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EVALUATION REPORT  
ENDEMIC AND COMMUNICABLE DISEASE CONTROL  
MALARIA COMPONENT  
Project 660-11-531-058

Prepared by:  
Robert L. Turner, Malaria Advisor, USAID/Zaire  
Contract AID/afr-C-1315

September 7, 1979

### 13. Summary

The Malaria Control Pilot Program (Programme de lutte Antipaludique) is actively beginning to accomplish its objectives.

a. Geographical reconnaissance (GR) is being verified, blocks and sections marked with respective designations at key locations.

b. Chloroquine has been distributed to fever complainants under 15 years of age, as well as pregnant and lactating women during the initial GR.

c. Health education activities include visits to program area for discussions about the program activities to residents, community leaders, civic and political officials. There have been newspaper articles, television coverage and radio broadcasts in three languages.

d. Interdomiciliary spray coverage carried out in the program area.

e. Entomology studies have indicated full susceptibility to DDT by the vector, Anopheles gambiae.

f. Studies to identify other anophelines found in the Kinshasa area are underway.

g. Progress of the program is hampered by the delay in delivery of transport.

h. Storeroom has been established.

i. Despite the year's delay in starting the program activities are essentially on time, with regard to event intervals, in attaining the objectives projected in the ProAg.

### 14. Evaluation

The purpose of this evaluation is to ascertain the status of the program, its successes, shortfalls, and remedies for the latter.

Term of reference is AID Project Evaluation Summary (Attachment A). Further references were program reports, special reports, and discussions with cadre and other staff. Individuals contribution to this evaluation were:

Dr. Makengo, Director  
Cit. Tshibangu, Supervisor  
Cit. Mplumba, Assistant Supervisor  
Cit. Nyangwili, Assistant Supervisor  
Cit. Kial, Administrator  
Cit. Luantadila, Aide to Assistant Supervisor  
M. S. M. Roche, WHO Technical Officer

15. External Factors

Since the signing of the ProAg on June 29, 1976, significant economic changes have occurred in Zaire, with increasing deterioration of other life values.

Goods and services are in short supply and when available command high prices which are increased weekly. There have been two devaluations of the currency and the price of gasoline has quadrupled during the past year.

The program was assigned a cadre of experienced sanitarians and one part-time physician as Director. Additionally, a group of Hygiene Service workers was inherited.

Only two members of the cadre of four had received previous training in malaria control techniques in 1966 at the WHO Malaria Training Center, Lome, Togo. During the intervening 13 years, their duties did not involve malaria control.

Upon the arrival of the USAID Malaria Advisor in September 1977, GOZ was in the process of organizing and implementing an environmental malaria control activity, not along the lines projected by the ProAg. ProAg activities began July 1, 1978.

Personnel training, field work, and other program implementation activities have been delayed, hampered or postponed because vehicles ordered in June 1978 have failed to arrive by September 1979.

Space for the program is located in the FONAMES and Hygiene Service buildings which are three miles apart. Warehouse space has been provided by the Malaria Control Pilot Program by finishing the construction of a building at Hygiene Service. A walled parking facility-garage is under construction, adjacent to the warehouse.

Program personnel and equipment have been commandeered to assist in the cholera problem beginning July and continuing to September 1979. The entire epidemiology section, program supervisor, and health educator have been utilized.

These activities have also delayed training, establishment of the laboratory and a fuller implementation of malaria program activities in the pilot program area.

Discussions with WHO officials prior to the writing of the ProAg impelled great optimism relative to the expected role of activity by WHO in the attainment of the program goals. Regular visits of the USAID Malaria Advisor to the WHO Regional Office, Brazzaville, are always cordially and cooperatively received but substantial assistance in training, baseline studies, scholarships, etc., has not been received.

The problem, apparently, involves communications difficulty - i.e. the pilot program to MOH and MOH to WHO.

In addition to cooperation received during the visits, two WHO technicians have been sent for short periods to assist the program. The USAID Malaria Advisor has established a personal communications link with the WHO Regional Office in order to be knowledgeable about the kinds of WHO assistance which may be available.

#### 16. Inputs

Transport. Two Chevrolet pick-up trucks were available to the program upon the arrival of the USAID Malaria Advisor, one being used by the Advisor and the other eventually transferred to the GOZ.

Vehicles ordered in June 1978 have failed to arrive by September 1979. Offshore commodities ordered June 1978 were received in early 1979. Items included DDT, sprayers, laboratory and epidemiology equipment, as well as some office equipment.

DDT. The present stock of DDT is approximately 22,208 kg. This amount is adequate for the second round of spraying in the program area plus one new zone.

Sprayers. Of 100 Hudson sprayers (10-liter) received, 99 are in stock. One sprayer was lost or misplaced during the June-July spraying round. All are presently undergoing thorough cleaning and full maintenance measures.

