

Report on the

**Fifth intercountry meeting of national malaria
programme managers – countries of
moderate to high malaria endemicity**

Cairo, Egypt
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CONTENTS

1.	INTRODUCTION	1
2.	PROGRESS ON RBM IMPLEMENTATION IN THE EASTERN MEDITERRANEAN REGION AND GLOBALLY	2
2.1	Implementation of RBM interventions at global level: progress and challenges	2
2.2	RBM evaluation and progress report for 2004 in the Eastern Mediterranean Region	4
2.3	Progress of RBM in the WHO European Region	6
2.4	Update on scaling-up insecticide treated nets	7
2.5	Highlights from the World Malaria Report 2005	8
3.	IMPLEMENTATION OF RBM INTERVENTIONS, SUCCESS STORIES AND CHALLENGES	10
3.1	Progress of RBM implementation in Afghanistan	10
3.2	Progress of RBM implementation in Djibouti	11
3.3	Progress of RBM implementation in Eritrea.....	11
3.4	Progress of RBM implementation in Islamic Republic of Iran	12
3.5	Progress of RBM implementation in Iraq	12
3.6	Progress of RBM implementation in Saudi Arabia.....	13
3.7	Progress of RBM implementation in Somalia	13
3.8	Progress of RBM implementation in Sudan.....	14
3.9	Progress of RBM implementation in south Sudan.....	15
3.10	Progress of RBM implementation in Yemen.....	15
3.11	The Saudi-Yemeni cooperation to control malaria at the border areas	16
4.	COMMUNITY-BASED ACTION AND INTEGRATED STRATEGIES TO SCALE-UP COVERAGE OF MALARIA TREATMENT AND PREVENTION.....	17
4.1	Home management of malaria strategy.....	17
4.2	Linkages of RBM with community-based initiatives in the Eastern Mediterranean Region to scale-up coverage of malaria control and prevention ...	18
4.4	Integrated delivery of interventions: insecticide-treated bednets.....	19
4.5	Integrated strategies to scale-up coverage of malaria treatment and prevention: integration with the EPI programme	19
5.	THE EASTERN MEDITERRANEAN REGION EXPECTED RESULTS FOR MALARIA AND VECTOR CONTROL AREAS OF WORK.....	20
6.	RECOMMENDATIONS	21
	Annexes	
1.	AGENDA	23
2.	PROGRAMME	24
3.	LIST OF PARTICIPANTS	26

1. INTRODUCTION

The fifth intercountry meeting of national malaria programme managers of countries with moderate to high malaria endemicity in the World Health Organization (WHO) Eastern Mediterranean Region was held in Cairo, Egypt, from 29 to 31 May 2005. (See Annex 1 for agenda and Annex 2 for programme). The meeting was attended by representatives from nine countries of the Region plus one country from WHO African Region namely Eritrea. Representatives from WHO/headquarters including Director of Roll Back Malaria (RBM), Dr Fatoumata Nafou- Traoré, the RBM Regional Advisor from WHO Regional Office for Europe as well as RBM partners and the Secretariat from the WHO Regional Office for the Eastern Mediterranean (EMRO) (See Annex 3).

Dr Zuhair Hallaj, Director of Communicable Diseases Control, WHO/EMRO, delivered a message on behalf of Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean in which Dr Gezairy reminded the participants that the first World Malaria Report was launched simultaneously in Cairo, New York and Geneva on 3 May 2005. The report, developed by WHO and the United Nations Children's Fund (UNICEF), summarizes the status of malaria worldwide. It demonstrates that malaria is still a major global problem, exacting an unacceptable toll on the health and economic welfare of the world's poorest communities. The report clearly shows that there has been some progress towards effective treatment and prevention of malaria, more people are using insecticide-treated bednets and more countries are adopting artemisinin-based combination therapy (ACT) as their first line of treatment for falciparum malaria. It also shows that RBM has produced success stories in reducing the malaria burden in some of the endemic areas, for example Socotra Island in Yemen. However, it also highlights the challenges that continue to face effective prevention and control, despite the existence of effective tools. Dr Gezairy urged all countries to explore all possible mechanisms to scale up access to effective diagnosis and treatment, including the use of community-based initiatives such as home management of malaria in remote areas and for marginalized populations.

Dr Gezairy reminded participants that since malaria treatment is moving towards using more expensive drugs, it is ever more important to confirm malaria diagnosis and avoid spending unnecessary resources on ACT for non-malaria fever cases. Microscopy examination is still the gold standard for malaria diagnosis and ensuring its quality is of utmost importance. It was pointed out that successful implementation of vector control for malaria and other vector-borne diseases are reliant not only on effective tools, but also on national capacities to deliver such tools. The strategy for integrated vector management (IVM) through intersectoral collaboration sustains such capacities.

Dr Hallaj stated the objectives of the meeting as follows:

- to review the progress made and challenges facing implementation of RBM strategies in malaria endemic countries;
- to follow up on the implementation of the recommendations of meetings and workshops conducted during 2004

- to discuss community-based action and integrated strategies to scale up coverage of malaria treatment and insecticides treated nets (ITNs);
- to present the WHO expected results for 2006–2007 and develop country specific expected results and comprehensive plans of action including WHO joint activities for the coming biennium.

2. PROGRESS ON RBM IMPLEMENTATION IN THE EASTERN MEDITERRANEAN REGION AND GLOBALLY

2.1 Implementation of RBM interventions at global level: progress and challenges

Dr Fatoumata Nafou-Traoré

The objective of RBM, launched in 1998, is to halve the global malaria burden by 2010. In 2000, UN General Assembly proclaimed 2001–2010 the decade to roll back malaria and African heads of states in the Abuja summit set a target of 60% coverage of suitable preventive and curative interventions by 2005 to achieve RBM goals. In 2001, the report of the Commission on Macroeconomics and Health highlighted that countries with high malaria burden grew economically 1.3% less per person per year. At the Fifty-eighth World Health Assembly, Member States committed themselves to ensuring that at least 80% of those at risk of, or suffering from, malaria benefit from major preventive and curative interventions by 2010.

Evidence-based strategies of RBM are early diagnosis, prompt and effective treatment, integrated vector management, intermittent preventive treatment for pregnant women in areas of stable transmission, and prevention, early detection and prompt control of epidemics.

Because of high prevalence of resistance to commonly-used antimalarial medicines like chloroquine (CQ) and sulfadoxine-pyrimethamine (SP), WHO recommended antimalarial combination therapy to provide effective treatment and to prevent or delay the development of drug resistance. The recommended combination therapies are as follows: artemether/lumefantrine, artesunate + amodiaquine, artesunate + SP, artesunate + mefloquine and amodiaquine + SP. The first four combinations are artemisinin-based (ACT) which is extracted from the *Artemisia annua*.

Fifty-eight countries adopted ACT and 24 of them are deploying. There is a huge gap between estimated needs and current ACT production capacity, which means all parties should scale up their activities to fill this gap.

