers and electrical condensers. Some industrial processes using combustion are also potential releasers of formed POPs, like waste incinerators, thermal processes in the metallurgical and chemical industry...

Besides, diffused releases which are difficult to evaluate and then, rarely mentioned in national inventories, are more and more considered as major sources of dioxins and furans: burning of landfill sites, burning of waste, forest fire and building fire, etc...

The animal experiments and accidental exposures have shown that POPs may cause foetal anomalies, cancer, dysfunction of the immunity system and reproduction problems in the mammals. Most recent studies have demonstrated that exposure level, although very weak, may, in the long run, increase the rate of congenital malformations in humans and provoke serious diseases, including cancer. Because of their propagation and bioaccumulation characteristics, POPs invest in all biological environments and concentrate in organisms located upstream the food line. Therefore, they constitute a serious threat to human health in the world.

I.1.3- PROVISIONS OF STOCKHOLM CONVENTION

The objective of Stockholm Convention on POPs is to protect human health and its environment by creating an institutional and regular framework that allows the international community to unite efforts in view of eliminating persistent organic pollutants from our environment.

The first objective of the Convention is to eliminate releases and use of the twelve most dangerous POPs. The main provisions of the Convention can be summarised as follows:

- **a.** Prohibition to produce and use "Endrin" and "Toxaphene" pesticides as soon as the Convention enters into force;
- **b.** Prohibition to produce "Aldrin", "Dieldrin" and "Toxaphene" pesticides, as from entry into force of the Convention. The Parties that wish to use existing stocks of these products at specific ends, should ask for public derogations for a determined period;
- **c.** Prohibition to produce "Polychlorinated Biphenyls" (PCB) as from entry into force. The parties should stop utilisation of any equipment containing PCB before 2025. The quantities recovered of PCB should be eliminated before 2028;
- **d.** Limitation of production and use of "Chlordane", "Hexachlorobenzene" and "Mirex" to strictly defined ends and only to Parties listed in the Register for specific exemptions;
- **e.** Limitation of production and use of "DDT" (Annex B of the Convention) to fight against disease vectors, for countries that have asked and obtained an exemption, and as a synthesis intermediary for manufacturing "Dicotol" pesticide;
- **f.** Restriction to import and export the 10 intentional POPs, authorizing their transport only for ensuring their ecologically rational destruction, or for an authorized use in a country having obtained a derogation;
- **g.** Setting up measures to reduce unintentional releases of products listed in Annex C ("Dioxins" and "Furans", "Hexachlorobenzene" and "Polychlorinated Biphenyls");
- **h.** Setting up measures to reduce releases emanating from stockpiles and contaminated wastes by products listed in Annexes A, B and C;
- **i.** Elaboration by signatory countries, within two years following entry into force of the Convention for each country (13 September 2006 for Morocco), of a National Implementation Plan (NIP) for Stockholm Convention, as well as a Plan of Action regarding reduction of unintentional releases of POPs.

The other provisions of the Convention concern namely the possibility to register new POPs in one of the three Annexes, the establishment of a system for information on POPs as well chemicals of substitution, the promotion of training activities and research in the field of POPs and technical and financial assistance for developing countries.

Finally, Stockholm Convention has provided for the creation of its own management subsidiary bodies, namely the Persistent Organic Pollutants Review Committee (POPRC) and the Committee for Best Available Techniques/Best Environmental Practices (BAT/BEP). The Convention Secretariat is in charge of coordination of activities in the framework of the Convention.

I.1.4- DEROGATIONS AND DELAYS FOR EXECUTION

The second objective of the Convention is to proceed to the progressive replacement of POPs by less dangerous molecules having the equivalent efficacy.

In this respect, some POPs are no longer used by any country since a long time, and were replaced by other products. Therefore, their immediate and complete prohibition does not pose any problem: case of "Endrin" and "Toxaphene". However, certain POPs are still necessary in some countries where no substitute, equivalent in terms of efficacy and/or cost, has yet been found. In order to allow these countries to enter the Convention progressively, exemptions are foreseen to derogate temporarily, and under certain conditions, to the Convention obligations.

In particular, some products, like DDT, are still necessary to combat malaria which continues to ravage in many countries. Therefore, the elimination of this product should be made progressively to leave time for scientists and user countries, to find substances of replacement. The countries that wish to use DDT should have its name on the public register for exemption, and provide a report on the relevance of its utilisation every three years.

Regarding PCBs, substitution products are largely used, but there are still great numbers of condensers and electrical transformers full of substances that require elimination. However, it is difficult and costly, particularly for developing countries, to eliminate and quickly replace all equipment containing PCBs. The Convention has then provided a delay, until 2025, to proceed to the replacement of all PCB equipment, then a further three years to destroy all stocks of PCB contaminated equipment.

Moreover, the Convention authorises Parties to obtain explicit exemptions, meaning derogations for one or other chemical to one country and one particular utilisation. These exemptions have a maximum duration of five years after the date of entry into force of the Convention, with regard to the related chemical. On quick request and in special circumstances, the Conference of Parties (COP) may decide to extend a given exemption, only one more time, for a period up to five years.

The exemptions foreseen by the Convention regarding the other pesticides are:

- Limited production and use for specific ends of "Chlordane", "Hexachlorobenzene" and "Mirex";
- Use of stocks still available of "Aldrin", "Dieldrin" and "Heptachlore", for specific ends. The production of these pesticides is prohibited since the entry of the Convention into force.

The signatory countries wishing to benefit from an exemption should submit a justification report to the Convention Secretariat. The Conference of Parties examines the report and makes recommendations to the country that requests the exemption.

A public Register of exemptions is maintained by the Secretariat. It comprises:

a. A list of specific types of exemptions foreseen in Annexes A and B;
b. A list of Parties benefiting from a specific exemption foreseen in Annex A or Annex B;
c. A list of expiry dates for each specific exemption registered.

We underline here that Morocco has requested a specific derogation to continue the use of DDT against the anopheles malaria vector. This disease is still encountered in some regions of Morocco.

I.1.5- REPORTS TO THE CONFERENCE OF PARTIES

In framework of the Conference of Parties (COP), each country has to inform other nations on arrangements in place, efforts made and results obtained. In particular, each Party has to submit the following reports:

- **a-** A Plan of Action for the identification, characterization and management of release of chemicals listed in Annex C of the Convention. This plan is to be reviewed every five years (see Article 5);
- **b-** A National Implementation Plan (NIP), two years after ratification of the Convention, including the first national plan of action for the reduction of unintentional releases. The factors due to start an assessment and updating of the NIP, could be internal or external to the Party (According to Article 7 and decision SC-1/12 of COP);
- **c-** A report on measures taken to apply Stockholm Convention and on efficiency in achieving objectives (Article 15). Established according to the format adopted by COP, this report will comprise statistical data regarding production, use import and export of each of the products listed in Annexes A and B of the Convention, as well as a list of countries from which it has imported or to which it has exported POPs. The initial report will be submitted to the Secretariat of the Convention before 31 December 2006, in view of its assessment during COP3 in 2007, then every four years later (Decision SC-1/22 of COP1);
- **d-** A report on monitoring activities results led by countries or regional bodies four years after the of entry into force of the Convention, and periodically afterwards according to an agenda to be defined by COP2 (Article 16, §2);
- **e-** A report on progress achieved in PCB elimination every five years (alinea g – second part of Annex A);
- **f-** Every Party that uses DDT should also provide, every three years, a report on quantities utilised, conditions of this use and its interest for prophylactic strategy (§ 4 – second part of Annex B).

The following table summarizes the planning of reports to be transmitted to COP, in framework of POPs activities monitoring

2004	Entry into force of the Convention (17 May 2004)					
	2-6 May 2005 Punta del Este – Uruguay Starting of Convention implementation					COP-1
2006	May 2006 – 1st NPA & 1st initial NIP (Article 7) Dec 2006 – Initial NAT REP (Article 15)	NAT REP	NPA	NIP		COP-2
	1st Report on DDT (Annex B)		DDT			COP-3
2008	1st Evaluation of the Convention efficiency (Article 16)			CEE		
	1st Report on PCBs (Annex A) Deadline for exemptions		PCB	NIP		COP-4
2010	2nd Report on DDT 2nd National report	NAT REP	DDT			
	1st Evaluation of the NPA		NPA	NIP		COP-5
2012						
	3rd Report on DDT 2nd STAT Report		DDT			COP-6
2014	3rd STAT Report 2nd Report on PCBs	NAT REP	PCB			
				NIP		COP-7
2016	4th Report on DDT 2nd Evaluation of the NPA		DDT	NPA		
						COP-8
2018	4th STAT Report	NAT REP				
	5th Report on DDT 3rd Report on PCBs	PCB	DDT	NIP		COP-9
2020						
	3rd Evaluation of the NPA		NPA	NIP		COP-10
2022	5th STAT Report 6th Report on DDT	NAT REP	DDT			
						COP-11
2024	4th Report on PCBs		PCB			
	7th Report on DDT Stopping use of PCB equipment		DDT	NIP		COP-12
2026	6th STAT Report 4th Evaluation of the NPA	NAT REP	NPA			
	7th Report on DDT Elimination of PCB equipment					COP-13
2028	8th Report on DDT		DDT			

COP : Conference of the Parties

NPA — National Plan of Action aiming at identifying, characterizing and managing releases listed in Annex C. This Report should be revised every 5 years (Article 5)

NIP — National Implementation likely to be reviewed according to internal and/or external factors To the Party (Article 7, decision COP-1 SC-1/12).

NAT RAP — Report on majors taking to apply the Convention and on their efficiency in achievement of objectives (Article 15).

DDT — Each party using DDT should provide every three years a report on quantities utilized and it interest of prophylactic strategy (§4-2nd part of Annex B)

CEE — Convention efficiency evaluation report on measures taken to apply the Convention and on their efficiency In achievement of objectives (Article 15).

PCB — Report on progress achieved in elimination of PCBs every 5 years (2nd part of Annex A)

I.2- PURPOSE OF THE NATIONAL IMPLEMENTATION PLAN (NIP)

Stockholm Convention on Persistent Organic Pollutants is an international agreement in pursuance of which, signatory nations are engaged to implement adequate means to protect human health and the environment from dangers linked to POPs.

Morocco signed the Convention on 23 May 2001 and ratified it on 21 April 2004. Therefore, it is engaged to elaborate and execute a national implementation plan, according to Article 7.1.b of the Convention which stipulates that "Each Party shall transmit its implementation plan to the Conference of the Parties within two years of the date on which this Convention enters into force for it"_ meaning 13 September 2006 for Morocco.

The purpose of the NIP is to inform the Conference of the Parties (COP) and the public in general, on the situation of POPs in Morocco and the initiatives that the country has taken or plans to take, in order to fulfil its obligations with regard to Stockholm Convention.

These initiatives comprise institutional arrangements, the adoption of a specific jurisdiction, imposition of norms, achievement of specific programmes for de-pollution/elimination, and all other provisions intended to manage POPs in an ecologically sound manner and eliminate them from the environment.

From another side, Article 5 of the Convention stipulates that the NIP should comprise a plan of action to reduce releases of unintentionally produced POPs, namely dioxins and furans, hexachlorobenzene (HCB) and polychlorinated Biphenyls (PCB).

These two plans are integrated in the present document.

I.3- PROCESS FOLLOWED FOR THE ELABORATION OF THE NIP

In order to achieve the National Implementation Plan and develop national capacities allowing fulfilment of its obligations with regard to Stockholm Convention on POPs, Morocco has benefited from GEF funds through UNDP, in framework of Project MOR/02/G31.

The project is jointly executed by the Ministry of Territory Management, Water and Environment (MTMWE) and UNDP. It allowed achievement of several successful activities regarding diagnostic, sensitization, and development of knowledge and reinforcement of POPs management capacities.

The project has also allowed Morocco to set up mechanisms for dialogue, exchange of information and cooperation between stakeholders (governmental institutions, NGOs, private sector, scientists, etc...). The main result of the project consists in the elaboration of national inventories of POPs, preparation of the NIP and its endorsement by the stakeholders.

In pursuance of UNEP recommendations, the implementation of the project was made according to the following phases:

- **Phase 1:** Setting up mechanisms of coordination and working groups;
- **Phase 2:** Elaboration of POPs inventories and collection of basic information on Morocco profile;
- **Phase 3:** Elaboration of national priorities and definition of objectives;
- **Phase 4:** Formulation of the NIP;
- **Phase 5:** Validation and submission of the NIP.

I.3.1- COORDINATION MECHANISMS AND WORKING GROUPS

The focal point of Stockholm Convention is the Directorate for Surveillance and Risk Prevention (DSRP), depending on MTMWE, and whose Director is also the Technical Director of POPs project.

A National Coordinator of the project was hired to ensure daily follow up of the project, in close collaboration with the project section and the internal committee.

A National Coordination Board (NCB) was constituted to follow and guide the execution of the project, in line with the work plans. It is composed of twenty members representing ministerial Departments involved in the POPs management, representatives from professional associations, private sector NGOs concerned by the environment field. The description of NCB missions and the list of organisms composing it are mentioned in Annex 3.

Meeting of a Pilot Committee

A group of information on POPs was created within the DSRP which has in its possession bibliographical resources and documentaries at disposal of the public, as well as data processing means for research, visualisation and editing documents. Also, a website was created in framework of the project, dedicated to POPs and activities linked to Stockholm Convention implementation: www.pop-maroc.org.

The POPs Unit is in charge of coordination and management of the entire activities concerning the Convention implementation by Morocco.

I.3.2- STUDIES AND PRELIMINARY INVESTIGATIONS

I.3.2.1- Evaluation Study of National Needs in Capacity Building for an Ecologically Sound Management of POPs in Morocco

The purpose of this study is to evaluate the national capacities for an ecologically rational management of POPs in Morocco. It concerns the entire aspects of POPs management with the aim to define the content of the capacity reinforcement programme, which is due to endow Morocco with the necessary means to better apprehend the POPs issue, in pursuance of the Convention obligations.

The principle of the approach is to define the status of the situation and the needs required before engaging any action of national capacity reinforcement.

The study is composed of 5 missions:

- **Mission 1:** Evaluation of needs in the technical field;
- **Mission 2:** Evaluation of needs in the institutional field;
- **Mission 3:** Evaluation of needs in the legislative and statutory field;
- **Mission 4:** Evaluation of needs in terms of information, communication and public sensitization;
- **Mission 5:** General synthesis and recommendations.

The study allows clarification of the existing status, the shortcomings and proposed actions to fill the gaps and reinforce national capacities.

I.3.2.2- National POPs Inventories

In framework of the POPs project, the national inventories of all types of POPs , were prepared by a team of national and international experts. That was an occasion to sensitize all stakeholders about POPs.

The methodological approach adopted for preparation of these inventories was based on the following sequences and means:

1. Organisation of the starting workshop and training of working groups;
2. Organisation of regional workshops for sensitization and information POPs;
3. Critical analysis of available national inventories;
4. POPs inventories;
5. PCBs inventory;
6. Inventory of dioxins and furans release sources;
7. Analysis of POPs impacts on population health and their dissemination in the environment.

Two working groups have been constituted to follow elaboration of inventories and then, take over the project in order to update the collected information periodically: one group for Dioxins/ Furans/PCB, and the other for POPs pesticides. The members of working groups were trained and sensitized about the POPs issue, during several workshops and specific training sessions.

I.3.3- IDENTIFICATION OF NATIONAL PRIORITIES

In order to determine national priorities, a process of a continuous dialogue was established with all stakeholders. These comprise ministerial departments, professional associations, NGOs, University and other bodies due to be implicated in the implementation of proposed measures.

I.3.4- PREPARATION OF FIRST VERSION OF THE NIP

This first version of the NIP was elaborated on the basis of consultation and recommendations of all studies achieved since the beginning of the project. It represents contributions and consensus of all stakeholders.

The document was submitted for discussion and validation by all stakeholders, according to a process that ended with the formulation of the present version of the NIP. The latter will be delivered to the Convention Secretariat, on the occasion of the Second Conference of the Parties to be held in Geneva, in May 2006.

I.3.5- VALIDATION PROCESS

The validation process took several months and comprised workshops for presentation at national and regional scales, meetings with University sector, media, civil society and sensitization/ information sessions to the general public.

The observations and remarks brought by interlocutors have been progressively integrated in the NIP document, in a manner to present a consensual report to the Government.

