The malaria-affected countries of the World Health Organization’s European Region include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, The Russian Federation, Tajikistan, Turkey, Turkmenistan, and Uzbekistan. Most of the above named countries have revised their national strategies according to the Global Roll Back Malaria (RBM) initiative and endorse completely the principles and concepts of the regional RBM movement.

The international and political attention, which has been mobilised in recent years in malaria-affected countries of the region, is presently being translated into real commitments and actions. Armenia, Azerbaijan, Georgia, Tajikistan and Turkey, supported by WHO and other RBM partners, have already managed to get country RBM partnership movements off the ground.

The development and implementation of a regional RBM strategy, along with the crucial elements of strong political will to tackle the disease, intensive support from WHO, a high level of advocacy for action against malaria, broad-based Roll Back Malaria partnerships, with a particular focus on the local malaria situations and countries’ needs, and considerable financial assistance, have brought about a substantial reduction in the reported incidence of malaria and the containment of large-scale malaria epidemics in the Region.

This bulletin is intended to provide an update on just some of the RBM activities, which took place over the course of the 2000 - 2001 biennium.
Roll Back Malaria in the European Region

**Strategies and Objectives**

Amongst all health priorities of the countries in the WHO European Region, the control of infectious diseases including malaria is one of the highest. The WHO Regional Office for Europe has committed itself to an intensive response to the problem of malaria and in 1999, a regional Roll Back Malaria strategy for the malaria affected countries of the WHO European Region was developed (Strategy to Roll Back Malaria in the WHO European Region, Regional Office for Europe, WHO Document, 1999). The main directions of the strategy include:

- Expansion and intensification of country-level partnerships
- Enhancing national capacities for decision-making
- Improving capacities for early diagnosis and radical(prompt treatment
- Strengthening capacities for early detection, containment and prevention of outbreaks/epidemics
- Promoting cost-effective and sustainable preventive measures including vector control
- Strengthening surveillance and operational research capabilities
- Providing drugs, insecticides, and equipment
- Improving water management and vector control
- Increasing malaria awareness among populations

The ultimate goal is to interrupt the transmission of malaria, particularly of Plasmodium falciparum, by the year 2010 within the WHO European Region. The short/mid-term specific objectives are as follows:

- To prevent deaths caused by malaria,
- To contain ongoing malaria outbreaks,
- To reduce the incidence of malaria, in particular Plasmodium falciparum
- To prevent the resumption of malaria transmission and maintain the malaria-free status of areas and countries where it has been eradicated.

**The malaria challenge**

In 2000, 31 774 cases of autochthonous malaria were reported in the WHO European Region. Although this represents an overall decrease in the number of cases as compared to 1999 figures, the malaria situation has actually deteriorated in some countries. In Armenia, Azerbaijan, The Russian Federation and Turkey, the number of reported malaria cases decreased, whereas Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan reported increases in number of malaria cases in the period 1999-2000.

The figures for 2001 are not yet final; nevertheless preliminary data indicates that the overall malaria incidence continues to decline in the European Region. In 3 countries, however, the malaria situation continues to deteriorate; in Georgia malaria has spread to the previously malaria-free western regions and an overall increase in the number

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**Figure 1 - Number of malaria cases reported in the WHO European Region, 1992-2000. Number for 2001 estimated**
of cases has been observed; in Turkey the burden of malaria remains high; and in Tajikistan, the situation is complicated by the resumption and spread of P. falciparum.

The current situation in Central Asia and Kazakhstan
- Approximately 15–20 million people, or more than 30% of the total population in Central Asia and Kazakhstan live in areas at risk of malaria.
- In Tajikistan, the malaria situation is complicated by the spread of P. falciparum and the return of endemic malaria in the southern part of the country bordering Afghanistan.
- Malaria outbreaks have occurred in the northern, central, and western areas of Tajikistan.
- A recent survey in Khatlon, a region in the southern part of Tajikistan bordering Afghanistan, indicates that the number of malaria cases may be as high as 150,000 to 250,000. The estimate of symptomatic and asymptomatic cases of malaria for the whole country is 300,000 to 400,000.
- Malaria is assuming epidemic dimensions in Uzbekistan, and, taking into account the gravity of the malaria situation in neighbouring Tajikistan and Afghanistan, there is a substantial risk of malaria assuming larger proportions.
- The malaria situation is deteriorating in the border areas of Tajikistan, Uzbekistan, and Kyrgyzstan.
- Malaria is becoming more widespread in Turkmenistan, spreading to the west along the border with Iran. The total number of cases has not changed in the last years, however.

