DRAFT QUESTIONNAIRE FOR REPORTING BY COUNTRIES ON THE AMOUNTS OF DDT USED, CONDITIONS OF SUCH USE AND ITS RELEVANCE IN DISEASE MANAGEMENT STRATEGIES

QUESTIONNAIRE

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COUNTRY: …… 3-year Reporting Period: 2001 - 2003

Name of Principal Reporting Official	
Designation	
Agency Name and Address	
Fax:	
e-mail	
Signature of Official	**……. Date: ……..**

SECTION A: PRODUCTION AND USE OF DDT

A.I. SOURCES OF DDT

In-country production

1. Is DDT produced in your country? YES ☐ NO ☐ (If NO, proceed to question # 4)

2. If yes, please list the DDT production facilities in the country:

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

Import

4. Has DDT been imported into your country over the reporting period. YES ☐ NO ☐. (if NO, proceed to question 6.)

5. If DDT is imported please provide the following

Country of export	Name of manufacturer	Total net wt of import/yr for the reporting period			Formulation (type & % of a.i.)
		Yr. 1	Yr. 2	Yr. 3	

Stock information

6. Is DDT repackaged/reformulated in the country? Yes ☐_ No ☐__(If NO, please proceed to question 8)

7. If yes, please complete the following table:

Repackaging/reformulation Agency	Description of repackaging (boxed, polythene bagged; description of labelling etc.)	Formulation (type and % of active ingredient)	Intended end-use	Annual amount (kg).)

8. Please provide the following information on the usable stocks of DDT in your country.

Location	Total amount in storage (kg)	Formulation (type and % a.i.)	Managing authority of facility	Conditions of storage (e.g. storage capacity; access)

A.II. DDT DISPOSAL

9. Do you have obsolete DDT stocks in the country. YES____ NO:____. (If NO, proceed to question 13)

10. If yes, what is the total weight of obsolete DDT stock in the country (kg):___
Please tick here ☐ if amount is unknown

11. Please provide the following information on facilities where obsolete DDT is stored

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	Storage conditions					
	Housed or open?	Regular inspection? (yes/no). If yes how often?	Adequate security? (yes/no)	Leaky roof? (yes/no)	DDT leaking into environment (yes/no)	Any other comment on human and environmental safety (e.g. need for 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 obsolete DDT is disposed off in-country, then please complete the following table:

Disposal method (Electro-chemical, incineration etc)	Facilities using method	Years method has been in use	Disposal capacity/yr (kg)	Amount disposed off/yr (kg.)	Cost of disposal (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 Population at risk to disease	Disease burden: prevalence rate (a) & mortality rate (b)		% total national population at risk that is covered by DDT use			Main vector species targeted	DDT resistance in target species (Yes, no)	Year resistance was first reported
		a	b	Yr1	Yr2	Yr3			

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 holo-, hyper-, meso- or hypo-endemic[1])	Coverage in targeted areas (% of houses)			Annual amount of DDT used (kg)		
				Yr1	Yr2	Yr3	Yr1	Yr2	Yr3

[1] See instructions for definitions of endemicity.

A.IV. REGULATION AND CONTROL:

20. Are there laws and/or regulations governing or restricting the purchase and/or use of DDT? YES ☐ No ☐. If NO, go to question 29

21. If yes, please provide complete the following table (use additional sheets if need).

Title of relevant law or regulation on DDT	Year it was passed or enacted	List the main objectives of the law or regulation (e.g. Prohibits the use of public transport for transporting of DDT)

22. Please indicate the major limitations with the effective enforcement of existing regulations. (Tick all that apply)

Inadequate enforcement resources/facilities	Regulations not well understood by enforcement agencies	Inadequate number of trained personnel	Other (Please specify)

23. Name the overall managing authority for DDT in the country_____

24. Which Agency actually authorizes the use of DDT for disease vector control purposes

_____

25. Please clarify if the authorizing agency (check all that apply):

- ☐ is directly involved in vector control application of DDT
- ☐ performs supervisory roles
- ☐ have District offices in charge of DDT application in local areas
- ☐ train field staff (spray operators, inspectors etc.)
- ☐ Involved in public education on safe use of pesticides

26. Please list any other Agencies with specialized management roles for DDT:

Agency	Description of role in DDT management

End-use information

27. Do Local Municipalities use DDT for disease vector control purposes? YES ☐ NO ☐

28. Are there any other Agencies (e.g. private agencies, NGOs) involved in using DDT for disease vector control purposes YES ☐, NO ☐. (If NO, go to question 31).