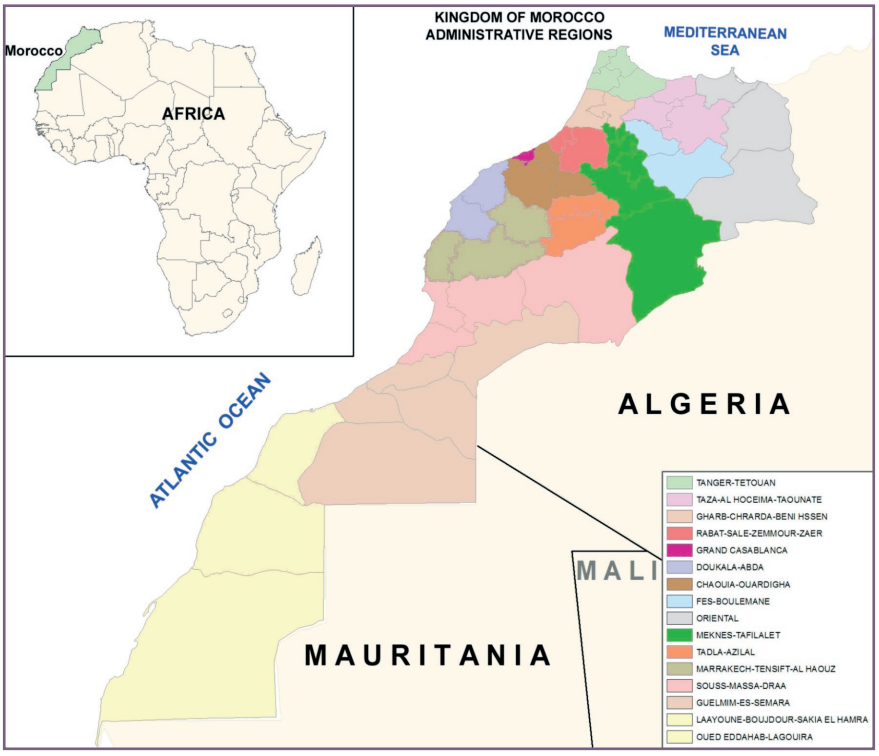
CHAPTER II: CONTEXT OF THE COUNTRY

II.1- NATIONAL DESCRIPTIVE

II.1.1- REFERENCE DATA

Morocco is located in the extreme North-West of the African continent (See Figure N°1), and constitutes a link between Europe, on one hand, and Africa and the Arab World, on the other hand. The Kingdom of Morocco is a constitutional monarchy, democratic and social, with a decentralised administrative structure that confers to the population Representatives large attributions regarding local affairs management.

Chart N°1: Map of Morocco – Economic regions



Morocco is a Moslem country with Arabic as official language. French is the second language and Berber dialects are currently used. It is part of the Great Maghreb and is active within international Organisations: United Nations, Arab League and Islamic Conference. As such, Morocco adheres to principles, rights and obligations established by the Charters of these Organisations.

His Majesty Mohammed VI, King of Morocco is the Head of State, Head of the army and Commander of faith. He practises important temporal and spiritual powers, namely, he appoints the Prime Minister and nominates Governments, on proposal of the latter, chairs the Government Council and promulgates legislative texts.

The Parliament, composed of two chambers, has legislative powers and controls Government which is the supreme executive Body of the State. The last legislative elections took place in September 2002, and the next ones are planned in 2007.

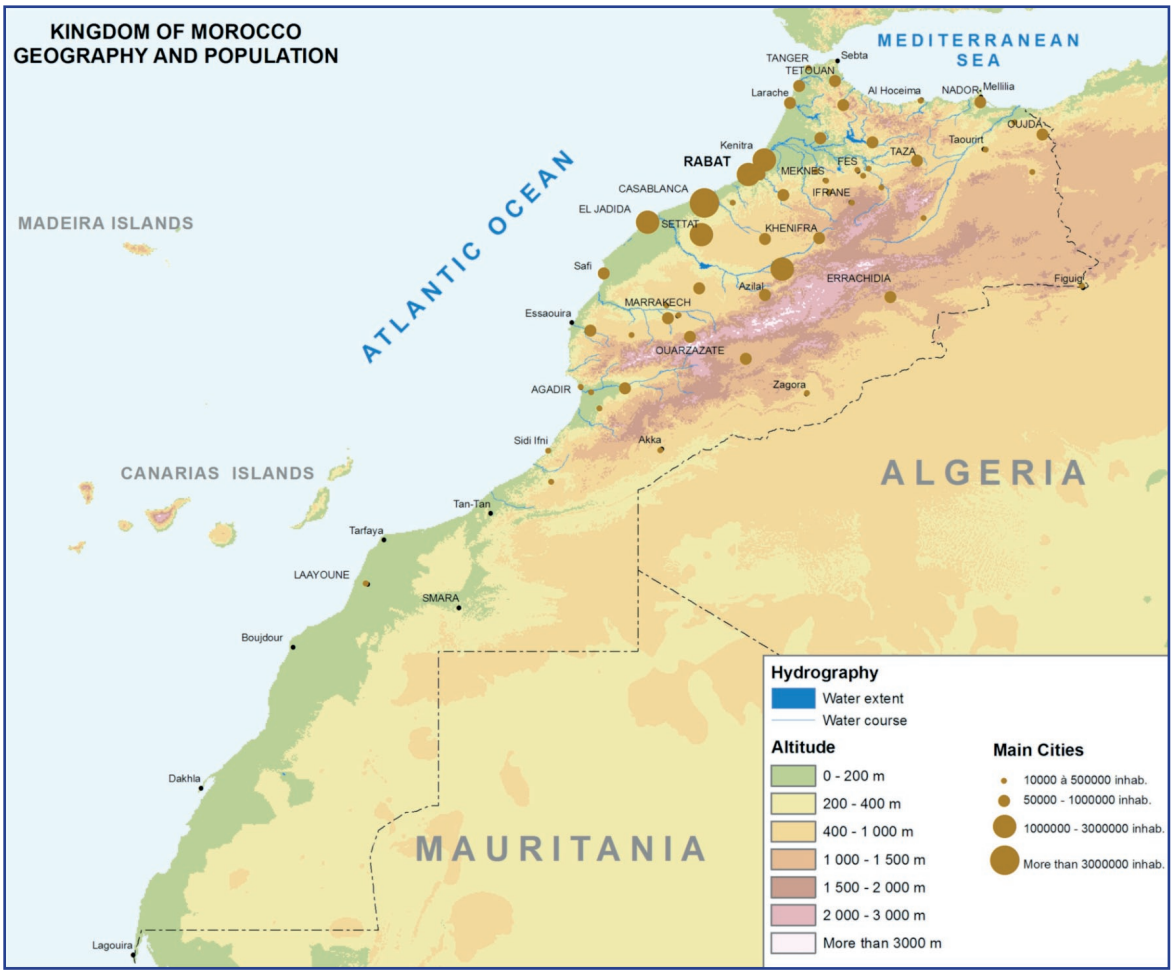
Morocco is a member of the International Trade Organisation (ITO), and maintains economic relations of cooperation and partnership with the European Union. It has also signed free exchange agreements with several countries, such as the United States of America, Tunisia, Turkey, Jordan and Egypt. Moreover, Morocco has undertaken numerous initiatives aiming at reinforcement of South-South economic cooperation, particularly with Arab and African countries.

II.1.2- GEOGRAPHY AND POPULATION

Morocco has an area of 710 000 square kilometres. It is bathed by the Atlantic Ocean on the West and the Mediterranean Sea on the North. It benefits from 3 500 km of coasts on its two maritime sides. On the East and South, it shares its boundaries with Algeria and Mauritania, respectively (Chart 2).

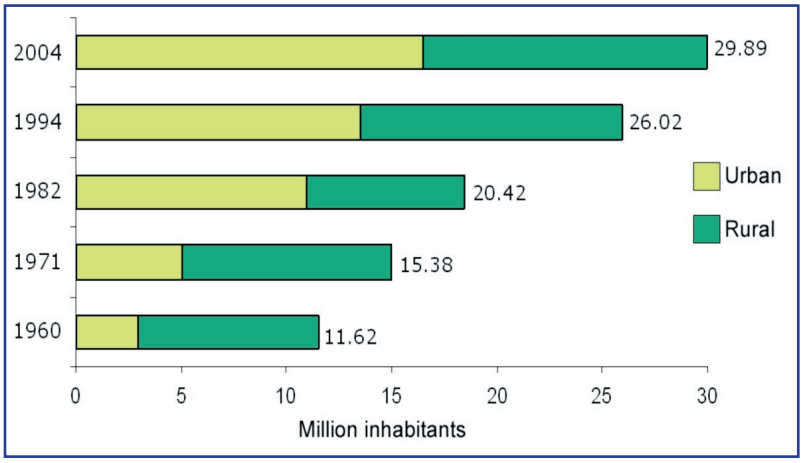
From the geomorphologic point of view, Morocco can be divided into three domains: Mountainous with the Atlas Chains and the Rif, Atlantic with plains and slightly high plateaus, and a vast domain of arid plateaus in the Eastern part and a large Saharan area in the South.

Chart N°2 : Map of Morocco: Geography and Population



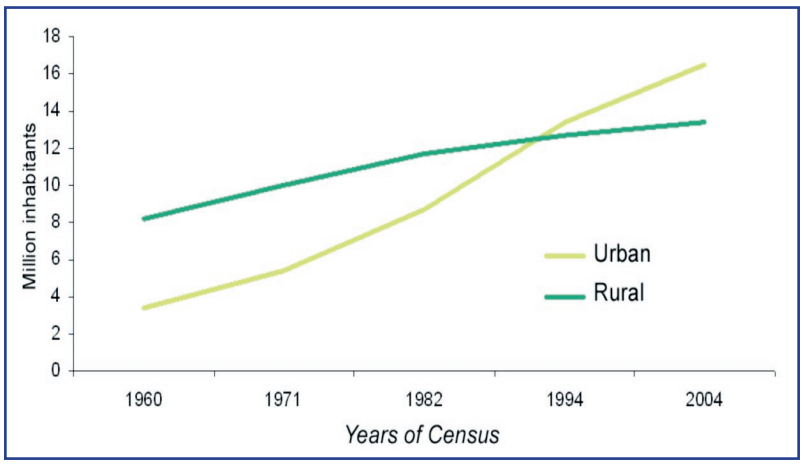
The population of Morocco was only 5 million of inhabitants at the beginning of the twentieth century. Today, it has reached 29.9 million, according to the last global population census of September 2004.

Chart N° 3: Census results



In a little more than twenty years, the Urban population has increased from 35 percent in 1971 to 55 percent in 2004.

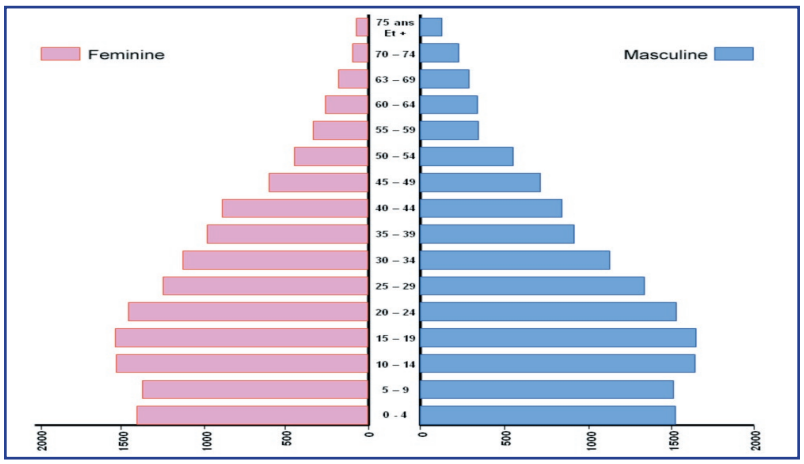
Chart N°4: Evolution of Moroccan Population
In Urban and Rural Areas



The most populated regions are represented by the Atlantic coastal zone of Casablanca and the most fertile agricultural plains as those of Fes-Meknes and Agadir.

The age pyramid (Fig.5) for the year 2002 showed that the Moroccan population is young: more than 50% of the population are less than 25 years of age. However, the tendency is inversing where we attend a decrease in the rate of population growth, from 2.8% in 1971 to 1.4% in 2004.

Chart N°5 : Moroccan pyramid of age in 2002

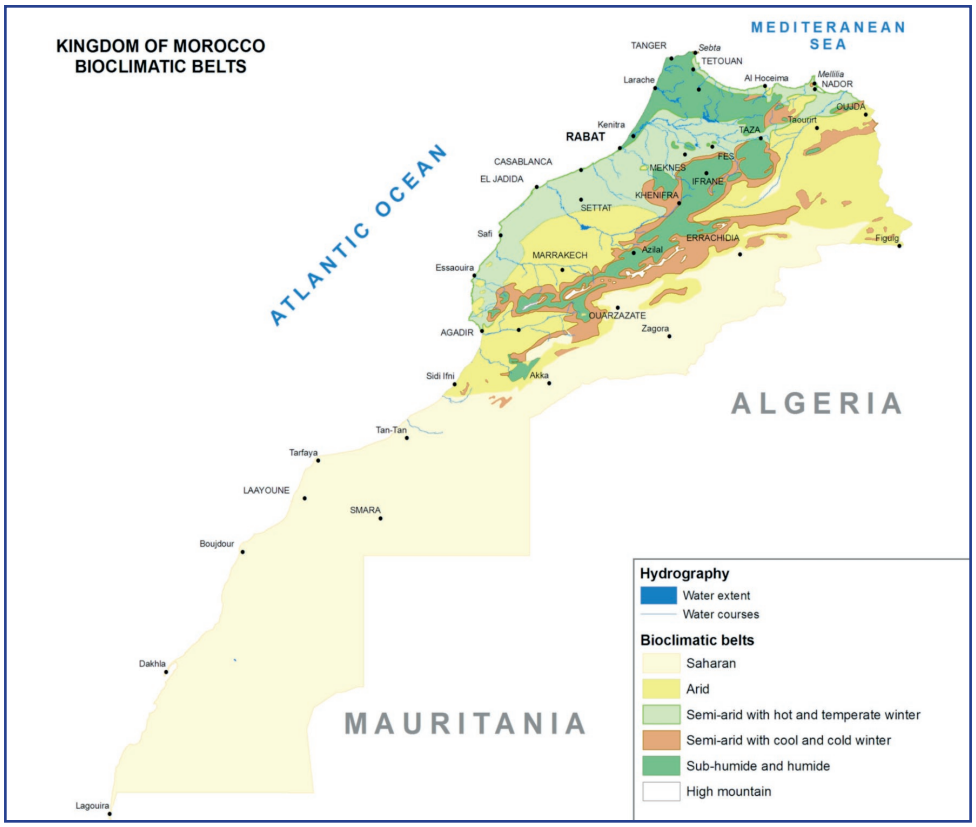


Source : Statistical Yearbook of Morocco 2003

II.1.3- NATURAL FRAME AND ENVIRONMENT

Because of its particular geographical location, Morocco undergoes different climatic influences: oceanic in the West and North, Saharan in the South. Inside the country, the climate is continental with hot and dry summers, cold and humid winters. On the Northern coastal regions, the climate is Mediterranean, whereas in South Agadir a specific Saharan arid weather prevails.

Chart N° 6 : Climatic Data

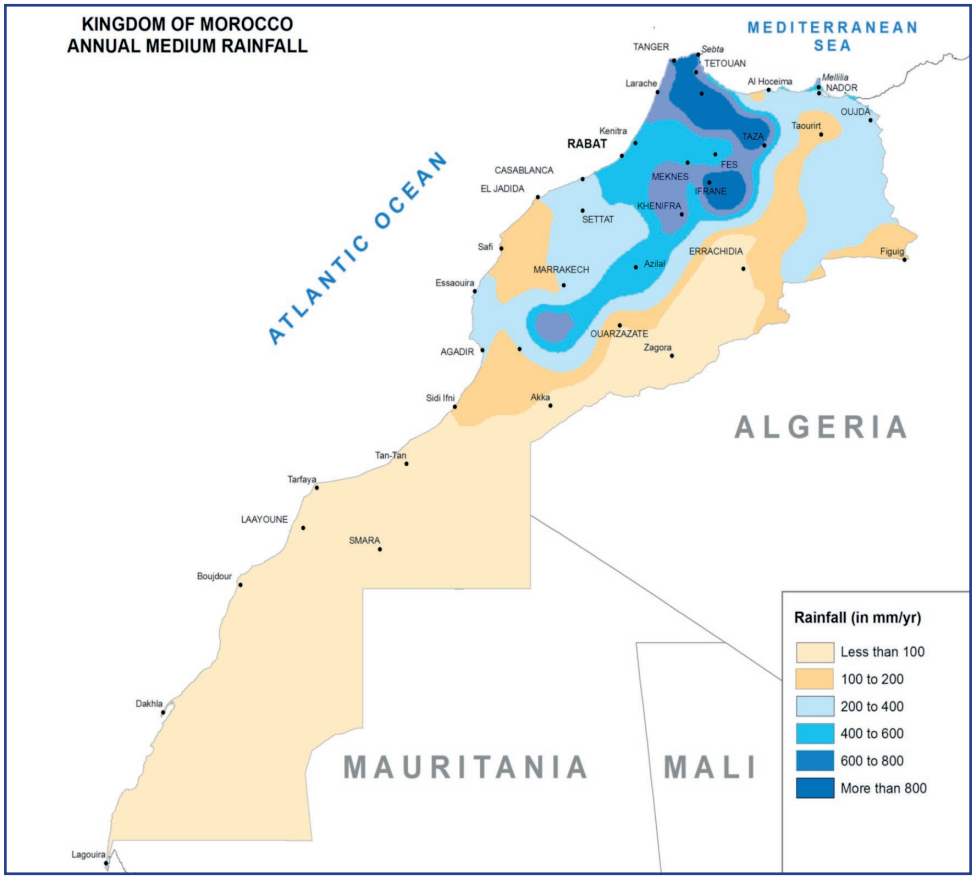


Source :'Atlas des ressources naturelles du Maroc'

To this variety of climates corresponds a great variety of landscape and natural environment. Depending on areas, we find ecosystems of Saharan, steppe, Mediterranean maquis, forest and high mountainous character.