The current situation in Caucasus
- Malaria is assuming epidemic dimensions in Georgia. Between 1999–2001, the number of reported malaria cases increased by more than 10-fold.
- The conditions for malaria transmission are favourable in nearly 50% of the whole territory of Georgia, an area in which 90% of the total population resides.
- There has been a substantial reduction in the reported incidence of malaria in Azerbaijan and Armenia.

The current situation in Turkey
- More than 15 million people, or 23% of the population, reside in areas where malaria remains endemic and approximately 28 million people, or 44% of the population, live in areas where the risk of outbreaks is high.
- The reported incidence of malaria in Turkey today represents a significant reduction.

Continued next page
A Malaria Border Coordination meeting organised by the Regional Office for Europe was held in Dushanbe, Tajikistan 1-2 June 2001. Countries represented included Tajikistan, Uzbekistan and Kyrgyzstan. WHO staff from EURO and the Tajikistan country office were in attendance at the meeting, as well as observers from the European Community Humanitarian Office (ECHO) and Medical Emergency Relief International (MERLIN).

The rationale for organising a meeting on border malaria on this topic was that it represents an issue of ever-increasing importance throughout the countries of Central Asia and Kazakhstan. The problem of border malaria is particularly acute in Kyrgyzstan, Tajikistan, and Uzbekistan, all of which have already undertaken significant efforts towards the control of malaria in their border areas. One of the major determinants of the continuing outbreaks and epidemics of malaria witnessed throughout Central Asia today is the lack of coordination and information exchange between countries. The WHO Regional Office for Europe has taken the lead in the initiative to improve cooperation and the exchange of data amongst these countries.

The meeting was convened to review the current malaria situations in the respective countries, to identify problems and constraints encountered, to outline a direction and strategy for increased coordination of malaria control in border areas in 2001–2003, and to discuss the modalities for a more systematic exchange of information on the malaria situation and its control/prevention, particularly in border areas.

As an outcome of the meeting, it was recommended that mechanisms for the exchange of information were developed and implemented, standard reporting formats drawn up, measures for the immediate notification of emergency situations applied, malaria action plans synchronized, and local health personnel offered training to increase knowledge of the disease. Efforts to be undertaken by WHO in this regard will include assisting in working out a common strategy, taking measures to elicit financial support from potential donors, and organising intercountry meetings to bring key decision makers from the region together.

Continued from page 3

- The number of malaria cases is undoubtedly larger than reported, particularly in the south–eastern part of the country

![Figure 4 Distribution of autochthonous malaria cases in Turkey in 2000](image)

![Figure 5 – Participants in Almaty Regional meeting vector biology and control. Kazakhstan, 2001](image)
A Regional Meeting on Vector Biology and Control was held 3-5 May 2001 in Almaty, Kazakhstan. The objectives of the meeting were to review the current status of knowledge in the area of vector biology and control; to identify Anopheles species of malaria vectors and their role and distribution in different eco-epidemiological zones of the WHO European Region; to review available information on mosquito susceptibility to insecticides in the WHO European Region; and to discuss existing methods and technologies for vector control (adult mosquito control by residual sprays with insecticides, biological control measures [Bacillus thuringiensis H-14], insect growth regulators [chitin synthesis inhibitors], the use of larvivorous fish, and genetic control methods) and their applicability in view of different eco-epidemiological settings, economic considerations and environmental concerns in the WHO European Region.

Countries participating in the meeting included Armenia, Azerbaijan, Georgia, Israel, Kazakhstan, Kyrgyzstan, the Russian Federation, Tajikistan, Turkey, Turkmenistan and Uzbekistan, with representatives of national malaria control programmes, research institutions, the private sector, and WHO EURO in attendance.

