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Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
Chemical Review Committee
First meeting
Geneva, 11–18 February 2005
Item 7 (d) of the provisional agenda*

Inclusion of chemicals in Annex III of the Rotterdam Convention: review of notifications of final regulatory actions to ban or severely restrict a chemical: methamidophos

Methamidophos: translation of notifications

Note by the secretariat

The secretariat has the honour to provide, in the annex to the present note, the translations of the notifications on methamidophos from Côte d'Ivoire and Panama

* UNEP/FAO/RC/CRC.1/1.

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Annex

Secretariat for the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

UNEP

FORM FOR NOTIFICATION OF FINAL REGULATORY ACTION TO BAN OR SEVERELY RESTRICT A CHEMICAL

F. ____

I. IMPORTANT: See instructions before filling in the form

COUNTRY: IVORY COAST

PART I: PROPERTIES, IDENTIFICATION AND USES

1.	**IDENTITY OF CHEMICAL**	
1.1	**Common name**	METHAMIDOPHOS
1.2	**Chemical name according to an internationally recognized nomenclature (e.g. IUPAC), where such nomenclature exists**	Phosphoramidothioic acid, O,S-dimethyl ester
1.3	**Trade names and names of preparations**	
1.4	**Code numbers**	
1.4.1	**CAS number**	10265-92-6
1.4.2	**Harmonized System customs code**	
1.4.3	**Other numbers (specify the numbering system)**	

G. 1.5 Indication regarding previous notification on this chemical, if any	
1.5.1	☐ This is a first time notification of final regulatory action on this chemical.
1.5.2	❑ This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____ ❑ This notification replaces all previously submitted notifications on this chemical.
	Date of issue of the previous notification: _____

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	**Hazard class**
Technical product: class Ib	Highly harmful
Other classification systems	**Hazard class**

1.7 Use or uses of the chemical	
1.7.1	☐ **Pesticide**
	Describe the uses of the chemical as a pesticide in your country:
	The use of Methamidophos is banned in the country
1.7.2	❑ **Industrial**
	Describe the industrial uses of the chemical in your country:
	None

1.8 Properties	
1.8.1	**Description of physico-chemical properties of the chemical**
	Methamidophos are colourless crystals which have a melting point of 44.5°C (pure product). The technical product comes in yellowish, colourless crystal forms which have a melting point that is below 40°C. If heated, it decomposes before the boiling point is reached. In water >200g/l at 20°C, it is highly soluble in alcohol and ketons and little soluble in ether and petroleum ether.

1.8.2	**Description of toxicological properties of the chemical** Organophosphate based insecticides are highly toxic whatever the kind of exposure. An excessive exposure of humans to Metamidophos may cause differred neuropathy .
1.8.3	**Description of ecotoxicological properties of the chemical** Methamidophos is toxic to bees, fish, birds and aquatic vertebrates.

PART II: FINAL REGULATORY ACTION

2.	**FINAL REGULATORY ACTION**
2.1	**The chemical is:** ❑ **banned** **OR** ☐ **severely restricted**
2.2	**Information specific to the final regulatory action**
2.2.1	**Summary of the final regulatory action** Methamidophos has not been registered. It is therefore prohibited to manufacture, sell and use this product on the territory of the Ivory Coast.
2.2.2	**Reference to the regulatory document** - Socio-economic analysis of pesticides production in the Ivory Coast (publication series N° 06/F)
2.2.3	**Date of entry into force of the final regulatory action** Since 1998

2.3	Was the final regulatory action based on a risk or hazard evaluation?	☐ Yes ☐ No
	If yes, give information on such evaluation	
	It is to be noted that the increasing use of plant protection products in the Ivory Coast by a rural population whose majority is illiterate presents several problems both to human health and the environment. In order to minimise the adverse effects caused by an excessive and irrational use of pesticides, the Government of the Ivory Coast has implemented regulatory texts based on decree 89-02 of 4 January 1989 on the approval, production, sale and use of pesticides related to international agreements.	
	Reference to the relevant documentation	
	- plant protection products index 2000, published by the Ministry of Agriculture - Socio-economic analysis of pesticides production in the Ivory Coast (publication series N°06/F)	