High prices of new regimens for treatment of falciparum malaria renewed the importance of confirmation of malaria diagnosis. For all patients in areas with low to moderate malaria transmission and for patients of above five years in a high transmission area a parasitologically confirmed diagnosis is highly recommended prior to treatment. For patients under-5 in high transmission areas, because of high probability of mortality, clinical diagnosis using the integrated management of childhood illness (IMCI) algorithm is justifiable. In 2005, WHO will publish new documents on treatment guidelines, rapid

diagnostic tests and technical specifications for pre-packaging antimalarial medicines and home management of malaria.

In high transmission areas, the objectives of vector control are personal protection of vulnerable groups, progressive increase of ITN coverage rates through a strategy of targeted distribution of free or highly subsidized ITNs to vulnerable groups through various channels, and use of vouchers to stimulate commercial market growth. In low transmission areas, community protection is the main objective through reduction or interruption of transmission through vector control, usually by indoor residual spraying (IRS) or ITNs, supplemented by additional measures when and where indicated in the context of IVM.

Although IRS is one of the most effective measures for vector control wherever recommended, insecticide resistance seriously threatens its usage. To address this problem insecticide resistance monitoring and management should be improved. Alternatives to DDT and improved formulations (longer residual activity, suitability in modern housing) are to be developed.

Long lasting insecticidal nets (LLIN) are mosquito nets treated with insecticide at factory level, which resists multiple washes and whose activity lasts as long as the net itself (e.g. around 3–5 years), considered one of the major advances in malaria control. Long-lasting treatment of fabrics (Etofenprox and Permethrin repellents) for clothing to prevent vector-borne diseases among travelers, refugees and military forces, long lasting treated hammocks for prevention of forest malaria, tsetse traps, and treated curtains and screens are alternative technology which can be used wherever suitable.

Preparation of country profiles for the global malaria report, published in May 2005, stimulated countries to improve and update reporting of health information system (HIS) and programme data. Profiles of 40 high-burden countries were published. Remaining profiles are available online.

RBM is working against a moving target – an organism that evolves to resist medicines and a mosquito vector that evades insecticides. Funds needed for an effective malaria control programme are something like US\$ 3 billion per year. However, in 2004, total international investment in malaria control, including the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) was only US\$ 600 million. In addition to inadequacy of funds, disbursement is too slow and delivery of interventions and health care to the poor is challenging. Regarding prevention measures, coverage of IPT is very low, sulfadoxine-pyrimethamine is becoming ineffective in many countries and no substitute medicine is available yet. At global level, the main challenges for implementation of control measures are ACT and LLIN availability, quality assurance, price negotiations, financing and drug procurement.

2.2 RBM evaluation and progress report for 2004 in the Eastern Mediterranean Region

Dr Hoda Atta

The majority of imported cases in malaria-free countries (Bahrain, Jordan, Kuwait, Lebanon, Libyan Jamahiriya, Palestine, Qatar, Tunisia, United Arab Emirates) or countries with very limited local malaria transmission (Egypt, Morocco, Oman and Syrian Arab Republic) are imported from the Indian subcontinent and especially Pakistan. In 2004, Morocco and the Syrian Arab Republic reported only one autochthonous malaria case.

In countries with low to moderate endemicity (Islamic Republic of Iran, Iraq and Saudi Arabia), there has been a significant reduction in the number of reported malaria cases (see Table 1).

Table 1. Reported malaria cases in countries with low to moderate endemicity

Country	Cases in 2002		Cases in 2003		Cases in 2004	
	Total	Autochthonous	Total	Autochthonous	Total	Autochthonous
Islamic Republic of Iran	15 558	9122	23 562	17 060	13 821	7602
Iraq	952	Most	347	Most	155	150
Saudi Arabia	2612	1226	1724	700	1232	308

In comparison with 2003, there has been reduction in the number of reported malaria cases from countries with intense malaria transmission (Afghanistan, Pakistan, Djibouti, Somalia, Sudan and Yemen), which are far fewer than the number of estimated cases. This difference shows the importance of finding a methodology for proper estimation of malaria burden in this group. Malaria burden in Pakistan is still very high and for the first time the Regional Office received data on as many as 1 831 631 malaria clinically diagnosed cases (see Table 2).

Table 2. Malaria cases in countries with intense malaria transmission

Countries	Total cases reported	Cases confirmed	Cases estimated
Afghanistan	261 456	240 408	2 500 000
Djibouti	2 142	122	80 000
Somalia	36 732	11 436	2 000 000
Sudan	2 083 711	668 484	7 500 000
Yemen	15 8561	48 756	3 000 000

To strengthen national capacity for malaria control in Member States, the Regional Officer has supported several courses including two courses on planning and management (one in English and one in Farsi), a course on medical entomology and a training of trainers course on pesticide management. It also supported the WHO Collaborating Centre in Cairo with a 2-month fellowship in molecular entomology.

To provide quality evidence for malaria control programmes and to support capacity building for operational research, WHO supported 7 and 10 TDR research proposals in the field of malaria and vector control in 2004 and 2005, respectively.

Strengthening malaria laboratory diagnosis is one of the main objectives of RBM. To achieve this objective, the Regional Office supported training of trainers courses on malaria microscopy in Afghanistan and Somalia, and an evaluation and training exercise for malaria microscopy in Sudan

The Regional Office has supported sentinel sites for drug efficacy monitoring in all Member States in which falciparum malaria is endemic. At this stage, 4 sites in Afghanistan, 5 in the Islamic Republic of Iran, 4 in Pakistan, 5 in Saudi Arabia, 4 in Yemen, 3 in Somalia and 5 in Sudan are functioning. The results of all of these studies show that there is a high prevalence of resistance of plasmodium falciparum to CQ. Based on this evidence, Afghanistan, Islamic Republic of Iran, Somalia and Sudan have updated their treatment guidelines.

Access to effective and reliable diagnosis and treatment is one of the main pillars for malaria control. Countries with low health system coverage and endemic for malaria, namely Afghanistan, Djibouti, Somalia, Sudan and Yemen, developed a plan of action for home management of malaria in a one-day workshop that followed this meeting.

Integrated vector management is a crucial element of the malaria control programme. In 2004, a vector control needs assessment tool was developed, intersectoral coordination mechanism for IVM implementation were initiated in the Egypt, Islamic Republic of Iran, Morocco, Sudan and Yemen. DDT reporting on use, manufacturing, storage and transportation was piloted in four countries of the Region (Djibouti, Oman, Morocco and Sudan) and a regional proposal to the Global Environment Facility (GEF) was approved initially for US\$ 650 000.

The Regional Office supported countries to establish malaria monitoring and evaluation systems during the regional workshop on monitoring and evaluation in Luxor, Egypt, on 5–9 December 2004. A national monitoring and evaluation workshop was also held in Khartoum, Sudan, on 7–20 September 2004. To have a more accurate estimation of the malaria burden, three operational research studies, two in Sudan and one in Yemen have been supported.

