



INTERNATIONAL BANK FOR
RECONSTRUCTION AND DEVELOPMENT
WASHINGTON, D. C. 20433, U. S. A.

OFFICE OF THE PRESIDENT

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FROM: The President

Control of Onchocerciasis in Western Africa

1. The Executive Directors will recall that in March of last year, after returning from a visit to Western Africa, I reported on the efforts being made to control onchocerciasis (riverblindness) in the Volta river basin and adjoining areas and proposed to explore the possibility of Bank Group support for these efforts (a background note on onchocerciasis is attached). Subsequently, in April 1972, I met with the Directors General of WHO and FAO and the Administrator of UNDP, and we agreed to set up a Steering Committee for Onchocerciasis Control, consisting of a representative of each of the four agencies, to coordinate action by these agencies in the planning and implementation of an onchocerciasis control program. The Steering Committee has recommended that the Bank should take the lead in mobilizing funds on an international basis for financing the first phase of the program, which is due to start early in 1974, and I propose that the Bank should assume this role. Primary responsibility for the organization and execution of the program will remain with WHO, working in concert with the seven African governments concerned, namely Dahomey, Ghana, Ivory Coast, Mali, Niger, Togo and Upper Volta. Six of these governments, together with France, are members of the Organisation de Coordination et de Coopération pour la Lutte Contre les Grandes Endémies (OCCGE), which has been playing an important part in the preparatory work of onchocerciasis control.

2. As the first step towards the creation of an international fund for onchocerciasis control, I propose that the Bank should convene a meeting of interested governments and international agencies in Paris in the last week of June with a view to establishing a consultative group for this purpose. All governments who would be ready to consider contributing to the fund would be invited to send representatives to the meeting, along with the African Development Bank and the European Development Fund, and the beneficiary African governments would also be represented.

3. A full presentation would be made at this meeting of the history of onchocerciasis, of the studies carried out in recent years in the Volta river basin, of the plans for the coming campaign and of the economic benefits expected from the control of onchocerciasis and the resettlement of river valleys from which the population has retreated mainly because of the disease. Technical experts from WHO and other scientific institutions and agencies would describe the research that has been undertaken and would provide detailed information about the proposed program for controlling the disease. The meeting would be provided with preliminary estimates of the cost of the program, with particular reference to the first phase, and there would be a discussion of the basis for cost sharing with a view to reaching agreement on individual contributions later in the year. WHO would outline its thinking with respect to the type of organization that would be set up to administer the program. It is to be expected that the potential donor governments will have views as to the appropriate form of organization, and due consideration will have to be given to these.

4. A "round-table conference" has been scheduled for December 1973 to consider the final report of a Preparatory Assistance Group mission which was set up in 1971 with its headquarters in Ouagadougou in Upper Volta. Terms of reference for this mission were agreed at a meeting sponsored by WHO and UNDP in Geneva in July 1970, in which the Bank participated, and the mission was financed by UNDP, with WHO as executing agency and FAO as associated agency. Its report, now under preparation, will contain a detailed description of the proposed control program, with the costs of each component, and will outline selected development projects demonstrating the potential economic benefits of the campaign. A second meeting of the consultative group should be held after the round-table conference to decide on the contributions to be made by each of the participating governments and agencies to the financing of the first phase of the program. A budget for this phase of the operations could then be approved and an organization established to administer the program.

5. Very preliminary estimates indicate that the total cost of the control program may be around \$100 million (at prices and exchange rates prevailing at mid-1972) spread over a period of 20 years. The cost of the first phase extending over six years from 1974 to 1980 would be approximately one-third of this, that is \$30-35 million, of which half would be accounted for by operations to control the vector (mainly by aerial application of insecticides) and the rest would cover entomological surveillance, epidemiological evaluation, scientific

and operational research, staff training and costs of management and supervision. Much the greater part of the cost will be in foreign exchange. Funding of the program itself will clearly need to be on a grant or near-grant basis, although it may be appropriate for some of the follow-up projects for agriculture, land settlement and rural development to be financed by loans on concessional terms. From indications so far received, I would expect that the governments of developed countries would be ready to provide the greater part of the financing required, with smaller contributions from international agencies and the beneficiary African governments. It is too early at present to say what would be the appropriate contribution for the World Bank Group, but I would plan to submit proposals on this to the Executive Directors in due course.