2.4	Reasons for the final regulatory action	
2.4.1	**Is the reason for the final regulatory action relevant to the human health?**	☐ Yes ❑ No
	If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers	
	Users are exposed to risks. Since handlers are usually unskilled, they don't respect the necessary precautions while using the product. They use the product for purposes Other than the indicated one, which are not recommended. In rural areas, the product is stored close to the human habitat. Industrial and mine workers are also at risk lacking the appropriate equipment for that chemical	
	Reference to the relevant documentation	
	National profile in order to assess the national capacity to manage chemicals (published by the Direction of Environment with the assistance of UNITAR and IFCS.	
	Expected effect of the final regulatory action	
	A total reduction of risks linked to the use of Methamidophos to preserve human health.	
2.4.2	**Is the reason for the final regulatory action relevant to the environment?**	☐ Yes ❑ No
	If yes, give summary of the known hazards and risks to the environment	
	In general, the environment is exposed to all kind of risks and dangers concerning the use of plant protection products which are mostly toxic and persistent. This situation results from the wrong management of these products (burying, direct discharge in the aquatic and terrestrial environment due to the disposal of its packaging)	
	Reference to the relevant documentation	
	National profile in order to assess the national capacity to manage chemicals (published by the Direction of Environment with the assistance of UNITAR and IFCS.	

	Expected effect of the final regulatory action	
	A total reduction of risks linked to the use of methamidophos to preserve the wildlife and the aquatic flora.	
2.5	**Category or categories where the final regulatory action has been taken**	
2.5.1	**Final regulatory action has been taken for the chemical category**	❑ **Industrial**
	Use or uses prohibited by the final regulatory action	
	Use or uses that remain allowed	
2.5.2	**Final regulatory action has been taken for the chemical category**	☒ **Pesticide**
	Formulation(s) and use or uses prohibited by the final regulatory action	
	All forms of formulations and uses are concerned	
	Formulation(s) and use or uses that remain allowed	
	None	

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.		
	Quantity per year (MT)	**Year**
Produced		
Imported		
Exported		
Used		

2.6	**Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions**

2.7	Other relevant information that may cover:
2.7.1	**Assessment of socio-economic effects of the final regulatory action**

The regulatory act basically comprises the legislation of the Ivory Coast in the field of plant protection products.
This legislation, based on decree 89-02 of 4 January 1989 on the approval, the production, the sale and use of pesticides in the Ivory Coast takes into account the FAO and WHO recommendations on the use of plant protection products.
This measure has recently been reinforced by the Ivory Coast ratification of the Rotterdam Convention.
Besides the environmental concerns linked to the effects on human health and the environment of the use of pesticides, it is also important to assess the socio-economic impact of these acts,
On the economic level:
- to improve and increase the agricultural production
- to develop the trade network
- to improve the economic and trade co-operation
- to preserve natural resources
- to introduce direct or indirect taxes and subventions in view of the development of this sector.

On the social level:
- to preserve human health and the environment
- to fight against poverty
- a good management of plant protection
- to improve the level of skill and information of the population
- to improve the standard of living

2.7.2	**Information on alternatives and their relative risks**
2.7.3	**Relevant additional information**

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Ministry of State, Ministry of the Environment / Direction of environment policies and strategies
Address	20 BP 650 Abidjan 20
Telephone	(225) 20 21 11 83
Telefax	(225) 20 22 20 50 / 20 21 11 83
E-mail address	
Designated National Authority	
Institution	Ministry of State, Ministry of the Environment / Direction of environment policies and strategies
Address	20 BP V 650 Abidjan 20
Name of person in charge	Ms. VI KOUADIO Amenan
Position of person in charge	Assistant, project management

Telephone	(225) 20 21 11 83 / 05 99 84 29
Telefax	(225) 20 22 20 50 / 20 21 11 83
E-mail address	vijosee@yahoo.fr

Date, signature of DNA and official seal: _____

Secretariat for the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade

UNEP

FORM FOR NOTIFICATION OF FINAL REGULATORY ACTION TO BAN OR SEVERELY RESTRICT A CHEMICAL

H.