At the closure of the meeting it was recommended that WHO and malaria-affected countries should continue to work together in the planning, implementation and evaluation of vector control operations, capacity building aimed at improving knowledge and developing skills and competence in the field of medical entomology, and operational entomological research, including the monitoring of resistance and irritability of local malaria vectors to insecticides used in both the agricultural sector and for vector control.
The Second Inter-Regional Malaria Coordination Meeting

The Second Inter-Regional Malaria Coordination Meeting, organized jointly by the WHO Regional Offices for Europe and the Eastern Mediterranean, was held in Baku, Azerbaijan from 31 May to 1 June 2000. Participants represented several countries of the WHO European and Eastern Mediterranean Regions, including Armenia, Azerbaijan, Georgia, The Islamic Republic of Iran, Iraq, Kazakhstan, Kyrgyzstan, The Russian Federation, Tajikistan, Turkey, Turkmenistan, and Uzbekistan. The meeting was organized as a follow-up to a Malaria Coordination meeting held in Baku in 1999.

The first day of the meeting was devoted to presentations on the dynamics of malaria in the respective countries and the progress made in relation to Roll Back Malaria activities over the preceding year. On the second day of the meeting, participants discussed priority problems and constraints encountered, and how these issues were addressed. The participating countries shared ideas regarding a direction and strategy for the improved coordination of malaria control measures and the development of joint action plans in order to synchronize malaria control operations in border areas. Practical modalities for a more regular exchange of inter-country and interregional malaria-related information were also discussed.

Regional Workshop on Study Design and Research Methodology

From 17-21 September 2001, representatives from Armenia, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, The Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan participated in a meeting on Study Design and Research Methodology, held in Tashkent, Uzbekistan. The workshop was organized in collaboration with RBM/HQ and the Programme for Research in Tropical Diseases (TDR).

The purpose of this workshop was to revise and finalize the originally submitted proposals to the 2001 TDR Call for Grant Applications and develop competence in drafting operational research designs and protocols related to malaria, its control and prevention. While in attendance at the workshop, facilitators offered instruction and hands-on guidance to ensure the revised versions of the proposals were up to standard in terms of conceptual framework, research objectives, design, methods, indicators, work plans and budgets.

Over the long term, it is hoped that the outcome of the workshop will be a strengthening of the capabilities of scientific researchers, increased competence on the part of malaria staff and research personnel, and the creation of a network for control oriented research on malaria and other tropical diseases in the region.
In July 2001, a WHO Roll Back Malaria Field Office was established in the Khatlon Region of Tajikistan. The Khatlon Region, with a total population of over two million, accounts for over 60% of the total annual number of cases of malaria reported nationwide. Perhaps even more alarmingly, the region also faces a growing problem with *P. falciparum* malaria. From 1998-2000, a four-fold increase in the number of *P. falciparum* cases was observed.

The field office was created to obtain a clearer picture of the extent of the malaria problem within the region, particularly in regards to *P. falciparum*, to reinforce surveillance mechanisms, to strengthen research capacities, to update the knowledge and practical skills of personnel engaged in the field of malaria, and to improve the coordination of RBM partnership actions at the peripheral level.

Over the pilot phase of this project, activities were carried out and data collected from selected districts with a total population of about 615,000 people. Base-line surveys were conducted, clinico-epidemiological data was collected and analysed, disease management resources were investigated, and public awareness measures were undertaken. Specific interventions, such as the distribution of chemoprophylaxis, were also carried out and its impact studied. International programme staff oversaw the operation of the facility.

The establishment of the Khatlon field office represented a truly collaborative effort between WHO, the Ministry of Health of Tajikistan, and many RBM partners, including ECHO, MERLIN, and ACTED.
Study tour in Tajikistan

From 4-13 June 2001, a malaria study tour took place in Tajikistan. Participants in the study tour, which was funded and organised by WHO in cooperation with the Ministry of Health of Tajikistan, included representatives of Georgia, Kazakhstan, Kyrgyzstan, and Tajikistan. At present, Georgia faces small-scale outbreaks of malaria, while in Kazakhstan and Kyrgyzstan, malaria may assume higher dimensions if adequate malaria control and prevention measures are not taken.