In early 2005, a malariometric survey was conducted in Somalia and is being analyzed. In the forthcoming transmission season of 2005, the national malaria control programme in Sudan will have a malaria indication survey and a parasite prevalence survey in states under GFATM support.

The most important achievements of the Regional Office in resource mobilization were approval of the regional proposal to the GEF for US\$ 650 000, the proposal by Afghanistan to USAID in 2004 (US\$ 500 000) and from south Sudan to the Humanitarian Aid Department of the European Commission (ECHO) (€ 135 000). A paper was presented during the annual symposium of the Islamic Development Bank (IDB) in the Islamic Republic of Iran, August 2004. A joint proposal with WHO headquarters and WHO Regional Office for Africa was developed by consultants.

In December 2004, a Memorandum of Understanding was signed between the United Nations Children's Fund (UNICEF) and WHO (US\$ 1 326 060) for implementation of the Somalia GFATM proposal. Letter of agreements between WHO and the United Nations Development Programme (UNDP) were signed in February 2005 for north Sudan (US\$ 7 132 122) and south Sudan (US\$ 352 000).

The Regional Office supported coordination of cross-border malaria control activities during a malaria cross-border workshop between Iraq, Syrian Arab Republic and Turkey, in Aleppo, Syrian Arab Republic, 20–22 April 2004, and a second malaria cross-border meeting for Afghanistan, Islamic Republic of Iran and Pakistan in Peshawar, Pakistan, 30 August–1 September 2004.

To implement the Division of Communicable Disease Control (DCD) vision for malaria elimination wherever possible, WHO will continue to support subregional projects for malaria elimination including: Malaria-Free north Africa, Malaria-Free Arabian Peninsula, malaria elimination in the Islamic Republic of Iran and Iraq, and maintenance and expansion of the Khartoum and Gezira Malaria-Free Initiative.

To address the new era of malaria control the Regional Office will develop a regional RBM strategy for 2006–2010 and support Member States to develop their own. To implement the newly developed strategy, and to monitor and evaluate the programme, WHO will continue to support human resource development activities, including human resource needs assessment, and capacity building in monitoring and evaluation and the estimation of malaria burden.

2.3 Progress of RBM in the WHO European Region

Dr Mikhail Ejov

In the WHO European Region, between 35 and 40 million people live in areas at risk of malaria. After a peak in the reported number of malaria cases during 1994–1996, malaria shows a decreasing trend. In 2004, reported malaria cases were around 13 000. The number of countries with reported autochthonous cases of malaria has increased from 3 (Azerbaijan, Tajikistan and Turkey) in the 1980s to 10 in the 2000s.

In Tajikistan and Turkey, malaria is still a major public health problem. Kyrgyzstan and Georgia are at risk of malaria epidemics, while Turkmenistan, Azerbaijan and Armenia are countries where malaria epidemics have been contained and the results achieved need to be

sustained. From Uzbekistan, Kazakhstan and the Russian Federation, sporadic cases are reported and the risk of further spread remains high.

Malaria is a re-emerging disease in the Region, where its burden is underestimated. There is a threat of re-establishment of malaria transmission in countries where it has been eliminated. Spread of drug resistant *P. falciparum* is also of major concern. At present, only a few countries in the Region can boast of adequate capacities to ensure appropriate malaria control and prevention. There is an urgent need for an increase in resources to consolidate the results achieved and to move from malaria control to elimination, at least in some countries.

Approximately 14 million people, or 33% of the total population of central Asia, live in areas at risk of malaria. Total estimated number of malaria cases in Tajikistan alone may approach 200 000–250 000. This situation is complicated by the spread of CQ and SP drug-resistant *P. falciparum* within Tajikistan. The malaria situation in border areas of Tajikistan, Kyrgyzstan, Turkmenistan and Uzbekistan has deteriorated; the first case of autochthonous falciparum malaria was reported in the southern part of Kyrgyzstan bordering Uzbekistan in 2004.

More than a ten-fold increase in the reported number of malaria cases was observed in Georgia during 1999–2002. The malaria situation has slightly improved in recent years. Almost the entire population of Georgia live in areas at risk of malaria; the conditions are favourable for malaria transmission in nearly 52% of the country, in which 93% of the total population lives. Reported incidence of malaria in Azerbaijan and Armenia has reduced substantially.

In recent years, reported incidence of malaria in Turkey has decreased significantly. However, more than 15 million people (23% of population) reside in areas where malaria is endemic, and a large proportion (44%) live in areas where the risk of outbreaks exists. The extent of the malaria problem is much larger than the incidence reported, particularly in the southeastern part of the country.

The long-term goals of Roll Back Malaria in Europe are: to interrupt *P. falciparum* transmission (by 2010); and to interrupt malaria transmission (by 2015).

The short and medium term goals are: to prevent deaths due to malaria; to prevent large-scale malaria epidemics; to contain malaria outbreaks; to reduce the incidence/prevalence of malaria; to prevent the re-establishment of malaria transmission; and to maintain the malaria-free status in countries where malaria has been eradicated.

2.4 Update on scaling-up insecticide treated nets

Dr Mohammadou Kabir Cham

Based on available information there is an encouraging increase in the number of distributed insecticide treated nets (ITNs)/long lasting insecticidal nets (LLINs) during 2001–2004 and this is expected to continue in 2005. Recent data show that some countries have already succeeded in reaching the Abuja targets (Togo > 95% and Eritrea > 60%). Some

others are poised to reach the target, like Tanzania, which has distributed 2.3 million nets bundled with treatment kits and a further 2.5 million insecticide retreatment kits (2003). Currently 7.8 million nets are in use in 7 million households, 70% of them treated.

Other countries with new programmes, new funding, or a rapidly growing culture of net use that can be converted to ITNs are within striking distance of achieving their targets, such as Gambia, Guinea Bissau, Malawi, Mali, Niger, Uganda, Rwanda, Senegal and Zambia. However, it is still unlikely that most countries can reach 60% by end of 2005.

Scaling up coverage of ITNs by integration of free ITNs or 100% redemption vouchers with other service delivery points in periodic campaigns (measles and malaria, national immunization days, child health days) or routine programmes like EPI and antenatal care could have encouraging results.

Converting the huge standing crop of untreated nets to LLINs by KO-Tab 1-2-3, using targeted subsidies such as social marketing through health services and private providers, and commercial distribution incentives, are other approaches that can be used to boost ITN coverage.

The results of studies on distribution of ITNs during measles campaigns shows that integration is safe, will provide high coverage and is in the line with equity and cost-effectiveness. In many areas, coverage of ITNs for children under-5 and households reaches over 95%.

It is estimated that Global Fund allocations in rounds 1–4 can support distribution of on average 20 million ITNs per year over a five-year period. The number of countries ordering LLINs has increased ten-fold over the past four years. Production capacity of ITNs/LLINs is always the concern of malaria control programmes. Based on available information, LLIN manufacturing capacity is catching up to global demand. Timely country level forecasting/planning to reduce current lead times (six months), matched campaign schedules and deadlines, and buffer stocks of LLINs to compensate for routine demand, are prerequisites for efforts to scale up malaria prevention by ITNs/LLINs.