II. IMPORTANT: See instructions before filling in the form

COUNTRY: PANAMA

PART I: PROPERTIES, IDENTIFICATION AND USES

1.	**IDENTITY OF CHEMICAL**	
1.1	**Common name**	Methamidophos
1.2	**Chemical name according to an internationally recognised nomenclature (e.g. IUPAC), where such nomenclature exists**	Methamidophos (soluble liquid formulations of the substance that exceed 600 g active ingredient/l)
1.3	**Trade names and names of preparations**	Amidor 60 SL, Crismaron 60 SL, Medofos 60 SL, Metafor 60 SL, Methamidophos DAF 60 SL, Methamidophos DREXEL 60 SL, Methamidophos Proficol 60 SL, Methamidophos 60 SL, MTD 60 SL, Pilaron 60 SL, Tamaron 60 SL
1.4	**Code numbers**	
1.4.1	**CAS number**	10265-92-6
1.4.2	**Harmonized System customs code**	38.08.12, 38.08.00, 3808.90
1.4.3	**Other numbers (specify the numbering system)**	463 (List Executive Decree No.305, 9 September 2002)

I. 1.5 Indication regarding previous notification on this chemical, if any	
1.5.1	☒ This is a first time notification of final regulatory action on this chemical.
1.5.2	❑ This is a modification of a previous notification of final regulatory action on this chemical. The sections modified are: _____ ❑ This notification replaces all previously submitted notifications on this chemical.
	Date of issue of the previous notification: Final decision on importation published on 07/1997

1.6 Information on hazard classification where the chemical is subject to classification requirements	
International classification systems	**Hazard class**
OPS/WHO liquid	Ib (extremely hazardous, classification based on the oral toxicity and depending on liquid preparations can be Ib and II)
Other classification systems	**Hazard class**
EPA	I (highly toxic)
UE	T+ (very toxic)
CIIC	Unclassified
Danger class 6.1 poisonous substance	
Packaging – Group 2	Substances and preparations with high poisoning risk (preparations containing from 15 to 100% of active material)
Packaging – Group 3	Harmful substances and preparations with low risk of poisoning (solid preparations containing from 3 to 15% of active material and liquid preparations containing from 1.5 to 15% of active material)

1.7 Use or uses of the chemical	
1.7.1	☒ **Pesticide**
	Describe the uses of the chemical as a pesticide in your country:
	It is used as insecticide and acaricide, restricted under technical conditions.
1.7.2	☒ **Industrial**
	Describe the industrial uses of the chemical in your country:
	None

1.8 Properties	
1.8.1	**Description of physico-chemical properties of the chemical**
	Identity: Colourless crystals with fusion point at 44.5° C (pure material). Technical methamidophos (73% aprox.) can be found as crystals from pale yellow to colourless with fusion point lower than 40° C. Formulation: C2 H8 NO2 PS O,S-dimethylphosphamidotioato (UIQPA;CAS) Chemical type: Organophosphoric Solubility: On water > 200 g/l at 20°C. Extremely soluble in alcohol and acetone, less soluble in ether and petroleum ether. Logarithm of octhanol/water separation coefficient -0.8 Vapour pression: 4.7 mPa (25°C) Reactivity: Decomposes when heated without boiling, stable at pH 3-8. The technical product and concentrations are corrosive for alloys containing steel and copper. Not compatible with alkaline pesticides. For further information, see Tomlin 1994 and IPCS 1993.

