

Report on the

**Second malaria cross-border meeting for  
Afghanistan, Islamic Republic of Iran and  
Pakistan**

Peshawar, Pakistan  
30 August to 1 September 2004



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## **1. INTRODUCTION**

In real terms, a border between countries means common spaces separated by permeable and active membrane. In border areas for each country, different layers and levels of governmental action are in contact. At the same time, there are different health system organizations and approaches at work. These different approaches lead to different disease management protocols, including drug policy and vector control strategy, and of course different definitions and indicators. This situation becomes more complicated in the presence of population movement across borders, refugee camps, high incidence of chloroquine resistance, falciparum malaria, low coverage of health facilities, undeveloped monitoring and evaluation systems and weak information exchange.

To address the malaria problem in countries generally, and malaria in border areas specifically, coordination is needed in situation analysis, planning, implantation and monitoring and evaluation. For this reason, WHO held a cross-border meeting for malaria control in Chabahar, Islamic Republic of Iran, on 20–22 July 2003. Following on the success of the first meeting, a second meeting was held in Peshawar, Pakistan, from 30 August to 1 September 2004. The second meeting had the following objectives:

- Review the implementation of the recommendations of the “first malaria border meeting” and identify the main achievements and challenges;
- Review the current malaria situation in the neighbouring areas of the three countries, with emphasis on the malaria epidemiology, demographic changes including population movements and refugees and control and preventive measures;
- Develop a plan of action for the coordination of antimalarial drug efficacy monitoring and drug policies in the three neighbouring countries, including the selection of focal points in each country;
- Develop a plan of action for the coordination of monitoring insecticide resistance in sentinel sites and vector control measures in the bordering areas, including the selection of focal points in each country;
- Develop a plan of action for the coordination of malaria epidemic detection and management in the bordering areas and the selection of focal points in each country;
- Develop a mechanism for malaria information exchange between Afghanistan, Islamic Republic of Iran and Pakistan and select focal points in each country;
- Establish a mechanism to develop a joint grant proposal to the Global Fund to fight AIDS, Tuberculosis and Malaria for the implementation of malaria control in the border areas.

Welcome addresses were given by Maj. Gen. Muhammad Aslam HI (M), Director-General of Health, Federal Ministry of Health, Pakistan, and Dr Lalilur Rehamn, Director-General of Health, North-West Frontier Province. Dr Khalif Bile Mohmud, WHO Representative, Pakistan delivered a message from Dr Hussein A. Gezairy, WHO Regional Director for the Eastern Mediterranean, in which he stressed the importance of malaria control, especially in the border areas between Afghanistan, Islamic Republic of Iran and Pakistan. Mr Inayatullah Khan, Minister of Health, North-West Frontier Province, in his inaugural address said that the assistance of WHO and other organizations was pivotal in strengthening regional cooperation for rolling back malaria.

The programme and list of participants are attached as Annexes 1 and 2. A map of the border areas discussed is attached as Annex 3. Country plans of action are included as Annex 4.

## **2. OVERVIEW OF THE REGIONAL RBM PERSPECTIVE**

*Dr Hoda Atta, RBM/WHO/EMRO, Cairo, Egypt*

Malaria is still a public health threat in the Eastern Mediterranean Region, where 287 million people live under risk (60% of the population of the Region) and 15 million clinical cases and 47 000 deaths occur annually. The countries of the Region are categorized into 4 groups according to epidemiological and operational situation. Group 1 comprises malaria-free countries: Bahrain, Jordan, Kuwait, Lebanon, Libyan Arab Jamahiriya, Palestine, Qatar and Tunisia. Group 2 countries, which are aiming at malaria elimination, include Egypt, Morocco, Oman, Syrian Arab Republic and United Arab Emirates. For countries in this group, population movements and the threat of malaria reintroduction from endemic areas such as the Indian subcontinent are the main challenges. Objectives of the programme in these countries are to prevent malaria reintroduction in malaria free-areas and eliminate residual foci. Group 3 countries, with more than 53% of the population in the Region and with low to moderate endemicity, include Iraq, Islamic Republic of Iran, Saudi Arabia and Pakistan. Good progress has been achieved in the former three countries (although in the Islamic Republic of Iran there was a significant increase in the number of malaria cases in 2003) in terms of reduction of malaria cases. In Pakistan there is an incomplete and incomprehensive surveillance system with more than 110 000 reported and 1.5 million estimated cases. Group 4 countries with intense malaria transmission (Afghanistan, Djibouti, Somalia, Sudan and Yemen) are responsible for 95% of the malaria cases in the Region. The estimated number of annual malaria cases is more than 2.5 million in Afghanistan.