The U.S. Embassy JAO carpentry shop has aided the program by preparing, virtually at cost, pallets for DDT cartons, laboratory tables and stools, as well as storeroom shelving.

Counterpart Funds have provided for the purchase of gasoline, oil, tires, GOZ truck maintenance, telephone installation, office equipment and furnishings, salaries for temporary workers during spraying campaign, salary supplements (primes) for staff with MOH employment status, salaries for direct-hire personnel, modification of a building for a warehouse, construction of a parking-garage facility and miscellaneous local purchases.

#### Consultants

a. Mr. Edgar Smith, AID/Washington, after a visit in April 1979, has recommended the need for short-term specialist services in the following categories: entomology, source reduction engineer, laboratory technician, engineer, technical training organizer.

b. Mr. S. Roche, WHO Technical Officer, was present on the program from June 15 to August 15, 1979 to assist in the spraying operations.

c. Mr. Buisson, WHO Technical Officer, arrived in November 1977 for three weeks TDY. Unfortunately, his arrival occurred before the program began to be organized. He was able to provide orientation to personnel on field operations techniques.

#### 17. Outputs

Spraying. From the spraying campaign, June 25 - July 28, 1979 in the program area (Map Annex 1), the following results are summarized:

Houses sprayed	28,932
Persons protected, directly	192,321
Persons protected, indirectly through reduction of the mosquito vector population	<u>64,000</u>
Persons protected, total	256,321

(See Annexes 2, 3.)

The program achieved 94.7% and 86.95% coverage of human habitations in Ndjili and Masina Zones, respectively.

For the entire program area, 5.15% of houses were closed on the day when spraying was planned, due to the absence of occupants. Refusals were 3.73% for the area, with the highest number in Masina Zone. These refusals reflected the weakness of the program health education effort.

#### Epidemiology

Parasitology. Baseline information was gathered during May-June 1979 about fever cases less than 15 years of age, as follows:

Ndjili Zone	4880 (40 dispensaries)
Masina Zone	2195 (39 dispensaries)

1200 blood smears were collected from school children. Examination is under way.

Entomology. 1346 larvae collected (964 Anopheles gambiae, 6 Anopheles coustani). Collections are being made to identify other anophelines present in the Kinshasa area.

Susceptibility test results have proven conclusively that previous WHO reports of An. gambiae resistance to DDT in the Kinshasa area were not correct.

18. Purpose

The overall purpose of the Endemic Disease program is to strengthen the GOZ institutional capacity for monitoring and controlling communicable diseases during a five-year period. Malaria components are: The establishment of a malaria control pilot program in the Kinshasa Region and one nearby rural area, with a demonstrable decrease in malaria incidence, and the development of a cadre of GOZ health workers competent to deal with insect-borne diseases and environmental health and the organization and infrastructure to support these activities.

19. Goal/Sub-Goal

Not pertinent at this time.

20. Beneficiaries

Although the program is still in the throes of being organized efficiently, evidence indicates that present activities have provided substantial benefits for the population in the program area.

During geographical reconnaissance, chloroquine tablets, 100 mg base, were distributed to persons complaining of fever, as follows:

Ndjili Zone - 14,668 tablets to 3774 children less than 15 years old, pregnant women 198, nursing mothers 391.

Masina Zone - 36,769 tablets to 2313 persons complaining of fever; age and status breakdown not available.

Masina, adjacent to an extensive swampy area, is well known as a highly malarious zone.

During the spraying campaign in June-July 1979, <sup>192,321</sup> ~~42,321~~ persons were protected directly by the spraying activity, with a multiplier effect created by the reduction of insect vectors, protecting an additional 65,000. It is estimated that the spraying operation has protected nearly 257,000 persons.

In an area of chronically high unemployment, the program hired nearly 150 men, mainly from the pilot program area, during the spraying campaign. The cadre of GOZ health workers is developing the competency to deal with insect-borne diseases and environmental health.

21. Unplanned Effects

Not pertinent at this time.

