

# SC



**UNEP**/POPS/EGDDT.2/3 3 November 2006

English only

Stockholm Convention on Persistent Organic Pollutants Expert Group to assess DDT production and use and its alternatives Second meeting

Geneva, 21-23 November 2006

# Draft revision for the DDT questionnaire

### Note by the Secretariat

- 1. At its first meeting, the Conference of the Parties adopted the format and questionnaire contained in Annex III to its decision SC-1/25 on DDT. In paragraph 4 of that same decision, the Conference of the Parties requested the Secretariat, in cooperation with the World Health Organization, to keep under regular review the adequacy of the information required under sections A, B, C and D thereof and propose to the Conference of the Parties any modifications that are deemed essential.
- 2. In conducting the regional induction workshops on reporting and data requirements for countries that use or potentially will use DDT for disease vector control, many comments were received from participants on the adequacy of the questionnaire and further requests were made for its simplification by Parties at the second meeting of the Conference of the Parties in May 2006.
- 3. The Secretariat has reviewed the comments made at the aforementioned workshops and, in collaboration with the World Health Organization, has revised the questionnaire.
- 4. Annex I to the present note contains the draft of the revised questionnaire.
- 5. Annex II to the present note contains the original questionnaire that was adopted by the Conference of the Parties.

### Annex I

#### DRAFT REVISION DDT QUESTIONNAIRE

Format for reporting by each Party that uses DDT for disease vector control pursuant to paragraph 4 of Part II of Annex B of the Stockholm Convention on Persistent Organic Pollutants (Section A) combined with a questionnaire for reporting other information relevant for the evaluation of the continued need for DDT for disease vector control (Sections B, C and D)

COUNTRY:	•••••	. 3-year Reporting Period:
Name of Principal		
Reporting Official		
Designation		
Agency Name and		
Address		
Fax:		
e-mail		
Signature of Official		Date:
SECTION A: PRODUCTION	N AND USE OF DDT	
A.I. SOURCES OF DDT		
In-country production		
1. Is DDT produced in your o	country? YES	NO [ (If NO, proceed to question # 4)
2. If yes, please list the DDT	production facilities in the co	ountry:

No	Production Facility and location	Total production capacity (kg)	Ne Yr. 1	t output/y (kg) Yr. 2	yr Yr. 3	Formulation (type & % of active ingredient (a.i.))	% for in-country use
i.							
ii.							
iii.							

3. For each of the production facilities listed above, please provide the following:

No	Facility	Export information				
		Destination country(s)		antity/yr (		Formulation (type and % active
			Yr. 1	Yr. 2	Yr. 3	ingredient (a.i.))
1.						
ii.						
iii.						