## **3. SUMMARY OF COUNTRY PRESENTATIONS**

### **3.1 Overview**

Tables 1–3 show the epidemiological situation

**Table 1. Trend of reported malaria cases during the past five years in three neighbouring countries**

Country	1999	2000	2001	2002	2003
Afghanistan	395 581	203 911	364 243	590 176	591 441
Islamic Republic of Iran#	23 110	19 716	19 274	15 558*	23 562**
Pakistan	91 774	82 526	104 003	101 761	104 603

\*: include 9122 autochthonous cases

\*\* : include 17066 autochthonous cases

# The most prominent epidemiological finding is more than 50% increase in the total and 87% increase in the number of autochthonous malaria cases in Iran from 2002 to 2003

**Table 2. Situation of drug efficacy monitoring sentinel sites in border districts**

Country	Site	Drug tested	No of patients involved	ACPR	Drug policy update
Afghanistan	Jalalabad (Nangarhar)	SP	96	96%	Drug policy updated in 2003, AS+SP adopted as the first line. Implementation in some districts started
	Jalalabad (Nangarhar)	SP+AQ (25 mg)	100	97%	
	Jalalabad (Nangarhar)	AQ (25 mg)	93	62%	
Islamic Republic of Iran	Chabahar	CQ	60	13%	Drug policy updated in 2004, AS+SP adopted as the first line. Not yet implemented
	Sarbaz	CQ	57	14%	
Pakistan	Kurram	SP+AS	50	Data collection in process	Not yet
	Zhob or Kech	AQ	50	Data collection in process	

**Table 3. Malaria burden in neighbouring districts between Islamic Republic of Iran, Pakistan and Afghanistan**

Country	Province	District	Total population	Total malaria cases (reported)		No of falciparum cases		API		AFI	
				2002	2003	2002	2003	2002	2003	2002	2003
Islamic Republic of Iran–Pakistan border districts											
Islamic Republic of Iran	Sistan va Baluchestan	Saravan	205 980	516	2415	71	712	2.51	11.72	0.34	3.46
		Chabahar	208 310	1956	5180	284	1326	9.39	24.87	1.36	6.37
		Sarbaz	123 379	2141	4681	1087	1907	17.35	37.94	8.81	15.46
		<b>Total</b>	<b>537 669</b>	<b>4613</b>	<b>12 276</b>	<b>1442</b>	<b>3945</b>	<b>8.58</b>	<b>22.83</b>	<b>2.68</b>	<b>7.34</b>
Pakistan	Baluchistan	Gawadar	208 699	5124	9 856	2716	8681	24.55	47.23	13.01	41.60
		Kech	421 530	3991	6770	3112	898	9.47	16.06	7.38	2.13
		Pungur	255 637	3184	2803	206	317	12.46	10.96	0.81	1.24
		Kharan	231 614	1559	1209	230	646	6.73	5.22	0.99	2.79
		Chagi	228 874	2426	659	69	79	10.60	2.88	0.30	0.35
		<b>Total</b>	<b>1 346 355</b>	<b>16 284</b>	<b>21 297</b>	<b>6333</b>	<b>10 621</b>	<b>12.09</b>	<b>15.82</b>	<b>4.70</b>	<b>7.89</b>
Afghanistan–Pakistan border districts											
Afghanistan	Nangahar	Nazian	1 089 100		45 418*		2971		41.70	-	-
		Gushta									
		Shinwar									
		Hesarack									
		Coat									
		Achin									
	Kunar	Asmar	306 000		18 187**		878		59.43	-	-

Pakistan	Paktia	Khost	300 200	–	1590***	–	718	–	52.98	–	–
		Total	1 695 300	–	79 509	–	4567	–	46.90	–	–
	FATA	Mohmand	391 363	1440	1810	44	145	3.68	4.62	0.11	0.37
		Bajor	707 471	3093	–	457	–	4.37	–	0.65	–
		Khyber	619 880	2156	2091	530	260	3.48	3.37	0.86	0.42
		Kurram	480 658	2684	3192	443	527	5.58	6.64	0.92	1.10
		North Waziristan	393 479	3940	3838	1371	1228	10.01	9.75	3.48	3.12
		South Waziristan	443 111	1253	1386	316	469	2.83	3.13	0.71	1.06
	Baluchistan	Q. Abdullah	440 877	350	1264	91	416	0.79	2.87	0.21	0.94
		Chaghai	228 874	2426	659	69	79	10.60	2.88	0.30	0.35
		Zhob	292 141	2396	2954	1194	124	8.20	10.11	4.09	0.42
		Total	3 997 853	19 738	17 194	4515	3248	4.94	4.30	1.13	0.81
	<p>*: include 8009 clinical cases  **: include 11612 clinical cases  ***: include 9978 clinical cases  # In 2003, a significant increase in the incidence of malaria is observed in the border of the Islamic Republic of Iran and Pakistan</p>										



### 3.2 Afghanistan

Afghanistan has recently emerged from 23 years of armed conflict. The Ministry of Public Health is now in the process of rebuilding its shattered infrastructure. Outdated vertical programmes such as malaria and tuberculosis control are to be integrated into the primary health care structure as part of broader health sector reforms.