The next steps to increasing the coverage of ITNs are the development of an operational framework and guidelines on an integrated approach, linking ITN deployment with other health programmes, integrated demand and supply forecasting, specifications on LLINs, and long lasting treatments and other LLIN applications.

2.5 Highlights from the World Malaria Report 2005

Dr Ghasem Zamani

World Malaria Report 2005 was launched on 3 May 2005. The report which is the most comprehensive global account of progress in malaria control efforts since the launch of RBM, was developed by WHO and UNICEF for RBM (and is available online at <http://rbm.who.int/wmr2005>).

WHO and UNICEF developed the report through consultation at global (RBM Monitoring and Evaluation Reference Group) and regional levels (WHO regional offices), and ministries of health in all malaria-affected countries. The report draws on many sources of information including evidence from national and subnational community surveys such as demographic and health surveys (DHS), multiple indicator cluster surveys (MICS), national malaria control programmes, research studies and ongoing activities at sentinel surveillance sites.

The report presents the best available evidence on malaria burden, including country reports to WHO, coverage of key interventions including access to antimalarial treatment and insecticide-treated nets, national programme efforts to deliver malaria services, current country-level policy and financial environment, and the results of antimalarial drug efficacy studies.

Overall, 3.2 billion of the world's population are at risk of malaria, and 350–500 million clinical cases of malaria occur each year, most caused by *P. falciparum* and *P. vivax*. *P. falciparum* malaria directly causes more than 1 million deaths each year and contributes indirectly to many additional deaths in synergy with other infections and illnesses; 60% of cases worldwide, 75% of global falciparum cases and more than 80% of all deaths are from sub-Saharan Africa.

The report suggests real progress is being made in revitalizing national malaria control programmes in Africa, Asia and the Americas, in the scaling up of interventions in Africa, the distributing of ITNs, in adopting recommendations for malaria control during pregnancy, in changing drug policies, in collecting evidence on antimalarial drug efficacy and in making finances available at the global level for malaria control efforts.

However, despite real progress, much more needs to be done to face the ongoing challenges. A huge gap remains between the resources needed (minimum of \$3.2 billion per year for at least the next decade) and what is available. Supply of ITNs and drugs also needs to be scaled up to meet increasing demand. Investment is needed in capacity building, especially at country level, and in research to improve present tools and develop new tools. More attention is needed to developing effective monitoring and evaluation systems.

The report suggests that in order to effectively monitor progress in malaria control efforts, there is need for strengthening country capacity for monitoring and evaluation and to strengthen national health information systems, improving efforts to understand malaria burden, conducting household surveys to assess coverage of key malaria interventions and continued monitoring of antimalarial drug efficacy. More systematic efforts are needed to monitor malaria finances and services delivered by programmes.

3. IMPLEMENTATION OF RBM INTERVENTIONS, SUCCESS STORIES AND CHALLENGES

3.1 Progress of RBM implementation in Afghanistan

Dr Najib Mahboob

Afghanistan reported 261 270 malaria cases in 2004, although the estimated figure is much higher. *P. falciparum* and mixed malaria cases represented 5% of the total malaria cases. At this stage, there is no reliable malaria mortality data. With the implementation of the essential package of hospital services, the health management information system (HMIS) is expected to start collecting data on malaria deaths.

Malaria case management is an integral part of the basic package of health services. To promote ACT, the malaria multi-year strategic plan advocates the expansion of laboratory services to include the basic health centres in 14 priority provinces. Rapid diagnostic tests are proposed for use in emergency situations. Referral of severe malaria cases will be part of the referral system proposed in the essential package of hospital services. Four sentinel sites continued to monitor the therapeutic efficacy of the antimalarial drugs.

More than 98 000 ITNs (conventional and LLINs) were distributed nationwide during 2004. According to the multi-year strategic plan, indoor residual spraying and insecticide treated materials (chadors, blankets, etc.) can be considered for control of epidemics, where applicable. The Ministry of Public Health, in collaboration with WHO and the Louis Pasteur Institute, Islamic Republic of Iran, has plans to initiate entomological surveillance during 2005.

No malaria epidemics were reported during 2004. National guidelines on falciparum malaria outbreaks were developed and a field guide for malaria epidemic assessment and reporting was translated into Dari. Provincial teams were trained on malaria epidemics and response, and contingency supplies were pre-positioned in 14 provinces during the 2004 transmission season (including ACT and rapid diagnostic tests).

A Ministry of Public Health nominated national malaria monitoring and evaluation team coordinates and oversees the monitoring of progress and evaluation of national malaria strategies. The Ministry of Public Health, WHO and USAID are planning to establish a sentinel surveillance system in two provinces during 2005. The newly established Global Management Unit subnational offices will further strengthen coordination and information sharing between the Ministry of Public Health, WHO and other implementing agencies.

A proposal to round 5 of the Global Fund has been submitted. USAID supported the construction of a malaria institute as well as incentive support to national malaria and leishmaniasis control programme staff. In 2005, another proposal was submitted to consolidate the RBM strategic plan. The EC supported a risk-mapping project, and Health Net International and Population Services International participated in an ITN project. A national malaria advisory board is planned for 2005 to promote intersectoral collaboration.

To strengthen human resource development, a national workshop standardized the malaria-training curriculum for all categories of health workers in the basic package of health services, and 15 key staff from the national malaria and leishmaniasis control programme and partner nongovernmental organizations were trained for 2 months in the WHO regional training centre in Bandar Abbas, Islamic Republic of Iran. There are several research projects underway, including studies on malaria and pregnancy, a Lapdap efficacy study and a malaria risk mapping project.

The main challenges for the malaria control programme are evolving a health care delivery system, the many different stakeholders, weak coordination, poor procurement and logistic systems, unregulated private sector activities and lack of security.

3.2 Progress of RBM implementation in Djibouti

Ms Mouna Osman

Sixty-five percent of the population in Djibouti is at risk of malaria transmission. In 2004, 1662 malaria cases were reported. ITNs are the main strategy for malaria prevention, which are to be distributed through collaboration with antenatal care, EPI and basic development needs programmes.

USAID and John Snow International supported human resource development and social mobilization activities. World Bank supported the malaria control programme to purchase ITNs and to strengthen the human resources of the malaria control programme.

3.3 Progress of RBM implementation in Eritrea

Dr Tewolde Ghebremsekel

Eritrea adopted the RBM initiative in 1998. The objectives are to reduce malaria morbidity and mortality by 80% from 1999 levels and prevent epidemics of malaria. Based on the preliminary report of the 2004 RBM survey in four zones, 60.2% of children under-5 and 53% of pregnant women slept under ITNs the previous night. The percentage of households owning two or more ITNs in the three zones was found to be 66%. Overall, malaria morbidity in outpatient departments has been reduced by 84.5% of year 1999 level. Malaria deaths have been reduced by 84% of the 1999 level. Case fatality rates have reduced from 2.3 to 0.9 and from 2.4 to 0.3 for children under-five, and aged five and above respectively. The bednet re-impregnation rate increased from 17.2% in 1999 to 83.5 % in 2004.