29. If the answer to question 28 is yes, please complete the following table.

Name of Agency	Areas where Agency uses DDT (e.g. districts)	Population size covered by Agency	Annual amount of DDT used (kg active ingredient)	DDT use related activities carried out by agency		
				training of sprayers (yes/no)	Community education/ awareness?	Other (specify)

30. For the agencies listed in question 29, provide the following additional information:

Agency	DDT application budget (as % of overall vector control budget)	Total personnel & Man hours expended per application cycle			Annual Population coverage		
		Yr.1	Yr. 2	Yr. 3	Yr. 1	Yr. 2	Yr.3

31. What is the average cost per house sprayed with DDT (including labour and other operational costs)
Local currency _____ current equivalent in US$_____

32. How would you rate the general acceptance / refusal of DDT for indoor-application by the households (please tick as appropriate):

	Provide calculated rate if available	Estimated rate (if calculated rate is not available)				
		Very Low (1)	Low (2)	(3)	High (4)	Very high (5)
Refusal rate						
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.	Unpleasant smell of DDT	Dislike for white residues on walls	Reluctance to provide access to strangers (sprayers)	Timing of spraying inappropriate	Other (specify)

34. Is DDT application limited to certain house types or households? YES: ☐ NO: ☐. If yes, please indicate the house types targeted (e.g. traditional houses, western-type houses)

_____

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[2]

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

[2] Mortality after 24-hour holding period of mosquito specimens exposed to diagnostic concentration (4% DDT) for 1 hour

42. Please provide the following information on insecticide residual efficacy according to the WHO standard bioassay test).[3] (If no information is available for the reporting period, please provide the most recent data.)

(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_____

43. Briefly describe the surveillance mechanism(s) in the country for monitoring DDT resistance (Include the number & location of sentinel sites, if any):

_____

_____

_____

_____

_____

_____

_____

[3] 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)	Target population (%)	Accepta-bility[1]	Annual budget (US$) (and as % of vector control)	Unit cost [2]
Biological control (e.g. Bacteria)							
Chemical control & related strategies (e.g. ITNs, pyrethroids)							
Environme-ntal control (e.g. source reduction)							

[1] End-user refusal rate (Rt) and/or use rate (Ut), indicate as appropriate [2] 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:

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

48. 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)			
Environmental control			

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

49. 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.

Disease	Vector species	Insecticide 1: …… ……		Insecticide 2: …… ……		Insecticide 3 ……		Insecticide 4: …… ……		Insecticide 5: …… ……	
		Mortality		Mortality		Mortality		Mortality		Mortality	
		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.[4] (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_____

[4] 24-hour holding period mortality of vector strains of known susceptibility exposed for 1 hour to an insecticide sprayed surface.

B.II. DISEASE MANAGEMENT STRATEGIES

51. Is there a national vector control policy? YES ☐ NO ☐

52. Is the country implementing an integrated vector management (IVM) strategy YES ☐ NO ☐

53. If yes, please list the components parts of the IVM for the diseases listed in this report:

Disease	Annual budget (US$)	Vector control component	% of overall budget	Major limitation to implementation

54. Please indicate the vector resistance management strategy employed _____
_____
_____

55. Provide any information on the entomology laboratories available in country. For each laboratory, indicate if it is adequately equipped to carry out insect resistance testing and related functions. If not, please indicate (quantify if possible) the limitations faced: _____
_____
_____

56. Is there research into the development of locally appropriate alternative intervention options to DDT?
YES ☐ NO ☐

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

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

SECTION C: GENERAL HUMAN AND ENVIRONMENTAL SAFETY ISSUES

58. Has there been any insecticide incident(s) in relation to vector control with generalised human exposure &/or environmental release of INSECTICIDES in the country (e.g. road accidents, spills)? YES ☐ NO ☐

59. If the answer to question 58 is yes, please complete the following table:

		Details of exposure or environmental release			
Incident Number	Insecticide (DDT & other)	Date	Place	Quantity released	Estimated number of people exposed
I					
Ii					
Iii					
Iv					

60. Please complete the following table for the incidents listed in question 59

	Details of exposure or environmental release			
Incident number (Question 56)	Caused of incident (e.g. Road accident during transport)	Remedial actions taken	Agency undertaking remedial action	Safeguards employed to prevent future incidents
i				
ii				
iii				
iv				

61. Which agency(ies) is(are) responsible for assessing the risks posed by the use of insecticides for public health _____
_____

62. Is there a programme to raise awareness among communities and households on safety issues relating to insecticides use in disease vector control YES ☐ NO ☐

63. If yes, who implements the programme and what public education method(s) are used ?
_____
_____

SECTION D: SYSTEMS STRENGTHENING IN DISEASE VECTOR CONTROL

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

Category of personnel	Level of training (PhD, Master, Bachelor)	Present staffing levels (number)	Targeted staffing level
Technical (e.g. management, planners)			
Operational (e.g. sprayers, sanitarians, mosquito collectors)			
other (please list)			

65. What is the overall budget for disease vector control_____ (US$). Also indicate as a percentage of the national health budget_____

66. What is the budget shortfall (US$) for vector control (percentage)Yr.1_____ Yr. 2_____ Yr. 3_____

67. Give the proportion of the annual budget mobilized in-country _____and externally_____

68. List the facilities in the country providing training in disease vector control.

Training facility	Specialization (vector biology, entomology etc)	Training level provided (degree or other)	Annual output

69. Provide details on the in-service training programmes available, especially at the regional and district levels:

_____
_____
_____
_____
_____

70. Do formal mechanisms exist for inter-sectoral collaboration in disease vector control YES ☐ NO ☐
If the answer is YES, please complete the following table (tick as appropriate).

Policy on inter-sectoral collaboration	Inter-sectoral committee/board at national level	Inter-sectoral committee at district level	Joint Planning (indicate if national, provincial, district etc.)	Joint implementation of activities

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:

_____
_____
_____
_____
_____
_____
_____
_____