The malaria situation deteriorated significantly during the years of fighting, not only in terms of incidence: the proportion of cases caused by the potentially lethal falciparum malaria has increased dramatically, and chloroquine and sulfadoxine–pyrimethamine resistant parasites are now widespread. As a result, the Ministry of Public Health considers malaria a very high priority and as such its diagnosis and treatment has been incorporated into the new basic package of health services (BPHS), which is to be provided by all health care providers (Ministry of Public Health and nongovernmental organizations).

In 2003, some 591 441 suspected and confirmed cases were reported indicating an annual national incidence of 197 per 10 000 population. Incidence ranged from less than 7 per 10 000 population per year (southern region) to 1955 per 10 000. *P. falciparum* accounted for 7% of all confirmed malaria cases, ranging from 0.002% in Wardak province to 31% in Takhar province. A total of 45 418 suspected and confirmed cases were reported from Nangarhar province, which neighbours Pakistan. Falciparum malaria represented 8% of the total confirmed cases. (Source: MRCs, NHMIS in some provinces and nongovernmental organization facility reports)

Over the past 25 years of instability, a wide range of nongovernmental organizations have been engaged in the provision of emergency health care in Afghanistan. Most have been involved in the provision of diagnostic and curative services for malaria, and over the past ten years or so, many working in the east and north-east have become involved in the distribution of insecticide-impregnated bednets. During this period a few key players have emerged in the field of policy development, the most notable of these being HealthNet International (HNI). During 2003, RBM partners managed to distribute 103 221 conventional nets and re-treat other 42 154 conventional nets. They were also able to distribute small amounts of long-lasting nets, i.e. 25 000 permanent (IMC and Malteser) and 15 000 Olysets (WHO).

A multipartite community-based malaria control project continued for the sixth year in Nangarhar province. It included health education, bednet re-impregnation campaign, *chador* impregnation, larviciding, female awareness and school health programme, targeted implementation of highly subsidized nets, cattle sponging, and a swamp and pond drainage programme. Follow-up studies in areas where this project was implemented showed a significant reduction in malaria cases.

A sentinel site to monitor the therapeutic efficacy of antimalarial drugs was established in Jalalabad city of Nangarhar province in 2003. The site was able to evaluate the therapeutic

efficacy of amodiaquine (AQ) as monotherapy and sulfadoxine–pyrimethamine (SP) plus AQ as a combination therapy. Results of the study are to be published soon.

### **3.3 Islamic Republic of Iran**

Malaria control activities have been integrated into primary health care (PHC) since 1988. At present, there are more than 16 000 Health Houses run by two community health workers (*behvarz*), one male and one female. In the areas with malaria transmission, malaria control activities are the main responsibility of health workers. At the village level all cases suffering from malaria symptoms are referred to the Health House for blood slide-taking and dispensing of antimalaria drugs.

Usually the blood slides, in particular for the passive cases, are sent to the nearest rural health centre on the same day. About 80% of all slides are examined and receive treatment according to available guidelines in less than 24 hours. In those areas which are not covered by PHC, antimalaria activities are carried out by mobile teams. The areas not covered by PHC are mainly located in the three south-eastern provinces, Sistan va Baluchistan, Hormozgan and Kerman, which report 73% of total malaria cases.

Malaria is still a major health problem in the south-eastern part of the country. Among 23 562 cases reported in 2003, 24% of cases were from Afghanistan and 7.5% had Pakistani nationality. During 2003, 15% of reported malaria cases in Sistan va Baluchistan were from Pakistan. This figure has increased to 24% in 2004 (until the end of August).

Sarbaz, Chabahar and Saravan districts at the border of Pakistan have higher incidences of malaria in Sistan va Baluchistan province. The highest falciparum rates have also been reported from these districts. In these three districts, malaria transmission starts from east at the border and expand to other areas toward the west. Pishin, Koohak and Dargaz health centres, which are the health centres nearest to the Pakistan border, have the highest incidence and falciparum rates among health centres in Sarbaz, Saravan and Chabahar districts. More than 50% of malaria cases diagnosed and treated in these health centres are from Pakistan.

### **3.4 Pakistan**

Malaria continues to be a major public health problem in Pakistan. The geographical and meteorological conditions, economic situation, heavy dependence on agriculture and irrigation systems and huge internal and external population movements result in high malariogenic potential. Analysis of malaria data for 2003 shows a reported Annual Parasite Incidence (API) of 0.8 per 1000 population. The border provinces of Baluchistan, Federally Administered Tribal Areas (FATA) and North-West Frontier Province (NWFP) have highest incidence of malaria, with 4.2, 4 and 1.32, respectively. Kech, Panjgur and Chagi at the border area with the Islamic

Republic of Iran have highest number of reported cases, and Kech has the highest proportion of falciparum malaria.

