The World Bank and the Use of DDT in Madagascar

World Bank’s input for Malaria: In 1987, malaria was among the leading causes of mortality in Madagascar (8% of all deaths). To address this problem, the Government worked with the World Bank to make a significant investment in malaria control activities in 1992 through the First and the ongoing Second Health Sector Support Project. About one third of the total amount (US$31 million) of the First Credit was allocated to support malaria control activities within the context of the project’s infectious disease prevention and management component.

The World Bank’s Second Health Sector Support Project (US$40 million), which began in September 2000, allocates 27% of the total funds for malaria control activities such as procurement of insecticide and insecticide treated bednets.

Madagascar’s Success in Malaria Control:
Malaria control interventions include indoor spraying and the establishment of an epidemic alert system in the highlands. In the rest of the country, the strategy is based on the use of insecticide treated nets and adequate case management. Annual “intra-domiciliary or indoor spraying” (OPID) with DDT began in the highlands of Madagascar in 1993, covering approximately 66,000 square kilometers and a population of about 2,600,000.

The strategy significantly reduced malaria prevalence in the highland areas: 0.8% in OPID areas as compared with 6.5% in non-OPID areas. A study conducted in the Alaotra Lake region in Mahakary, also showed that household spraying and the use of impregnated curtains reduced the number of infecting bites per person per night from 4.76 in 1995 to 1.0 in 1996.

Finding Viable Alternatives to DDT: The use of DDT, particularly in the agricultural sector, drew criticism from the international community, as well as environmental and NGO groups in Madagascar.

The local scientific committee, including the Ministry of Health and various research institutions (the Pasteur Institute and the Institut de Recherche pour le Développement) - actively sought viable alternatives to the use of DDT. Studies on the efficacy of Lambda cyhalothrin were conducted by IRD in association with the Ministry of Health. While the first results have been encouraging, it was determined that Lambda cyhalothrin could not replace DDT due to its limited residual activity (i.e. 3 months). The search for an appropriate alternative to DDT will be expanded to include other insecticides. Following the reduction of malaria transmission in most of the highlands, the OPID campaigns have been limited to a few high-risk areas and to the margins of the highlands.

The New Approach: In 1998, the World Bank and the government of Madagascar agreed to reduce the total surface areas for spraying and to progressively phase out DDT, replacing it with an environmentally friendly insecticide.

With financial support from the World Bank, the environmental impact of the program will be monitored and evaluated. Moreover, greater emphasis is being placed on outbreak control and epidemiological surveillance in the highlands of the country and the elaboration of a more comprehensive strategy for other geographical zones and populations where malaria is endemic (e.g. more attention to malaria control
activities in groups at risk, i.e. pregnant women and children, adequate treatment of acute and complicated malaria cases, etc.).

Strategic decisions on spraying, bednet policy, and choice of drugs will be taken under the guidance of the Roll Back Malaria (RBM) committee in Madagascar.

2 Introduced on a small scale and gradually made available in larger quantities.
4 Institut Pasteur de Madagascar, “Rapport d’activités - Programme paludisme”, 1994-1997 and supplemented by discussions with the project’s external consultant.