The main objective of the study tour was to update knowledge and to improve the technical skills of staff engaged in malaria control. The course also contained a well-organized field course, the purpose of which was to introduce participants to the means by which preventive activities may be carried out under field conditions.

Following completion of the course, participants provided a summary of knowledge gained and drew up plans for uses of their new skills upon return to their permanent positions.

The idea to conduct such a study tour in Tajikistan, the most problematic country in terms of malaria in the Region, found great support from all participants. It was proposed to continue this initiative within the Region, and to organise such practical exercises in the field of malaria and its control and prevention in Tajikistan on a regular basis.

Assessment of Vector Control Activities in Turkey

A mission was undertaken by WHO Short Term Consultant Norman Gratz from 1-12 July 2001 to assess the various vector control activities currently being carried out in Turkey.

Over the course of his twelve day visit to malaria departments, zone offices, research and training facilities, institutes, universities and Ministry offices in Ankara, Dyarbakir, and Adana, the consultant reviewed methods and materials used in vector control and evaluated their efficacy, assessed surveillance activities and their use in guiding vector control operations, and examined the issue of vector resistance to insecticides.

The report produced as a result of this mission summarises the problems facing malaria control departments and programs, suggests measures for their alleviation, and offers recommendations for the improvement of malaria surveillance and control in Turkey.
Agricultural development and its impact on malaria in Azerbaijan

Agricultural development and its impact on malaria in Azerbaijan was the focus of a joint project initiated in March 2001 between the International Service for National Agricultural Research (ISNAR) and the WHO Regional Office for Europe.

Although the absolute numbers of malaria cases in Azerbaijan have declined since 1996, the conditions suitable for the spread of malaria prevail. The re-distribution of land into small private farms and a re-orientation of cropping patterns from fruits and vegetables towards cereals, rice and cotton could have serious implications on the resurgence of malaria.

The report identifies associations between changes in agricultural practices and malaria, envisages possible short and long-term effects of these changes, and proposes strategies for improved environmental management and cost-effective vector control to the mutual benefit of both agricultural development and the health of the population.

RBM Publications, 2000-2001

Reports
Progress with Roll Back Malaria in the WHO European Region, September 2000 (English)
Malaria Border Coordination Meeting, Tajikistan, 2001 (English, with Russian summary)
Second Interregional Malaria Coordination Meeting, Azerbaijan, 2000 (English)
Progress with Roll Back Malaria in the WHO European Region September 2000 – April 2001, 2001 (English)
Malaria vectors and approaches to their control in malaria affected countries of the WHO European Region. The proceedings of a regional meeting on vector biology and control, Almaty, Kazakhstan. To be published soon

RBM Project Documents for Caucasus and Turkey, (English). To be published soon

CD's
MALSAM. Malaria Sporogony Assessment Model, 2001
Country RBM Partnership Inception Meetings

Roll Back Malaria Partnership Meeting in Tajikistan
On 11 January 2000, a Roll Back Malaria Partnership Meeting was held in Dushanbe, Tajikistan. The objectives of the meeting were to review technical and operational modalities on dealing with malaria and to evaluate the results achieved by the National Programme of Tropical Disease Control in Tajikistan during 1997-1999; to develop a joint plan of action for the National Programme of Tropical Disease Control and RBM regarding malaria control in 2000-2001; to promote country RBM partnership actions amongst the Ministry of Health of Tajikistan, the National Programme for Tropical Disease Control, WHO/EURO, WHO/EMRO, and other UN agencies, international NGOs, research institutions, the media and other partners/donors; and to prepare a national RBM strategy for implementing cost-effective but technically sound and sustainable malaria control measures adapted to the country’s conditions and responding to local needs.

As an outcome of the meeting, a RBM Project Proposal of actions to be implemented in Tajikistan in 2000-2001 was drafted. The purpose of such a document was to elicit financial support from both existing and potential donors.