<u>Import</u>						
Has DDT been import NO, please proceed to	ted into your country o question 6.)	over the repo	orting p	eriod?	YES [	NO . (
5. If DDT is imported	d, please provide the fo	llowing:				
Country imported from	Name of manufac	turer		et wt of in		Formulation
			for the reporting period		(type & % of a.i.)	
			Yr. 1	Yr. 2	Yr. 3	
Stock information						
_						
6. Is DDT repackage question 8)	d/reformulated in the c	country? Y	es 🔝	No	o∐ (If	NO, please procee
•						
	plete the following tab					
Repackaging/reformulation facility Formulation facility				ulation An and % of active ingredient)		
			y which you can work in ground in y			(kg).)
0 Di :1 1	6.11	1	1	1 CDD		
<u> </u>	following information			ks of DD	T in yo	
8. Please provide the Location	Total amount in storage (kg)	on the usal  Formula  (type and	ation		T in yo	ur country: ons of storage capacity; access)
<u> </u>	Total amount in	Formul	ation		T in yo	ons of storage
<u> </u>	Total amount in	Formul	ation		T in yo	ons of storage
<u>-</u>	Total amount in	Formul	ation		T in yo	ons of storage
<u>-</u>	Total amount in	Formul	ation		T in yo	ons of storage
<u> </u>	Total amount in	Formul	ation		T in yo	ons of storage
<u>-</u>	Total amount in storage (kg)	Formul	ation		T in yo	ons of storage
Location  A.II. DDT DISPOSA	Total amount in storage (kg)	Formul (type and	ation % a.i.)		T in yo	ons of storage capacity; access)
Location  A.II. DDT DISPOSA	Total amount in storage (kg)  L  ete DDT stocks in the o	Formul (type and	ation % a.i.)		T in yo Condition	ons of storage capacity; access)
A.II. DDT DISPOSA  9. Do you have obsol (If NO, proceed to	Total amount in storage (kg)  L  ete DDT stocks in the or question 15)	Formul (type and	ation % a.i.)	(e.;	OT in yo  Condition g. storage	ons of storage capacity; access)
A.II. DDT DISPOSA  9. Do you have obsol (If NO, proceed to	Total amount in storage (kg)  AL  ete DDT stocks in the or question 15)  etotal weight of obsole	Formul (type and country? Y	ation % a.i.)	(e.;	OT in yo  Condition g. storage	ons of storage capacity; access)
A.II. DDT DISPOSA  9. Do you have obsol (If NO, proceed to	Total amount in storage (kg)  L  ete DDT stocks in the or question 15)	Formul (type and country? Y	ation % a.i.)	(e.;	OT in yo  Condition g. storage	ons of storage capacity; access)
A.II. DDT DISPOSA  9. Do you have obsol (If NO, proceed to 10. If yes, what is the Please tick here	Total amount in storage (kg)  L  ete DDT stocks in the or question 15)  total weight of obsoler  if amount is unknown e stores of obsolete DE	Formulative and the country? Yete DDT stooms	ation % a.i.)	e country	OT in yo  Condition g. storage	ons of storage capacity; access)
A.II. DDT DISPOSA  9. Do you have obsol    (If NO, proceed to 10. If yes, what is the    Please tick here   11. What condition ar    Good   Good	Total amount in storage (kg)  L  ete DDT stocks in the or question 15)  total weight of obsoler  if amount is unknown e stores of obsolete DE	Formulative and te DDT stocked and the DDT sto	YES C	e country	NO [	ons of storage capacity; access)

UNEP/POPS/EGDDT.2/3

UNEP/POPS/EGDDT.2/3	
Kg	
14. What was the disposal method used? Elec Other	ctro-chemical
15. Was obsolete DDT exported during this re	eporting period? YES NO NO
16. The amount of obsolete DDT exported wa	as:Kg
17. Was the obsolete DDT exported for: Dis	sposal Use Use
A.III. DDT USE	
18. What is the total amount (kg) of DDT used	d annually for disease vector control?
Yr 1:, formulation (type	e & % a.i.)
Yr 2, formulation (type	e & % a.i.)
Yr 3, formulation (type	e & % a.i.)
19. Please complete the following table for ea	ach disease for which DDT is used:
	Main vector species targeted
Disease	
-	
-	
  -	
A.IV. REGULATION AND CONTROL:	
	CDDT0
YES No No	ng or restricting the purchase and/or use of DDT?
21. If Yes to question 20, are these laws and r	regulations fully enforced? Yes No
<b>End-use information</b>	
22. Are there non-government agencies (e.g. 1 disease vector control purposes? YES	private agencies, NGOs) involved in using DDT for

UNEP/POPS/EC	GDDT.2/3					
23. Is DDT u	sed for any other	r purpose beside	s disease vecto	or control?	YES 🗌	NO
	ald you rate the g ck as appropriate				cation by the ho	useholds? Very poor
tick all th Stran	the reasons, if an at apply): Incompers entering hores:	venience	Smell		indoor applicati Residue on w	
26. How mar	ny DDT applicati	ion cycles are the	ere in a year?	ONE 🗌	TWO 🗌	
Resistance me	onitoring					
27. Is there s	urveillance mech	nanism(s) for mo	nitoring DDT	resistance?	Yes 🗌	No 🗌
28. If underta	aken, what bioas	say test procedur	re(s) is used fo	r detecting D	DT resistance?	
	ny is done, please susceptibility tes		ollowing table	on vector sus	ceptibility to D	DT according
Diagona	Main vector	Minimum	Maximum	Year last	Specific geograp	
Disease	species	mortality %	mortality %	tested	associated with	lest, if any