Robert S. McNamara

Annex: Background Note on Onchocerciasis in Western Africa

BACKGROUND NOTE ON ONCHOCERCIASIS IN WESTERN AFRICA

1. Human onchocerciasis is a parasitic disease caused by a thread-like worm (Onchocerca volvulus) that lodges in the body and is transmitted by a species of blackfly (Simulium damnosum) that breeds in fast flowing rivers. The worms multiply within the body as a person living in an endemic area is constantly being reinfected with the disease, and the heaviest infections are usually found amongst older people. Apart from its generally debilitating effects, onchocerciasis frequently causes eye lesions leading to impairment of vision and in some cases total blindness. In the worst affected areas as many as 30-50 percent of the adult male population may be incapacitated by loss of vision, which generally occurs after the age of 30.
2. The disease occurs in Africa, the Yemen and parts of Central and South America, and there are about 20 million people in the world infected with it. The medically most important and largest endemic areas are in tropical Africa, mainly in the northern savanna belt, and the Volta river basin is one of the worst. The latest estimates suggest that around one million people are suffering from onchocerciasis in the zone to be covered by the proposed program, and of these as many as 60,000 may be blind. Approximate numbers for each country are as follows: Upper Volta, 410,000; Ghana, Ivory Coast and Mali, 150,000 each; Dahomey, 120,000; Togo, 50,000; Niger, less than 10,000.
3. From an economic point of view, the heaviest costs of onchocerciasis in the Volta river basin - and the most important benefits that would result from control of the disease - are associated with the retreat of population from heavily infested river valleys which contain some of the most fertile land in the area. The movement of people out of these valleys, particularly in Upper Volta, appears to have been under way since the turn of the century, and as a result there is now an excessive concentration of population in the less fertile uplands, combined with a regular stream of emigration composed mainly of young people towards the towns and plantations in the more humid zone to the south. Over-cropping has reduced yields in the over-populated uplands, while an estimated 65,000 square kilometers of land in the valleys have been lost to agriculture. If onchocerciasis can be controlled, there is a reasonable expectation that most of this abandoned land can be brought back into cultivation.
4. The parasite that causes onchocerciasis was first discovered by western medicine in the latter part of the 19th century, and extensive epidemiological and entomological research has been conducted since then into the causes of the disease. Medical treatment of onchocerciasis raises problems, for none of the remedies at present

available appears to be suitable for mass campaigns, and the most effective of them involves appreciable risks for the patients treated. Current plans for controlling the disease therefore rely mainly on interrupting its transmission by attacking the vector through the periodic introduction of insecticides into the rivers where the blackfly breeds. This must be done over a long enough period (about twenty years) to ensure the natural disappearance of the parasite from its human host. Control operations against Simulium damnosum have been undertaken in many places in Africa, including Nigeria and Kenya, and valuable lessons have been learned, particularly from the campaign carried out in recent years in the Ivory Coast, Upper Volta and Mali with assistance of the Fonds Européen de Développement (FED) and the Organisation de Coordination et de Coopération pour la Lutte Contre les Grandes Endémies (OCCGE). However, none of these operations has been on a large enough scale to have a major impact on onchocerciasis.

5. In July 1968, acting in conjunction with the US Agency for International Development and OCCGE, the World Health Organization convened a technical conference in Tunis to consider the problem of onchocerciasis. This conference, which brought together the world's leading experts on the subject, concluded that control of the disease was now technically feasible, and that the chances of lasting success would be greatest if control was carried out in ecological zones large enough to obviate the need for continuous protection against reinvasion of the blackfly. The conference recommended that Africa be accorded priority, with first attention being given to the severely affected area of the Volta river basin, including adjoining parts of Dahomey, Ghana, Ivory Coast, Mali, Niger, Togo and Upper Volta. This area was chosen because of the prevalence of onchocerciasis in a severe form, with particularly high rates of blindness; because a good deal of technical and economic information had already been assembled as a result of the operations conducted in recent years; and because of the readiness of the parties concerned, supported by public opinion, to cooperate in a control program designed to improve the health of the people and to provide opportunities for economic development.