The RBM Project has supported Tajikistan in its efforts to prevent malaria mortality and reduce morbidity, to minimize the socio-economic losses imposed by malaria, and to contain and prevent the further spread of malaria in the country. The RBM Project focuses on addressing malaria-related issues through the building up of RBM partnerships, promoting cost-effective and sustainable vector control measures, improving access and capacities for timely diagnosis and appropriate treatment, improving community awareness and involvement in malaria control/prevention, reinforcing surveillance mechanisms, and enhancing intersectoral collaboration. Planning and implementation of the proposed strategy represented a collaborative effort between the Ministry of Health in cooperation with existing donors and partners including WHO, ECHO, UNICEF, ACTED, MERLIN, WFP, and the government of Italy.

Roll Back Malaria Partnership Meeting in Turkey
On 22 March 2000, a Roll Back Malaria Partnership meeting was held in Ankara, Turkey. The purpose of this meeting was to draw up an RBM project proposal for implementation in Turkey within the period between 2000-2002. Over 180 government officials and representatives from national and international institutions, organizations, and agencies, as well as private companies, participated in the meeting.

The RBM project aims to support Turkey in its efforts to reduce malaria morbidity and minimize socio-economic losses caused by the disease through a variety of activities including the building of partnerships, the promotion of health sector reforms aimed at improving capacities for access to early diag-

Roll Back Malaria project proposal for Central Asia
In face of the grave malaria situation in Tajikistan, a recent malaria outbreak in Turkmenistan, the re-establishment of malaria transmission in Uzbekistan, Kyrgyzstan and Kazakhstan, and the real threat of a resumption of malaria transmission in areas where malaria had been eradicated many years ago, national RBM projects have been prepared.

The projects will have a strong but flexible management structure capable of mobilizing the partnership among the Ministry of Health, UN agencies, other donor agencies and countries, NGOs, as well as the media in implementing cost-effective but technically sound and sustainable malaria control measures adapted to the country’s conditions and responding to local needs. The projects are planned for a period of 4 years (2002-2005).

The RBM Projects will focus on addressing malaria-related issues through capacity building, improving capacities for access to early diagnosis/adequate treatment and timely response to and prevention of malaria outbreaks. Other areas that will be dealt with are reinforcement of surveillance mechanisms, and intensification of community awareness and involvement in malaria prevention.
nosis and proper treatment within the primary health care system, the promotion of cost-effective and sustainable vector control measures, and the strengthening of research capabilities. The proposal also encompasses reinforcing surveillance mechanisms; increasing community involvement in malaria control/prevention; enhancing intersectoral collaboration; developing human resources, and coordinating RBM Project interventions.

**Emergency Roll Back Malaria Partnership Meeting in Georgia**

On 7 December 2000, WHO EURO organised an emergency Roll Back Malaria Partnership meeting in Tbilisi, Georgia. This meeting was held in order to elicit the financial assistance necessary for containing the epidemic of malaria in the country and as a reaction to the inadequate response and insufficient financial assistance from partners/donors to cope with the malaria problem following the first WHO mission to build the Partnership for Roll Back Malaria in Georgia (November 1999). As a result of the inadequacy of measures, which had been taken to date, the incidence of malaria had increased substantially, and the threat of malaria assuming epidemic proportions in the country was an issue to be addressed urgently.

Representatives and officials participating in this meeting included those from UNDP, WHO (EURO and Country Offices), ECHO, the French Embassy, USAID, IMC, UNICEF, EC-Delegation, GTZ Medical Project, ICRC, Embassy of Germany, AIHA, JICA, Austrian Airlines, IFRC, SDC, Save the Children, OSGF, Ministry of Labour, Health and Social affairs, National Centre for Diseases Control, Parliament of Children and Youth of Georgia, and the Institute of Parasitology and Tropical Medicine, Georgia.