<sup>1</sup> Mortality after 24-hour holding period of mosquito specimens exposed to diagnostic concentration (4% DDT) for 1 hour

(a) DDT bioassay results by month: yr1
Month 1
Month 4
Month 8
Month 12
(b) DDT bioassay results by month: yr2
Month 1
Month 4
Month 8
Month 12
(c) DDT bioassay results by month: yr3
Month 1
Month 4
Month 8
Month 12

30. Please provide the following information on DDT residual efficacy according to the WHO standard bioassay test).<sup>2</sup>

<sup>2</sup> 24-hour holding period mortality of vector strains of known DDT susceptibility exposed for 1 hour to a DDT-sprayed surface (75% WP)

# SECTION B: DDT ALTERNATIVES (INSECTICIDES, METHODS AND STRATEGIES)

### **B.I.: DDT ALTERNATIVES**

31. Please complete as applicable, the following tables for DDT alternatives that are in use:

Alternative control category	Method or chemical used	Disease targeted	Annual use (kg of a.i. or quantity as applicable)	Source (import/local)	Efficacy acceptable Yes/No
Biological control (e.g. Bacteria)					
Chemical control & related strategies (e.g. ITNs, pyrethroids)					
Environmental control (e.g. source reduction)					

32. Complete the table on other DDT alternative(s) that were in use in this reporting period but are not used any more:

Alternative control	Method or product used &	Disease targeted	Reason why the use of the
category	mode of application		method/product was rejected or stopped
Biological control			
Chemical control &			
related strategies (e.g. ITNs)			
Environmental			
control			

# B.II. <u>DISEASE MANAGEMENT STRATEGIES</u>

33.	Is there a national vector control policy? YES \[ \] NO \[ \]
34.	Is there an integrated vector management (IVM) strategy implemented? YES \( \square \) NO \( \square \)
35.	Is there an entomology laboratory(ies) available in the country? Yes \( \square\) No
36.	Is the Laboratory(ies) adequately equipped to carry out insect resistance testing and related functions? YES \( \subseteq \text{NO} \subseteq \)
37.	Is there research into the development of locally appropriate alternative intervention options to DDT? YES \( \subseteq \text{No} \subseteq \text{No} \subseteq \text{.}
38.	If the answer to question 38 is yes, please indicate the type of research: (tick all that apply)  Alternative chemical   Other:  Other:
SE	CTION C: GENERAL HUMAN AND ENVIRONMENTAL SAFETY ISSUES
39.	Has there been any incident(s) in relation to vector control with generalised human exposure &/or environmental release of DDT in the country (e.g. road accidents, spills)? YES NO (If NO, please proceed to question 44)
40.	Was the amount of DDT released from the incident(s) above: $<10$ Kg $\square$ $<100$ Kg $\square$
41.	Was the DDT that was released from the incident(s) recovered?Yes \( \square \) No \( \square \)
42.	Have safeguards been employed to prevent future incidents? Yes \( \subseteq \text{No } \subseteq \)
43.	Is there a programme to raise awareness among communities and households on safety issues relating to DDT use in disease vector control? YES \( \square \) NO \( \square \)
SE(	CTION D: SYSTEMS STRENGTHENING IN DISEASE VECTOR CONTROL
44.	Are there trained personnel in the national disease vector control programme? Yes \( \square \) No \( \square \)
45.	Are there training facilities in the country? Yes \[ \] No \[ \]
46.	Is training being conducted on vector control? Yes \( \square \) No \( \square \)
47.	Do formal mechanisms exist for inter-sectoral collaboration in disease vector control?  Yes \( \subseteq  \text{No} \subseteq \)
48.	If these mechanisms exist, is collaboration being implemented? Yes \( \square \) No \( \square \)

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Please provide any other relevant information relevant to your country's situation with regards to the production and use of DDT for disease vector control:

#### **ANNEX II**

#### **DDT QUESTIONNAIRE**

Format for reporting by each Party that uses DDT for disease vector control pursuant to paragraph 4 of Part II of Annex B of the Stockholm Convention on Persistent Organic Pollutants (Section A) combined with a questionnaire for reporting other information relevant for the evaluation of the continued need for DDT for disease vector control (Sections B, C and D)