## 22. Lessons Learned

The project is still in its infancy but numerous lessons have been learned, including:

- a. Pro-Ag should have made provision for a training-orientation period for cadre. Such subjects as planning, organizing, administration, personnel management, office management, creative problem solving, supervision, procurement, accounting (or bookkeeping) practice, logistics, warehouse management and others. Most of these areas are among the easily-recognized shortfalls of the project.
- b. The requirement for cadre to function as a team rather than as individuals in organization, implementation, and evaluation of activities.
- c. A malaria control pilot program is a costly and complex undertaking. The diverse elements necessary to achieve success are often underestimated by workers, cadre, COZ, and USAID.
- d. The necessity for making timely decisions.
- e. The worth of written policies and rules for all aspects of the work.
- f. Deadlines and adequate follow-up for all tasks assigned.
- g. Accountability for time and effort expended and a determination by management whether individuals are measuring up, relative to objectives of the program.
- h. Materials and equipment necessary for all activities must be anticipated in time and the proper distribution to field or laboratory must be well formulated.
- i. Health education is an essential element of the pilot program. The higher number of refusals in Masina Zone during the spray campaign underlined the importance of a well-organized health education effort.
- j. It was learned in general that the public was very cooperative and the reduction of malaria and mosquito biting by the program was appreciated.
- k. The cooperation of Zone and collectivité officials facilitated the acceptance of program activities by an overwhelming proportion of the population.
- l. That firm leadership promotes better work practices and successful results of the work.

m. Well-organized training sessions for all categories of personnel must be implemented.

23. Special Comments or Remarks

None

## PROJECT EVALUATION SUMMARY (PES) – PART II

The following topics are to be covered in a brief narrative statement (averaging about 200 words or half a page per item) and attached to the printed PES facesheet. Each topic should have an underlined heading. If a topic is not pertinent to a particular evaluation, list the topic and state: "Not pertinent at this time". The Summary (Item 13) should always be included, and should not exceed 200 words.

**13. SUMMARY** - Summarize the current project situation, mentioning progress in relation to design, prospects of achieving the purpose and goal, major problems encountered, etc.

**14. EVALUATION METHODOLOGY** - What was the reason for the evaluation, e.g., clarify project design, measure progress, verify program/project hypotheses, improve implementation, assess a pilot phase, prepare budget, etc? Where appropriate, refer to the Evaluation Plan in the Project Paper. Describe the methods used for this evaluation, including the study design, scope, cost, techniques of data collection, analysis and data sources. Identify agencies and key individuals (host, other donor, public, AID) participating and contributing.

**15. EXTERNAL FACTORS** - Identify and discuss major changes in project setting, including socio-economic conditions and host government priorities, which have an impact on the project. Examine continuing validity of assumptions.

**16. INPUTS** - Are there any problems with commodities, technical services, training or other inputs as to quality, quantity, timeliness, etc? Any changes needed in the type or amount of inputs to produce outputs?

**17. OUTPUTS** - Measure actual progress against projected output targets in current project design or implementation plan. Use tabular format if desired. Comment on significant management experiences. If outputs are not on target, discuss causes (e.g., problems with inputs, implementation assumptions). Are any changes needed in the outputs to achieve purpose?

**18. PURPOSE** - Quote approved project purpose. Cite progress toward each End of Project Status (EOPS) condition. When can achievement be expected? Is the set of EOPS conditions still considered a good description of what will exist when the purpose is achieved? Discuss the causes of any shortfalls in terms of the causal linkage between outputs and purpose or external factors.

**19. GOAL/SUBGOAL** - Quote approved goal, and subgoal, where relevant, to which the project contributes. Describe status by citing evidence available to date from specified indicators, and by mentioning the progress of other contributory projects. To what extent can progress toward goal/subgoal be attributed to purpose achievement, to other projects, to other causal factors? If progress is less than satisfactory, explore the reasons, e.g., purpose inadequate for hypothesized impact, new external factors affect purpose-subgoal/goal linkage.

**20. BENEFICIARIES** - Identify the direct and indirect beneficiaries of this project in terms of criteria in Sec. 102(d) of the FAA (e.g., a. increase small-farm, labor-intensive agricultural productivity; b. reduce infant mortality; c. control population growth; d. promote greater equality in income; e. reduce rates of unemployment and underemployment). Summarize data on the nature of benefits and the identity and number of those benefitting, even if some aspects were reported in preceding questions on output, purpose, or subgoal/goal. For AID/W projects, assess likelihood that results of projects will be used in LDC's.

**21. UNPLANNED EFFECTS** - Has the project had any unexpected results or impact, such as changes in social structure, environment, health, technical or economic situation? Are these effects advantageous or not? Do they require any change in project design or execution?

**22. LESSONS LEARNED** - What advice can you give a colleague about development strategy, e.g., how to tackle a similar development problem or to manage a similar project in another country? What can be suggested for follow-on in this country? Similarly, do you have any suggestions about evaluation methodology?

**23. SPECIAL COMMENTS OR REMARKS** - Include any significant policy or program management implications. Also list titles of attachments and number of pages.