**RBM country missions, 2000-2001**

| Armenia | Assessment of the malaria situation, malaria control implementation status and problems in 2000 Planning of malaria control activities for 2001 Follow up on the RBM partnership actionsPreparation for the 4th Global RBM Partnership Meeting in Washington |
| Azerbijan | 2nd Interregional Malaria Coordinating meeting (see page) |
| Georgia | Assessment of the malaria situation, malaria control implementation status and problems encountered in 2000 Emergency Roll Back Malaria Partnership Meeting (see page) Planning of malaria control activities for 2001 Follow up on the RBM partnership actions |
| Greece | 1st Balkan Conference on Malaria and Mosquito Control, Serres, Greece. |
| Kazakhstan | Assessment of the malaria situation, effectiveness of existing malaria control, problems/constraints encountered and needs for malaria control Coordination of the expansion of RBM Partnerships and discussions on the future collaboration in Kazakhstan Discussions with USAID on RBM partnership in Tajikistan Planning of malaria control activities for 2001 Regional Meeting on Vector Biology and Control (see page) |
| Kyrgyzstan | Assessment of the malaria situation, effectiveness of existing malaria control, problems/constraints encountered and needs for malaria control Coordination of the expansion of RBM Partnerships in Kyrgyzstan Field visits RBM Project Proposal for Kyrgyzstan for the period 2001-2005 |
| Tajikistan | Country RBM partnership meeting Assessment of the malaria situation and problems Inter-country Malaria Border Coordination Meeting (see page) Planning of malaria control for 2000 and 2001 Promotion, co-ordination and assessment of RBM partnership action and discussions with RBM partners on future collaboration GIS training Field visits Inter-Country Malaria Border Coordination Meeting (see page) Regional Malaria Study Tour (see page) Establishment of a WHO Roll Back Malaria field office (see page) |
| Turkey | Assessment of the malaria situation and the problems/constraints faced RBM Project proposal for Turkey, 2000-2001 RBM Partnership Meeting (see page). |
| Turkmenistan | Assessment of the effectiveness of existing malaria control, problems/constraints and needs for malaria control RBM Project Proposal for Turkmenistan for 2000-2001 Coordination of the build-up of RBM Partnership in Turkmenistan Field visits |
| Uzbekistan | 2nd International Course on malaria control and its planning Assessment of the malaria situation, effectiveness of existing malaria control, problems/constraints encountered and needs for malaria control GIS training Workshop on study design and research methodology (see page) |
As an outcome of this meeting, a conceptual paper to serve as the basis for a Roll Back Malaria project proposal for Georgia was drafted and submitted to Ministry of Health. The Ministry subsequently developed and distributed the project proposal to partners and potential donors, who reviewed the document and provided feedback on it.

Inter-Country Roll Back Malaria Partnership Meeting in countries of the Caucasian Region and Turkey

On 20 November 2001, a meeting on the topic of Roll Back Malaria Partnerships in Countries of the Caucasian and Turkey was held in Tbilisi, Georgia. The purpose of this meeting was to analyse and exchange country experiences with RBM to date, to provide guidance on strategies and mechanisms for more effective RBM sub-regional and country partnership actions, and to consolidate support for combating malaria and scaling up RBM partnership actions at sub-regional and country levels.

In Armenia and Azerbaijan, RBM Country partnerships have been established and malaria control activities are at present implemented with assistance from various partners. In both countries, RBM partnership actions have succeeded in containing malaria epidemics, and sustaining the results achieved to date is a major issue.

In Georgia and Turkey, RBM partnerships are being built at the country level, and assistance from various partners is presently being sought.

In addition to representatives from the countries listed above, in attendance were WHO staff from both Headquarters and EURO, as well as existing and potential RBM donors and partners, including USAID, WFP, UNDP, ICRC, MERLIN, MC International, GTZ, UNICEF, IMC, GAP, CARE and others. Observers from research institutes in Georgia and Russia also attended the meeting.

All participants concurred that the steps necessary to expand and accelerate RBM efforts in solving common malaria problems in respective countries should be taken, with particular emphasis placed on border areas. Finally country representatives and RBM partners proposed that WHO should continue taking the lead in technical guidance and coordination of partnership actions to combat malaria in the Caucasian countries and Turkey.

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