3-year Reporting Period:
Date:

#### **SECTION A: PRODUCTION AND USE OF DDT**

#### A.I. SOURCES OF DDT

#### **In-country production**

1. Is DDT produced i	n your country?	YES [	NO 🗌	(If NO,	proceed to o	question # 4)
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2. If yes, please list the DDT production facilities in the country:

No	Production Facility and location	Total production capacity (kg)	Ne Yr. 1	t output/y (kg) Yr. 2	Yr. 3	Formulation (type & % of active ingredient (a.i.))	% for in- country use
i.							
ii.							
iii.							

3. For each of the production facilities listed above, provide the following:

No	Facility		Export information									
		Destination country(s)	Quantity/yr (kg)			Formulation (type and % active						
			Yr. 1	Yr. 2	Yr. 3	ingredient (a.i.))						
i.												
ii.												
iii.												

UNEP/POPS/EGDDT.2/3  Import  4 Has DDT been im	ported into your country	y over the 1	enorting	neriod V	res □ N	NO□ (if NO
proceed to question		y over the i	cporting	period. 1		<b>10</b> ∐. (п 1 <b>10</b> ,
5. If DDT is imported	ed please provide the fo	llowing				
Country of export	Name of manufac	cturer		et wt of impreporting p		Formulation (type & % of a.i.)
			Yr. 1	Yr. 2	Yr. 3	
<b>Stock information</b>						
6. Is DDT repackage question 8)	ed/reformulated in the co	ountry? Ye	s 🔲_ N	o <u> </u> (If	NO, ple	ease proceed to
7. If yes, please com	plete the following table	e:				
Repackaging/reformul ation Agency	Description of repackaging (boxed, polythene bagged; description of labelling etc		Formulat (type and active ing	% of	Intended end-use	
8. Please provide the	following information	on the usal	ole stock	s of DDT	in vour	country.
Location	Total amount in storage (kg)	Formu (type and	ılation	Man	aging ority of	Conditions of storage (e.g. storage capacity)
				fac	ility	access)
A.II. DDT DISPOS	AL					
9. Do you have obso (If NO, proceed	lete DDT stocks in the or to question 13)	country. YI	ES1	NO:		
•	ne total weight of obsole		ock in the	country	( kg):	_

11. Please provide the following information on facilities where obsolete DI	(	ıse	pro	JV10	e tr	ie i	IOI	owing	1n	torma	tion	on	facilities	s where	obsc	Hete	טט	' I	1S S	storec
--	---	-----	-----	------	------	------	-----	-------	----	-------	------	----	------------	---------	------	------	----	-----	------	--------

Facility and location	Total capacity of storage (kg)	Total amount of obsolete pesticides in storage at the facility	Amount (kg) and approximate age (yrs) of obsolete DDT component

12. For each storage facility storing obsolete DDT listed in question 11, please complete the following on the storage conditions

Facility			St			
	Housed	Regular	Adequate	Leaky	DDT	Any other comment on
	or open?	inspection?	security?	roof?	leaking into	human and environmental
		(yes/no). If yes	(yes/no)	(yes/no)	environment	safety (e.g. need for
		how often?			(yes/no)	repackaging)

13. Which agency is directly responsible for DDT disposal?
14. Is DDT disposed off in-country? YES \[ \] NO \[ \]
15. If the answer to question 14 is NO, is the obsolete DDT exported? YES NO . If exported then indicate destination and intent of export
16 If about 4 DDT is discussed office according the collection and the following table.

16. If obsolete DDT is disposed off in-country, then please complete the following table:

Disposal method	Facilities using	Years method	Disposal	Amount	Cost of
(Electro-chemical,	method	has been in	capacity/yr (kg)	disposed off/yr	disposal
incineration etc)		use		(kg.)	(per kg)

### A.III. DDT USE

17. What is the total	amount of DDT used annually for disease vector control (	kg)?
Yr 1:	, formulation (type & % a.i.)	
Yr 2	, formulation (type & % a.i.)	
Yr 3	, formulation (type & % a.i.)	