The national strategy for rolling back malaria is based on the following key elements: early diagnosis and rapid treatment; multiple preventive measures, including promotion of insecticide-treated materials, targeted use of residual spraying, health education and introduction of biological and environmental management approaches; improved detection and response to epidemics; developing viable partnerships with international, governmental and nongovernmental partners; and operational research

In the second round of proposals to GFATM, US\$ 4.4 million was approved for: strengthening microscopy and improvement of case management capacity in 23 districts including all bordering districts of Baluchistan and FATA; designing and implementing BCC strategy; and scaling up ITN usage in 11 pilot districts through public-private partnership with nongovernmental organizations.

#### **4. TECHNICAL PRESENTATIONS**

##### **4.1 ACT: An update on progress in policy and access to treatment**

*Dr Hoda Atta, RBM*

In response to increasing resistance of plasmodium falciparum to antimalaria drugs in most malaria endemic areas, WHO has suggested combination therapy, especially ACT (artemisinin-based combination therapy), to improve efficacy, delay development of drug resistance and prolong the useful therapeutic life of antimalaria drugs. Combination therapies recommended by WHO are: artemether/lumefantrine; artesunate + amodiaquine; artesunate + sulfadoxine-pyrimethamine (SP); artesunate + mefloquine; amodiaquine + SP. The last one is non ACT and is recommended only if cost is a major concern and there is proof of good efficacy of both SP and amodiaquine.

At present, 36 countries have chosen ACT as the first line of treatment, 4 countries as the second treatment line, and 14 countries are considering policy change to ACT. Among Asian countries, Afghanistan, Bangladesh, Bhutan, India, Indonesia and Islamic Republic of Iran have adopted the ACT drug policy. It is predicted that in 2005 more than US\$ 130 million will be needed for procurement of ACT by public sector. Malaria is a highly treatable disease, and very effective treatment is available in the form of ACT. WHO calls on all RBM partners to unite in a global coalition to enable countries to accelerate access to ACT and make these life-saving medicines affordable to people in need.

## **4.2 ACT and the Global Fund**

*Dr Zinga José Nkuni*

GFATM is a new financial instrument and is said to be complementary to existing programmes. It brings additional financial resources to countries after submission of technically sound proposals to tackle HIV/AIDS, malaria and tuberculosis. A major challenge in malaria control is the growing resistance of *plasmodium falciparum* to chloroquine and SP, mainly in Africa and Asia.

The Global Fund wants countries to use the most effective therapy, which is ACT. ACT has proven effectiveness in multi-drug resistant areas, very fast parasite clearance, prompt reduction in fever, reduction of gametocytes carriage and good cure rates. However, there is a significant cost associated with it.

Some prerequisites are essential for countries to meet before shifting to ACT. Some 27 countries are scheduled for ACT but they all are not at the same stage in terms of grant agreement signing and treatment policy shift. To meet their 2-year ACT needs, the GFATM has to cover a gap of US\$ 414 253 943, which represents almost 79.5% of its approved 2-year malaria interventions grants. To narrow this gap, the GFATM wants to use the following tools during its Nairobi reprogramming meeting planned for the end of September: forecasting and calculating ACT needs for Round 4 and reprogramming round 1 to 3, and pooled financing for price negotiations.

## **4.3 Strengthening implementation of vector control tools in the border areas**

*Dr Abraham Mvzava*

Powerful vector control tools are available for malaria prevention. These include the use insecticide-treated bednets (ITNs), insecticide residual house spraying (IRS) and larval control, among others. Moreover, the three countries have a history of using at least one of these interventions. However, malaria is still endemic in Sindh, Baluchistan and the NWFP areas of Pakistan; the southern part of the Islamic Republic of Iran and in the northern and eastern areas of Afghanistan.

In-depth analysis of the situation suggests that the problem has to do with weak health systems, rather than a failure of the technical tools of the health system. For example, review of the recommendations from the first border coordination meeting shows that, except for ITN planning, none of the other planned activities were implemented. So as the three countries attempt again jointly to plan and implement vector control interventions in the border areas, serious consideration should be given towards strengthening human, technical, physical and financial capabilities. The absence of vector control focal points to plan, implement, monitor and supervise vector control activities in some of these countries is a sign of weakness in this area.

To strengthen their health systems, these countries need to embark on a strategic direction of implementing evidence-based, cost-effective and sustainable interventions for synergistic impact through the collaboration and partnership of all national stakeholders (private and public sectors). For realization of this long-term objective, a comprehensive vector control situation analysis (which will include the special and unique needs of the border areas) will need to be carried out to identify strengths, gaps etc. and how these are addressed through national IVM plans of action.

In the short term, while planning for the long-term objectives, the countries should coordinate the implementation of the vector control activities in the border areas, share relevant information, forecast their needs, and as much as possible stock emergency supplies of insecticides, nets and spraying equipment.