1.8.2	**Description of toxicological properties of the chemical**
	Generalities Way of action: Methamidophos affects the nervous system inhibiting acetyl cholinesterase (essential enzyme for the normal transmission of the nervous impulses) Absorption: Can be absorbed by ingestion inhalation or skin contact. Methabolism: On mammals, the biotransformation produces metabolites toxicologycally insignificant (IPCS, 1986; IPCS, 1993) Known effects on human health Acute toxicity: Poisoning symptoms: Organophosphoric insecticides are cholinesterase inhibitors. Highly toxic independently of the exposition via. When inhaled primary effects are respiratory and can include haemorrhage and nasal flow, snivelling, coughing, breast pain, respiratory difficulty, dyspnea and fatigue because of a reduction or excess of liquids in the bronchial conducts. By dermal contact can cause localised sweating and involuntary muscular contractions. By eyes contact can cause: pain, bleeding, lacrimation, pupil contraction and blurred vision. After exposition by any via, other systemic effects as for example paleness, nausea, vomiting, diarrhoea, abdominal cramps, cephalea, dizziness, eyes pain, blurred vision, pupil contraction or expansion, tearing, swallowing, sweating and confusion can occur after few minutes or not appear up to after 12 hours. Acute poisoning affects the central nervous system, producing uncoordination, talk difficulty, loss of reflexes, weakness, fatigue, involuntary and spasmodic muscle contractions, tongue and eyelid tremor and at last extremities and respiratory muscles paralysis. In the most acute cases can also occur: involuntary defecation or urination, psychosis, irregular cardiac pulse, unconsciousness, convulsions and coma. A respiratory insufficiency or cardiac arrest can cause death. Short and long exposition: Some organophosphoric can cause retarded symptoms, that can start from 1 to 4 weeks after acute exposition that can produce or not immediate symptoms. In such cases, numbness can occur, tingling sensation, weakness, cramps to low extremities and uncoordination, and progressive paralysis. After some months or years the situation can improve but there always can remain some kind of residual inadequacy. Repeated exposition by inhalation, ingestion or skin contact can cause the gradual appearance of signs and symptoms of cholinesterase activity inhibition. Human excessive exposition to methamidophos cause retarded neuropaty (IPCS, 1993). Epidemiological studies: No data available. Toxicity studies with test animals and in vitro systems Acute toxicity: (Tomlin, 1994; IPCS, 1993; FAO/WHO, 1993) Oral via: LD50 (i.a; mg/kg body weight): 10-50 on different test species. Dermal via: LD50 (i.a; mg/kg body weight): 50-110 on different test species. Inhalation: LC50 (i.a; mg/m^3 air 4 hours of exposition): 162 on rats. Irritation: Erythema and moderate oedemas were observed, on tests conducted on hear skin of rabbits. This substance causes also eyes irritation. Short and long term exposition: It has been published that the following levels doesn't have toxicological effects; on rats: 0.1 mg/kg body weight/day; on dogs: 0.06 mg/kg body weight/day; on chickens: 0.3 mg/kg body weight/day (IPCS, 1993). A long term study (500 days) performed on the effects of low doses of methamidophos on mice, administered with 0.03 mg/kg body weight, showed significant effects (reduction of the number of brain muscarinic receptors), which influence on the central nervous system was considered significant (Tigges, 1994). Reproduction effects: On reproduction studies, some parameters were affected with relatively low doses (IPCS,1993). Mutagenecity: It was observed not mutagenic in test with bacteria and in vitro (IPCS,1993). Carcinogenicity: No indications on mice study and no indications on long term study for rats on toxicity/carcinogenicity. Exposition Alimentary exposition: The use of methamidophos can cause a low level of residues not representing a harm for the health, if intervals are observed prior to harvest (IPCS, 1993). Since 1987, in Hong Kong, there have been many cases of acute poisoning as consequence of the consume of green leaf vegetables imported from china. It is suspected that in Shenzen, where the vegetables came from, some farmers used methamidophos and the vegetables spraied with were harvested much before than the residue levels were decreased to acceptable limits (Chan, 1994). Accidental poisoning: Can occur due to incorrect manipulation. On a 1989 study in the States, unacceptable levels were found in the meals for pre-school children. The ingesta media as IDA percentage was 5.763%. It was estimated that from 63% to 9.6% of children from 1 to 5, had a diary medium exposition higher than the IDA (NRDC, 1989). Occupational exposition: A high occupational exposition can occur (by inhalation and dermal absorption) in case of accident or as a result of an incorrect manipulation. Several reports informed that methamidophos can cause health problems for the occupational users. In the United States it was estimated that methamidophos was 3rd in a list of 28 pesticides for which security measures were adopted to prevent occupational risks, was the 3rd with higher percentage of poisoning for 1,000 applications in California, where the exposition of the manipulators while mixing was included, and the 2nd in general for agricultural workers. Methamidophos was the 2nd in percentage of cases of occupational poisoning with signs and symptoms that could be lethal as shown by the Poison Control Centre (EPA, 1996). In China 48377 poisoning cases were reported on 1995, with 3204 deaths. 15300 were caused by a normal agricultural use. More then 50% of these 15000 cases were attributed to parathion, methamidophos and ometoato (AGROW, Chan, 1996). Environment: The population is not generally exposed to methamidophos through the air in the water.
1.8.3	**Description of ecotoxicological properties of the chemical**
	Environment effects: Persistency: Half life is few days on soil. Degradation products are CO2, mercaptan, dimethyl sulphure and dimethyl disulphure. Bioconcentration: On the bases of the data available related to methamidophos solubility, bioaccumulation is not foreseen (Tomlin, 1994; IPCS, 1993). Ecotoxicity: Fish: LC96 hours: 25-100 mg/l (rainbow trout, gold fish, carp). Aquatic invertebrates: EC50 48 hours: 0.27 mg/l (Daphnia) Birds: LD50 oral via: 8-50 mg/kg body weight (wild duck, Japanese quail, hen) Bees: Toxic for bees (Tomlin, 1994; IPCS, 1993)