18. Please complete the following table for each disease for which DDT is used:

Disease	Total national Populat ion at risk to disease	Disease burden: prevalence rate (a) & mortality rate (b)		% total national population at risk that is covered by DDT use  Yr1 Yr2 Yr3			Main vector species targeted	DDT resistance in target species (Yes, no)	Year resistance was first reported
		a	b	111	112	113			

19. Complete the following table for each disease for which DDT is used (Please use additional page as necessary):

Disease	Local areas where DDT is used (e.g. district)	Population size in targeted areas	Disease transmission classification in targeted areas (stable or unstable; if stable, indicate if	targ	verage geted an of hou	reas	Annua	Annual amount of used (kg)		
			holo-, hyper-, meso- or hypo- endemic <sup>3</sup> )	Yr1	Yr2	Yr3	Yr1	Yr2	Yr3	

<sup>&</sup>lt;sup>3</sup> See instructions for definitions of endemicity.

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UNEF/POPS/EGDD1.2/3								
A.IV. REGULATIO	ON AND CONTI	ROL:						
20. Are there laws an	d/or regulations	governing or restri	cting the purchase and/or use of DDT?					
	If NO, go to que							
21. If yes, please pro	vide complete the	e following table (	use additional sheets if need).					
Title of relevant law or Year it was List the main objectives of the law or regulation								
regulation on DDT	passed or enacted	(e.g. Prohibits the	use of public transport for transporting of DDT)					
22. Please indicate thall that apply)	e major limitation	ns with the effecti	ve enforcement of existing regulations. (Tick					
Inadequate enforcement								
resources/facilities	by enforcement agencies	personnel	, ,					
23. Name the overall	managing author	rity for DDT in the	e country					
		-	•					
24. Which Agency ac	ctually authorizes	the use of DD1 f	or disease vector control purposes					
25. Please clarify if the	he authorizing ag	ency (check all th	at apply):					
is directly involved in vector control application of DDT								
performs supervisory roles								
have District offices in charge of DDT application in local areas								
<ul> <li>train field staff (spray operators, inspectors etc.)</li> <li>Involved in public education on safe use of pesticides</li> </ul>								
26. Please list any oth	ner Agencies with	n specialized mana	agement roles for DDT:					
Agency	Description of	Frole in DDT manage	ment					
	i i		I					

# **End-use information**

27. Do Local Municipalities use DDT for disease vector control purposes? YES  $\square$  NO  $\square$ 

vector control p						go to questio			using	ו ועט	or disease	
29. If the answe	29. If the answer to question 28 is yet Name of Agency Areas where Agency uses DDT (e.g. districts)		gency	Population size covered by Agency		on Annual red amount of		DDT use related activities carried out by agency				
		(178, 1131111		23 - 1	<i></i>	(kg active ingredient)	traini spra (yes	yers	Comm educa aware	tion/	Other (specify)	
30. For the ager				, 1								
Agency	I	ODT applica (as % of or control		ector		personnel & Ma ded per applicat Yr. 2		le c	Annual Populati coverage Yr. 1 Yr. 2			
Local cur  32. How would households (ple	d you	rate the geck as appr	eneral a copriate	accepta		Es	T for i	d rate	;		by the	
		calculate rate if available	, 	Very I	OW	(if calculated Low (2)					Very high	
Refusal rate		avanao		(1)		Low (2)	(3)		High (4)		(5)	
Re-plastering rate  33. If the acceptability of indoor application of DDT is low, what are the reasons given for the lack of acceptance by the households (please tick all that apply):												
Inconvenient - moving furniture etc.	Unp	leasant nell of DDT	Dislike for white residuon walls			Reluctance provide access strangers	Reluctance to rovide access to		Timing of spraying inappropriate		Other (specify)	
34. Is DDT app indicate the hou										):	f yes, pleas	

