TECHNICAL ASSISTANCE COMPLETION REPORT

Division : SESS

RETA 6243: Strengthening Malaria Control for Ethnic Minorities				Amount Approved: $750,000	
				Revised Amount: $750,000	
Executing Agency Asian Development Bank		Source of Funding Poverty Reduction Cooperation Fund		Amount Undisbursed: $28,000	Amount Utilized: $722,000
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Description

While the overall malaria situation in the Greater Mekong Subregion (GMS) has improved in the last ten years largely because of the distribution of insecticide treated nets (ITNs) and better diagnostic and treatment, malaria remains a major public health threat to vulnerable populations living in remote areas[1]. About one third of the population in GMS lives in remote areas where health services are difficult to access and opportunity costs for malaria treatment are high. There are four main categories of malaria affected populations in GMS: ethnic minority groups (EMGs), forest fringe inhabitants, temporary migrants and seasonal workers. Malaria transmission in GMS is largely restricted to forest areas. All age groups are exposed to malaria transmission but pregnant women and children are extremely vulnerable. The situation is further exacerbated by a high rate of anti-malarial drug resistance[2] because of plasmodium resistance and incorrect treatment of malaria cases. ADB has supported malaria prevention and control in GMS since 2000 through regional technical assistance (TA) 5958: Roll Back Malaria Initiative in the GMS, which enhanced the capacity of Ministries of Health to strengthen community-based malaria prevention, control and treatment. Based on the recommendations of TA 5958, national malaria institutes (NMIs) of six GMS countries [Cambodia, Lao PDR, Myanmar, People's Republic of China (PRC),Thailand and Viet Nam] requested additional TA to build the capacity of NMIs, and to identify and implement malaria control strategies for EMGs.

Expected Impact, Outcome and Outputs

The expected impact of the TA was a reduced malaria burden among poor EMGs living in malaria-prone areas in GMS. The expected outcome was to field test malaria strategies for selected EMGs[3] and integration of pilot-tested strategies for the national malaria control programs (NMCPs). The TA had three specific outputs: (i) strengthened capacity of NMCPs; (ii) acceptable, affordable, and effective strategies for malaria control for EMGs developed; (iii) scaled-up malaria control efforts for EMGs established; and (iv) regional collaboration for malaria control promoted.

Delivery of Inputs and Conduct of Activities

The TA was funded through the Poverty Reduction Cooperation Fund ($750,000). The Western Pacific Regional Office (WPRO) of the World Health Organization (WHO), the implementing agency (IA), contributed an additional $130,000 for consulting services. The TA financed a total of 24 person-months of international consultants with expertise in health communications and malaria control. WPRO financed six international consultants in the areas of epidemiology, malaria research, medical anthropology, entomology and economics. The team leader, the health communication specialist, was based in WHO Vientiane, Lao PDR, and was assisted by an administrative officer. The TA funded workshops on qualitative and quantitative data collection and analysis; training on social mobilization and communication for malaria prevention for village health workers and teachers, and the provision of basic malaria kits containing rapid diagnostic tests (RDT), artemisinin-based combination therapy (ACT) and communication materials in local languages. The consultant team prepared three comprehensive progress reports. The consultants' performance was rated as fully satisfactory. WPRO assisted in technical back up for the participating countries. The performance of the IA is rated as fully satisfactory. ADB undertook three review missions including a final workshop and its performance was fully satisfactory.

[1] Between 2002-2005, the average annual incidence of confirmed malaria cases ranged between 0.2 cases in Yunnan, PRC and 5.5 cases per 1,000 population in Cambodia.

[2] Since the 1970's, the border area between Cambodia and Thailand has seen emerging resistance of *Plasmodium falciparum* to anti-malarial drugs, starting with resistance to chloroquine followed by mefloquine.

[3] EMGs include Kreung (Cambodia), Wa (Yunnan, PRC), Brau-Lave (Laos), Shan (Myanmar), Karen (Thailand), Raglai (Vietnam).