The rainwater inputs are different from one year to the other. They are estimated to an average of 150 billiard square meters where only 20 percent remain as mobilised resources. Rainfalls also vary from one region to the other: from less than a 100 mm per year in the South of Atlas Chain to more than 800 mm in the North-West region.

Chart N°7 : Annual Average Rainfalls



Source :'Atlas des ressources naturelles du Maroc'

II.1.4- BRIEF DATA ON ECONOMY

Since the signature by Morocco of GATT/WTO agreements and the association agreement with the European Union, the country has undertaken great structural reforms. These reforms aimed at developing national economy, rebuilding the customs system, controlling the budget deficit of the State and creating a favourable economic frame for investments.

The progression of GDP was 3% in average during the last decade, with an inflation rate not exceeding 2.5%. This stability of the macroeconomic frame offers the Moroccan economy adequate conditions for achieving a sustainable growth which will contribute to reduce unemployment and poverty.

The main exchange items in 2003 were as follows:

Imported	% in value	Exported	% in value
Industrial Equipment	14	Clothing articles	32
Textiles: thread and material	8	Phosphates and by-products	15
Crude oil	7	Electronic components	7
Gas and fuel oil	6	Fish and shellfish	7
Cereals	4	Thread, electric cables, cluster	5
Chemical products	4	Canned animal food	4
Various equipment material	4	Early vegetables and fruit	3
Plastics	3	Citrus fruits	3

Source: Ministry of External Trade

The balance of external trade is generally in deficit, as exported products cover an average of less than 65% of imports. However the balance of payments remains in excess thanks to tourism returns, in particular, money transferred from Moroccans residing abroad and to foreign investments.

The economic and social development that Morocco has known during the last decades has permitted to set up basic infrastructures of the national economy, and satisfy socio-educative needs of the population. Many sectors have sensibly been developed; but this development has engendered an exceeded exploitation of natural resources and relatively important degradation of the environment.

II.1.5- GLIMPSE ON CERTAIN ECONOMIC SECTORS

II.1.5.1- Agriculture

Agriculture occupies about 35% of active population in Morocco and contributes some 18% of GDP, depending on years. The Useful Agricultural Area is around 9 million hectares, including more than one million ha irrigated, thanks to important dams built on the most important Rivers.

The main agricultural productions are cereals (wheat, barley, maize), pulses (beans, peas, lentils), market garden cultures, citrus fruits and sugar plants. Arboriculture and olive production have also developed recently.

The maritime fishery sector also occupies a prominent place in the national economy. The exports of sea-products contribute for more than 50% to the agricultural food products exports of the country.

The hard currency returns from agriculture, fisheries and agricultural food industries represent 18% of global Moroccan exports. As such, the agriculture sector is considered as one of the major sectors of Moroccan economy.

II.1.5.2- Industry

Industry has developed in Morocco since the Second World War. Today, the industrial sector represents nearly 17% of national GDP. Having been dominated by food industries for a long time, the industrial sector has rapidly diversified due to the rise of Chemistry and Para-chemistry sectors, paper and cardboard, vehicle equipment and electronic.

The following table shows the relative importance of each industrial branch in Morocco, in 2003:

MAIN INDUSTRIAL SECTORS	% Total production
Food Industries	33
Textile and Leather	15
Chemistry and Para-chemistry	34
Metal and Mechanics	12
Electrical and Electronics Industries	6

Source: Ministry of Commerce & Industry Enquiry 2003

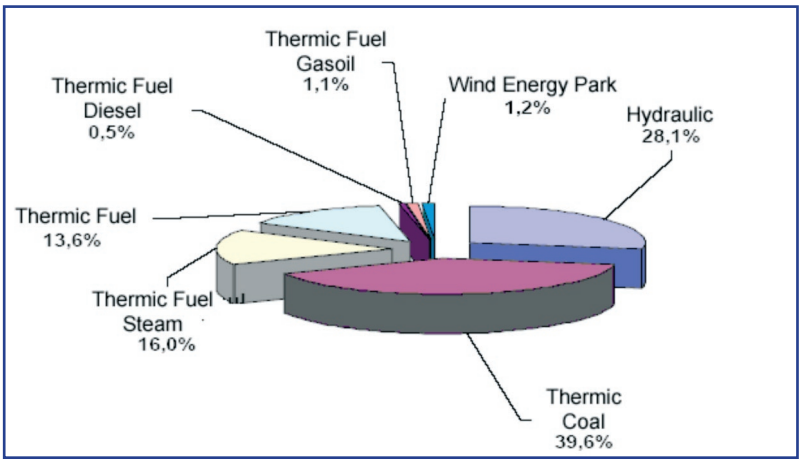
The average rate of growth in this sector has decreased from 4.5 % per year at the end of the 80s to 2.6 % in the 90s.

II.1.5.3- Energy sector

Morocco does not have important energy resources. It strongly depends on petrol products and coal for its supply. The annual energy consumption is 12 million tons petrol equivalent (TPE), to which should be added 3 million TPE of firewood, or the equivalent of 0.5 TPE/per capita/year. The consumption is increasing by 3.3% per year.

The Electricity produced in 2004 was of 18 000 Gwh. This volume remains relatively insufficient (480 Kwh/ per capita/year). The chart below represents the electricity production by source of energy and shows predominance of coal and fuel:

Chart N° 8: Distribution of electrical production by type ofcombustible in 2003



Source : National Office of Electricity

The transport sector consumes about 3.5 million tons of refined petrol products.

II.1.5.4- Mineral sector

Morocco has important mineral resources. The share of the mineral sector in GDP (not including transformation), represents 3% in average and contributes to the level of third of the value of exports. The main mineral products being exploited are: phosphates (most important mineral resource in the country), lead, silver, copper, zinc, gold, cobalt and manganese.

The valorisation of phosphates is done through the production of phosphoric acid and chemical fertilizers in the industrial complexes located in Safi and Jorf Lasfar. The valorisation of the other minerals concerns in particular production and refinery of metals such as lead, copper, cobalt, silver and gold.

The turnover of the mineral sector has reached the equivalent of USD 1.8 billiard, in 2000. However, the mineral activity remains strongly dependent on the external market, namely fluctuations of the world quotations for minerals.

II.1.5.5- Tourism sector

Morocco is considered as a country having an aptitude for tourism, because of its varied cultural and natural heritage. This sector constitutes the first source of hard currency for Morocco, after returns from phosphates and by-products sales and remittances from Moroccans residing abroad.

With more than 550 classified hotels and a capacity of 125 000 beds, Morocco received some 5.843 million foreign tourists in 2005. The most visited places are seaside resorts in the South, imperial cities of Marrakesh, Fes, Rabat and Meknes.

The generated added value of international tourism is estimated at USD 1.2 billiard, and the State draws about USD 300 million of fiscal returns from tourism activities. The sector also plays an important role regarding employment, since it provides jobs for more than 600 000 persons.

Morocco has recently adopted a policy of diversifying its products: the mountain and excursion tourism, desert tourism, rural tourism and the recent notion of "Riad" (traditional house) which seduces both foreigners and Moroccans, are up-to-fashion products.
At present, a new strategy called "Morocco 2010" is being developed. It aims at reinforcing Moroccan capacities to receive 10 million tourists per year as from year 2010.

II.2- INSTITUTIONAL, POLITICAL AND STATUTORY FRAME OF ENVIRONMENT

II.2.1- INSTITUTIONAL FRAME

Since 1972, was created a department for environment within the Ministry of Habitat and Tourism. During two decades, this department has been progressively endowed with more and more important prerogatives that ended with the creation an entire ministry of environment in February 1995.

Today, the Ministry of Territory Management, Water and Environment (MTMWE) is the government authority in charge of elaboration and implementation of Government policy in the field of environment protection and sustainable development.

MTMWE has for mission to animate, promote and coordinate, in relation with the concerned ministry departments, the Government action regarding environment management. Its action consists particularly on:

- Setting up the appropriate instruments of a continuous surveillance and control of the state of environment;
- Establishing norms and settlements relating to protection and improvement of the quality of environment;
- Watching over the application of legislation and regulation regarding environment, and necessary inspections.

Other Ministerial Departments or Offices also have units in charge of certain environment aspects, such as the Ministry of Interior (MOI), the Ministry of Equipment and Transport (MET), the Ministry of Agriculture, Rural Development and Maritime Fisheries (MARDMF), the Ministry of Health (MOH), the National Office for Drinking Water (NODW) or the Higher Commission for Water and Forests and Fight against Desertification. The Ministry of Territorial Management, Water and Environment plays the role of coordinator, as the management and protection of environment in Morocco concern several institutions.

Beside these Departments, advisory Organs are in charge of formulating opinions on particular questions regarding the environment field, among which we mention the National Environment Council (NEC), the Higher Council for Water and Climate (HCWC) and the National Forest Council (NFC).

These structures are represented at the regional level and participate at inter-sector working groups, in framework of Environment Regional Councils (ERC).

The local communities also play a prominent role in the environment management, as they are in charge of improving liquid sanitation, wastes and soil occupation.

Lastly, let us underline the positive role played by a great number of Non-Governmental Organisations (NGOs) in the promotion of environment and human health protection. A great number of NGOs, national and international, are active in Morocco and participate in the creation of a democratic environmental conscience. Some NGOs are particularly interested in the issue of toxic chemical substances.

II.2.2- ENVIRONMENT AND SUSTAINABLE DEVELOPMENT POLICY

Since the Earth Summit, held in Rio in 1992, the environment protection and sustainable development have had a prominent place among the preoccupations of the Moroccan public authorities and the civil society. This concept is now in the centre of the national strategy for environment preservation.

Under the leadership of the MTMWE, and in close collaboration with other Departments, a national

strategy for environment protection and sustainable development was presented and adopted by the National Environment Council (NEC) in 1995. This strategy is based on two pillars: preservation of resources and fight against pollution.

With the aim to bring back, as from 2005, the state of environment degradation prevailing before 1992, then improve it until 2020 horizon, this strategy has focalised the national environmental policy on four priority fields for which the quality objectives were established as follows:

- Protection of water resources;
- Reduction of wastes and improvement of their management;
- Improvement of air quality and reduction of atmospheric pollution;
- Protection and preservation of soils and littoral.

To achieve these objectives, a programme was prepared and implemented with the collaboration of UNDP and UNFPA. This programme, known as ACTION 30, aimed at three essential objectives:

- Setting up a frame of dialogue between the stakeholders on different environmental issues;
- Formulation of a National Plan of Action for Environment (NPAE);
- Mobilisation of necessary material resources to achieve the NPAE.

The NPAE was elaborated through several workshops, each dealing with a subject belonging to human, economic and ecologic systems, or management. Each workshop, attended by concerned operators, adopted, at the end of the session, concrete actions to be realised.

The NPAE which is a tool of harmonisation and integration of all points of view, constitutes the reference frame in which a dynamic planning of the engagement regarding environment.

II.2.3- ENVIRONMENTAL LEGISLATIVE FRAME

The Moroccan legal arsenal regarding environment is relatively old. The first laws concerning the matter date from 1914 with the "Dahir" on unhealthy, inconvenient or dangerous dwellings, as well as the law on conservation and exploitation of forests. Since that date, Morocco has enriched its legislation with more than 300 texts covering most environment fields.

Principal environmental laws

The Ministry of Territory Management, Water and Environment has, during the last years, endeavoured to establish an efficient and modern environmental legislation, based on universally recognized principles and consecrated by international conventions. Therefore, several laws have been created, namely:

- Law on environment protection and development (2003);
- Law on fight against atmospheric pollution (2003);
- Law on environment impact studies (2003);
- Law on water (1995);
- Law on wastes (being promulgated).

a. Law 11-03 on environment protection and development

The aim of this law is to enact basic regulations and general principles of the national policy on environment. Its objective is to protect environment against all forms of degradation, protect man and his life environment, define basic orientations of the environmental

legislative frame and install a responsibility regime warranting reparation of damages.

b. Law 13-03 on fight against air pollution

Its aim is to prevent and combat releases of atmospheric pollutants that are dangerous for human health, fauna, soil, climate, cultural heritage and environment in general. The Law provides Administration with the means to combat all forms of atmospheric pollution and to control releases towards atmosphere, and establishes a sanction regime against polluters.

c. Law 12-03 on Impact Studies

This Law has restored the obligation to elaborate a preliminary study to evaluate direct and indirect effects due to affect environment, as a result of achievement of an important economic project or creation of an infrastructure. The project authorisation is subordinated to its environmental acceptability.

d. Law 10-95 on Water

The Law on water has determined utilisation rules, appropriate to the economic and social conditions of Morocco, as well as principles for an efficient management of water, which allows taking up expected challenges for the security of the country supply. Moreover, this Law allows valorisation of agreed efforts for mobilisation and use of water and renders them compatible with aspirations to a sustainable and balanced development. The main principles established by this Law are: the public domain character of water and water resources, unity of the water resource and respect of the unity of the hydrographical basin. The Law also provides the country with means for water management, thanks to the creation of basin agencies and the institution of control and regulation mechanisms: overflow authorisation, water policy, pollution dues, etc...

e. Law 28-00 on Wastes

This Law is presently under approval by Parliament. It will allow Morocco to have adequate legal means for an efficient management of all forms of wastes. The bill has introduced a preliminary authorisation system for all phases of collection, treatment and elimination of wastes. The wastes will be eliminated in three different kinds of rubbish dumps under control. In particular, the new Law definitely prohibits open sky incineration of wastes and stipulates that hazardous wastes should be treated in dedicated structures. Their collection, transport and treatment are regulated, and any burying of wastes is strictly prohibited.

The present law will allow filling the legal gap in the wastes management field and adapt the national legislation to international conventions ratified by Morocco, namely those of Basel, Rotterdam and Stockholm.

Environmental Regulation

The Moroccan environmental regulation comprises several ministerial decrees and orders which clarify the applying conditions of environmental laws and fixes norms. In order to complete the statutory purview, the Government continues to prepare project norms. Some of these are under approval or due to be validated with the concerned partners. For instance, we can cite the following:

- Joint project decree determining specific values of paper industries releases;
- Joint project decree on limitation of air pollution by cement sector;
- Joint project decree fixing specific values of petrol refineries releases;
- Joint project decree fixing general limited values of release in the atmosphere.

International Conventions

Morocco is part of a great number of international conventions relating to environment protection, namely the following:

- Montreal Protocol on substances that weaken the Ozone layer (Montreal, 16/09/87);
- Basel Convention on control of trans-boundary movements of dangerous wastes and their elimination (Basel, 22/03/1989);
- Convention on Climatic Changes (New York, 09/05/1992);
- Convention on Biological Diversity (Rio de Janeiro, 13/06/1992);
- Stockholm Convention on Persistent Organic Pollutants (Stockholm, 23/05/2001);
- Rotterdam Convention: Morocco has not yet signed it, but a process of adhesion and ratification is in progress.

CHAPTER III: SITUATION OF POPS IN MOROCCO

III.1- LEGISLATIVE FRAME OF POPs

The Ministry of Agriculture in Morocco has very early established a legislation organising the sector of agriculture used pesticides. In particular, Law N° 42-95 organises the trade of pesticides used in agriculture, and the Decree of 5 May 1999 institutes an homologation procedure of pesticides in the country, in framework of an inter ministerial commission.

Regarding POPs in general, the Moroccan legislation is mainly constituted by texts relating to organo-chlorinated pesticides and DDT.

III.1.1- PESTICIDES

The organo-chlorinated pesticides in Morocco are regulated by a Decree from the Ministry of Agriculture and Agrarian Reform, on 19 March 1984. In pursuance of this Decree, many pesticides, including POPs, have totally been banned. This decree prohibits manufacturing, sale, cession and use of these products or any preparation containing the following products:

- Aldrin;
- Eldrin;
- Dieldrin;
- Chlordane;
- Toxaphene;
- Heptachlor;
- "Strobane";
- Hexachlorobenzene (HCB);
- "Chlorobenzilate";
- "Dichlorodiphenyledichloroethylen" (DDE);
- "Dichlorodiphenyletrichloroethane" (DDT).

The Decree, however, foresees some exemptions of exceptional character for certain organo-chlorinated for specific uses (requiring authorisation), in particular for DDT which may be authorised in hygiene and public health (control of malaria) and Dieldrin against locusts.
Therefore, POPs pesticides are regulated in Morocco since 1984, with the exception of Mirex for which no request for homologation has ever been made.

III.1.2- PCBs

A project of regulating PCB based dielectric oils, as well as PCB contaminated dielectric oils, is being elaborated by MTMWE. The main points of this text aim at concordance of the Moroccan Convention with Stockholm Convention, namely the prohibition of import and trade of PCB equipment, control of equipment having undergone a retro-filling and their elimination at horizon 2025.

III.1.3- DIOXINS AND FURANS

The Law N°13-03 against air pollution constitutes the legal frame which allows Morocco to enact norms relative to "the prevention and fight against releases of atmospheric pollutants due to affect human health, fauna, soil, climate, cultural heritage and environment in general".