PART II: FINAL REGULATORY ACTION

2.	**FINAL REGULATORY ACTION**	
2.1	**The chemical is:** ❑ **banned** **OR** ☒ **severely restricted**	
2.2	**Information specific to the final regulatory action**	
2.2.1	**Summary of the final regulatory action**	
	National Constitution, Sanitary Code Law No.12 , 14 June 2000, through which the "Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 10 September 1998" is approved. Law No. 1, 10 January 2001, on medicines and other products for the human health. Executive Decree No.305, 9 September 2002, establishing "Automatic Licensing to regulate the import of certain chemicals potentially dangerous as controlled dangerous substances or materials and setting up other dispositions".	
2.2.2	**Reference to the regulatory document**	
	All published in the Official Magazine, No.24077 of 19 June 2000, No.24218 of 12 January 2001 and 24634 of 9 September 2002 respectively. The Pesticides Working Technical Group submits to consideration of the Pesticides Interinstitutional Commission (COTEPA) the decision of officially restrict or ban with the ecotoxicologic evaluation of risk according to the proposal No. 9, op.cit.	
2.2.3	**Date of entry into force of the final regulatory action**	
	1997, 2000, 2001 and 2002 respectively.	

2.3	**Was the final regulatory action based on a risk or hazard evaluation?**	☒ **Yes** ☐ **No**
	If yes, give information on such evaluation	
	Based on international references or reliable systematised data bases performed by toxicologists, ecotoxicologists and epidemiologists for the international and national organisms (UNEP, IRPTC, OPS/WHO, UITOX, UIPAQ, USEPA, ASTDR, IARC, FAO, OIT). Adverse acute effects on humans: At contact with skin and eyes can cause burning. Powerful cholinesterase inhibitor. Depending on the intoxication severity can occur: on eyes, accommodation difficulty, epifora, conjunctival hyperhemy, myosis and blurred vision; on mucous: hyperhemy, rinorrhea, bronchorrea, cyanorrea, dispnea, toracic pain, coughing, sybilancies, anorexia, colics, diarrhoea, nausea, sialorrhea, vomiting, brachicardy, cardiac arrest, dysuria, urinary incontinence, diaphoresis, cephalea, temporal hypertension, dizziness, paleness, cramps, general weakness, fasciculation, myalgies, feeble paralysis, anxiety, ataxia, positive Babinski, confusion, depression, convulsions, breathing and circulatory centres depression, somnolence, mental perturbation, coma and death. Chronic adverse acute effects on humans: on test animals causes underweight at birth and is a weak mutagenic.	
	Reference to the relevant documentation	

	Panama, MIDA/IDIAP/ANDIA. List of Banned and Restricted Pesticides 1986. UNEP/FAO/ Decision guidance documents, FAO/UNEP Joint Program for the application of the Prior Inform Consent Procedure (PIC). UNEP/IRPTC/INFOTERRA. Chemical Safety. Information Sources. Nairobi 1993. OPS/WHO/ Health and Environment Division/HEP. Program for the Environment in Central America (MASICA) Project for the Occupation and Environment to the Pesticides Exposition in Central America (PLAGSALUD). Pesticides technical files to ban or restrict included in the agreement No.9 of the XVI Meeting of the Health of Central America and the Dominican Republic (RESSCAD), July 2001, p.198-199.