Evaluation of Outputs and Achievement of Outcomes

The TA achieved the expected outputs and outcomes. With regard to output 1, the capacity of national and local malaria specialists to identify, plan and implement targeted interventions for ethnic minorities and vulnerable groups was strengthened. The project teams in the six countries collected baseline data on malaria prevalence, utilization of ITNs, and knowledge and practices regarding malaria prevention and control. With regard to the design of the field test, there was limited technical capacity using qualitative methods which required substantial support from the consultants. As part of output 2, NMIs piloted malaria control interventions, based on the provision of ITN and early diagnosis and appropriate treatment (EDAT), tailored to the requirements in pilot areas. Village volunteers and health staff were trained on the use of RDT and ACT. A total of 60 villages in the pilot areas benefited from the distribution of basic malaria prevention packages. In Vietnam, stand-by treatment for malaria was provided to forest workers and proved to be successful. In Cambodia, the utilization rate for ITNs increased from 24% to 87% and patients seeking EDAT increased from 31% to 54%.The training and mobilization of village health workers (VHWs) and volunteers in the target villages showed considerable improvement in treatment-seeking behavior. In Cambodia, 70% of caretakers sought treatment for children under five years of age with febrile diseases within three days. Malaria educational materials developed by TA 5958: Roll Back Malaria Initiative in the GMS were tested, reproduced and distributed to VHWs and volunteers. VHWs and volunteers received incentives to work in their own and neighboring communities but the sustainability of these incentive payments is a challenge since local governments are not able or willing to continue to payment of VHWs. National plans to scale up malaria interventions for EMGs were prepared. Intervention costs were assessed for Lao PDR, the PRC, Thailand and Vietnam, and included in the funding request for the Global Fund to Fight Aids, Malaria and Tuberculosis (GFAMT). Lao PDR, Thailand, and Vietnam were successful in receiving additional funding for EMGs. With regard to the outcomes, each country prepared a national plan to upscale malaria interventions for EMGs, which outlined specific activities to strengthen (i) health promotion for malaria prevention, (ii) the provision of ITN, (iii) personal protection measures such as hammock nets for mobile populations, (iii) early diagnosis and RDT in remote locations, (iv) treatment of *falciparum* and *vivax* malaria, (v) training of VHWs on RDT and ACT, and (vi) surveillance. As anti-malarial drug resistance in the GMS is the most serious in the world, the strategies focus on populations living near and in the forests, as well as seasonal workers moving from malaria non-endemic to endemic areas in GMS. The draft framework for the regional strategy to address malaria control for vulnerable populations is comprised of four main components (i) integration of malaria in febrile disease programs (ii) public-private partnerships and social cooperate responsibility, (iii) integration of poverty reduction strategies in national health policies, and (iv) operations research to further elaborate the regional strategy.

Overall Assessment and Rating

The TA can be rated as successful as it achieved the expected outputs and outcomes. The TA showed that the adequate provision of rapid diagnosis tests, artemisinin-based combination therapy and ITNs targeted to EMGs, combined with health education in local languages, can help to reduce the overall burden of malaria. Further, it revealed that the training and mobilization of VHWs and volunteers is key in reaching EMGs and increasing their awareness of the importance of seeking early treatment.

Major Lessons

The TA showed that (i) the integration of the malaria program in febrile disease programs would be beneficial because people living in poverty are not only heavily burdened with malaria but also other communicable diseases including dengue, acute respiratory infections, and diarrhoea; (ii) community-based interventions and/or services through a network of village health workers and volunteers are required because vulnerable populations have little access to services and opportunity costs are high, and (iii) different control strategies are necessary because the epidemiology of diseases varies from one at-risk group to another.

Recommendations and Follow-Up Actions

Stand-by treatments for self-medication used in Vietnam in the event of fever provide the best option for treatment for populations living and working in forests, as well as hammock nets. These strategies should be introduced in other GMS countries. To scale-up interventions, national and/or local governments require a clear policy on how to finance incentives for VHWs and volunteers. A regional approach is key to combating malaria and other neglected communicable diseases. The exchange of surveillance data relating to routine incidence, drug resistance, counterfeit drugs and insecticide resistance is key for evidence-based management of malaria control programs.

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