6. All seven governments subsequently confirmed their interest in participating in the program, and the UNDP agreed to a proposal put forward by WHO for establishing a Preparatory Assistance Group (PAG) mission with a twofold objective. In the health sector, the mission was requested to prepare a plan of work to achieve control of onchocerciasis over the recommended project zone and to work out the expected costs and benefits of the scheme. On the agricultural side, it was called upon to identify areas within the project zone which offered development possibilities and to draft preliminary terms of reference for feasibility studies to be conducted later in these areas.

7. The terms of reference for the PAG mission were agreed at a meeting held in Geneva in July 1970, with the participation of the Conseil de l'Entente (representing Dahomey, Ivory Coast, Niger, Togo and Upper Volta), Ghana, OCCGE, FAO, FED, IBRD, UNDP, USAID and WHO. The mission, which was financed by UNDP with WHO as executing agency and FAO as associated agency, established its headquarters at Ouagadougou in August 1971 with the full support of the Government of Upper Volta. It completed its field work towards the end of 1972 and is now preparing a report which is to be submitted to the interested governments and international agencies by August 1973.

8. Meanwhile, a Steering Committee for Onchocerciasis Control has been established by the WHO, FAO, UNDP and the World Bank. This Committee has recommended that, as a further stage in the preparatory work for the main campaign, an interim project should be undertaken in the second half of 1973 in the Comoe Leraba basin in the southwest of Upper Volta. UNDP has agreed to finance this project to the extent of just over \$500,000. The project will enable different methods of aerial application to be tried out and the precise quantities of pesticide required for a given set of river conditions to be established, so that the cost estimates for the large-scale campaign can be further refined. Research into pesticides is continuing. Control operations to date have been mainly carried out with DDT formulations applied from the ground, but DDT is no longer recommended, and alternative pesticides are being evaluated at the hydrobiological laboratory of the French Office de la Recherche Scientifique et Technique Outre Mer (Fort Lamy-Chad), at the aquatic biological laboratory of Achimota (Ghana) and at the laboratory of entomology of the Faculty of Agriculture in Khartoum (Sudan). The outcome of these tests is expected to be available shortly.

9. The project zone as now delineated covers a total land area of about 600,000 square kilometers and includes a number of depopulated river valleys with reasonably good soils where onchocerciasis constitutes a major obstacle to development. There are also overpopulated areas within the zone or at the periphery which could become "departure zones" for people migrating to areas identified for future settlement. In the eastern part of the zone agriculture is predominantly of a subsistence character, with millet and sorghum as the main crops. Further to the west, the land is better watered, and more cash crops are grown, particularly cotton, groundnuts and rice, while the most important food crops are cassava, yams and maize. Livestock production is important in the northern part of the zone. Preliminary studies carried out by consultants under supervision of FAO and by agencies of the French Government have identified a number of river valleys with good possibilities for agricultural development. These include the White and Red Volta rivers in Upper Volta and northeast Ghana, the confluence of the Bandama Blanc and Bou rivers in the Ivory Coast and the Sansanne-Mango area in the north of Togo.

IBRD, Western Africa Region
Washington, D.C.