2.4	**Reasons for the final regulatory action**	
2.4.1	**Is the reason for the final regulatory action relevant to the human health?**	☒ **Yes** ❑ **No**
	If yes, give summary of the known hazards and risks presented by the chemical to human health, including the health of consumers and workers	
	Based on international references or systematised data bases performed by toxicologists, ecotoxicologists and epidemiologists for the international and national organisms (UNEP, IRPTC, OPS/WHO, UITOX, UIPAQ, USEPA, ASTDR, IARC, FAO, OIT). Adverse acute effects on humans: At contact with skin and eyes can cause burning. Powerful cholinesterase inhibitor. Depending on the intoxication severity can occur: on eyes, accommodation difficulty, epifora, conjunctival hyperhemy, myosis and blurred vision; on mucous: hyperhemy, rinorrhea, bronchorrea, cyanorrea, dispnea, toracic pain, coughing, sybilancies, anorexia, colics, diarrhoea, nausea, sialorrhea, vomiting, brachicardy, cardiac arrest, dysuria, urinary incontinence, diaphoresis, cephalea, temporal hypertension, dizziness, paleness, cramps, general weakness, fasciculation, myalgies, feeble paralysis, anxiety, ataxia, positive Babinski, confusion, depression, convulsions, breathing and circulatory centres depression, somnolence, mental perturbation, coma and death. Chronic adverse effects on humans: For organophosphoric has been reported in general: decrease of cholynesterase activity (intoxication symptoms similar to those of an acute intoxication), memory and concentration difficulties, confusion, severe depressions, irritability, talk difficulty, retarded reaction time, nightmares, insomnia. Abnormal neuropsychiatric test and encephalogram can persist for several months after an acute exposition. It has been associated with retarded peripheral neuropaty. On test animals it has been found a decrease in the percentage of females having descendants. It has been encountered also diminution on sperm and sperm viability on humans. On test animals teratogenic effects have been encountered.	
	Reference to the relevant documentation	
	Panama, MIDA/IDIAP/ANDIA. List of Banned and Restricted Pesticides 1986. UNEP/FAO/ Decision guidance documents, FAO/UNEP Joint Program for the application of the Prior Inform Consent Procedure (PIC) UNEP/IRPTC/INFOTERRA. Chemical Safety. Information Sources. Nairobi 1993. OPS/OMS/ Health and Environment Division/HEP. Program for the Environment in Central America (MASICA) Project for the Occupation and Environment to the Pesticides Exposition in Central America (PLAGSALUD). Pesticides technical files to ban or restrict included in the agreement No.9 of the XVI Meeting of the Health of Central America and the Dominican Republic (RESSCAD), July 2001, p.198-199.	
	Expected effect of the final regulatory action	
	Notes: It will be consented only if registered and restricted for the uses, as accorded by Health Ministers of Central America and Dominican Republic in the agreement No.9 of the XVI Meeting of the RESSCAD and will be submitted to conditional no automatic previous license. This product is subject to the Prior Inform Consent Procedure (PIC), which requires that all banned or severely restricted dangerous substances and pesticides shouldn't be exported , unless explicit specific agreement of the importing country. Those countries not consenting such substances are obliged to end up the national production for domestic use.	

2.4.2	**Is the reason for the final regulatory action relevant to the environment?**	☒ **Yes** ❑ **No**
	If yes, give summary of the known hazards and risks to the environment	
	Inherent risks to human health and environment are higher than those associated with the use, no measure will reduce risks to acceptable levels and there are better alternatives.	

	Reference to the relevant documentation
	Panama, MIDA/IDIAP/ANDIA. List of Banned and Restricted Pesticides 1986. UNEP/FAO/ Decision guidance documents, FAO/UNEP Joint Program for the application of the Prior Inform Consent Procedure (PIC) UNEP/IRPTC/INFOTERRA. Chemical Safety. Information Sources. Nairobi 1993. OPS/OMS/ Health and Environment Division/HEP. Program for the Environment in Central America (MASICA) Project for the Occupation and Environment to the Pesticides Exposition in Central America (PLAGSALUD). Pesticides technical files to ban or restrict included in the agreement No.9 of the XVI Meeting of the Health of Central America and the Dominican Republic (RESSCAD), July 2001, p.198-199.