## **5. FOLLOW-UP OF RECOMMENDATIONS MADE BY THE FIRST CROSS-BORDER MEETING**

- Active coordination of malaria control in border areas was the key recommendation for three countries, which has not yet been implemented.
- No national policies have been developed for coordination mechanisms.
- No action has been taken for establishment of an electronic exchange network for surveillance data.
- Antimalaria drug efficacy monitoring has started in the Islamic Republic of Iran and Afghanistan, and will start very soon in Pakistan, but there is no real networking within these monitoring systems.
- An insecticide resistance monitoring network has not been developed.
- One of the most important recommendations of the first meeting, inviting country representatives for strategic planning meetings, has not materialized
- Local coordination mechanisms for vector control and data exchange in border areas are not yet in practice.
- No action has been taken for submission of a joint proposal for GFATM.

## 6. PLANS OF ACTION

On the second and third days of the meeting, 3 working groups, on epidemic management and surveillance systems, vector control and disease management, reviewed the first meeting's recommendations and discussed challenges and constraints. Participants prepared a joint plan of action for 3 main interventions to coordinate their malaria control activities in the bordering areas: 1) epidemic management and surveillance systems; 2) case management; and 3) vector control (see Annex 3 for detailed plans).

## 7. RECOMMENDATIONS

### Recommendations to the three countries

#### *Coordination*

1. A border coordination committee (BCC) should be established, with members from the national level and from bordering districts/provinces, with assistance from WHO country offices.

#### **Members of the Border Coordination Committee**

Country	National level	Provincial level	District level	WHO	Focal point
Afghanistan	NPM	PPM, Herat and Ningarhar		Technical Officer	NPM
Islamic Republic of Iran	NPM	PPM	Director Disease Control Chabhar, Sarbaz, Saravan	WHO National Officer	NMP
Pakistan	NPM, Epidemiologist	PPM, NWFP and Baluchistan and Epidemiologist	EDO Kech and Kurram	Technical Officer	Epidemiologist NMCP

2. A focal point from each country should be nominated to be responsible for follow-up of the implementation of the plans of actions at the border areas, recommendations of the border meetings and sharing information among the countries.
3. Meetings of the district/provincial malaria managers of the bordering high risk districts (as in the list) should be held on a 6-month basis.
4. Cross-border meetings of the BCC members of three countries should be held annually, with assistance from WHO, to review the progress achieved and develop or update plans of action.

5. Joint action plans should be developed and implemented and district teams should be established in the high risk border districts, in order to synchronize malaria control operations.

*Information exchange*

6. The BCC should develop a common protocol for early detection of epidemics in the border districts through weekly data collection tools, common training workshops in border districts and immediate sharing of epidemic information.
7. A technical committee should be established for monitoring and evaluation at national and provincial levels. Focal points for monitoring and evaluation should be assigned in the three countries to define and select common indicators for monitoring and evaluation of malaria control programmes in border districts and provinces.
8. A mechanism should be developed for common training workshops in border districts.
9. The exchange of information between the border districts should be put into place immediately (preferably electronically)
10. An information channel should be established on the RBM website in EMRO for sharing malaria information and documents on a regular basis (to be followed up by WHO country officers).
11. All strategic documents such as RBM strategy, ITN strategy, drug policy and treatment guidelines and training modules should be shared among countries by WHO country officers.

*Anti-malaria treatment guidelines*

12. Sentinel sites for monitoring drug efficacy have already been established in some border districts in the Islamic Republic of Iran (Chabahar, Sarbaz and Iranshahr) and Afghanistan (Nangarhar). The process of establishment in Pakistan should be finalized in 2004.
13. Drug policy in Pakistan, including ACT, should be updated once data are available from the sentinel site. Registration of ACT should be started as soon as possible.

*Vector control*

14. The three countries should conduct a vector control needs assessment (comprehensive situation analysis) for the development and implementation of national IVM plans of action. WHO would provide the needed technical guidelines and support

15. Vector control focal points should be identified and recruited at all administrative levels (national, provincial and district) to plan, implement, supervise, monitor and evaluate vector control activities.
16. As procurement and the maintenance of emergency stocks of insecticides and other essential equipment is a problem not only for these three countries, control programmes should forecast and plan their needs in a timely manner.

*Capacity-building*

17. Countries should continue to develop and produce learning/training materials related to malaria and its control in local languages.
18. Basic and refresher training on malaria and its control should continue to be conducted for various categories of general and specialized malaria/health personnel.
19. Countries should exchange training modules and guidelines in Persian, Pashto and Urdu.

*Operational research*

20. Countries should collaborate with research institutes and universities in developing and implementing relevant applied field research, e.g. assessing the impact of ITN use against vivax malaria, malaria vector distribution/bionomics and susceptibility to insecticides, and drug efficacy monitoring trials, with WHO support.