However, the programme is still facing several challenges. Sustainability of ITN distribution, case management, integration with IMCI, safe motherhood and integrated disease surveillance and response (IDSR), sustainability of community participation and community based interventions, cross-border malaria, using malaria microscopy at the lower level of health facilities, antimalarial drug resistance and changes in ACT are some of the challenges. Significant reduction of malaria morbidity creates other challenging factors related to creation of a low immunity situation in the population, which means a tendency to develop severe malaria and malaria epidemics.

3.4 Progress of RBM implementation in Islamic Republic of Iran

Dr Ahmad Raeisi

In the Islamic Republic of Iran, the total population at risk of malaria is 2 714 648 (4% of total population), mainly living in the south-east provinces, in particular Sistan and Baluchestan, Kerman and Hormozgan. In 2004, total reported malaria cases were 13 823, out of which 7602 were autochthonous cases. Falciparum and mixed malaria were only 10% of total reported malaria cases. In that year, 60% of malaria cases were from Islamic Republic of Iran.

In 2004, a feasibility study for malaria elimination was done and the preparation phase started, drug policy revised and new national malaria treatment guidelines developed and published. The achievements of the 2004 malaria control programme include preparation of the background for implementing a national integrated vector management (IVM) steering committee, continuation of the joint project with WHO on antimalarial drug efficacy monitoring, case management and vector control workshops and refresher courses for malaria officers and national authorities, contribution to the 7th and 8th international diploma courses on malaria programme planning and management, and preparation of draft guidelines for strengthening malaria laboratory diagnosis and quality assurance.

The main strategies for strengthening malaria vector control are increasing ITN coverage for the targeted at-risk population, increasing locally-made Bti coverage for the population at risk and strengthening indoor residual spraying activity, according to WHO recommendations. The main challenges for the malaria control programme are cross-border population movement, lack of effective antimalaria measures in border areas and lack of appropriate follow-up of cross-border meeting recommendations.

3.5 Progress of RBM implementation in Iraq

In Iraq, 4.4 million people are living in malaria endemic areas. In 2004, 155 malaria cases were reported, the majority of them from northern governorates. Despite the war and unrest in Iraq, there has been a continuous reduction in the number of reported cases from 1999 to 2004.

During 2004, more than 90 000 house structures were covered by indoor residual spraying, 96% of targeted breeding sites were covered by larval control measures and 320 000 ITNs were distributed for a targeted population of 700 000.

Lack of security, population movement, rehabilitation of marshes, irregular provision of resources and lack of communications are the main challenges for the malaria control programme.

3.6 Progress of RBM implementation in Saudi Arabia

Dr Suleiman M. Alseghayer

In the early 1970s, malaria was eliminated from the eastern, central and northern regions. Malaria is still endemic in the south western part of the country in altitudes below about 2000 metres, especially in Jazan region. *P. falciparum* is the dominant parasite and *A. arabiensis* is the main vector. The population living in relatively hyperendemic areas is 1.15 million (about 5% of the country's population). In 2004, 1232 cases were reported; out of which, 308 were local cases. The peak of malaria transmission occurs between October and April. The disease follows a seasonal and unstable annual amount pattern of transmission. Micro-epidemics frequently appear after heavy rains, the last one occurring in 1997–1998 in the south western areas of Jazan.

National malaria control programme objectives are: to prevent re-introduction of local transmission in areas where malaria transmission has been interrupted (eastern, northern and central regions); to reduce the number of indigenous cases by 50% in the first phase (2005–2007) and by 100% during the second phase (2008–2010); to establish a maintenance phase by the end of the year 2010 (third phase); and to keep the country free from malaria. The malaria elimination strategy was launched in 2004. Remarkable success in malaria control has been achieved including strengthening cooperation with Yemen in controlling malaria across the border.

3.7 Progress of RBM implementation in Somalia

Dr Hussein Haji Elmi

In 2004, Somalia reported 36 732 malaria cases, 11 436 of which were confirmed.

In 2005, an interim drug policy was developed with AS + SP as first line. The latest result of drug efficacy studies found that adequate clinical and parasitological response to ACTs is 94%, which shows that this combination is a good option as the first line drug for treatment of malaria.

In 2004, 6700 ITNs were distributed to target groups in all zones, 4000 nets retreated in central zone, five epidemic prone villages in north-west zone sprayed, larvivorous fish distributed in north west zone and community sensitization done through mass media and advocacy on malaria/vector control measures.

Epidemics occurred in 2004 in central and south zones but were not responded to due to insecurity. In 2005, with support of the Regional Office, an epidemic preparedness plan was developed for north-west zones and will be extended to other zones. CDC surveillance and malaria surveillance are integrated with 47 surveillance sites reporting malaria data. A malariometric survey was completed in the north-west, central and south zones. The survey will be conducted in July 2005 in north-east zone.

In partnership with UNICEF and international nongovernmental organizations, funds were received from the Global Fund for a malaria control project. A Memorandum of

Understanding was prepared with international nongovernmental organizations (International Cooperation for Development, INTERSOS, Somalia Red Crescent Society,) to work for establishing and strengthening malaria microscopy in mother and child health clinics.

Since 1999, several cross-border meetings were held to develop a policy for malaria control coordination in border areas. In 2002, a meeting and technical training were held in Harar (Ethiopia). Cross-border malaria microscopy training was held in Hargeisa for strengthening border mother and child health clinics for malaria microscopy (two clinics) in 2003. Malaria border coordination between Djibouti, Ethiopia and Somalia will be revitalized in 2005.

In 2004, 56 malaria microscopists and laboratory technicians were trained on malaria microscopy. Ten health professionals on case management, and seven entomology technicians and entomology assistants on vector control measures were trained. Three teams were given refresher course and one new sentinel site team trained in Gedo region of the south zone.

The main challenges of malaria control activities are the difficulties with coordinating the malaria control programme due to a lack of central government, lack of a drug policy and drug regulation, irrational use of antimalarials and self-medication, inadequate laboratory facilities for malaria diagnosis, weak quality control of malaria microscopy, lack of sustainability of trained staff and insecurity in certain areas.

3.8 Progress of RBM implementation in Sudan

Dr E. M. Malik

Based on the evidence of drug efficacy studies, national treatment guidelines were updated in 2003 with AS + SP as the first line and these started to be implemented in 2004 by printing and distributing guidelines and training of health staff at all levels.