UNEP/POPS/EGDDT.2/3
35. What are the criteria for selecting a geographical area or community for DDT indoor application?
36. Who determines the timing of DDT application at the local level?
37. What factors determine the timing of the DDT application cycle?
38. How many DDT application cycles are there in a year? ONE TWO
39. How long does an application cycle take (time – in days or hrs)?
Resistance monitoring
40. What bioassay test procedure(s) is used for detecting DDT resistance?:
41. Please complete the following table on vector susceptibility to DDT according to WHO susceptibility test <sup>4</sup>

Disease	Main vector species	Minimum mortality %	Maximum mortality %	Year last tested	Specific geographical areas associated with test, if any

<sup>&</sup>lt;sup>4</sup> Mortality after 24-hour holding period of mosquito specimens exposed to diagnostic concentration (4% DDT) for 1 hour

most recent data.)

(a)	DDT bioassay results by month: yr1
Mon	th 1
	th 4
	th 8
	th 12
(b)	DDT bioassay results by month: yr2
Mon	th 1
	th 4
	th 8
	th 12
(c)	DDT bioassay results by month: yr3
Mon	th 1
Mon	th 4
	th 8
	th 12
	describe the surveillance mechanism(s) in the country for monitoring DDT resistance number & location of sentinel sites, if any):

42. Please provide the following information on insecticide residual efficacy according to the WHO standard bioassay test).<sup>5</sup> (If no information is available for the reporting period, please provide the

<sup>&</sup>lt;sup>5</sup> 24-hour holding period mortality of vector strains of known DDT susceptibility exposed for 1 hour to a DDT-sprayed surface (75% WP)

# SECTION B: DDT ALTERNATIVES (INSECTICIDES, METHODS AND STRATEGIES)

### **B.I.: DDT ALTERNATIVES**

44. Please complete the following tables for DDT alternatives that are in use:

Alternative control category	Method or chemical used	Disease targeted	Annual use (kg of active ingredient or quantity as applicable)	Accepta- bility <sup>1</sup>	Annual budget (US\$) (and as % of vector control)	Unit cost <sup>2</sup>
Biological control (e.g. Bacteria)						
Chemical control & related strategies (e.g. ITNs, pyrethroids)						
Environmental control (e.g. source reduction)	weel rate (Dt) and/or wee rate (I					

<sup>&</sup>lt;sup>1</sup> End-user refusal rate (Rt) and/or use rate (Ut), indicate as appropriate <sup>2</sup> As appropriate. e.g. unit cost of ITN or cost of chemical application per house

# 45. Complete the following table on sources of the alternative options listed above, as applicable:

Alternative category	Biological or chemical product used	Source (Import/local)	Formulations (as applicable)	Annual import (kg active ingredient)	Managing authority
Biological control					
Chemical					
control					

46. Complete the following table on the disposal relating to the alternative options listed:

Alternative category	Biological or chemical product used	Total national stock (kg or quantity, as applicable)	Total obsolete stock (kg or quantity, as applicable)	Disposal method used	Annual disposal cost (US\$)	Agency responsible for disposal
Biological control						
Chemical control						

47. Provide information on vector resistance to any of the insecticides listed previously as DDT alternatives in use:

Vector species	Insecticide tolerance or resistance reported in the country (indicate region/area of country associated with report)	Year of first report

38. Complete the table on other DDT alternative(s) that have been considered for use or have been used in the country in the past but are not used any more:

Alternative control category	Method or product used & mode of application	Disease targeted	Reason why the use of the method/product was rejected or stopped
Biological control			
Chemical control & related strategies (e.g. ITNs)			
(0.g. 11110)			
Environmental control			

# Main vector(s) susceptibility to insecticide (DDT alternatives listed)

39. For the alternative insecticides in use, please indicate for the targeted vector species, the minimum & maximum mortality rates using the standard (discriminating/diagnostic) insecticide concentration.

D.	<b>T</b> 7 4	T		T /	• 1	T (* *	1	т ,	1	T (*	. 1
Disease	Vector	Insecticide				Insecticide		Insecticide		Insecticide	
	species	1:				3		4:			
		Mort	ality	Moı	tality	Morta	ality	Mort	ality	Mort	ality
		Min %	Max %	Min %	Max %	Min %	Max %	Min %	Max %	Min %	Max %
Year last	tested										

**Insecticide residual efficacy (for each insecticide listed above)** Please provide information on insecticide residual efficacy according to the WHO bioassay test. (If no information is available for the reporting period, please provide the most recent data.)