This Law is applicable to mineral, industrial and crafts industries, vehicles, waste incineration installations releasing gas, fumes, dust or smells, as well as thermal installations of heating and air-conditioning.

In pursuance of this Law, the Administration should take all necessary measures for controlling air pollution, as well as installing control networks of the air quality, and for detection of fixed and mobile sources of pollution due to harm human health and the environment. In this respect, the Administration elaborates and fixes norms of admissible releases by category of releaser or type of release.

Therefore, a project decree fixing release norms of certain atmospheric pollutants, including unintentional releases of dioxins and furans, has been prepared and disseminated for consultation and comments with principle actors concerned (big releasers, ministries and public offices, research institutes, professional associations, etc.).

III.2- ROLES AND RESPONSIBILITIES OF PUBLIC ORGANISMS CONCERNED BY POPs

The life cycle of POPs comprises production phases, import/export, storage, use, discharge and/or destruction, sanitary and environmental control. Several public organisms are concerned by POPs management.

The tables below summarise the roles played by the different public organisms depending on the POP category at each phase of their life cycle:

III.2.1- PESTICIDES

Cycle phase	Organisms	Roles & legal responsibilities
Production	Agriculture Department	- Application of Law N°42-95 relating to control and Organisation of sale of pesticides used in agric. - Application of Decree of 5 May 1999 on import, Manufacture and commercialisation of products Used in agriculture - Application of Decree of 19 March 1984 regulating Organo-chlorinated pesticides - Application of Decree of 5 May 1999 on pesticides Homologation
	Industry Depart.	Application of industrial norms and security of Chemical products
	Pesticides Commission: Agriculture, Interior, Health, Customs, Trade & Industry, Environment	Study and evaluation of risks and proposal of legislative and regulating measures for import, manufacturing, formulation, holding, commerce, circulation and use of pesticides (Decree 17/09/01)
	National Committee for Impact Studies:	MTMWE provides the environmental Acceptability Certificate to projects, on recommendation of this Commission (Law 12/03)

Cycle phase	Organisms	Roles & legal responsibilities
Import/export	Agriculture Department	- Application of Law N°42-95 Imports pesticides for big fights and Vegetal protection
	Ministry of Interior	Imports pesticides to combat locusts
	Ministry of Health	Imports DDT for controlling Malaria, when declared
	Pesticides Commission: Agriculture, Health, Customs, Interior, Trade And Industry, Environment, Equipment and Transport	Study and evaluation of risks and proposal of legislative and regulating measures for import,manufacturing, formulation, holding, commerce,And Industry, Environment, circulation and use of pesticides Examination of pesticides homologation requests
	Department of Finance	- Office of Exchange : Control of import engagements And export declarations - Customs: Physical control of products at frontiers (prohibition to import certain organo-chlorinated products - Application of Basel Convention on control of Trans-boundary movements of dangerous wastes and their elimination .
	Commerce Exterieur	Contrôle des mouvements commerciaux des produits chimiques

Cycle phase	Organisms	Roles & legal responsibilities
Holding Trade and Transport	Agriculture Department	- Application of Law N° 42-95 - Application of Decree of 5 May 1999 on import, Manufacturing and commercialisation of pesticides used in agriculture.
	Transport Department	Application of legislation on transport of hazardous chemicals
Utilisation	Agriculture Depart.	Application of Decree 19/03/84 regulating organo- Chlorinated pesticides: Use of POPs prohibited
	Health Department	DDT for Malaria centres when disease declared
Destruction	DSRP/MTMWE	Application of Basel Convention on control of trans-boundary movements of hazardous wastes And their elimination
	Department of finance	Control of exported products
Surveillance	MTMWE	Control and Surveillance of environment status in Pursuance of Laws 11-03 on protection and develop. of environment, 10-95 on water and 13-03 on air Pollution
	Health Department	Awareness for toxics, epidemiological studies
	National Office for Drinking Water	Chemical and bacteriological control of drinking Water resources

II.2.2- PCBs

Cycle phase	Organisms	Roles & legal responsibilities
Production	Industrial Department	Application of industrial and security norms for Chemicals
	National Committee for Impact Studies	MTMWE provides environmental acceptability to projects on recommendation of this Committee
Import/export	MTMWE	Application of Basel Convention in case of export Authorisation of wastes containing PCBs
Destruction	Department of Finance	- Application of Basel Convention on control of trans-boundary movements of hazardous wastes And their elimination - Control of exported products
Surveillance	Industry Department	Application of the norm NM ISO 15318 on PCB Content in textiles fibres
	MTMWE	Control and Surveillance of environment status, In pursuance of Laws 11-03 on protection and Development of environment, 10-95 on water And 13-03 on air pollution

III.2.3- UNINTENTIONAL POPs

Phases	Organisms	Roles & legal responsibilities
Surveillance	MTMWE	Control and surveillance of the environment status, Wastes follow up: in pursuance of Laws 11-03 on protection and environment development, 10-95 on Water and 13-03 on Air pollution

III.3- EVALUATION OF POPs IN MOROCCO

Data on this section come from the "Survey on POPs Inventory in Morocco", prepared in framework of POPs project, between September 2004 and March 2005: a CD on this survey is attached in Annex 4.

III.3.1- EVALUATION REGARDING PESTICIDES

The inventory of pesticides (POPs and non-POPs), contaminated soils and wastes containing PCBs, was elaborated by MTMWE in framework of POPs project, by a team of experts in pesticides, according to an approach that combines a collection of information through questionnaires and audits of storage sites.

Audit in storage sites

Having in mind that organo-chlorinated pesticides, among which POPs pesticides, are not manufactured in Morocco and are then prohibited to import since 1984, the expert team has concentrated in identifying expired stockpiles and storage premises that have served for storing these products in the past.

A Cartography of previous storage sites was elaborated, thanks to information collected with concerned departments, in particular the Ministry of Agriculture and Rural Development and the Directorate of Epidemiology and Fight against Diseases, attached to the Ministry of Health.

The investigations realised in the course of the inventory have shown the following results:

A- Nearly 225 storage sites for pesticides exist in Morocco among which the main ones are:

- **The National Centre to Combat Locusts (NCCL):** this strategic centre for Morocco, disposes of pesticides stockpiles located close to most often affected areas by locusts. The main storage site of NCCL is the centre of Ait Melloul, close to Agadir, which works as a principle platform. NCCL still disposes of stockpiles of expired pesticides, namely 98 tons of HCH and 17 tons HCH bait. These pesticides are no longer used for treatment but are still stored in drums awaiting their destruction, in framework of the African Programme for Elimination of Pesticides Stockpiles (APEPS);
- **The Centre of Big Fights in Salé:** In this centre are stored necessary pesticides against great invasions of ravagers. The centre has no stocks of POPs, but only small quantities of other diverse expired pesticides;
- **The Works Centres (WC) depending on Agriculture Provincial Directorates (APD):** Some of these centres hold pesticides for many years. The stockpiles detained are not always managed in a rational way and some of them contain expired pesticides and/or non-identified pesticides, potentially contaminated by POPs;
- Various storage sites belonging to commercial enterprises: The led investigations have not revealed presence of POPs with this category of professionals. However, some sites should be deeply audited, because of inadequate storage conditions and traces of pollution on the floor.

  This preliminary inventory of pesticides storage premises has probably not identified all possible sites. A further one will allow better identification of the list.

B- The information collected by questionnaires, document analysis, existing inventories and visits to main pesticide holders, has allowed to evaluate the quantities of POPs to 39.2 tons and expired pesticides (Non-POPs), to nearly 200 tons.

Phyto-sanitary treatment in the field

Centre for pesticides storage in Chefchaouen

Stockage non sécurisé de pesticides chez un opérateur privé

The total quantity of identified POPs is composed of DDT to be found in two sites belonging to the Ministry of Health in Oued Zem and Settat.

C- Some fifteen sites containing pesticides of unknown formulation, are suspected to contain POPs. The total quantity of undetermined composition is estimated to 6 tons.

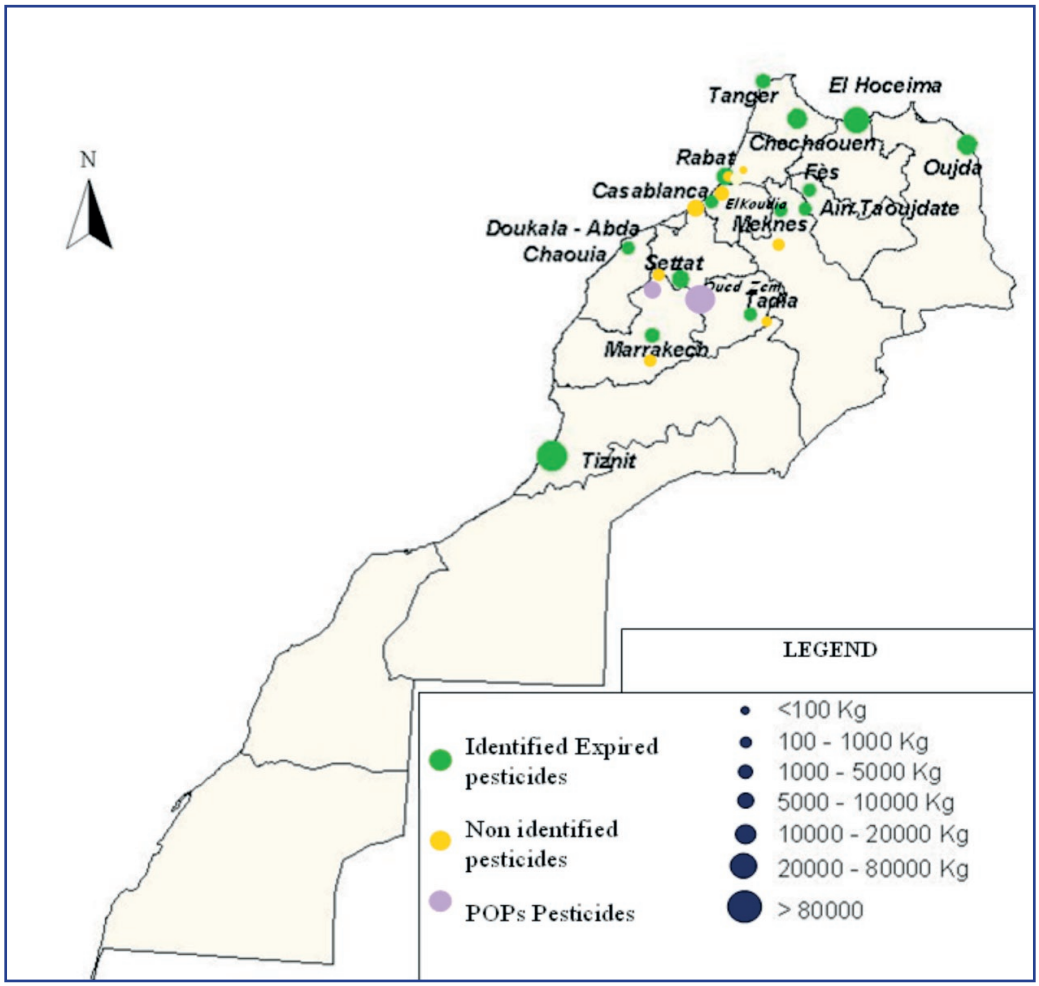
D- The contamination of the floor is also a current phenomenon in pesticides storage sites, particularly that the floors are rarely watertight. Among the classified sites, fifteen present floor contamination traces. The quantity of contaminated soil is estimated to 8,300 tons, according to experts' judgement.

E- The POPs contaminated wastes were estimated to more than 50 tons, mainly constituted of packages, steel drums, pallets and inducted baits.

Pesticides of unknown formulation

The chart below gives a view of the geographical distribution of pesticides and POPs in Morocco:

Chart N° 9 : Geographical distribution of pesticides stockpiles



III.3.2- EVALUATION REGARDING DDT (ANNEX B)

The use of DDT is authorised in Morocco, exclusively to combat the proliferation of "anophel" mosquito, in view to reduce malaria centres when declared. For this reason, the Ministry of Health held, during the inventory in 2004, a stockpile of 39 tons. The latter is essentially located in warehouses at Oued Zem and Settat (Chart 9).

The annual quantities used by MOH average 500 kilograms, which shows that the stocks held are disproportioned with regard to real needs. Being conscious of this fact, MOH has no longer imported DDT for several years, and utilises the available quantities very carefully.

DDT treatment of areas

III.3.3- EVALUATION REGARDING PCBs

Until the beginning of the 80s, most of the big electric transformers and condensers utilised in Morocco, used mainly products known as "Pyralene" and "Askarele", as refrigerating dielectric fluid of PCB. As manufacturing of these products have stopped at international level, holders of PCB equipment have gradually started to change their machines against equipment functioning with mineral oils. But in most cases, PCB was replaced by a mineral oil without changing the equipment.

The present situation is characterised by the existence of a stock composed of old equipment still containing pure PCB, and a stock of equipment, relatively more important, of equipment containing PCB contaminated mineral oils.

MTMWE elaborated a first inventory of PCB machines, in 2002, with the assistance of the Swiss Cooperation, then a second one, in 2004/2005, in framework of POPs project. The first inventory has allowed identification of the main PCB equipment holders which are still functioning, or as non eliminated waste. As for the second inventory, it allowed refining data already collected, measuring the park evolution, registering equipment containing PCB contaminated oils (analyses campaign), and locating wastes stocks containing PCB. The situation during the first semester of 2005 is as follows:

- 573 transformers using PCB are still functioning and contain about 200 tons of PCB;
- 342 condensers using PCB are still functioning;
- Contaminated transformers: 3,500 tons of mineral oils for transformers are contaminated (containing more than 50 ppm of PCB);
- Stocks of wastes containing PCB: 20 identified sites, of which 10 are presenting floor pollution traces.

Temporary storage of transformers expecting elimination

The results obtained show that the deposit of PCB equipment is seriously decreasing, passing from 672 identified transformers during the first inventory, in 2002, to 573 machines in the present inventory, meaning a 15% decrease during three years. The diminution in the volume of equipment is explained by the policy that great holders have engaged themselves to eliminate equipment using PCB, still detained in specialised centres abroad.

The geographical distribution of transformers using PCB and contaminated condensers does not present important differences with the distribution of non contaminated electrical transformers. However, it is to be underlined that the biggest holders of PCB equipment, or PCB contaminated equipment (Electricity Administration), have proceeded to their complete replacement a long time ago. The present holders are only counted among small and medium enterprises/industries.

PCB equipment been transferred

III.3.4- EVALUATION REGARDING RELEASES OF CHEMICALS LISTED IN ANNEX C

III.3.4.1- Dioxins and Furans

An inventory of dioxins and furans releasing sources was prepared in 2003. It was realised according to the UNEP recommended methodology which consists in implementing the specialised tool for identification and quantification of dioxins and furans releases, also called "Toolkit".

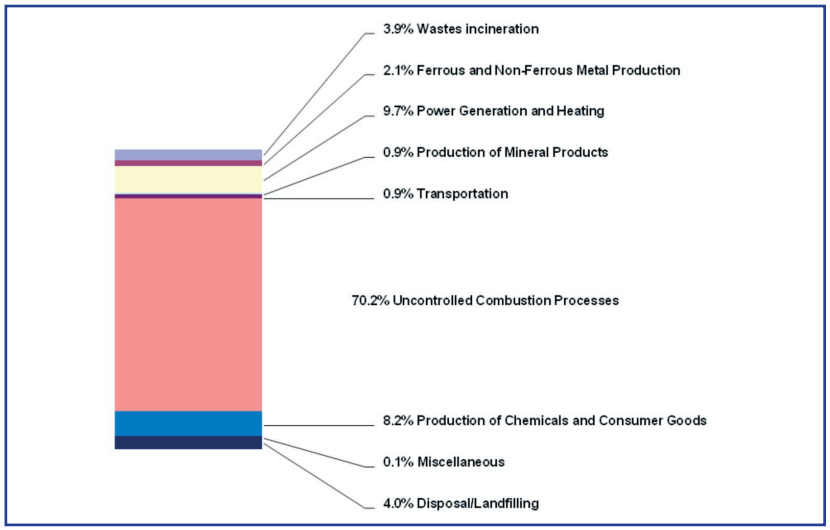
The utilisation of the "toolkit" has allowed reviewing all industrial and non industrial processes that release, or are likely to release dioxins and furans. For the reference year 2003, the total releases were 235,5g-TEQ. The release global results by source category and release environment are listed in the following table:

INVENTORY OF RELEASES OF DIOXINS AND FURANS

		Annual releases (g TEQ/year)					
Cat	Source categories	Air	Water	Earth	Products	Residues	TOTAL
1	Wastes incineration	8,046	0,000	0,000	0,000	1,253	9,299
2	Production of iron and Non iron metals	1,637	0,015	0,000	0,000	3,223	4,875
3	Electricity and heating Generation	17,635	0,000	0,000	0,000	5,121	22,756
4	Minerals production	2,120	0,000	0,000	0,000	0,029	2,148
5	Transport	2,154	0,000	0,000	0,000	0,000	2,154
6	Uncontrolled Combustion processes	135,280	0,000	0,224	0,000	30,000	165,504
7	Production of chemicals And consumption goods	0,079	0,008	0,000	19,108	0,149	19,343
8	Miscellaneous	0,002	0,000	0,000	0,000	0,122	0,124
9	Processes of treatment / Dump	0,020	3,273	0,000	0,000	6,053	9,346
10	Hot points						
1-9	Total	166,971	3,295	0,224	19,108	45,950	235,548

The release distribution by source category is represented in the following chart:

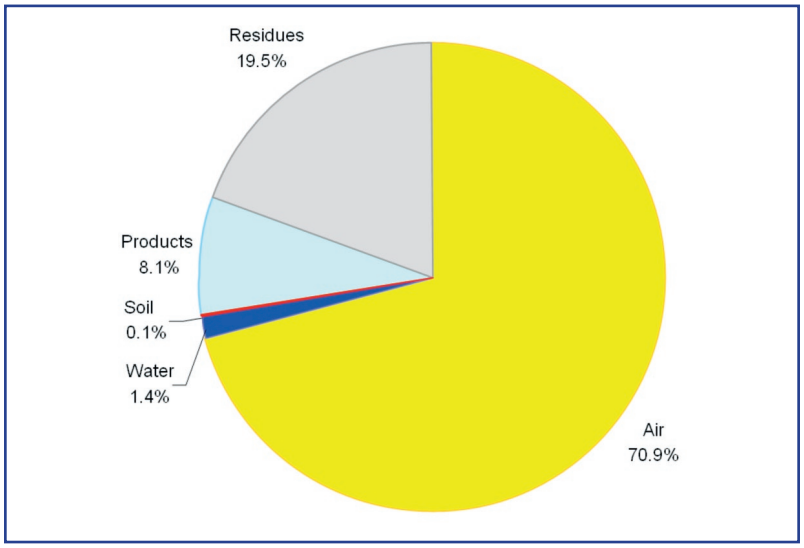
Chart N°10: Distribution of dioxins and furans by source category



We note the high preponderance of release sources resulting from the uncontrolled combustion processes, which is explained by use of old industrial processes, on one hand, and by a weak control of rubbish dumps, on the other hand.