In 2004, national malaria control programme started an active and new approach to improve malaria microscopy called the 3-by-3 initiative. WHO and UNICEF distributed 165 000 LLINs to the targeted population including people at the border areas of Ethiopia and 270 000 ITNs were distributed by the private sector. In 2005, it is planned that 480 000 LLINs will be distributed. Larviciding in urban areas is another selected measure. Larvivorous fish are used mainly in irrigated areas and Khartoum.

After a national monitoring and evaluation workshop and participation in regional workshop, the monitoring and evaluation focal person was selected and the monitoring and evaluation plan finalized. During the transmission season of 2005, a baseline survey funded by the Global Fund is planned in 10 states.

From 2000 there has been a continuous increase in the amount of budget received, in 2004, 60% of the allocated budget was received. Recruitment of needed staff, continuous in job training with voluntary exams, and support for a diploma in malariology are the main activities of the malaria control programme for human resource development, one of the most

important strategies for strengthening the programme. Two participants were trained on planning in the regional centre in Islamic Republic of Iran.

Improving access to ACTs and free malaria treatment, improving malaria diagnostic facilities and meeting demands after the peace agreement in the south are the main challenges for the malaria control programme in the coming years.

3.9 Progress of RBM implementation in south Sudan

Dr Othwonh Thabo Ojamen

In 2004, 1 762 745 malaria cases were reported. The most recent information from drug efficacy studies in southern Sudan shows that the efficacy of AS + SP is similar to AS + AQ (92%). Based on this evidence, AS + AQ was recommended as the first line treatment of uncomplicated falciparum malaria. To start to implement the newly updated drug guidelines, the first training of trainers' course on malaria case management with a focus on ACT and rapid diagnostic tests was conducted for the implementing nongovernmental organizations funded by the Humanitarian Aid Department of the European Commission (ECHO) and the Global Fund. An epidemic preparedness plan will be developed and implemented in 2006.

In 2004, an IIN strategy was developed and more than 290 000 bed nets were distributed by different nongovernmental organizations in three states. To strengthen the malaria control programme, resources were mobilized mainly by submitting a proposal to ECHO, partnership building was promoted, a malaria technical working group was formed, and the national RBM focal person was trained in the regional course in the Islamic Republic of Iran.

The malaria control programme is facing many challenges including limited trained human resources in south Sudan, lack of national budget for the malaria programme, no regular budget from WHO, high turnover of partners and staff, and restriction of Global Fund to limited partners. The monitoring and evaluation system is very weak, there is no focal point for monitoring and evaluation, and the monitoring and evaluation plan is only for Global Fund sub-recipient partners.

3.10 Progress of RBM implementation in Yemen

Dr Jamal Amran

The national malaria control programme in collaboration with WHO was established in 2000. The objectives of the malaria control programme in Yemen are to eliminate malaria in Socotra island, and to reduce malaria mortality by 80%, and malaria morbidity by 50% in other areas of the country.

In 2004, 109 805 clinical and 48 756 confirmed cases (of which 97% of them were falciparum malaria) were reported. The prevalence of malaria parasite in schoolchildren of Tihama region was 11.5%. There is no report of malaria epidemics in 2004, but epidemics of other vector-borne diseases like leishmaniasis and dengue fever occurred.

The latest information from drug efficacy studies shows that failure rate for SP is up to 5%. The number of house structures covered by indoor residual spraying has increased from 600 in 2000 to 36 905 in 2004, and the total number of ITNs distributed from 2002 to 2005 was 34 300. The main achievements during 2004 were strengthening the entomology and vector control unit, updating the distribution map of anopheline mosquitoes, development of a system for procurement of public health pesticides, and capacity building in all aspects of entomology and vector control.

A technical committee responsible for monitoring and evaluation has been established composed of malaria control programme staff from national and subnational levels and from different disciplines to strengthen the monitoring and evaluation system of the malaria control programme.

Strengthening local, bilateral, and international partnership has resulted in significant improvement in the capacity of the malaria control programme. The first joint evaluation for vector control activities in border areas was done as part of bilateral partnership with Saudi Arabia on 26–28 December 2004.

The national malaria control programme is facing many challenges including: shortage or scarcity of qualified, experienced and trained staff with the necessary skills; lack of motivation due to lack of incentives and very low salaries; weak intra and intersectoral collaboration; absence of health or environmental impact assessments; weak surveillance and information systems; the need to change drug policy to more expensive drugs; poor procurement and distribution channels; lack of cooperation with the private sector; low levels of access to appropriate case management in remote areas; lack of a national registration system of public health insecticides; and climatic changes.

3.11 The Saudi-Yemeni cooperation to control malaria at the border areas

Dr Mohammad Ali Khalifa

External indicators, such as the annual reports of the national malaria control programme in United Arab Emirates and Saudi Arabia, show significant reduction in the number of malaria cases imported from Yemen.

Saudi Arabia and Yemen cooperate to attain a high level of political will and commitment. The two countries will jointly review and evaluate the infrastructure of the Yemeni national malaria control programme in the targeted areas, establish infrastructure where needed and strengthen the already existing one. Capacity of the national malaria control programme will be strengthened so that trained, highly qualified and skilled staff are available to supervise, monitor and evaluate integrated vector management, with a strong component of entomological surveillance on both sides of the border. Saudi Arabia and Yemen will also cooperate to strengthen the surveillance system and to ensure community participation through advocacy and health education.

4. COMMUNITY-BASED ACTION AND INTEGRATED STRATEGIES TO SCALE-UP COVERAGE OF MALARIA TREATMENT AND PREVENTION

4.1 Home management of malaria strategy

Dr Wilson Were

The majority of children's deaths from malaria occur within 48 hours of onset of illness; 50%–70% of childhood deaths occur without contact with general health services. In Africa, > 70% of fever episodes in rural areas and > 50% in urban areas are self-treated. Most of these treatments are inappropriate, with only < 15% malaria patients treated correctly. Because of long distances to facilities, services unavailable at times of need, lack of drug stock in health facilities, inappropriate provider behaviour, and user fees for poor populations, less than 50% of malaria treatment occurs in the public sector. Other contributing factors are the presence of a poor quality and counterfeit drug trade in the informal private sector and poor compliance and suboptimal doses due to lack of information and keeping drugs for the next episode.

Studies have shown that the home management of malaria strategy reduces by 25%–50% progression to severe disease and reduces under-five overall mortality by 40%. Unit-dose pre-packaging can improve adherence to treatment, and training of community drug providers (Community health workers, village volunteers and schoolteachers) is effective and feasible.

Home management of malaria is defined as malaria case management occurring outside the health facility clinical setting within the home or community, especially in children under 5 years of age. It should be designed as an integral part of the overall RBM strategy on case management.

The goal of home management of malaria is to achieve early recognition and prompt appropriate treatment of malaria and other responses to malarial illness, especially in children less than 5 years of age, in the home or community. Its main objectives are: enabling carers to recognize malaria illness early and take appropriate action; ensuring that care providers have adequate knowledge and skills to respond malaria; creating an enabling environment to implement the strategy.