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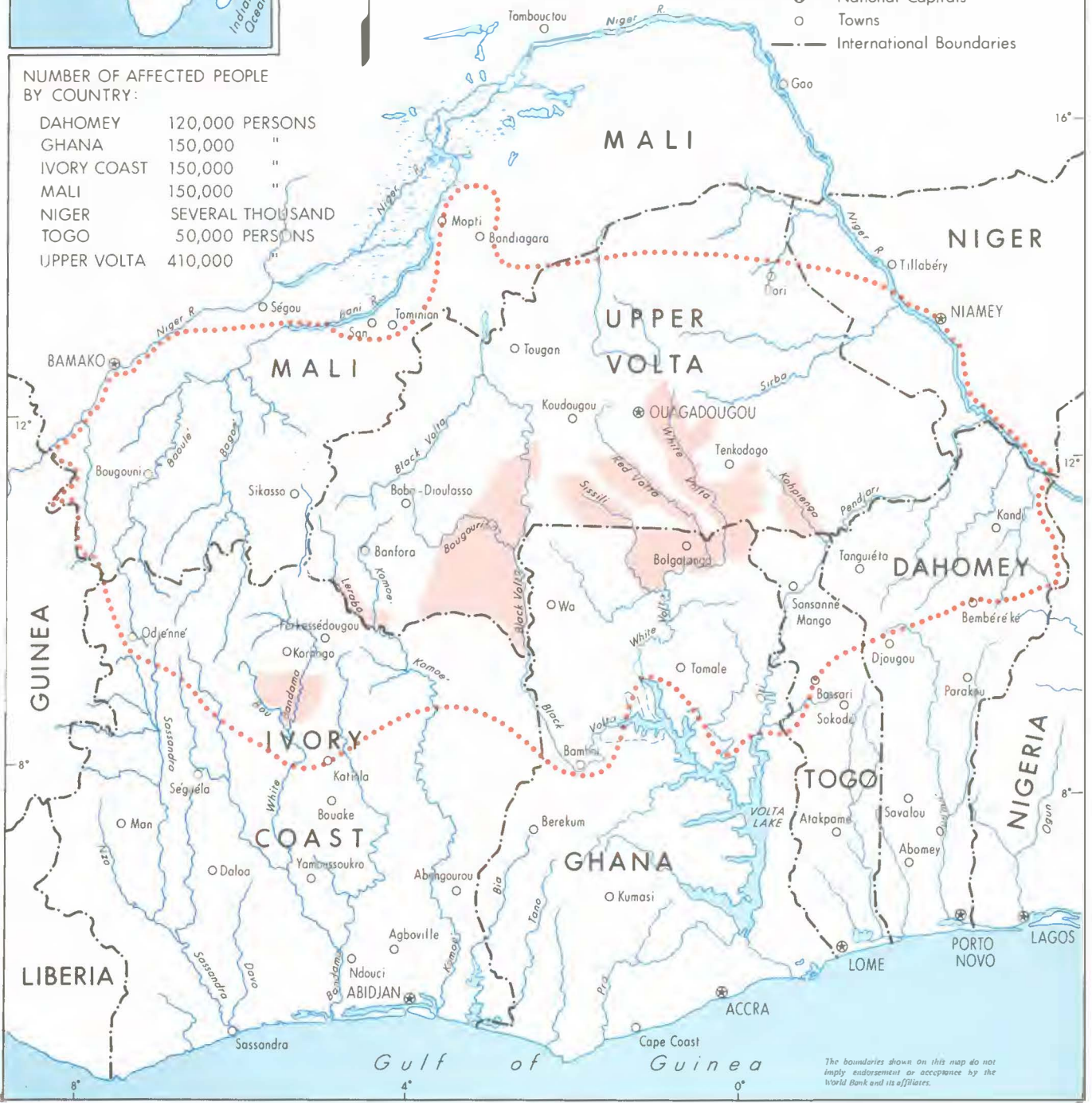
ONCHOCERCIASIS CONTROL PROGRAM IN WESTERN AFRICA



- Campaign Area Boundary
- Location of Major Resettlement Projects
- Rivers
- ⊕ National Capitals
- Towns
- International Boundaries

NUMBER OF AFFECTED PEOPLE BY COUNTRY:

DAHOMY	120,000 PERSONS
GHANA	150,000 "
IVORY COAST	150,000 "
MALI	150,000 "
NIGER	SEVERAL THOUSAND
TOGO	50,000 PERSONS
UPPER VOLTA	410,000 "



The boundaries shown on this map do not imply endorsement or acceptance by the World Bank and its affiliates.