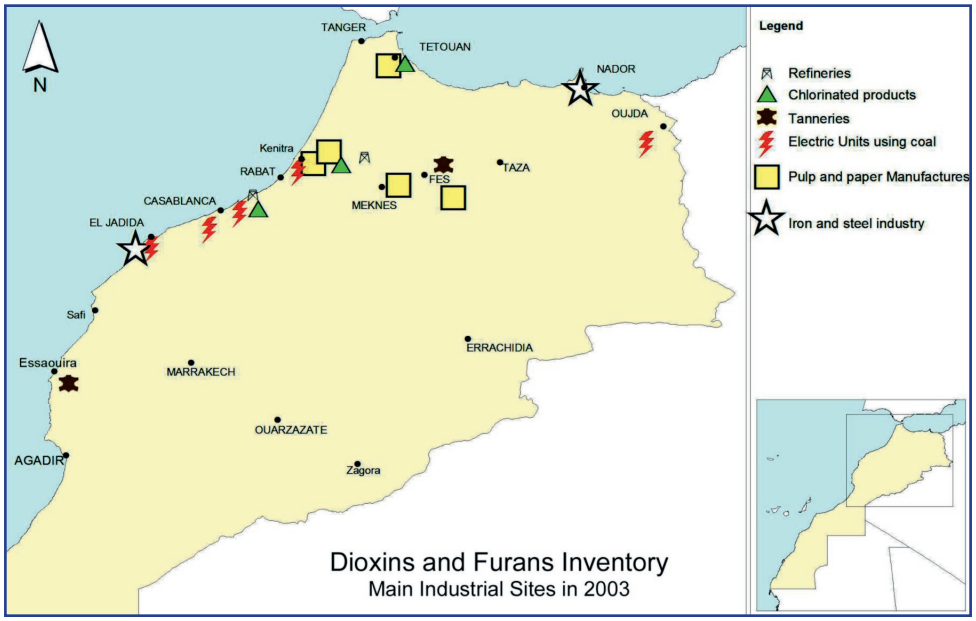
This inventory has also shown that dioxins and furans releases are effected 71% towards air and 20% towards residues. The chart below shows distribution by source of release:

Chart N° 11 : Distribution of releases by environment



The geographically located sources (industry units, rubbish dumps...), represent 70% of total releases. The sources linked to population density (heating and cooking), represent 28% of releases whereas the diffused sources (transport, accidental fire, charcoal...) contribute for less than 2% of total dioxins and furans releases. The map below represents the main industrial sources:

Chart N° 12 : Map of industrial sites



III.3.4.2- Unintentional PCBs and HCBs

Like dioxins and furans, PCBs and HCBs may also be released unintentionally by industrial processes or anthrop activities. The achieved unintentional POPs inventory has employed the "toolkit" method to evaluate releases, but because of lack of adequate information regarding potential sources and release factors, the inventory could not take into account the unintentional HCB and PCB releases.

III.4- EVALUATION OF NATIONAL CAPACITIES REGARDING POPs MANAGEMENT

The information provided in this section comes from the "Evaluation Study of national needs in capacity building, in view of an ecologically sound management of POPs in Morocco", elaborated in framework of POPs project, during the first semester of 2004.

This study has permitted examination of the present status of POPs management on institutional, legislative, technical and information/communication levels, and proposal of activities to achieve for reinforcing capacities in this field.

III.4.1- INSTITUTIONAL AND LEGAL COMPONENT

The study of this component regarding POPs has permitted to analyse all international conventions, laws and regulating texts concerning the POPs issue. This analysis has emphasised the strong points and gaps of the Moroccan legislation, as well as the role of the various concerned institutions.

III.4.2- TRAINING, INFORMATION AND SENSITIZATION COMPONENT

The diagnosis of the knowledge degree of POPs issue, at the level of the various stakeholders concerned by POPs management, has mainly concerned the Ministry of Territory Management, Water and Environment, the Ministry of Agriculture, Rural Development and Maritime Fisheries, the Ministry of Health, as well as education and research institutions.

The aim of this diagnosis was to identify information and sensitization means for the public and evaluation of current programmes by POP category.

Pesticides

The pesticides used in agriculture are very well known, particularly in the rural areas; but the dangers inherent to their manipulation are considerably underestimated by the population.

- The Ministry of Agriculture, through the Directorate of Vegetal Protection and Fraud Repression, is the first responsible for informing and sensitizing farmers with regard to the use of pesticides and communication on their risks. This department actually provides training on behalf of farmers, but the examination of communication themes has revealed some gaps in terms of sensitization on pesticides dangers, namely for POPs, and on human health protection.
- The Ministry of Health regularly proceeds to the application of pesticides and DDT for the protection of citizens against disease vectors. However, this Department does not organise sensitizing programmes for the population on pesticides risks.
- The Anti-Poison Centre, depending on the Ministry of Health, disposes of a telephone service which communicates to medical doctors and the public in general, toxicological and pharmacological information regarding pesticides and the behaviour to adopt in case of poisoning.

As a conclusion, we may say that the communication organised by ministerial departments regarding pesticides, does not give enough importance to POPs themes, and only focalises on technical aspects linked to utilisation. Some improvements in this matter are expected, as a follow up to the information campaign organised in framework of POPs project in Morocco.

PCBs

Sensitization programmes have been achieved by MTMWE, in framework of the Inventory of PCB equipment in Morocco (2002). This campaign resulted in organisation of national and regional workshops on sensitization and information on PCBs, radio programmes, articles in the press, realisation of a documentary and two leaflets...

These actions have targeted small and medium enterprises and persons in direct contact with PCBs, namely scrap merchants and electricians. These sensitization programmes, however, remained limited in terms of space covered and number of beneficiaries.

Some experts and designing Offices have developed skills in terms of communication on PCBs and best available techniques (BAT) to eliminate them. The means and adapted professionals for reaching industrial holders of PCB equipment are not lacking: professional associations, Chambers of Commerce, industrial zones associations...

The planning of communication actions on behalf of professional PCB equipment holders is possible with the present means and could be very efficient.

Dioxins and furans

It was revealed that the majority of interlocutors completely ignore this category of POPs, as pollutants likely to be released unintentionally by very current processes. With very little exception, Dioxins and furans have never been subject to any communication or information from the part of the public authorities, media or private sector.

A sensitization campaign was launched in framework of POPs project, and consisted in organising regional workshops animated by national experts, elaboration of leaflets and posters of sensitization on POPs dangers, creation of a website devoted to POPs, publication of articles through classical media and participation at radio and television programmes. The communication on dioxins and furans is at present an exclusive action of MTMWE.

Open sky burning of wastes

In conclusion, the study has emphasised the entire insufficiency of activities regarding sensitization, education and communication on POPs. Yet, the organisms likely to realise sensitization actions, dispose of highly trained staff (medical doctors, engineers...), adequate professionals for organising meetings are available, and the mass media are willing to collaborate. The absence of an integrated programme of communication allowing mobilisation of existing potentialities and reaching the public, is the main hamper in terms of training, information and sensitization.

III.4.3- TECHNICAL CAPACITIES COMPONENT

The diagnosis which allowed evaluation of needs for reinforcement of technical capacities, has reached stakeholders in managing chemical products, in general, and POPs, in particular. The evaluated aspects are: availability of documentation on POPs, studies of POPs impact on human health and the environment, follow up on environment, national expertise, sampling and analysis laboratories, scientific research.

III.4.3.1- Documentation

In spite of the great number of documents in some institutions, namely at research centres and agriculture education institutions, very few documents deal with technical aspects regarding dioxins, furans and PCBs, particularly the following fields:

- Best available techniques/Best environmental practices (BAT/BEP) for POPs management;
- Analysis and sampling methods;
- Follow up on environment, monitoring;
- POPs impact on health.

III.4.3.2- Impact Studies of POPs on Health

A certain number of scientific works have been realised in Morocco, on food contamination through pesticides. Moreover, several references relating to pesticides toxicology have been recovered: Moroccan research teams have worked on chlorinated by-products, but no one has dealt with dioxins/furans or PCBs.

It was also revealed that most of the works are relatively old, which showed a certain disinterest on the question for a long time. This type of studies has to be reactivated.

III.4.3.3- Follow up of POPs in the Environment

Pesticides

The main approach to retain regarding follow up of pesticides in the environment is that of the National Office for Drinking Water, which set up a network for controlling the quality of water for

drinking water production. The 70 sites of this network are controlled 4 times a year in view to detect eventual presence of pesticides, among which certain POPs (pesticides and DDT).

PCBs

With the support of the Swiss Cooperation, MTMWE realised in 2002, an inventory equipment containing PCBs and their holders as well as sites containing PCB contaminated wastes. This survey has permitted to know with precision the contaminated sites and those likely to be. It allowed the Ministry to improve its skills regarding PCBs and elaborate new follow up programmes (studies and measures). It also permitted equipment of the National Environment Laboratory with necessary machines for PCBs analyses.

Spreading of pesticides

Dioxins and furans

The only known programme of dioxins and furans follow up in environment in Morocco, is the one set up by cement industries which utilise wastes as combustible. In pursuance of an agreement between the Professional Association of Cementers and MTMWE, the cement units concerned undertake, every three months, an analysis of dioxins and furans rate in the fumes of their chimney. Beside this, there are no other systematic operations in Morocco for follow up and measure of dioxins and furans in the environment.

It is to be noted that no laboratory in Morocco has specific equipment for dioxins and furans analysis. The samples, being sent to foreign laboratories for analysis, take several months to have results. A project for reinforcing technical capacities in this field will allow a better control of these pollutants.

III.4.3.4- National Expertise

The national university institutes, Engineer Schools, Centres of agronomic and veterinary research, dispose of eminent professors in the fields of chemistry, chemical engineering, toxicology and various sciences of nature and environment.

The scientific competences in fields related to POPs, are available in Morocco in a great number, both in training and research institutions and administration. But in the absence of sensitization and communication on POPs, few scientists have been interested in this question.

The database collected from national design Offices, counts more than 30 Offices, specialised in environment. Yet, it is more difficult to evaluate how many of them dispose of competencies regarding POPs. The Moroccan Study markets being very narrow, no design Office has exclusively specialised in POPs.

As a summary, the national expertise in basic scientific fields is important and available, without counting the Moroccan scientists exercising in Europe, the United States and Canada. This community, being sensitized and motivated, is to constitute an enormous reservoir of expertise regarding POPs.

III.4.3.5- Sampling and Analysis Laboratories

About seven laboratories having capacities for analysis and control of POPs, were identified. These laboratories dispose of technicians and important means for analysing pesticides and PCBs. Yet, no one of them was able to effect analyses of dioxins and furans (August 2004).

The network of these laboratories was constituted under impulse of POPs project. Their technicians have undergone training in order to acquire essential techniques of dioxins and furans analysis.

On another side, the education and research institutions also dispose of relatively equipped laboratories which, provided they have some complementary equipment, can realise all analyses regarding POPs.

Once again, it seems that the POPs analysis market, namely PCBs and dioxins, has not yet reached enough maturity for laboratories to realise the necessary investments. The regulating constraint of releases follow up is to play a favourable part for development of this sector.

III.4.3.6- Means for de-pollution and elimination of POPs

Real and potential means for de-pollution and elimination of POPs do exist in Morocco. Among these methods, some raise from the application of BAT and BET, and others are real elimination techniques, meaning the transformation of POPs into non pollutant elements.

The evaluation study of national needs for an ecologically sound management of POPs in Morocco, has listed present available means for the elimination of pesticides and PCBs. A feasibility analysis of these methods, in light of BAT and BET and the environmental legislation has retained the following installations:

- A unit for elimination of PCBs through the process of "dechloration" at SD Myers;
- The ovens of cement industries (14 in total) which may eventually eliminate contaminated dielectric oils containing less than 50 ppm of PCB.

Although cement units are potentially in position to eliminate pesticides and PCBs ecologically, the method is not yet envisaged in Morocco.

At present, the complete elimination is sub-treated with specialised enterprises in Europe, in framework of Basel and Stockholm Conventions.

III.5- CHEMICALS MANAGEMENT

During the last years, MTMWE has undertaken a programme aiming at endowing the country with means for management and control of chemical products in general and wastes resulting from dangerous substances. In order to realise this objective, MTMWE has elaborated a certain number of studies aiming at a better knowledge of the chemical situation in Morocco, and has initiated concretely realised projects with national and international partners.

III.5.1- NATIONAL CHEMICAL PROFILE

During the past year, MTMWE has realised the study of the "National Chemical Profile" (NCP) which consists in realising an exhaustive diagnosis of national capacities (institutional, regular, technical), regarding management of chemicals in general, with a particular emphasis on hazardous chemical products.

This study has permitted to:

- Set up a process of coordination and dialogue regarding rational management of chemical products, among different concerned actors;
- Know the present state of national capacities (institutional, technical and human) regarding chemicals management;
- Identify priority needs of national activities and external technical assistance for institutional, legal and technical reinforcement in view of ensuring rational management of chemical products.

The NCP has allowed, in a second phase, to elaborate a national strategy for chemicals management from production or importation to their elimination, including aspects relating to chemical risks and prepare a national plan to fill the identified gaps and sustain the application of national policy in this field.

III.5.2- HAZARDOUS CHEMICALS INVENTORY AND RISK PREVENTION PLANS

This survey has consisted in an exhaustive enquiry which permitted to identify the main chemicals holders in Morocco, and to evaluate the quantities detained. It has also been the occasion to realise risk prevention plans for certain units considered risky and for certain industrial areas where a great concentration of products generates important risks.

III.5.3- NATIONAL CENTRE FOR SPECIAL WASTES ELIMINATION

In framework of cooperation between the kingdom of Morocco and the German "Land of Rhenanie-Westphalie", a project of a Centre for special wastes elimination is on the way to be realised.

This centre, which will need a global investment of 15 million dollars, will be located in Casablanca suburbs. It will allow treatment, according to the best available practices, of hospital and industrial hazardous wastes, including POPs products or POPs contaminated substances.

The Centre will be composed of:

- A rubbish dump controlled for hazardous wastes;
- A unit for physical and chemical treatment;
- A unit for production of alternative combustibles;
- A unit for thermal treatment.

The impact study of this project was realised by MTMWE and examined by the National Committee for Impact Studies. At technical level, the feasibility studies and detailed studies will be realised during 2006. This unit is planned for 2008.

III.5.4- AFRICAN PROGRAMME FOR ELIMINATION OF PESTICIDES STOCKPILES

Thanks to a financial support amounting to 4.5 million dollars, a big project for elimination of expired pesticides stockpiles will be achieved in Morocco. This project aims at clearing all African countries from present stockpiles of expired pesticides, pesticides residues (containers and equipment) and seriously contaminated grounds, and installing measures to prevent accumulation of new stocks.

CHAPTER IV: STRATEGY AND PLAN OF ACTION

Morocco has to present, at the latest on 15 September 2006, a National Implementation Plan (NIP), describing the way it intends to fulfil its obligations, in pursuance of the Convention. More precisely, Article 7 of the Convention stipulates:

1- Each Party shall:

a) Develop and endeavour to implement a plan for the implementation of its obligations under this Convention;

b) Transmit its implementation plan to the Conference of the Parties within two years of the date on which this Convention enters into force for it; and

c) Review and update, as appropriate, its implementation plan on a periodic basis and in a manner to be specified by a decision of the Conference of the Parties.

2- The Parties shall, where appropriate, cooperate directly or through global, regional and sub-regional organisations, and consult their national stakeholders, including women's groups involved in the health of children, in order to facilitate the development, implementation and updating of their implementation plans.

3- The Parties shall endeavour to utilize and, where necessary, establish the means to integrate national implementation plans for persistent organic pollutants in their sustainable development strategies where appropriate.

Moreover and in pursuance of paragraph (a) of Article 5 of the Convention, Morocco has to develop an action plan on measures to be taken for reducing or eliminating unintentional POPs releases.

IV.1- ECONOMIC DEVELOPMENT AND ENVIRONMENTAL STRATEGY

Morocco is a developing country with a high demographic growth, accelerated exploitation of its natural resources and intense occupation of territory. The effects generated by economic activities, combined with little favourable climatic conditions, have conducted Morocco to a situation of an ecological deficit of which economic and social repercussions are likely to curb, or even destroy all sustainable development efforts of the country.

Face to this situation, Morocco has adopted a policy that puts environment in the centre of all reflection on socio-economic development, according to the fourth principle of Rio Declaration. The Moroccan Law on environment protection and development has established in principle, taking into consideration the protection of environment and ecological equilibrium when elaborating and executing territory management plans. This law has also consecrated integration of sustainable development concept, as a fundamental element of the economic and social development policy.

From another side, a National Strategy for the Protection of Environment and Sustainable Development was adopted. It defines global orientations and main axes of action to take regarding environment, and constitutes de facto the general frame where environment national actions are registered.

The national environmental strategy can be summarised in four key words:

- Repair degradations undergone by environment;
- Correct tendencies towards bad environmental practices;
- Provide the country with tools for measuring and evaluation;

- Plan and build on the basis of a global system for integrated prevention.

This strategy was elaborated in three steps:

1- The first step has permitted to examine the state of environment starting from a number of indicators and extrapolating this state up to horizon 2020;

2- The second step concentrated on identification and evaluation of impacts and cost of environment degradation; and

3- The third has allowed fixing priorities and objectives in view of a sustainable development of the country.

The National Implementation Plan for Stockholm Convention, which will allow Morocco to fulfil its obligations regarding this convention, is in keeping with the general pattern of this strategy.

IV.2- MOROCCAN POLICY AND OBJECTIVES REGARDING POPs

For a long time, Morocco has been engaged in implementing a national policy for protection of human health and prevention of risks linked to chemical products in general, and POPs in particular.

By subscribing to the NIP for Stockholm Convention, Morocco will continue and reinforce this policy, in view to reach a healthy situation shortly, with regard to POPs, according to the Convention fill book.

The objectives of the national strategy are dealing with the following elements:

- Setting up an adapted regular frame integrating the Convention obligations;
- Appropriate elimination of obsolete stockpiles and sound management of wastes;
- Reduction to the strict minimum of DDT stockpiles, still necessary against disease vectors, in framework of an integrated strategy;
- Important reduction of dioxins and furans releases, as a follow up of an integrated plan of action that contains sensitization and partnership actions;
- Reinforcement of national capacities regarding POPs management;
- Information and sensitization on POPs.

IV.3- CONSTRAINTS AND OPPORTUNITIES

To look for a balance between development demands, on one hand, and necessity to protect the environment and population health at short and long term, on the other hand, is the main challenge to take up in management of POPs and hazardous chemicals in general.

These aspects were discussed in framework of different information and dialogue workshops with all stakeholders, often resulting in consensuses which took into account points of view and demands of each participant.

The implementation of the different components of the Action plan will require important efforts in term of financial and logistical support, capacity building, technical assistance and sensitization/ information.

These efforts should be planned to insure efficiency and feasibility of the NIP objectives. Without accompanying measures, all action will be vain and inefficient.

The constraints to implementation of the NIP actions are of economic order; but also of social order, as they engender radical changes in behaviour of the main holders and users of the concerned products. As there is no decree for behaviour changes, reaching the fixed objectives will take a

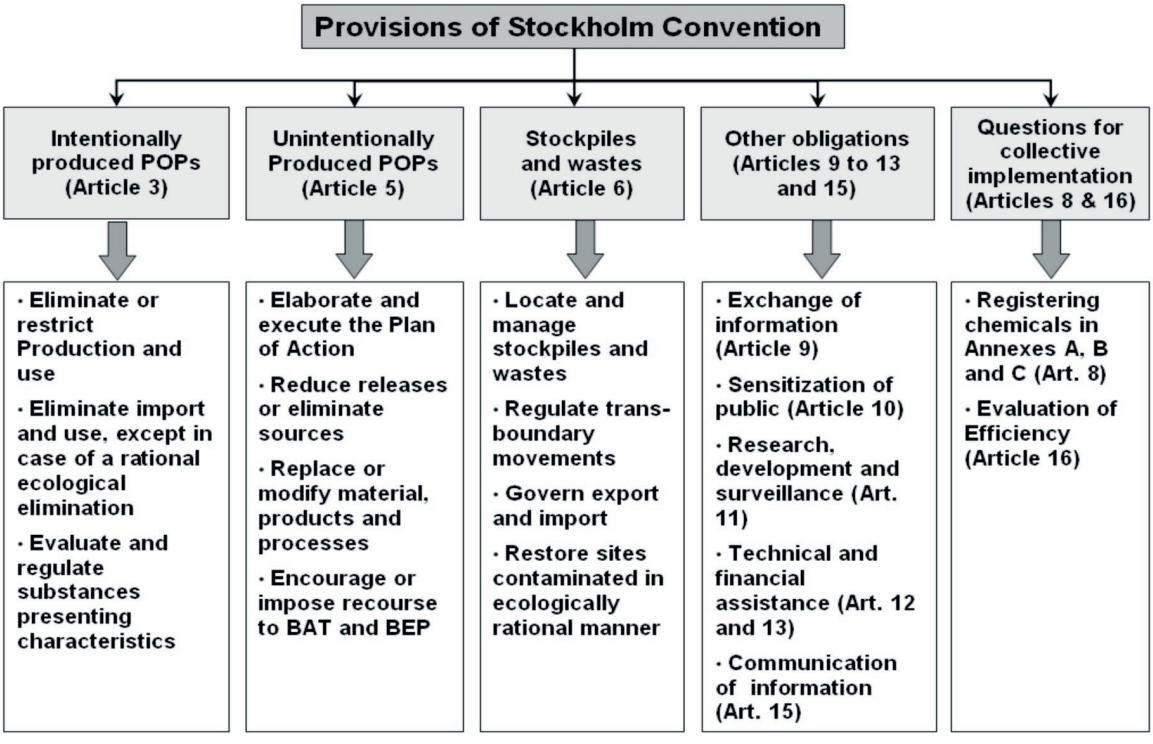
long time of sensitization and popularization.

On the other side, there are several elements favourable to the fulfilment of the main obligations, among which the following:

- Legal obligation to implement Stockholm Convention, because of its ratification by the highest authority of the State;
- Existence of the National Environment Plan (NEP) where the NIP is registered;
- Better appreciation of the POPs dangers, thanks namely to studies and sensitization campaigns led by DSRP in framework of Morocco POPs project;
- Existence of a commission for pesticides used in agriculture, in charge of studying and providing an opinion on pesticides homologation requests, among other prerogatives;
- Prohibition to import and use organo-chlorinated products, since 1984;
- Better knowledge of the national chemical context, following the elaboration by DSRP of a series of studies on the subject:
    - Elaboration of the first PCB Inventory, in 1998;
    - Elaboration of risk prevention plans linked to use of hazardous chemicals;
    - Preparation of the African Programme for Elimination of Expired Pesticides Stockpiles;
    - Elaboration of the National Emergency Plan to Combat Accidental Marine Pollutions;
    - Elaboration of a national profile on chemicals;
    - Installation of the National Centre for Elimination of Special Wastes.

IV.4- REQUIREMENTS AND PROPER MEASURES

The Stockholm Convention states obligations/prohibitions, and invites or encourages the Parties to take measures to reduce POPs impact on man and the environment.



IV.4.1- OBLIGATIONS UNDER ARTICLE 3

This article requires that the Parties prohibit or take the legal and administrative measures necessary to eliminate production, use, import and export of POPs intentionally produced and listed in Annex A (Aldrin, Chlordane, DDT, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene (HCB), Mirex, Polychlorinated Biphenyls (PCB), Toxaphene). Restrictions are applied to production and use of DDT, which constitutes an important means to combat disease vectors, namely malaria.

The following table summarizes the obligations of Article 3 of the Convention:

Article/§	Obligations/Recommendations	Comments
Art.3 §1-a-i	Prohibition of production and Use of chemicals listed in Annex A (Aldrin, Chlordane, DDT, Dieldrin,Endrin, Heptachlor, HCBs, Mirex, Toxaphene, PCBs)	Specific exemptions, limited in time, may be granted on request to the Parties; Already manufactured products containing POPs Are not concerned; A delay of 25 years is Granted for complete Prohibition of PCBs
Art.3 §1-a-i i	Set up provisions regarding importand export of products listed in Annex A	
Art.3 §1- b	Restrict production and use of chemicals listed in Annex B (DDT), to an acceptable purpose or as intermediary product	the use is subject to registration and setting up a replacement plan
Art.3 § 3	Regulate, at national level, production or use of pesticides or industrial chemicals having POPs Characteristics	
Art.3 § 4	Take into consideration the 4 criteria to evaluate pesticides and industrial circulating products	
Art.3 § 5	Exemption for products used in research	
Art.3 § 6	Measures for being sure that uses under exemption regime least affect persons and environment	

IV.4.1.1- Present measures for management of chemicals listed in Annex A

At present, the actions in force regarding obligations under Article 3 are:

- Prohibition of production, use, import and commercialisation of POP organo-chlorinated pesticides (except Mirex), since the Ministry of Agriculture Decree N° 466-84 of 1984. Mirex is not part of pesticides having been prohibited, because it has never been subject to a homologation request, and therefore, will not be imported in Morocco;
- Exceptional derogations for DDT used against Malaria vectors: import, formulation and use are submitted for authorisation from the Directorate of Vegetal Protection and Fraud Repression, Ministry of Agriculture.

IV.4.1.2- Measures to take under Article 3

The planned programmes for fulfilment of obligations under Article 3, are measures to reinforce and concord the present legislation with the terms of the Convention:

- Updating the present text regarding organo-chlorinated pesticides and DDT in order to include Dieldrin and Mirex on the list of prohibited products;
- Elaborating a regulation for PCBs (Prime Minister Decree with countersigning of Ministers of Industry and MTMWE) to translate to civil rights provisions of the Convention (Art. 3 §3 and §4), including delays for its final prohibition and incentive measures regarding management and elimination, etc...

IV.4.2- OBLIGATIONS UNDER ARTICLE 5

Article 5 of Stockholm Convention stipulates that the Parties are required to take all measures for reducing or eliminating releases that result from unintentional production of POPs.

The following table summarises obligations under Article 5, with regard to reduction and elimination of POPs unintentional releases:

Article / Paragraph	Obligation / Recommendation	Comments
Art. 5 a)	Elaborate a plan of action regarding products In Annex C, comprising inventory of release Sources of unintentional POPs	Re-examination every five years
Art. 5 b)	Encourage measures of reducing releases And elimination of most dangerous sources	
Art. 5 c) d) e)	Encourage or require recourse to BAT/BEP to reduce release of chemicals listed in Annex C	
Art. 5 g)	Elaborate norms for maximal releases of products listed in Annex C, using BAT/BEP	

IV.4.2.1- Present measures for management of chemicals listed in Annex C

With the exception of the convention agreed between MTMWE and the Cementers (imposing a measure of dioxins and furans every six months), there is no specific text regarding these products at present.

IV.4.2.2- Plan of Action for Unintentional Releases

Unintentional releases of dioxins, furans, PCB and HCB can happen in various processes of combustion, from forest fires to industrial processes generating high temperatures (incineration, metallurgy...). They are also unintentionally produced during chemical synthesis of aromatic chlorinated by-products.

The Inventory of dioxins and furans release sources (2004-2005), has demonstrated that around 235g-TEQ are released in Morocco (for the reference year 2003) by industry and various anthrop activities (heating, cooking, transport, dump fires...). More than 70% of these releases go to the atmosphere and, in a diffuse manner, end on soils, plants and water surfaces. Besides, 20% of releases go straight to soils to constitute reservoirs for POPs, particularly in rubbish dumps, pesticides spreading sites, premises where wood is treated with pentachlorophenol, etc...

The danger of unintentional POPs releases depends on the probability that these substances take a way leading to humans.

The most efficient way to protect man from these highly toxic products, is to limit their release from the starting point. For this, it is necessary to implement an integrated strategy to reduce releases, taking into account all aspects of the problem, meaning legislative, regulating, institutional and technical aspects.

The proposed strategy aims at filling the gaps with regard to monitoring and evaluation of unintentional POPs releases, and setting up incentive measures for recourse to the best available techniques (BAT) and best environmental practices (BEP) in highly potential release sectors.

A/ Short and Middle-term Actions

A1- Updating of the Legislation

The Moroccan environmental legislation does not include at present specific provisions for dioxins and furans. However, the law on air pollution foresees the elaboration of a regulation that fixes the limited values of dioxins and furans releases by the various sources.

Morocco considers three regulating measures:

- Complete texts applying to law on atmospheric releases and law on water with norms regarding release of dioxins and furans in air and water;
- Impose the recourse to the BAT for new release sources being part of source categories listed in the second part of Annex C, through applying texts on impact studies.
- Reinforce sanitary regulation of food products and creation of a Moroccan Agency for Sanitary Food Security. The project law N°31-01, creating this Agency is under approval. Its role will consist in systematically assisting the Government in the evaluation of risks, and in taking decisions affecting the food right. This action entails consideration of the problem of POPs contained in food products.

A2- Pursuing inventory of dioxins and furans releasing sources

It is essential to dispose of an exhaustive inventory of releasing sources and deepen research on certain categories of sources located in sensitive environments. The inventory will be updated

every five years and should contain most data of national origin, namely those concerning release values based on measures and analyses.

A3- Studies per sector

It is important that studies allowing improvement of knowledge regarding certain sectors potentially releasers of dioxins, be undertaken for a better apprehension of the issue. The priority studies will concern management of hospital wastes, home combustion of solid combustibles (wood, charcoal, household wastes, green wastes,...) metallurgical industries, dangerous practices in rubbish dumps, cartography of back points, etc...

A4- Reinforcement of means of control and surveillance

The country is determined to reinforce its own capacities of surveillance and follow up of the quality of environments (Specialized laboratories) and to exercise its prerogatives with regard to environmental police (Training of Inspectors). It is essential, in fact, to be able to measure releases and dioxins content with local means, in order to protect human health and verify the respect of norms.

A5- Information and sensitization

Pollution through dioxins concerns both big industrial enterprises and particulars. Each category, at its level, can participate in reducing dioxins releases. Therefore, sensitization plays a determinant role in the success of the Plan of Action.

Sensitizing actions will be realised by all stakeholders, namely ministerial departments, NGOs, professional associations and the media. Their objective will be to eradicate very common practices but dangerous, like waste incineration.

A6- Research and training

The participation of the national scientific community in the effort of reducing pollution by dioxins, can be made through elaboration of studies, framing University theses, collection of information and publication of works, particularly in the fields of chemistry, eco-toxicology, health, environment and information systems.

A7- Cooperation reinforcement

Morocco has to reinforce its cooperation with international organisms and more advanced countries in matter of environment protection and POPs, in particular, in order to mobilise adequate human and material means, exchange information and experiences, transfer know-how regarding evaluation and substitution techniques.

The fact that Morocco stood as candidate, during COP1, to host one of the Convention centres, shows its wish to promote regional and international cooperation in this field, namely the South-south cooperation.

A8- Partnership with industry

Partnership activities with industry will be initiated in order to promote BAT and set up monitoring means in the installations. Initiatives of this kind, have already started to have good results, namely the conventional approach with the Phosphates Cherifian Office and the Professional Association of Cementers, concerning cement industries atmospheric releases.

B/ Long term actions

The long term actions will mainly consist of evaluating initial actions, updating the National Plan of Action and setting up plans of actions by sector.

Long course activities will be planned since the beginning, among which the following:

- Collection of epidemiological and toxicological data;
- Control and surveillance of POPs concentration in environments;
- Follow up of dioxins releases;
- Control of animal feed food products quality;
- Promotion of recourse to BAT/BEP and technology transfer in sectors having high potential of dioxins releases.

IV.4.3- OBLIGATIONS UNDER ARTICLE 6

Article 6 of the Convention, relative to management of stockpiles containing POPs and wastes, requires the Parties to:

- Develop appropriate strategies for identifying stockpiles, wastes including products and articles in circulation;
- Identify, to the extent practicable, stockpiles consisting of or containing chemicals listed either in Annex A or Annex B, on the basis of the strategies referred to in subparagraph (a);
- Manage stockpiles, as appropriate, in a safe, efficient and environmentally sound manner;
- Take appropriate measures so that wastes, including products and articles upon becoming wastes, are handled, collected, transported, stored and eliminated in an environmentally sound manner;
- Develop appropriate strategies for identifying sites contaminated by POPs, and if remediation of those sites is undertaken, it shall be performed in an environmentally sound manner.

The following table summarises the obligations under Article 6 of the Convention:

Article /paragraph	Obligations / Recommandations	Comments
Art. 6 a) b)	Identify stockpiles of products Listed in Annexes A and B Consisting of or containing Chemicals, as well as wastes	
Art. 6 c)	Manage stockpiles of chemicals listed in Annexes A and B, in an environmentally sound manner	
Art. 6 d)	Manage stockpiles of chemicals listed in Annexes A and B, in an environmentally sound manner	
Art. 6 e)	Endeavour to identify contaminated sites and remediate them in an environmentally sound manner	

IV.4.3.1- Present measures regarding obligations under Article 6

- An Inventory of stockpiles, wastes and sites contaminated by pesticides and PCB, was elaborated in 2004;
- Many public and private companies (ONE, ONEP, Alcatel, etc...) have already started elimination abroad of equipment using PCB;
- The main contaminated sites were identified;
- The process of creation of the National Centre for Elimination of Special Wastes (NCESW) is quite advanced;
- The inventory of hazardous chemical products was elaborated and a database is operational;
- Morocco has been selected as pilot country for implementation of the first phase of the African Stockpile Programme (ASP) concerning elimination of expired pesticides stockpiles;
- The national chemical profile is prepared;
- A database on sites containing PCBs in Morocco has been set up.

IV.4.3.2- Measures to take under Article 6

The specific actions relating to a programme of environmentally sound elimination of stockpiles and remediation of sites comprise the following:

- Elaboration of a cartography associated to a database on contaminated sites;
- Achievement of pilot project on POPs destruction (tests on chemical processes, incineration methods, etc...);
- Achievement of analyses campaigns allowing identification of transformers contaminated by PCBs, in partnership with public corporations for electricity distribution;
- Elaboration of a plan for environmental management of pesticides stockpiles, including destruction of DDT stockpiles in adequate centres (Ministry of Health);
- Remediation of soils polluted by pesticides and PCBs.

IV.4.4- OBLIGATIONS UNDER ARTICLES 9 TO 13 AND 15

The obligations contained in these articles are summarised hereunder:

Article / Paragraph	Obligation / Recommandations	Comments
9	Exchange of information on POPs between the Parties, through the Convention Secretariat	
10	Information, sensitization and education of the public	
11	Research, development and surveillance	Concerned public: Polical public Officials, decision-makers, professionals,researchers and educators, women and general public
12	Technical assistance and transfer of technology on behalf of developing countries	
13	Engagement to dispose of financial Resources for elaboration of Plan Of Action	Depending on available means
15	Communication to the Secretariat of statistics and other information on the country	

IV.4.4.1- Present measures regarding obligations under Articles 9 to 13 and 15

- Organisation of national and regional workshops on sensitization and information on POPs;
- Participation at several radio and TV programmes and implication of the media in every activity related to POPs;
- Production and wide dissemination of appropriate communication material on POPs (posters, flyers, self-adhesives, video, etc...);
- Exhibition stand devoted to POPs at all events related to environment;
- Organisation of workshops and meetings at regional level;
- Trips for study and training;
- Finalization of inventories and the National Implementation Plan (NIP) for transmission to the Convention Secretariat.

IV.4.4.2- Measures regarding articles 9 to 13 and 15

- Dissemination and endorsement of the NIP among the main stakeholders;
- Presentation and popularization of the NIP to the attention of political officials and namely Parliament commissions;
- Continuation and reinforcement of international cooperation, namely South/south;
- Morocco candidature to host one of the Convention regional centres;
- Continuation and reinforcement of actions related to sensitization, information and education on behalf of all stakeholders, including the public and NGOs;
- Elaboration and dissemination of the different reports indicated in Article 15 of the Convention, according to the presentation and intervals agreed by the Conference of the Parties.

4.5- NATIONAL PRIORITIES

The stakeholders have largely been consulted in framework of the National Coordination Board on POPs (NCB-POP), to determine national priorities regarding POPs management.

The approach adopted consisted in defining priority fields, in a first step, in accordance with preliminary studies, namely the examination of needs and the national inventory on POPs.

The identified fields of priority are:

- Updating the national legislation to take the Convention obligations into account;
- Development of a strategy for identification and elimination of unintentional pesticides stockpiles, obsolete or likely to contain POPs;
- Development of a strategy for eliminating equipment containing PCBs from the national environment and destruction of oils contaminated by PCBs, in an environmental sound manner;
- Promote application of BAT in enterprises likely to release unintentional POPs and help the local communities better manage their rubbish dumps;
- Develop a sensitization and communication strategy with the public, in view of reducing practices that generate POPs;
- Develop national capacities with regard to POPs management.

From these fields, the NCB working group proposed actions and measures which were evaluated by stakeholders, according to the following criteria:

- Respond to Stockholm Convention obligations;
- Benefit public health and environment;
- Size and/or urgency of the problem and its perception by the population;
- Regular, technical and economic feasibility.

On this base, a list of actions was retained and constitutes the body of this plan of action.

IV.6- COMPONENTS OF THE NIP

The different components of the National Implementation Plan constitute the synthesis of different actions and measures that Morocco intends to develop in view of respecting its engagements towards Stockholm Convention.

The recommended actions are detailed in Annex 1 in project sheets.

COMPONENT 1: REGULAR AND INSTITUTIONAL MEASURES

Action 1.1: Updating the Decree of 19 March 1984 of the Ministry of Agriculture, regarding organo-chlorinated pesticides and DDT in order to include Dieldrin and Mirex in the list of products in Article 1 and consequently modify Articles 2 and 5 of the Decree;

Action 1.2: Elaboration of a new text for management, elimination and prohibition of PCBs to translate provisions of the Convention into civil rights (Art. 3 §3 and §4);

Action 1.3: Elaboration of a text regulating commercialisation of insecticides of public and hygienic use;

Action 1.4: Institutionalization of the National Study Committee for POPs (NSC-POP) which will have for mission, among other prerogatives, to study chemical products to register on the list of POPs;

Action 1.5: Support to the creation of a Moroccan Agency for Food Health Security (MAFHS) _ Bill N° 31-01 for creation of MAFHS under approval.

COMPONENT 2: MEASURES REGARDING TECHNICAL ASPECTS OF MANAGEMENT

Action 2.1: Reinforcement of national capacities with regard to technical expertise, ecologically sound management, scientific documentation and BAT/BEP on persistent organi pollutants;

Action 2.2: Periodical evaluation of the Convention implementation in Morocco;

Action 2.3: Undertake appropriate activities of development research and transfer of know-how through cooperation with advanced countries with regard to POPs;

Action 2.4: Surveillance and monitoring of POPs in the environment, in framework of the evaluation of the Stockholm Convention (Art. 16);

Action 2.5: Consolidation and reinforcement of the National Laboratory Network (NLN), concerned by POPs management;

Action 2.6: Installing a pilot site for destruction of equipment contaminated by PCBs;

Action 2.7: Elimination of obsolete POPs pesticides (namely in framework of ASP;

Action 2.8: Development of an integrated strategy for management of chemicals used in the fight against disease vectors, including DDT;

Action 2.9: Elaboration of studies on possible substitutes of DDT, in the case of Morocco;

Action 2.10: Study on identification and feasibility of decontamination of all sites contaminated by PCBs and POPs;

Action 2.11: Remediation of sites identified;

Action 2.12: Targeted equipment of the National Environment Laboratory, namely samplings and analyses of Dioxins and Furans;

Action 2.13: Updating inventories.

COMPONENT 3: MEASURES REGARDING TRAINING, SENSITIZATION AND COMMUNICATION

Action 3.1: Elaboration and development of a national strategy of communication on POPs;

Action 3.2: Information, sensitization and education of the public (workshops, seminars, conferences, etc...);

Action 3.3: Support to NGOs concerned by environment field and protection of population health with regard to POPs;

Action 3.4: Training and sensitization of Customs employees and environment inspectors in the field of POPs and chemical products;

Action 3.5: Training and sensitization of national professional staff in public and private sectors on POPs;

Action 3.6: Sensitization of media representatives on POPs;

Action 3.7; Provide the public with health and environmental information regarding POPs and put into practice measures of labelling and sensitizing consumers;

Action 3.8: Maintain, update and administration of website on POPs (www.pop-maroc.org)

COMPONENT 4: OTHER COMMITMENTS

Action 4.1: Exchange of information with other countries (namely in framework of South/south cooperation), satisfy all information requests of these and of the Secretariat, and support the creation of a regional centre of the Convention in Morocco;

Action 4.2: Financial assistance by which Morocco will respect provisions of financial order of the Convention by disbursing the contributions due to be paid;

Action 4.3: Elaboration and dissemination of the different report required by Article 15 of the Convention, according to the format and intervals decided by the Secretariat.

IV.7- NECESSARY RESOURCES

Morocco will finance a part of the NIP with its own means, within the limit of resources granted by the general State budget to the environment sector, and more particularly to the hazardous chemical products.

These resources being obviously insufficient, the government will call upon other financing possibilities, namely those foreseen by Article 13 of the Convention, the bilateral and multilateral cooperation, contributions from all organisations and/or international associations, the recourse to different funds of support to environmental actions, etc...

At last, all forms of partnership will be encouraged (namely those from public/private sectors such as the Convention with cementers).

The following table summarises the foreseen actions, their cost and delays of achievement:

Actions	Required budget In $ US	Delay of achievement
Reinforcing regulations regarding POPs	30 000	1 to 5 years
Elaboration of law texts regarding commercialisation of insecticides of public and hygienic use	10 000	6 months
Training of boundaries staff on chemicals field	150 000	1 year
Epidemiological study in areas where utilisation of pesticides is frequent	300 000	3 years
Epidemiological study in area dioxins And furans are potentially released	300 000	3 years
Surveillance of POPs in environment	800 000	3 years
Reinforcement of the national network for surveillance of chemicals and POPs	500 000	2 years
Reinforcement of capacities for management and elimination PCB oils and equipment	13 550 000	5 years
Elimination of expired pesticides stockpiles in framework of the African Stockpile Programme (ASP)	4 500 000	5 to 10 years
Setting up of integrated management of Fight against disease vectors and improvement of DDT stockpiles management	1 000 000	10 years
Support to management of rubbish dumps in view of Reducing dioxins releases	500 000	5 years
Creation of a Moroccan Agency for Food Health Security	3 000 000	2 years
Elaboration of sensitization and information programmes on POPs	200 000	2 years
Transfer of technology on POPs	75 000	5 years
TOTAL	24 915 000 $ US	

IV.8- MONITORING/EVALUATION

The implementation of the NIP will be subject to regular evaluations by the National Commission on POPs, services of MTMWE, and once every three years by an independent expert, known at international scale.

The results of different evaluations will serve to make adjustments to the NIP components, in function of real impacts of each action and changes occurred during the implementation.

Programmes by sector will be established on need and implemented with respect to the objectives of the NIP strategy.

ANNEX

PROJECTS SHEETS

PROJECT SHEET

Title of project: Reinforcement of regulations regarding POPs

Type of project: Legal

Global objective: Reinforcement of the legislative frame regarding POPs (organo-chlorinated insecticides, air releases of unintentional POPs, PCBs)

Objective/Convention: Disposal of a legislation on POPs allowing regulation of production, import/export and use of products listed in Annex A of Stockholm Convention, and provide the country with rules in accordance to the best environmental practices

Convention Article: Art.3, Art.5 §g

Context/Present situation: At present, there is no legislation concerning PCBs and dioxins/furans.The Decree of 19 March 1984 prohibits manufacturing, sale and use of 11 organo-chlorinated pesticides, with the exception of Mirex, and tolerates use of dieldrin in the fight against locusts and DDT against disease vectors

Description of project: Updating Decree of 19 March 1984; Elaboration of a text regarding PCBs; Elaboration of norms regarding dioxins/furans release towards air and water; Elaboration of norms regarding maximal content of dioxins and furans in food products

Activities: Documentary research, compared analysis of the international legislation, proposal for modification of existing texts through amendment and establishing new texts, followed by promulgation procedure

Expected results: Disposal of legal and regulating texts allowing a better control of POPs

Expected changes: Progressive elimination of PCBs from environment; Disposal of texts regulating dioxins and furans releases; Total prohibition of POPs pesticides

Delay of achievement: 1 to 5 years

Implementing Departments: MTMWE, Ministry of Agriculture, Ministry of Commerce and Industry, MOH

- Implementation: MTMWE
- Monitoring and Evaluation: MTMWE, Ministry of Agriculture

Partners: Ministerial departments, Universities, NGOs, UNIDO, UNDP, UNEP

Synergy with other programmes: Programme to modernize the national environmental legislation

Budget: 30 000 $US

Eventual source of finance: General Budget

Other sources: Cooperation

Cross-cutting aspects: Environment protection

Links with other activities: Updating the national environmental legislation

Impact on Environment: Prevent pollution in natural environments

Social impact: Protect health of labourers and citizens

Economic impact: Cost of change of equipment containing PCBs or polluted by PCBs; Cost of setting up the best available techniques (BAT) in industry.

PROJECT SHEET

Title of project: Elaboration of legal texts regarding commercialisation of public used insecticides

Type of project: Legal – Management

Global objective: Reinforcement of legal frame regarding insecticides classified as POPs

Objective/Convention: Taking into consideration the 4 criteria to evaluate the pesticides and industrial products in circulation

Article Convention: Art.3 §4

Context/Present situation: The sector of hygiene used pesticides is not regulated

Description of project: Elaboration of legal texts regarding pesticides used in public hygiene and in homes

Activities: Research and international legislative documentation

Expected results:

- Disposal of legal texts allowing control of insecticides import and/or production;
- Use and sound management of pesticides in Morocco

Expected changes: Better control of hygiene used products

Delay for achievement: 6 months

Implementing Authority:

- Implementation: Ministry of Health, Ministry of Commerce and Industry
- Monitoring and Evaluation: Ministry of Health, MTMWE
- Sustainability: Ministry of Health

Partners: Ministry of Agriculture, Universities, Engineers Schools, NGOs, Anti- poison Centre

Synergy with other programmes: Updating national environmental legislation

Budget: 10 000 $US

Eventual source of financing: State Budget

Other sources:

Cross-cutting aspects: Protection of health, protection of environment
Link with other activities: Protection of health
Environmental impact: Protection of population health, reduction of intoxications caused by domestic chemical products
Social impact: Protection of health
Economic impact: Decrease of costs linked to impacts on health and environment

PROJECT SHEET

Title of project: Training of boundaries staff in the field of chemicals

Type of project: Institutional – Legal

Global objective: Teach staff at boundaries borders how to recognize products containing POPs

Objective/Convention: Setting up provisions regarding Import/Export of POPs

Article/Convention: Art.3 §1-a-ii

Context/Present situation: At present, the Customs Corps has not benefited from any training on POPs

Description of project: Installing a surveillance and control system of chemical products entering to and/or leaving the country

Activities: Training sessions, exchange

Expected results:

- Qualified Customs staff, sensitized to the POPs issue
- Staff able to recognize products likely to contain POPs
- Setting up control provisions regarding Import/Export of chemicals likely to contain POPs
- Specific database on POPs

Expected changes: Human resources development

Delay for achievement: The training of Customs staff will be realised through training sessions and information seminars

Implementing Authority:

- Implementation: Ministry of Finance (Customs), MTMWE
- Monitoring and evaluation: MTMWE/Customs
- Sustainability: MTMWE/Customs

Partners: Ministry of Commerce and Industry, Ministry of Agriculture

Synergy with other programmes:

Budget: 150 000 $US

Eventual of financing: State Budget, GEF, Bilateral and Multilateral cooperation

Other resources: UNDP, UNIDO, UNEP, UNITAR, OFPPT

Cross-cutting aspects: Improvement of national competencies, capacity building

Link with other activities: Other sensitization actions in framework of the NIP

Environmental impact: Reduction of risk introducing POPs to the country

Social impact: Protection of human health

Economic impact: Decrease in the costs linked to environment degradation

PROJECT SHEET

Title of project: Epidemiological study in areas where use of pesticides is frequent

Type of project: Research

Global objective: Determine eventual links between certain diseases and use of pesticides. The areas where fight against locusts and those where fight against disease vectors using DDT is prevailing, will have priority in this type of study

Objective/Convention: Research, development and surveillance: knowledge of POPs effects on human health

Article/Convention: Art.11

Context/Present situation: No study in this field has ever been led in Morocco

Description of project: Epidemiological research

Activities: Studies, capacity building

Expected results: Better knowledge of pesticides effects on human health and identification of populations needing to be taken in charge

Expected changes: Setting up an epidemiological surveillance system in the field of POPs

Delay for achievement: Three years

Implementing Authority:

- Implementation: MOH, MTMWE, Faculty of Medicine, Hassan II Agronomic and Veterinary Institute
- Monitoring and evaluation: MOH
- Sustainability: MOH, MTMWE

Partners: Agriculture Department, Universities, NGO, UNEP

Synergy with other programmes: Woman and Child health (UNIFEM)

Budget: 300 000 $US

Eventual source of financing: State Budget and bilateral cooperation
Other sources:WHO, UNIFEM, UNICEF

Cross-cutting aspects: Capacity building

Link with other activities: Fight against locusts, fight against malaria vectors, epidemiological studies

Environmental impact: More rational use of pesticides

Social impact: Improvement of human health

Economic impact: Savings resulting from sound use of pesticides, decrease in costs linked to POPs impact on health and environment

PROJECT SHEET

Title of project: Epidemiological study in areas where dioxins and furans are potentially released

Type of project: Research

Global objective: Analysis of cause/effect relation between certain diseases and dioxins and furans releases, namely with populations living close to rubbish dumps (Ex Akrash near Rabat and Mediouna near Casablanca)

Objective/Convention: Research, development and surveillance: knowledge of POPs effects on human health

Article/Convention: Art.11

Context/Present situation: Absence of knowledge on state of health of populations living close to rubbish dumps

Description of project: Epidemiological study

Activities: Research

Expected results: Better knowledge of pesticides effects on human health and identification of populations needing to be taken in charge

Expected changes: Capacity building

Delay for achievement: Three years

Implementing Authority:

- Implementation: MOH, MTMWE
- Monitoring and evaluation: MOH, MTMWE
- Sustainability: MOH, MTMWE

Partners: Local Authorities, national and foreign laboratories, Universities

Synergy with other programmes: Epidemiological studies, health and environment

Budget: 300 000 $US

Eventual source of finance: Ministry of Health, WHO

Other sources: UNIFEM, UNICEF, UNIDO, bilateral cooperation

Cross-cutting aspects: Possibility of sensitizing population under study

Link with other activities: Other epidemiological studies

Environmental impact: Improvement of human health

Social impact: Reduction of diseases

Economic impact: Reduction of costs linked to POPs impact on health

PROJECT SHEET

Title of project: Surveillance of POPs in the environment

Type of project: Technical – Research

Global objective: The activity consists in taking samples from soil, water, air, sediments and plants in order to monitor POPs in the environment, at national level. The targeted zones are areas where POPs were previously utilised, sites where disaffected electrical transformers are stored, storage sites belonging to the Agriculture Department

Objective/Convention: Improvement of the Inventory and study of POPs dissemination, development and transformation

Article/Convention: Art.11

Context/Present situation: No knowledge of the POPs contamination level at level of black points

Description of project: Audit of potentially contaminated areas

Activities: Enquiries, sampling and analyses on black point sites (10 to 15 sites per year), elaboration of mapping and tabular database containing information on contaminated sites

Expected results: Better knowledge of contamination level of certain back points and elaboration of more accurate inventories, elaboration of maps on POPs pollution

Expected changes: Reinforcement of national laboratories capacity and motivation of environment inspectors in monitoring the POPs issue

Delay for achievement: Three years

Implementing Authority:

- Implementation: Environment Department and national laboratories
- Monitoring and evaluation: Environment Department
- Sustainability: Environment Department

Partners: National Office for Electricity, Jorf Lasfar Electric Company, National Office for Drinking Water, Basin Agencies, local authorities, Anti-poison Centre, Hygiene Institute

Budget: 800 000 $US

Eventual source of finance: International or bilateral cooperation, FODEP, UNEP, GEF
Other sources:Partnership with an Industrials Association

Cross-cutting aspects: Environment protection

Link to other activities: Improvement of POPs inventories taking place every 5 years

Environmental impact: Prevention of natural milieus contamination by POPs

Social impact: Protection of health

Economic impact: Reduction of costs of environment degradation

PROJECT SHEET

Title of project: Reinforcement of the national network for surveillance of chemical products and POPs

Type of project: Technical-Research

Global objective: Improvement of equipment belonging to a national laboratory for POPs analyses, namely dioxins and furans

Objective/Convention: Improvement of inventory and study of POPs propagation, surveillance of development and transformation

Article/Convention: Art.11

Context/Present situation: There is no laboratory for dioxins/furans analysis in Morocco

Description of project: Acquisition of equipment and staff training

Activities: Monitoring and timely analyses

Expected results: Disposal of one laboratory at least, at national level; creation of a core of competence in POPs analysis

Expected changes: Operational changes, capacity building

Delay for achievement: Two years

Implementing Authority:

- Implementation: Environment Department
- Monitoring and evaluation: Environment department
- Sustainability: Environment Department

Partners: Ministry of Higher Education and Scientific research, National Centre for Scientific and Technical Research, UNEP, UNDP and National Laboratories

Synergy with other programmes: Vigilance of Anti-poison Centre

Budget: 500 000 $US

Eventual source of finance: International Donors, state budget, UNEP

Other sources: Private sector in framework of partnership, UNIDO

Cross-cutting aspects: Capacity building

Link with other activities: reinforcement of existing programmes of environment surveillance

Environmental impact: Better knowledge of the milieu contamination and setting up most adequate BEP

Social impact: Prevention of contamination risk and protection of health

Economic impact: Reduction of costs engendered by environment degradation

PROJECT SHEET

Title of project: Reinforcement of capacities for management and elimination of PCB based oils, material and soil contaminated by POPs

Type of project: Integrated project composed of three aspects:

- Legislative and regular
- POPs management
- POPs elimination

Global objective: Provide the country with a structure for management and elimination of PCB and decontamination of soils

Objective/Convention: Ensure that stockpiles composed of chemical substances listed in Annex A or Annex B and wastes containing these products, be managed in a way to protect human health and the environment. Take appropriate measures to eliminate wastes and articles reduced to waste state in an environmentally sound manner

Article/Convention: Art.6

Context/Present situation: At present, there is no specific legislation for management of oils and equipment containing PCBs in Morocco. Furthermore, there is no specialised structure for management and/or elimination of PCBs and wastes contaminated by PCBs

Description of project: The goal of this project is to build an establishment for management and elimination of PCBs and wastes containing PCBs

Activities:

- Reinforcement of the administrative and legal frame for management and elimination of PCBs, together with promulgation of adequate texts, development and approval of principles for the obligation of contaminated sites remediation, training of stakeholders and sensitization of public
- Management of the PCB issue, namely formal identification of equipment containing PCBs, marking contaminated equipment for proper follow up, holding inventory registers giving detail of material and contaminated soils, proposing case by case elimination methods
- Elaboration of studies and construction of premises for the elimination of wastes containing PCBs, execution of elimination activities, transfer of the establishment to the selected operator in framework of Government/private sector partnership

Expected results: Setting up national capacities for elimination of PCBs and treatment of POPs contaminated soils

Expected changes: Stopping export of PCB equipment in view of their elimination and reduction rough eliminations

Delay for achievement: 5 years

Implementing Authority:

- Implementation: MTMWE, Ministry of Commerce and Industry
- Monitoring and evaluation: MTMWE
- Sustainability: MTMWE, Private sector

Partners: Private sector, design offices, specialised enterprises

Synergy with other programmes:

- The project will complete APEPS project (African Programme for Elimination of Pesticides Stockpiles);
- UNDP programme regarding PCB management and elimination by non-combustion;
- Project for creation of the National Centre for Elimination of Special Wastes

Budget: 13 550 000 $US

Eventual source of finance: Moroccan Government, private sector, international donors (KfW via GTZ)

Other resources: World Environment Fund, UNDP, FODEP, UNIDO

Environmental impact: Potential for elimination of 5 000 tons of PCB, 14 000 tons of contaminated transformers, 10 000 tons of condensers and treatment of thousands of tons of contaminated soil

Social impact: Employment, technology transfer, capacity building, protection of human health and the environment

Economic impact: Hard currency savings for the country, reduction of elimination costs, creation of a market for environmentally sound elimination, reduction of degradation costs, creation of added value

PROJECT SHEET

Title of project: Elimination of expired pesticide stockpiles in framework of ASP

Type of project: Technical, research, management

Global objective: Complete destruction of expired pesticide stockpiles, at regional level (including those of the Ministry of Health

Objective/Convention: Sound and definitive elimination of products and articles reduced to waste state containing POPs

Article/Convention: Art.6§d

Context/Present situation: According to FAO/ASP data, Morocco detains 760 tons expired pesticides potentially contaminated by POPs

Description of project: The African Programme regarding Pesticides Stockpiles aims at eliminating all expired pesticide stockpiles from Africa and put in place measures that prevent future accumulation

Activities: Export and destruction in special centres

Expected results:

- Get Africa rid of expired pesticides and accumulated contaminated wastes (containers and other equipment) without disrupting environment;
- Serve as a catalytic to adjustment of preventive measures; and
- Ensure reinforcement of capacities and institutions on all important questions concerning chemical products

Expected changes: Structural, operational, capacity building

Dealy for achievement: An approach by long term phases is requested, at least three parts during 5 to 10 years. The first phase of three to four years duration is being implemented since 2004 in partnership with UNIDO. Morocco is among the 15 targeted countries for Phase 1 activities

Implementing Authority:

- Implementation: ASP/Ministry of Agriculture
- Monitoring & evaluation: MTMWE, ASP
- Sustainability: MOH, Ministry of Agriculture, MTMWE

Partners: ASP partnership is constituted of international and African NGOs, regional and international organisations, World Bank, GEF, Multilateral Agencies and representatives of private sector and industry

Synergy with other programmes: Basel Convention, Rotterdam Convention, Bamako Convention

Budget: 4.5 M$ US (World Bank loan)

Other resources: MOH, Agriculture, MTMWE

Cross-cutting aspects: Protection of environment and human health

Link with other activities: Other actions foreseen by the NIP

Environmental impact: Elimination of hazardous pollutants

Social impact: Protection of health and creation of jobs

Economic impact: Reduction of costs of environment degradation, reduction of costs for elimination of expired pesticides abroad.

PROJECT SHEET

Title of project: Setting up of integrated management of fight against disease vectors, and improvement of DDT stockpiles management

Type of project: Technical

Global objective: Gradual reduction of DDT use in Morocco and introduction of alternatives

Objective/Convention: Limitation and eventually elimination of DDT use in Morocco

Article/Convention: Art.3§1b

Context/present situation: Morocco has a stock of 47 tons of DDT of which 50% are held by the Ministry of Health, when only one ton per year is used in the fight against malaria vectors. This disease is regressing but risk factors are still present

Description of the project: The aim of the project is to reduce exposure of human beings and the environment to DDT and its risks. It proposes the implementation of an integrated management for fighting disease vectors which will allow limitation of DDT use, and introduction of new methods of fight

Activities: Implementation of the integrated management

Expected results:

- Plan of action for the integrated management;
- Evaluation of acceptability or not of DDT replacement products

Expected changes: Gradual renunciation to use DDT

Delay for achievement: Five years

Implementing Authority:

- Implementation: MOH, Ministry of Agriculture
- Monitoring and evaluation: MOH, Ministry of Agriculture, MTMWE
- Sustainability: MOH, Ministry of Agriculture, MTMWE

Partners: MTMWE, ASP, WHO, private sector of pesticides industry

Synergy with other programmes: Integrated management of pesticides used in agriculture

Budget: 1 000 000 $US

Eventual source of finance: State Budget, GEF, WHO

Other resources: ASP

Cross-cutting aspects: Reinforcement of collaboration among sectors, capacity building

Link with other activities: NIP of Stockholm Convention

Environmental impact: Protection of biological diversity

Social impact: Reduction of impact on health

Economic impact:

PROJECT SHEET

Title of project: Support to management of rubbish dumps in view to reduce Dioxins releases

Type of project: Institutional – Management – Technical

Global objective: Improve or replace old rubbish dumps by controlled premises in view to reduce risks of dioxins releases by open sky incineration of wastes

Objective/Convention: Encourage measures for reducing wastes

Article/Convention: Art.5 §b, c, e

Context/present situation: At present, very few dumps are seriously controlled in Morocco

Description of project: Achieve actions for partnership and mobilisation of funds on behalf of Local Communes for better management of dumps

Activities: Sensitize locally elected authorities, inform populations on dangers caused by open sky incineration of wastes, prepare communication support and assist in elaboration of controlled dumps

Expected results:

- Improvement of rubbish dumps management;
- Rehabilitation of certain dumps;
- Important reduction of dioxins releases (around 50% of present releases according to the Inventory results)

Expected changes: Optimal management of wastes throughout controlled dumps

Delay for achievement: Five years

Implementing Authority:

- Implementation: Municipalities/MTMWE
- Monitoring and evaluation: Municipalities/MTMWE
- Sustainability: Municipalities/MTMWE

Partners: Communal Equipment Fund, Ministry of Interior, International cooperation agencies, Basin Agencies, MOH, National Office for Drinking Water (NODW)...

Synergy with other programmes: Public health programmes, protection of water resources programmes

Budget: 500 000 $US

Eventual source of finance: State Budget, International Organisations

Other resources: Basin Agencies, NODW, Environment protection associations, UNEP

Cross-cutting aspects: Improvement of life environment

Link with other activities: Activities pursued in framework of Law on wastes, and activities in connection with the Convention on Climatic Changes

Environmental impact: Reduction of risks engendered by production of unintentional POPs, protection of water resources, reduction of air pollution

Social impact: Improvement of health of populations living close to rubbish dumps

Economic impact: The improvement of dumps is a job opportunity for various operators in public and private sectors

PROJECT SHEET

Title of project: Creation of a Moroccan Agency for Food Health Security

Type of project: Technical – Research – Management

Global objective: Dispose of a scientific institution likely to advise government on issues of health risks from food origin. Its role will consist on evaluating risks and proposing remedies

Objective/Convention: Elaborate norms for maximum releases of POPs in Annex C

Article/Convention: Art.5 §g

Context/present situation: Absence of organism in charge of food security

Description of project: Creation of the Agency

Activities: Legal creation of the entity, equipment of laboratories and training of staff, international expertise

Expected results: Reinforcement of food security

Expected changes: Improvement of food quality control

Delay for achievement: Two years

Implementing Authority:

- Implementation: Ministry of Agriculture, MTMWE
- Monitoring and evaluation: Ministry of Agriculture, MTMWE
- Sustainability: Ministry of Agriculture

Partners: Customs, agro-alimentary industry

Synergy with other programmes: Control of the environment quality

Budget: 3 000 000 $US

Eventual source of finance: State Budget

Other resources: International cooperation, private partners

Cross-cutting aspects: Reinforcement of control activities

Link with other activities:

Environmental impact: Reduction of POPs in food products (pesticides residues,dioxin, PCB)
Social impact: Protection of population health

Economic impact: Creation of jobs

PROJECT SHEET

Title of project: Elaboration of sensitization and information programmes

Type of project: Information, Education and Communication

Global objective: Promotion and sensitization of researchers through organisation of meetings and workshops on themes related to POPs management

Objective/Convention: Encourage and facilitate information and sensitization of the public

Article/Convention: Art.10

Context/present situation: Very few meetings were organised in Morocco on POPs issue

Description of project: Organisation of workshops and meetings; communication and information media

Activities: Exchange of information and contact with national and international experts

Expected results: Large-scale sensitization of economic operators, scientists, decision-makers, farmers, NGOs, women and children

Expected changes: Human resources development and better knowledge of POPs issue

Delay for achievement: Two years

Implementing Authority:

- Implementation: Environment Department
- Monitoring and evaluation: Environment Department
- Sustainability: Environment Department

Partners: Ministry of Higher Education and Scientific Research, Universities, Research laboratories, UNITAR and UNIDO

Synergy with other programmes: Public education and teaching programmes

Budget: 200 000 $US

Eventual source of finance: Sponsoring, multilateral and bilateral cooperation

Other resources: UNICEF, WHO, UNDP, UNEP

Cross-cutting aspects: Capacity building

Link with other activities: Capacity building programmes on environment issue, support to the national policy regarding improvement of chemical products management

Environmental impact: Prevention of risks linked to ignorance of POPs dangers

Social impact: Protection of population health, particularly women and children

Economic impact: Reduction of costs linked to impact on health

PROJECT SHEET

Title of project: Technology transfer on POPs

Type of project: Research

Global objective: Create national competencies

Objective/Convention: Encourage and undertake research activities on various items linked to POPs

Article/Convention: Art.11

Context/present situation: Little competence in the field of POPs treatment

Description of project: Creation of a technological lookout cell for POPs within the Environment department and bringing to light collected information, updating and perpetuating the website on POPs (www.pop-maroc.org)

Activities: Technological lookout

Expected results:

Expected change: Better knowledge of POPs, development of national competencies in the field of POPs

Delay for achievement: Six months (for installation)

Implementing Authority:

- Implementation: Environment Department
- Monitoring and evaluation: Environment Department
- Sustainability: Environment Department

Partners: Ministry of Higher Education and Scientific research, Universities, Anti-poison Centre, National Library

Synergy with other programmes:

Budget: 15 000 $US per year during 5 years

Eventual source of finance: State Budget, multilateral and bilateral cooperation

Other resources: UNIDO, UNEP, GEM

Cross-cutting aspects: Capacity building in POPs management

Link with other activities: Sensitization, information and communication on POPs

Environmental impact: Adoption of BAT/BEP by enterprises

Social impact: Protection of health, development of scientific and technical capacities

Economic impact: Creation of jobs in the sector of clean production technologies