	Expected effect of the final regulatory action
	This product is subject to the Prior Inform Consent Procedure (PIC), which requires that all banned or severely restricted dangerous substances and pesticides shouldn't be exported , unless explicit specific agreement of the importing country. Those countries not consenting such substances are obliged to stop the national production for domestic use. It is severely controlled and restricted.

2.5	**Category or categories where the final regulatory action has been taken**	
2.5.1	**Final regulatory action has been taken for the chemical category**	☒ **Industrial**
	Use or uses prohibited by the final regulatory action None	
	Use or uses that remain allowed Insecticide and acaricide.	

2.5.2	**Final regulatory action has been taken for the chemical category**	☒ **Pesticide**
	Formulation(s) and use or uses prohibited by the final regulatory action Formulations with a concentration of 600g/l of active ingredient	
	Formulation(s) and use or uses that remain allowed Formulations with a concentration less or equal than 600 g/l of active ingredient	

2.5.3 Estimated quantity of the chemical produced, imported, exported and used, where available.

	Quantity per year (MT)	Year
Produced	No	2001
Imported	Yes	2001
Exported	Yes	2001
Used	Yes	2001

2.6 Indication, to the extent possible, of the likely relevance of the final regulatory action to other states and regions

	It is unknown by now, since we don't have clean technology for the environment to determine the relevance

2.7	**Other relevant information that may cover:**
2.7.1	**Assessment of socio-economic effects of the final regulatory action** None. The risk is prevented through formal and informal education.

2.7.2	**Information on alternatives and their relative risks** Biological control with alternate crops of NIM and other insects repellent, nurseries control, less dangerous pyretrines and Integrated Pests and Vectors Management, with other pesticides Ciflutrine, pyretrine and permetrine.
2.7.3	**Relevant additional information** 1. The seller and/or distributor will have an inventory control registry for restricted pesticides. 2. Sold only subject to a suitable professional on agricultural sciences prescription. 3. Can be applied only terrestrial via and by a MIDA certified person with specific equipment appropriate for the use. 4. It is prohibited to mix up with other pesticides. 5. At a production or farm level, a register of the use will be kept. 6. It is allowed the register of a product containing only this product. 7. Use is prohibited near to residential areas, warehouses, affluents, natural or artificial water bodies and places of sanitary interest. 8. It has to be indicated in the upper central part of the commercial label in big, black, upper case characters the writing "restricted use product". 9. In the area where the product was applied, has to be placed advertising signs with the writing "do not enter" and death in the upper part.

PART III : GOVERNMENT AUTHORITIES

Ministry/Department and authority responsible for issuing/enforcing the final regulatory action	
Institution	Ministry of Agricultural Development
Address	Rio Tapia, Corregimiento de Tocùmen, Distrito, Provincia y Pais de Panama, Apdo. 5193, Zona 5, Panama, Panama
Telephone	(507) 220-79-29
Telefax	(507) 220-7979
E-mail address	Midasveg@mida-dnsv.gob.pa
Designated National Authority	
Institution	Ministry of Health
Address	Calle Gorgas, Edificio 265, II Alto, Corregimiento de Ancòn, Distrito, Provincia y Pais de Panama, Apdo.2048, Zona 1, Panama

Name of person in charge	Dra. Elda Velarde (Focal Point) Dra. Maria Inès Esquivel (Manager)
Position of person in charge	Dra. on General Medicine, Master on Public Health, General Director of Health, President of Interinstitutional Technical Team for Cellular Antennas, Lines and Similar, President of the Permanent Commission for Vehicles Emissions, President of the National Net for Solid Residues, Focal Point for the Stockholm Convention, Other Party of the Environment National Authority, Sub-coordinator of Nuclear Weapons Proscription in South America. Dra. on General Medicine, Master on Environment Health, Ministry of Health General Subdirector for the Environment Health, National Coordinator for the Plagsalud Project, Working Technical Group Commission for Pesticides.
Telephone	(507) 212-9274 (507) 212-9271
Telefax	(507) 212-9286
E-mail address	subdirsgs@minsa.gob.pa eldayane@hotmail.com miesquig@hotmail.com miesquig@belisouth.net.pa

Date, signature of DNA and official seal: _____