*Information, education, communication and advocacy*

21. Countries should plan activities to raise the awareness of communities and of the health staff dealing with fever cases, including the private sector.
22. Specific IEC activities should be conducted, targeting the populations at risk to ensure early seeking of medical care in case of fever and use of personal protection measures such as insecticide-treated nets.
23. A national malaria day should be organized on 15 May with a common theme in order to intensify IEC activities for advocacy and mass awareness.

*Resource mobilization*

24. With assistance and technical guidance from WHO, the three countries should develop and submit a common malaria proposal for strengthening malaria control and prevention



activities in the border areas, to be submitted to the fifth round of applications to the Global Fund.

**Recommendations for WHO**

25. WHO should provide technical assistance to the three countries for analysis of the malaria situation in the border areas.
26. WHO should put into place a mechanism for monitoring and following up the implementation of recommendations in border areas.
27. WHO should support a feasibility study of malaria elimination in the Islamic Republic of Iran and, when possible, in Afghanistan and Pakistan.
28. WHO should facilitate the procurement of ACT.
29. For the optimum utilization of vector control interventions, e.g. indoor residual house spraying, WHO should provide guidelines on when and where to use such an intervention.
30. WHO and other concerned agencies should initiate and explore the feasibility of maintaining stocks with partners such as the Disaster Resource Network (DRN), which has a warehouse in Dubai.

Annex 1

**PROGRAMME**

**Monday, 30 August 2004**

- 9:00–9:30 Registration of participants
- 9:35–9:40 Recitation from Holy Quran
- 9:40–9:50 Welcome Address By Maj. Gen. (R) Muhammad Aslam HI (M), Director General Public Health, Federal Ministry of Health, Pakistan
- 9:50–10:00 WHO Message by Dr Khalif Bile Mohmud, WHO Representative, Pakistan
- 10:00–10:15 Overview of the regional RBM perspective and importance of cross-border meeting / Dr Hoda Atta, WHO/EMRO
- 10:15 –10:20 Objectives of the second meeting
- 10:20–11:00 Inaugural Address by Mr Inayatullah Khan, Minister of Health, NWFP
- Technical Session 1: Review of the current malaria situation in border areas*
- 11:00–11:10 Review first meeting's recommendations
- 11:10–11:20 Malaria situations in bordering areas in Afghanistan
- 11:20–11:30 Malaria situation in bordering areas in the Islamic Republic of Iran
- 11:30–11:40 Malaria situation in bordering areas in Pakistan
- 11:40–11:50 Discussions
- 11:50–12:00 Presentations by Dr Atta and Dr Nkuni: ACT
- 12:00–12:10 Malaria situations in Afghan refugees and pattern of drug resistance by HNI–Peshawar
- 12:10–12:20 Presentation by Dr Mnzava on rational use of insecticides in vector control and success with ITN implementation.

- 12:20–15:30 Working groups exploring ways for further meaningful coordination between the three countries for implementation of successful malaria control activities in the bordering districts
- 15:30–16:00 Presentations from working groups
- 16:00–16:45 Discussions on the establishment of a mechanism to develop a joint grant proposal to the Global Fund for the implementation of malaria control in the border areas

**Tuesday, 31 August 2004**

- 9:30–16:00 Field visit to Torkhum Border and THQ/BHU

**Wednesday, 1 September 2004**

*Technical Session 2: Presentations and drafting of action plan*

- 9:30–14:00 Review/update existing plans of action for strengthening malaria control and prevention measures in the bordering districts with particular reference to the following:  
Early diagnosis and prompt treatment of cases  
Vector control  
Common malaria information system  
Epidemics detection and management
- 14:00–14:15 Recommendations of meeting
- 14:15–14:25 Concluding Address by Mr Tariq Farook, Federal Secretary of Health