To achieve to these objectives the following strategies has been selected:

- an effective communication strategy for behaviour change to enable individuals/carers to recognize malaria illness early and take appropriate action;
- equipping community-based service providers with the necessary skills and knowledge to manage malarial illness;
- ensuring availability and access to effective quality pre-packed antimalarial medicines in the community, as close to the home as possible;
- developing a good mechanism for supervision and monitoring of community activities.

Community health workers, community resource persons (e.g. teachers, opinion leaders, community leaders, IMCI-trained persons, community health agents and medicine vendors) are possible community service providers. To provide an enabling environment we need policies that allow strategy implementation, ownership of the strategy by all stakeholders, availability of implementation resources, a conducive environment for service providers, a clear linkage with the nearest health facilities and integration within the overall district and local health plans.

As a preliminary step, malaria control programmes should perform a situation analysis and set appropriate goals. The next steps are to: establish a core working group and partnerships; mobilize resources through advocacy; address drug policy and medicine management issues including pre-packaging, procurement and supply systems; develop and implement a country-specific communication strategy; develop a training approach for identified providers, content, materials and tools; and develop implementation steps at district and community levels.

In conclusion, home management of malaria is recognized as a key strategy for improving access to treatment in RBM. There is substantial evidence of the benefit that treatment near the home can have in reducing childhood morbidity and mortality. Decades of experience of community involvement in malaria disease management supports this evidence. However, implementation of this strategy poses significant challenges to health systems and all stakeholders. There are still gaps in the strategy requiring further operational research and proper documentation.

4.2 Linkages of RBM with community-based initiatives in the Eastern Mediterranean Region to scale-up coverage of malaria control and prevention

Dr Mohammad Assai

Morbidities and mortalities cannot be reduced without addressing social determinants for health (sanitation, education, income, job, security, etc.) Poverty reduction strategies create opportunities for better health status. Community-based initiatives on the microeconomic level continue to empower communities to adopt poverty reduction strategies and sustainable development projects. Integration of different health related programmes in the areas where community-based initiatives are being implemented will be an opportunity to involve communities in the planning, implementation, and monitoring processes that will result in the programme's sustainability. Community-based initiatives including 14 basic development needs projects, 16 healthy cities, 6 healthy villages and 21 women development projects covers more than 15 million people in the Region.

Malaria control programmes can enhance RBM through community organization and mobilization. Community involvement in the treatment of breeding sites, bednet distribution, identification of high-risk groups, spraying and other logistics and the selection of a focal person at community level, providing accommodation to teams for residual spraying as well as the identification, registration, referral and follow-up of all pregnant women for intermittent preventive therapy, are control measures that can be part of basic development needs projects. Community-based strategies such as home management of malaria will greatly

increase the coverage of effective malaria treatment, especially for underserved people and people living in remote areas.

The community can also be involved in: identifying suspected cases and referrals; the establishment of microscopic diagnostic centres; follow-up of treated cases; encouraging the private sectors to use the national drug policy; to support, coordinate and facilitate mobile action teams, and to assist the Ministry of Health to increase access to medicines; and to support initiatives like RBM-friendly hospitals and health centres.

4.4 Integrated delivery of interventions: insecticide-treated bednets

Dr A. Mnzava

Vector-borne diseases are still a major public health problem in the Eastern Mediterranean Region contributing to approximately 7% of all communicable diseases. One prevention strategy is the implementation of ITNs. In 2002, the Regional Office supported eight countries in developing their strategic plans to scale-up implementation. Five of these countries (Afghanistan, Djibouti, Saudi Arabia, Sudan and Yemen) finalized their plans and two of them (Afghanistan and Sudan) developed plans to promote awareness and uptake of ITNs through communication strategies for behavioural impact. These national ITN plans, in addition to providing countries with a vision, also help to mobilize additional resources. For example, of all Global Fund-supported projects, about 30% of total funds were for ITNs.

Despite of the progress achieved, national scaling-up of ITNs faces many challenges and opportunities. Firstly, there is a substantial gap in nets needed; of approximately 17 million nets needed, only are 3 million available. In simple terms, the coverage rate is very low. Secondly, countries have been struggling to accurately target the communities in most need and where this has been solved, getting the nets to the people in a timely fashion has been a problem.

To address these problems, the Regional Office is working closely with relevant partners to ensure that available nets get to where they are needed. Plans are underway in Somalia, Sudan and Yemen to emulate the experiences of some African countries of linking ITN implementation with other health delivery services, such as child vaccination. At the same time, opportunities to use available vector control infrastructure for other vector control interventions (spraying teams, for example) are being taken. This is a big challenge as three of the earmarked countries are currently in an emergency situation. It is therefore proposed that an intercountry meeting be held in 2006/2007 to develop a regional framework for scaling up ITN implementation linked to other delivery services.

4.5 Integrated strategies to scale-up coverage of malaria treatment and prevention: integration with the EPI programme

Dr S. Youssouf

The Expanded Programme on Immunization (EPI) and antenatal care services reach a substantial proportion of the target groups and provide free services. Pilot projects have shown that ITN distribution (by way of the net itself or a voucher) can be successfully

integrated into antenatal care or immunization campaigns and routine services. Countries can reach their short-term targets for ITN coverage through such integrated approaches.

Combined efforts may have a synergistic effect. Experience to date indicates that net distribution stimulates demand and increases coverage for immunization and antenatal care services. Free distribution of insecticide treatments should also be offered in parallel with other public health initiatives to people already in possession of nets that require regular re-treatment.

The objective of the WHO/UNICEF measles strategic control plan is to reduce measles morbidity by 50% and to interrupt transmission in large geographic areas. To reach this objective, the strategies used are: to increase coverage of routine immunization to > 90%; to provide a second opportunity; to enhance surveillance; and to strengthen case management.

By 2004, 16 countries in the Region eliminated measles and 6 countries namely Afghanistan, Djibouti, Pakistan and Sudan, are in a stage of elimination acceleration. The latter six countries are at high risk of malaria transmission, which opens the door for joint programmes and coordinated interventions. Four countries with high risk of malaria transmission are targeted for the measles campaign in 2004–06.

5. THE EASTERN MEDITERRANEAN REGION EXPECTED RESULTS FOR MALARIA AND VECTOR CONTROL AREAS OF WORK

The regional expected results of the global malaria control programme for 2006–2007 are:

- national capacity for malaria control and prevention are strengthened in all malaria endemic countries;
- access of populations at risk to effective treatment of malaria promoted and facilitated through guidance on treatment policy and implementation;
- application of effective preventive measures against malaria for populations at risk promoted in endemic countries;
- functional malaria surveillance systems and system for monitoring and evaluation of malaria control programmes;
- high priority operational research implemented to guide the control programmes;
- effective partnership for malaria prevention and control sustained and resources mobilized.