# Carte

des Zones de

N'DJILI et M'PONDJI

Ville de Niakhar

Zône Marécageuse

N A

S I

B A N S E K E

LIMITE

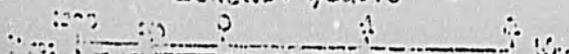
LIMITE

M'PONDJI

Scale  
1:50,000

	Limite de Zone		Route de Niakhar
	Limite de Quartier		
	Nombre de Quartier		Limite de Marécage
	Limite de Marécage		Chemin de Fer
	Magasin NDJILI (Tovoko) - Niakhar		Magasin M'PONDJI (Ouv. et Nord)
	Magasin M'PONDJI (Ouv. et Nord)		Magasin M'PONDJI (Partie Central - Ouv.)
	Magasin M'PONDJI (Partie Central - Ouv.)		Extension Niakhar (Nord)
	Extension Niakhar (Nord)		Extension Niakhar (Est - Airport)
	Extension Niakhar (Est - Airport)		NDJILI-Ouv. (Partie jardins viviers NDJILI)

Scale: 1/50,000



PULVERISATIONS INTRADOMICILIAIRES

RAPPORT FINAL

(25 Juin - 27 Juillet 1979)

Résultats par Zone

Items:	Zones:		MASINA		TOTAL	
	NDJILI		Nombre	%	Nombre	%
Nombre Parcelles	13,456	—	11,078	—	25,277	—
Entièrement	13,456	86,37	10,200	87,15	23,756	100,00
Partiellement	1,299	8,33	1,309	9,00	2,600	9,91
<b>SOUS-TOTAL A</b>	<b>14,755</b>	<b>94,70</b>	<b>11,609</b>	<b>86,95</b>	<b>26,364</b>	<b>91,17</b>
Ferrières	531	3,41	260	3,10	4,491	5,10
Volontaires	28	0,18	267	2,90	295	3,07
Naissances	184	1,10	314	2,57	510	1,83
Causés inconnus	82	0,53	172	1,29	254	0,90
Total "Refus"	294	1,80	783	5,06	4,077	2,73
<b>SOUS-TOTAL B</b>	<b>825</b>	<b>5,30</b>	<b>4,743</b>	<b>13,05</b>	<b>2,560</b>	<b>0,97</b>
<b>TOTAL "Actions d'habitation"</b>	<b>15,580</b>	<b>100</b>	<b>12,352</b>	<b>100</b>	<b>20,922</b>	<b>100</b>
Nombre d'Habitants protégés	112,525	—	79,786	—	192,321	—
Traitées	4,461	53,25	4,551	13,74	6,012	30,97
Non-Traitées	3,917	46,75	9,739	26,26	13,656	69,43
<b>TOTAL</b>	<b>8,378</b>	<b>100</b>	<b>11,290</b>	<b>100</b>	<b>19,668</b>	<b>100</b>
Nombre Sachets DDT utilisés	9,213		6,035		15,248	
Nombre de kg DDT 75% V.P.	6,145		4,025		10,170	
Nombre de Jours/Equipe	170		109		279	
Nombre de Jours/Aspersion	1,4,20		1,003		2,4,23	
Dates limites	25 Juin/14 Juillet		16 Juillet/27 Juillet		25 Juin/27 Juillet	
Nombre de Semaines	3		2		5	
Nombre de Jours ouvrables	17		11		28	

KINSHASA-ZAIRE  
PULVERISATIONS INTRADOMICILIAIRES

(25 Juin - 27 Juillet 1979)

RAPPORT FINAL  
MOYENNES PAR ZONE

Paramètres	ZONES	INDUSTRIEL	MAZINA	MOYENNE GÉNÉRALE
Nombre de Maisons/Parcelle		1,46	1,42	1,44
Nombre d'Habitants/Parcelle		0,27	6,74	5,93
Nombre d'Habitants/Maison		7,63	6,87	7,25
Nombre de Dépendances/Parcelle		0,62	0,95	0,78
Nombre de Dépendances/Maison		0,57	0,97	0,77
Surface théorique traitée		2.303,250	4.503,750	3.812,500
Surface théorique par Parcelle		171,20	127	150,50
Surface théorique par Maison/dépendance		136	130	133,00
Surface théorique dans Maison		146	137	142
Surface théorique dans dépendances		(0) 10	(0) 10	(0) 10
Surface théorique par habitant		20,46	10,92	15,72
Parcelles/Aspergeur/Jour		9,48	11,04	10,26
Maisons/Aspergeur/Jour		10,40	11,57	10,99
Habitants/Aspergeur/Jour		79,20	79,49	79,35
Surface traitée (ha)/Aspergeur/Jour		1622	1504	1573
Appareils (10 litres)/Aspergeur/Jour		6,49	6,02	6,20
Kg DDT 75 % WDP/Parcelle		0,457	0,380	0,401
Kg DDT 75 % WDP/Maison		0,446	0,347	0,397
Kg DDT 75 % WDP/Habitant		0,055	0,051	0,053
Kg DDT 75 % WDP utilisés		6.145	4.025	10.170