**Annex 2**

**LIST OF PARTICIPANTS**

**AFGHANISTAN**

Dr Najibullah Mahboob  
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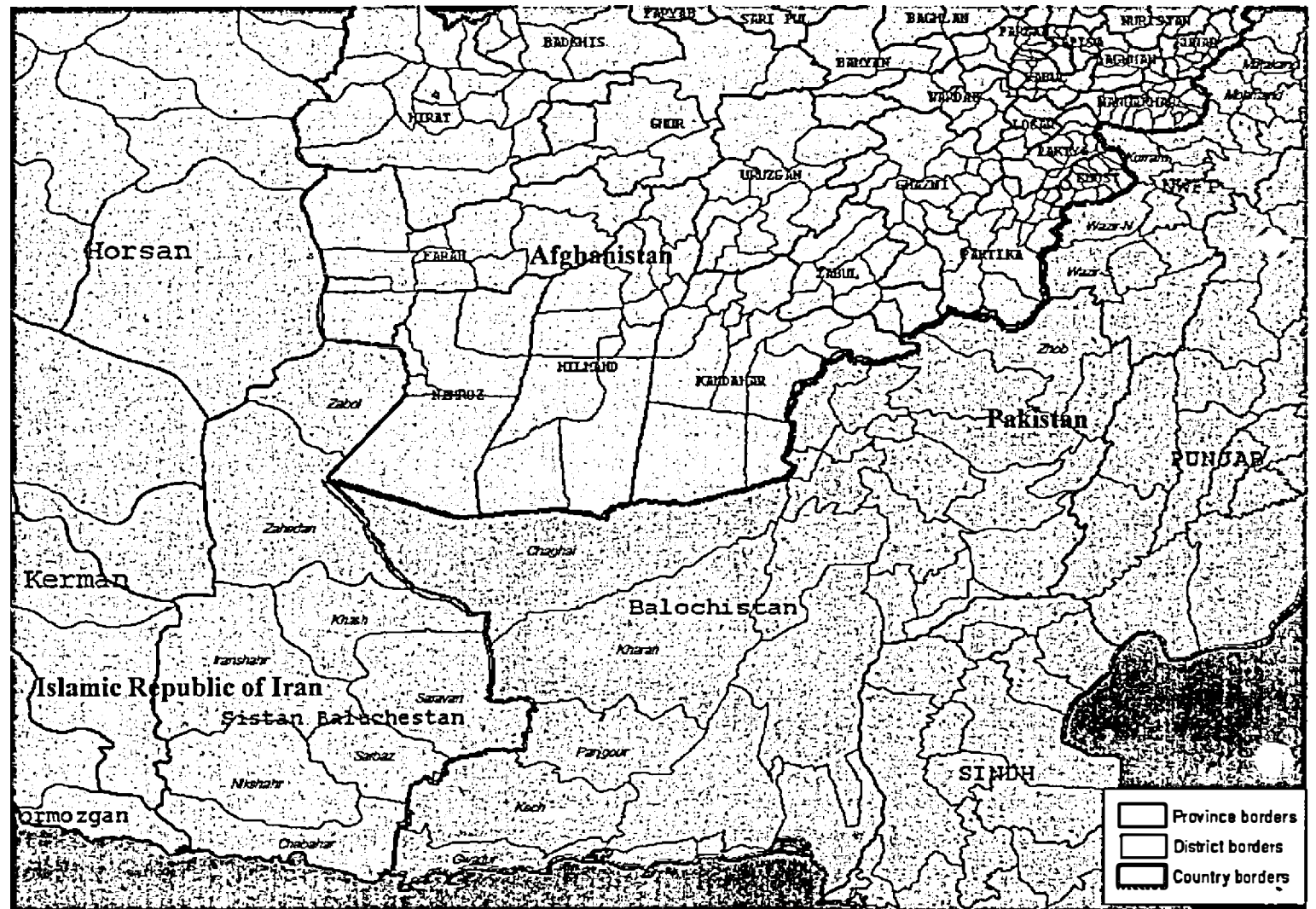
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Annex 3

MAP OF RELEVANT BORDER AREAS



## Annex 4

### PLANS OF ACTION

#### A. Epidemics management and surveillance system

Activity	Country	Current situation	Coordination plan	Time-line	Key responsible
Early detection of outbreaks	PAK	DWES is partially functional	To develop a common standard operating procedures for the adjacent districts of the three neighbouring countries; addressing: 1. Border district's profile (total number of districts, population, availability of resources including infrastructure, manpower and financial inputs; endemicity in the area) 2. Training plan for the staff in the border area 3. Implementation 4. Provision of logistic support 5. Identification of Focal Person/Point at each level	September–December 2004	National Director/Prov./FATA Director of malaria control programme
	IRAN	Daily telephone reporting is in place in all health centres, covered under DEWS software and GIS		Already functioning.	National malaria programme manager
	AFG	Immediate report to provincial level, when unusual increase in no. of cases		September–December 2004	National RBM officer, Provincial RBM officers of Nangarhar, Kunar, Khust, Kandahar, Helmand, Herat provinces
Early warning of malaria outbreaks	PAK	DWES is partially functional	To develop a common standard operating procedures for the adjacent Districts of the three neighbouring countries, addressing: 1. Establishing of meteorological data 2. Training plan for the staff in the border area	September 2004 to August 2005 for all the three countries	Ministry of Health (Pakistan); National malaria programme manager (Afghanistan and Iran)
	IRAN	Daily telephone reporting is in place in all health centres, covered under DEWS software and GIS			

	AFG	Weak communication, no proper tools such as GIS in place	<p>3. Implementation</p> <p>4. Provision of logistic support</p> <p>5. Identification of Focal Person/ Point at each level</p> <p>6. Establish/strengthen Entomological Department for vector control at provincial level of the border districts</p> <p>7. For Iran:</p> <p>A. Preparing special devices for meteorological data in all health centres, also fax and computers</p> <p>B. New maps of GIS</p> <p>C. GPS for all districts</p>		
Baseline data sharing	PAK	None	Assign a Focal person at provincial level; it is suggested that quarterly meetings between the adjacent bordering districts be organized	September–December 2004.	National malaria programme managers
	IRAN	None			
	AFG	None			