50. Insecticide name:
Please provide the following information on insecticide efficacy:
(a) Insecticide bioassay results by month: yr1
Month1
Month4_
Month8
Month12
(b) Insecticide bioassay results by month: yr2
Month1
Month4
Month8
Month4
Month12_
(c) Insecticide bioassay results by month: yr3
Month1
Month4_
Month8
Month12

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<sup>&</sup>lt;sup>6</sup> 24-hour holding period mortality of vector strains of known susceptibility exposed for 1 hour to an insecticide sprayed surface.

UNEP/POPS/	EGDDT 2/2			
-		MENT STRATEGIES		
D.II. <u>DISEA</u>	ASE MANAGEN	IENT STRATEGIES		
51. Is there	a national vector	or control policy? YES 🔲 N	1O 🗌	
52. Is the c	ountry impleme	nting an integrated vector m	nanagement (IVM)	strategy YES NO
53. If yes, 1	please list the co	omponents parts of the IVM	for the diseases list	ed in this report:
Disease	Annual budget (US\$)	Vector control component	% of overall budget	Major limitation to implementation
54. Please	indicate the vect	tor resistance management s	trategy employed _	
indicate if i	it is adequately	n on the entomology laborate equipped to carry out insect possible) the limitations fac	resistance testing a	
56. Is there DDT?	research into th	ne development of locally ap	propriate alternativ	e intervention options to

57. If the answer to question 56 is yes, please complete the following table

YES 🗌 NO 🗌

Type of research on DDT alternative	Institution leading the research	Year initiated

# SECTION C: GENERAL HUMAN AND ENVIRONMENTAL SAFETY ISSUES

	&/o <u>r</u> e	een any insecticide incidentification in the neutron mental release of					
59. If the	answe	r to question 58 is yes, p	olease o	compl	ete the follow	ing table:	
				De	etails of expos	ure or environmer	ntal release
Incident Number	\		Date		Place	Quantity released	Estimated number of people exposed
I							
Ii Iii							
Iv							
60. Please	comp	lete the following table				question 59 onmental release	
Incident nu	mber	Caused of incident		Remedial actions		Agency	Safeguards employed
(Question	56)	(e.g. Road accident dur	it during		taken	undertaking	to prevent future
i		transport)				remedial action	incidents
1							
ii							
iii							
1V							
61. Which	_	cy(ies) is(are) responsib	le for a	issess	ing the risks p	osed by the use of	insecticides for
relating to	insec	ogramme to raise aware ticides use in disease ve mplements the program	ector co	ontrol	YES 🗌 NO 🏻		· ·

# SECTION D: SYSTEMS STRENGTHENING IN DISEASE VECTOR CONTROL

64. Targets for relevant trained personnel in the national disease vector control programme (by category):

category):					
Category of personnel	Level of training (Pl Master, Bachelor		sent staffing levels (number)	Targeted sta	affing level
Technical (e.g. management, planners)					
Operational (e.g. sprayers, sanitarians, mosquito collectors)					
other (please list)					
66. What is the bud	ational health budget dget shortfall (US\$) f	or vector con	trol (percentage)		
58. List the facilitie  Training facili	es in the country prov		in disease vector		ual output
	biology, entor	nology etc)	(degree or other)	)	
69. Provide details district levels:	on the in-service train	ning program	nes available, es	pecially at the	regional and
YES 🗌 NO 🗌	hanisms exist for inte				ntrol?
If the answer is YE  Policy on inter- sectoral collaboration	Inter-sectoral committee/board at national level	Inter-sector committee district leve	al Joint Plant at (indicate if na	ning Joint in ational, of	mplementation `activities

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71. If the answer to question 70 is NO, what are the limitations to developing such mechanisms
72. What are the limitations to the monitoring and evaluation of vector control programmes?
and how can they be best overcome?
73. Please provide any other general information relevant to your country's situation with regards to vector borne diseases and their control: