

**OBSOLETE PESTICIDE STOCKS MADAGASCAR**

**INVENTORY , ELIMINATION AND PREVENTION OF PESTICIDE  
OBSOLETE STOCKS IN MADAGASCAR :  
PRESENTATION OF THE EXPERIENCE**

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MADAGASCAR

## **CONTENT**

**Introduction** : Motivation and objectives

### **I-Description of realized activities**

\*National inventory

\*Elimination of obsolete stocks

-Participants

-Collection

-Facilitating actions

-Packing / Packaging

\*Prevention program

-Operational Plan

-Increasing public awareness and training

### ***II-Learnt lessons***

### ***III-Prospects***

-Capitalization

-Perpetuating preventive actions

## **OBJECTIVES**

1/ Getting quantitative and qualitative nationwide analyses on the existence of obsolete pesticides

2/ Ensuring the elimination of obsolete stocks

3/ Initiating a national prevention program to avoid future accumulation of pesticide stocks.

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I-Description of realized activities

**CHRONOLOGY**

- 1993 = GTZ : MADAGASCAR EXPORTED 45 MT  
OBSOLETE PESTICIDE STOCKS (DIELDRIN FOR  
LOCUST CONTROL) TO ENGLAND FOR  
INCINERATION**
- 1994 = FIRST INITIATIVE FOR A NATIONAL INVENTORY  
= IN 13 PUBLIC COMPANY WAREHOUSES, 76 MT  
PESTICIDE WERE CONSIDERED AS OBSOLETE**
- 1996 = NATIONAL INVENTORY : INVENTORIES  
ANALYSES**
- 1997 = INVENTORY RESULTS  
= CREATION OF OBSOLETE PESTICIDE WORKING  
GROUP**
- 1998 = COLLECTION OF OBSOLETE STOCKS  
THROUGHOUT MADAGASCAR**
- 1999 = PREVENTION PROGRAM STARTED**
- 2000 = 96 MT OBSOLETE PESTICIDE STOCKS WERE  
EXPORTED TO BASLE**

**I-Description of realized activities**

**NATIONAL INVENTORY**

-The inventory revealed a total of 170 MT of unused pesticides

-The National inventory not only allowed to know the exact extent of the problem but also allowed to:

- identify the reasons why these products were accumulated and not used ;
- determine the quantity of decayed products to be eliminated ;
- quantify the products still usable and to determine their conditions for use and their expiry date,
- identify the warehouse to be restored,
- plan immediate actions for very urgent cases

(such

as decanting, safety measures...)

- 82 MT of pesticides to be eliminated.

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**I-Description of realized activities**

NATIONAL INVENTORY

**ORIGINS (CAUSES) OF OBSOLETE STOCKS**

CAUSES

CONSEQUENCES

\*Prohibition of use (case of Dieldrine)

\*Warehouses not complied with the standard (lack of ventilation system, products directly put on the floor...)

\*Warehouses in bad conditions

\*Poor handling conditions of cans and barrels (no lifting equipment)

\*No observance of FIFO principle

\*Loss of labels

\*No stock sheets

\*No quality control

\*Unsuitable packings

\*Suppliers' delivery conditions (minimum container) do not correspond to users' capacities

\*Wrong estimation of needs

\*Lack of training and supervision

\*Donations do not match the actual needs

\*The products get quickly decayed

\*Products exposed to the elements

\*Damaged cans and barrels

\*Accumulation of old stocks

\*Unidentifiable products

\*Inexact stock situations

\*Doubtful quality, unusable products

\*Difficulty in repackaging

\*Insufficient storage capacity

\*Purchases superior to needs

\*Slowdown in use

\*Undesirable products : not authorized in the beneficiary countries.

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**I-Description of realized activities**

**ELIMINATION OF OBSOLETE STOCKS**

**COSTS OF THE ELIMINATING OPERATION OF OBSOLETE PESTICIDES**

GCPF	Standardized packings	120,000 USD
	Packaging equipment	
	Protective equipment	
	Transport from Madagascar to Basle	
	Incineration	
GTZ	International expert in supervision	67,500 USD
	Local coordinator	
	Local team for packaging	
	Additional analysis	
	Drawing up of the Prevention Program	
DDC	Local logistics	90,000 USD
VOARISOA	Collection	
	Intermediary storage	
DPV	Analyses	10,500 USD
	Human Resources	
PHYTOMAD	Local transport to the port of loading	3,000 USD
	COST PER TON	= 3,000 USD

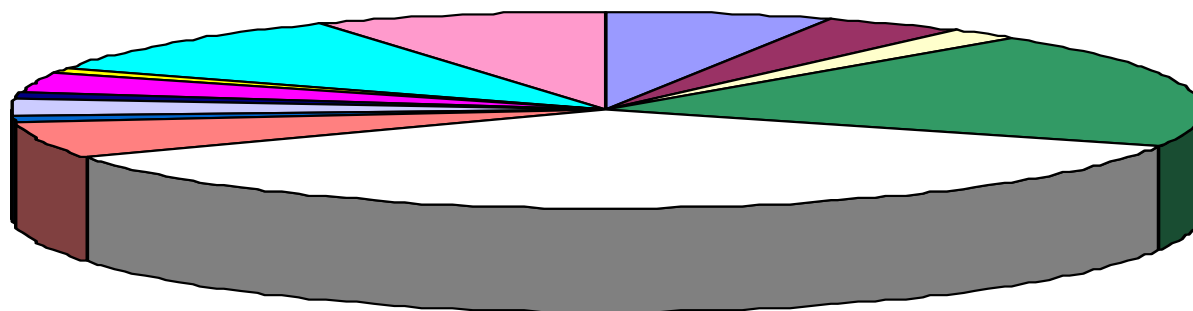
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OBSOLETE PESTICIDE STOCKS MADAGASCAR

I – Description of undertaken activities

COLLECTION



- |              |                   |
|--------------|-------------------|
| Others 6%    | Unkown 4%         |
| Bayer 2%     | Calliope 19%      |
| Sumitomo 36% | Ciba 6%           |
| Hokkai 1%    | ICI / Zeneka 3%   |
| Monsato 1%   | Nippon Soda 3%    |
| Procida 1%   | Rhone Poulenc 10% |
| Shell 8%     |                   |

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**• PREVENTION PROGRAM**

Obsolete Pesticides Working Group		AIMED RESULT No°: 1 All big pesticide consumers and a majority of retailers are informed on the principles of a rational pesticide use																	Period of planification: 07/99 – 12/2000	Page 1		
N°	Activities	Indicators of success	Period of execution																	Responsible	Notes	
			J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N			D
11.	Promote the implementation of IPM	• The use of alternatives to synthetic pesticides in increased	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	IWG, Consultants	In close collaboration with the existing NGO IPM network, Voarisoa and MinAg.  Costs : 20,000 FF
12.	Diffuse largely the national pesticide legislation	<ul style="list-style-type: none"> <li>▪ All the 8 big consumers and 50% of the retailers are informed</li> <li>▪ 1 radio program (theater) is prepared and broadcasted, by June 2000</li> </ul>			X			X			X			X						IWG, DPV, Consultants	A complete brochure will be prepared, used and distributed during 4 information meetings (Tana, Tulear, Mahajanga, Ambilobe)  Costs: 50,000 FF 1 Radio program costs: 20,000 FF	
13.	Promote the use of adequate conditioning	<ul style="list-style-type: none"> <li>▪ 8 of the main 10 retailers are distributing pesticides in small flasks</li> </ul>	X					X						X					X	DPV, PHYTOMAD	4 meetings Costs: 5,000 FF	
14.	Campaign against the re-use of empty pesticide packings	<ul style="list-style-type: none"> <li>▪ All big retailers officially commit themselves to recuperate their empty packings</li> <li>▪ 50% of the empty packings are marked</li> <li>▪ 20% are recuperated by the end of 2000</li> </ul>	X					X						X					X	DPV, PHYTOMAD Ministry of Health Ministry of Environment	Special case: Locust control campaign 4 meetings Costs: 2,500 FF	
15.	Contribute to reduce pesticide donations	<ul style="list-style-type: none"> <li>▪ The quantity of pesticides included in KR II donations are reduced by 50%</li> </ul>									X									Ministry of Agriculture Donation Service, PHYTOMAD, Donors	First meeting after obsolete pesticides have been exported Second meeting to check 2001 list Costs: 2,500FF	

**OBSOLETE PESTICIDE STOCKS MADAGASCAR**

Obsolete Pesticides Working Group		AIMED RESULT No°. 2 All big pesticide retailers and users are trained in safe handling, stock management, disposal and legislative aspects of pesticides																	Period of planification: 07/99 – 12/2000	<b>Page 2</b>		
N°	Activities	Indicators of success	Period of execution																	Responsible	Notes	
			J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N			D
21.	Training on risks linked to the handling of pesticides	• 100 persons in high pesticide-user areas are trained				X						X					X				Ministry of Health (REAMED), DPV, Voarisoa, Local authorities	Sites: Mahajanga, Tulear, Antsirabe, Alaotra Costs: 20,000 FF
22.	Training on pesticide stock management	▪ 50% of all warehouses stocking pesticides follow the legal standards					X					X					X			X	Ministry of Health (REAMED? DPV, Voarisoa, Local authorities)	Sites: Mahajanga, Tulear, Alaotra, Tana Costs: 20,000 FF
23.	Training on disposal management	▪ 100 persons, representatives of the 8PHYTOMAD members and of the 8 big pesticide consumers, are trained					X					X					X			X	Ministry of Health (REAMED? DPV, Voarisoa, Local authorities)	Sites: Mahajanga, Tulear, Tana, Alaotra (Collaboration with Basel Convention Secretariat) Costs: 20,000 FF
24.	Training on pesticide legislation	▪ Legal conformity of stocking, handling, transport, distribution and disposal conditions are increased by 20% to 60% (1998 level: 40%)				X						X					X			X	Ministry of Health (REAMED? DPV, Voarisoa, Local authorities)	Sites: Mahajanga, Tulear, Antsirabe, Alaotra Costs: 20,000 FF
25.	Evaluation on training impacts	▪ The training courses and sessions are recorded, reports are available. Knowledge improvements are measured				X		X							X					X	Working group, Consultants Local authorities	Cholinesterase levels will be used to compare impacts ex-ante and ex-post GTZ, GCPF, FAO and others invited to participate! Costs: 20,000FF

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Obsolete Pesticides Working Group		AIMED RESULT No°. 3 The national pesticide legislation is up-dated and considers the prevention against the building up of stocks																		Period of planification: 07/99 – 12/2000	<b>Page 3</b>	
N°	Activities	Indicators of success	Period of execution																		Responsible	Notes
			J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D		
31.	Update national legislation concerning: 1- Labelling 2- Re-formulations 3- "Return to sender" regimentation 4- Harmonization of tender requirements	<ul style="list-style-type: none"> <li>▪ 4 legal texts are prepared and submitted to the authorities for vote. Updating completed by 12/2000</li> <li>▪ The national legislation is recognized to be in conformity with international standards (FA)</li> </ul>																		X	DPV Working group	Participation in relevant international meetings (FAO) planned
32.	Follow up the implementation of the national legislation	A nationwide survey is completed	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	DPV Working group Consultants	Costs: 60,000 FF Funds still to be found

## II - LEARNT LESSONS

- Obsolete pesticide stocks constitute an actual danger for the environment.
- Pesticide stock elimination is always very expensive
- An effective commitment of industries and a collaboration with all parties are the key of success of the project.
- A good prevention plan must consider every angle of pesticide management –(storage, use, regulations...)
- Donator communities should take more interest in the possible consequences of donating pesticides.

### III - PROSPECTS

- Capitalization of the experiments : from 1994's inventory up to the dispatching for incineration in 2000.
- Perpetuating the Prevention Plan
- Increase of public awareness by NGOs
- Training of professionals by companies and suppliers (PHYTOMAD + GCPF)
- Enforcement of regulations supervised by civil services (DPV)
- Lookout / Observation (VOARISOA NGO).