## B. Vector control

Activity	Country	Current situation	Planned activities	Time-line	Key responsible
IRS	IRAN		1. Evaluating the effectiveness of First spraying cycle (March–April) in one district (Iranshahr), preferably before the 2nd spraying cycle 2. Explore the feasibility of providing spraying equipment which meets WHO specifications	March–April 2005  Before February 2005	MOH&ME + WR IRAN
	PAK		To spray border district (selected/targeted) for one cycle: August–September	August–September 2005	MOH (Districts) + NMCP
	AFG		Spraying planned only for epidemic response	Ongoing	MOH + HNI
Insecticide resistance monitoring sentinel sites	AFG		Setup of 2 entomological sentinel sites in Kunduz and Jalalabad	July 2005	WHO + HNI + MoH
	IRAN		Setup of 2 entomological sentinel sites in Iranshahr	May 2005	NMCP Mgr + Sch.Public Health - Iranshahr
	PAK		1 existing + 7 additional new districts: Gawadar, Kech, Panjgur, Kharan, Chagi, Pishin, Killeabdullah, Zhob.	June 2005	NMCP + MoH Province
ITN	IRA		1. Monitoring effect of locally made ITNs 2. Study of efficacy and acceptance of LLNs in Nikshahr + Khash districts	1. August–September 2005 2. August–September 2005	1. NMCP Mgr + Sch.Public Health - Iranshahr 2. NMCP Mgr + Sch.Public Health + WHO (study with M. Kayedi)
	PAK		Zhob, Kech, Chagi, Panjgur, Kharan trials on LLNs	September 2005	NMCP province and district level + HNI
	AFG		1. Re-impregnation of existing nets 2. Distribution of LLNs	1. Before next transmission season: April 2005 2. Continuous 2005	MoH + WHO + HNI + PSI
Larviciding, BTI	AFG		Will not be done in Afghanistan	N/A	N/A

	PAK		Currently Chemical Larv. Would like to coordinate BTI with Iran, to include training + supplies	1. Iran to provide consultancy (Mr Assan Zehi) to Pakistan, March 2005 2. Pilot study to explore future possibilities, April 2005	Iran + Pakistan NMCP, WHO consultant
	IRAN		Currently doing and will continue	Ongoing	NMCP

### C. Disease management

Activity	Country	Current situation	Coordination plan	Time-line	Key responsible
Data collection	AFG		Through routine surveillance system	All the year round	National programme manager
	IRAN	MEWS from district level and province without GIS	Progress programme with GIS	One year	Dr Raecissi
	PAK		Through routine surveillance system	All the year round	Provincial Epidemiologist/ DD-CDC
Treatment protocol for uncomplicated falciparum malaria	AFG		Produced	2004	National programme manager
	PAK		To be updated	July 2005	NPM
	IRAN	CQ+Primaquine first line; Quinine+Fansidar second line. Quinine +Tetracycline third line(new drug policy has been adopted but not implemented yet)	Produced	2004	NPM
Expansion of diagnostic services	AFG		Planned	July 2005	NPM-HNI
	IRAN	Enough now	Achieved with no plans for further expansion		
	PAK		Expansion to all RHCs	May 2005	NPM
Technical support	IRAN		Existing capacity are enough		
	AFG		Master trainers training conducted- technicians and doctors training planned	August 2005	HNI-NMCP-WHO Kabul
	PAK		Training of master trainers; Training of doctors and technicians	12/5/2004 and August 2005	WHO-NMP
Drug efficacy monitoring sentinel sites	AFG		Sentinel sites established in Nangarhar, Takhar, Taluqan, Badghis		NMP

	IRAN	4 sentinel sites activated from 2002 in the bordering districts	Already functional		NMP
	PAK		4 Sentinel sites Kurrum, Muzafargrah, Mir Pur Khas and Zhob	Oct-04	HNI-NMCP
Standard efficacy study protocol (most recent data, CQ failure day 28)	AFG		Planned	September 2005	NMCP-WHO Kabul
	IRAN		Activity conducted	2004	NMCP
	PAK		CQ, SP, AQ, SP-AS	October 2004	HNI-NMCP

#### D. Malaria information system

Activity	Plan	Time-line	Key Responsible
Common indicators and common definitions	All the three countries should develop common indicators and common definitions, which are understandable among them.	6 months	WHO should take the lead role in coordination with national programme managers, provincial programme managers
Regulations and official issues	There should be Border Coordination Committee with distinct members from bordering districts and provinces; quarterly meetings to be organized in order to have advocacy meetings with government officials for their commitment and political will.	6 months	Federal/ National Health Ministry/ WHO
Information exchange (technical issues)	<ol style="list-style-type: none"> <li>1. Identification of Focal Title</li> <li>2. Sharing of common web site on which information is entered and shared and for that governments have to be asked for permission and support</li> </ol>	6 months	Through EMRO