Using a tool developed by the Regional Office and based on national strategic plans, the resolution of the fifty-eighth World Health Assembly on malaria control, the global objectives

and targets of the malaria control programme and the regional expected results, participants drafted a country specific plan of action for malaria control and integrated vector management for 2006–2007. Developed plans were then presented and discussed in a plenary.

6. RECOMMENDATIONS

To Member States

1. National plans should be developed for malaria control for 2006–2010, addressing relevant targets of the Roll Back Malaria initiative and Millennium Development Goals.
2. Sentinel sites in falciparum-endemic countries should be maintained to monitor the efficacy of first-line and second-line drugs, as well as potential new drugs.
3. In countries that have not updated the national drug policy, activities should take place to update treatment guidelines ensuring the use of artemisinin-based combination therapy (ACT) by 2005.
4. ACT drugs recommended by WHO should be registered in all countries by the end of 2005.
5. All malaria cases in low to moderate malaria endemic areas and cases aged over-5 years of age in hyper-endemic areas should be confirmed by malaria laboratory diagnosis. The malaria microscopy network should be expanded and its quality assured. A quality control system should be established in areas where rapid diagnostic tests are the only available choice for confirmation of diagnosis.
6. Possible collaboration with community-based initiatives and outreach programmes (e.g. the expanded programme on immunization) should be developed in order to scale up all malaria control interventions, including prevention and treatment.
7. Mechanisms for collaboration with the private sector and nongovernmental organizations should be developed to provide effective and correct treatment for all malaria cases.
8. In countries where home management of malaria is part of the national RBM strategic plan, the detailed strategy and plan of action for project implementation should be finalized and submitted to WHO by the end of 2005.
9. All possible sources of funding to implement the pilot project for home management of malaria should be explored, including submission of operational research proposals to the UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) by the end of 2005.
10. The implementation of insecticide-treated nets should be integrated with other health care delivery services.

11. A human resources needs assessment exercise, with support from WHO as necessary should be initiated, to ensure adequate capacity at all levels for implementing malaria control interventions.
12. A plan for human resources development should be developed including recruitment, career policies and creating an enabling environment.
13. Cross-border control activities should be intensified and all mechanisms to facilitate coordination of activities explored, including involvement of ministries of foreign affairs.
14. Different sources of national and external funding should be explored.

To WHO

15. Efforts to improve delivery of effective malaria treatment should be supported, including drug efficacy studies in relevant Member States, pilot projects in priority countries to enhance access to effective treatment at community level, and operational research on home management of malaria (e.g. for nomadic populations).
16. Regional meetings and courses on different aspects of malaria control in English and national languages should continue to be supported, including development of national treatment guidelines (2006–2007), a planning and management course (2007), monitoring and evaluation training course (2007), training of trainers in malaria microscopy quality assurance (2007) and a regional training course on epidemic preparedness and response.
17. Cross-border coordination activities among countries of the Region and with countries in other WHO regions should continue to be supported.
18. National malaria control programmes should be supported in developing national resource mobilization strategies, including donor profiles, and in developing proposals to different donors.

Annex 1

AGENDA

1. Opening session
2. Objectives and expected outcomes of the meeting
3. Progress in the implementation of the RBM initiative at global, regional and country levels: success, problems and constraints
4. Follow-up on the implementation of the recommendations of the 2004 RBM meetings and workshop
5. Review of resource mobilization activities and partnership with Global Fund and other partners
6. Review of the progress on the malaria border coordination in relevant countries
7. Update on availability and procurement of ACT drugs
8. Review of community-based actions and integrated strategies to scale-up coverage of malaria treatment and insecticide-treated nets
9. Present the WHO expected results for 2006 2007 and develop country-specific expected results with comprehensive plans of action – including joint activities with partners
10. Discuss national intersectoral coordination mechanisms for carrying out vector control needs assessment for the development of IVM plans of action
11. Review the progress for the development of human resource in the Region
12. Recommendations
13. Closing session.

Annex 2**PROGRAMME****Sunday, 29 May 2005**

- 08:30–09:00 Registration
- 09:00–09:40 Opening Session
 Message from Dr Hussein A. Gezainy, Regional Director, WHO/EMRO
 (Given by Dr Z. Hallaj, WHO/EMRO/DCD)
 Objectives of the meeting and method of work
 Nomination of officers
- 10:00–10:20 Implementation of RBM interventions at global level – progress and challenges, Dr F. Nafo-Traoré
- 10:20–10:40 RBM evaluation and progress report for 2004 in the Eastern Mediterranean Region, Dr H. Atta
- 10:40–11:00 RBM progress in the European Region, Dr Mikhail Ejev
- 11:00–11:10 Update on scaling-up insecticide treated nets, Dr M. Cham
- 11:00–11:10 Highlights from the World Malaria Report, Dr G. Zamani
- 11:10–12:20 Implementation of RBM interventions in Islamic Republic of Iran, Iraq and Pakistan and Saudi Arabia: Country presentations
- 12:20–12:30 Discussions
- 13:15–14:45 RBM progress, success stories and challenges in high endemic countries (Afghanistan, Djibouti, Somalia, Sudan and Yemen): Country presentations
- 14:45–16:00 Discussions
- 16:00–17:00 Review of the implementation of the recommendations of the meetings and workshop conducted in 2004, Dr G. Zamani
 Review of the progress on the malaria border coordination in relevant countries, Dr M. Khalifa
- 17:00–17:30 Summary of successes and challenges, Dr H. Atta

Monday, 30 May 2005

- 08:30–9:00 ACT: policy updates, implementation issues and challenges encountered, Dr W. Were
- 09:00–9:30 Home management of malaria (HMM) strategy, Dr W. Were
- 09:30–10:00 Linkage of RBM with community-based initiatives in the Eastern Mediterranean Region to scale up coverage of malaria control and prevention, Dr M. Assai
 Integration with EPI Programme, Dr S. Youssouf
- 10:15–12:00 Group work on implementation of HMM
- 12:00–12:30 Presentation of group work
- 13:15–13:30 Intersectoral coordination mechanisms for carrying out vector control needs assessment for the development of IVM plans of action, Dr A. Mnzava

- 13:30–13:45 Regional expected results for 2006–2007, Dr H. Atta
- 13:45–15:30 Developing country specific expected results for 2006–2007, group work
- 15:45–17:40 Developing comprehensive plans of action for malaria control and integrated vector management – including activities with partners, group work

Tuesday, 31 May 2005

- 08:30–09:00 Human resource needs assessment and development of human resource in the Region – planned activities for 2006–2007, Dr G. Zamani
- 09:00–10:30 Developing comprehensive plans of action for malaria control and integrated vector management – including activities with partners, group work
- 10:15–12:15 Presentation and discussion of the RBM plans for 2006–2007: Country presentations
- 13:45–14:15 Progress and challenges of implementation of malaria GFATM funded proposals: Panel discussion
- 14:15–14:45 Resource mobilization and advocacy for RBM in 2006–2007, Mr D. Iyamah
- 14:45–15:30 Conclusion and recommendations
- 15:30 Closing session

Annex 3

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