LEISHMANIASIS
STRENGTHENING CROSS-BORDER COLLABORATION FOR CONTROL IN CENTRAL ASIAN AND MIDDLE-EASTERN COUNTRIES OF THE WHO EUROPEAN AND EASTERN MEDITERRANEAN REGIONS
REPORT OF A BI-REGIONAL MEETING
AWAZA, TURKMENBASHI, TURKMENISTAN
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Leishmaniasis: strengthening cross-border collaboration for control in central Asian and middle-eastern countries of the WHO European and Eastern Mediterranean Regions

Report of a bi-regional meeting
Awaza, Turkmenbashi, Turkmenistan
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1. Background

Leishmaniasis is endemic in countries of central Asia and the Middle East. One of the challenges to control of the disease in those countries is the movement of populations across the borders into neighbouring countries. At the initiative of the Innovative and Intensified Disease Management unit, WHO Department of Control of Neglected Tropical Diseases, and the WHO Regional Office for the Eastern Mediterranean and the WHO Regional Office for Europe in collaboration with the Ministry of Health of Turkmenistan, a meeting was held on 18–20 November 2014 in Awaza, Turkmenbashi, Turkmenistan, on strengthening cross-border collaboration for leishmaniasis control in central Asian and middle-eastern countries.

The objectives of the meeting were:

- to revisit the area-specific disease-related strategies focused on updating information on leishmaniasis in each country and review the progress of and challenges to control in neighbouring countries of the WHO Eastern Mediterranean Region and the WHO European Region;
- to identify major cross-border issues and areas of collaboration for improved leishmaniasis control;
- to share experiences on surveillance and control of leishmaniasis;
- to discuss the country-specific adaptation and implementation plan of the recently published leishmaniasis control strategic framework of both Regions;
- to formulate the needs of and recommendations by country of the sub-region for increasing alerts for the disease and implementing appropriate control measures.

Dr Bahtygul Kariyeva, WHO Representative in Turkmenistan, and Dr Y Gayypov, Deputy Head of Sanitary Epidemiological Services, Ministry of Health of Turkmenistan as representative of the Turkmenistan Health Ministry, delivered the opening remarks. Dr Jean Jannin, Coordinator, WHO Innovative and Intensified Disease Management unit, WHO Department of Control of Neglected Tropical Diseases, then explained the objectives of the meeting.

After the technical and country presentations, the participants were divided into two groups to discuss challenges, weaknesses and opportunities, and to propose suggestions for improved collaboration in leishmaniasis control among countries of the WHO Eastern Mediterranean Region and the WHO European Region. Finally, having reviewed the situation of the disease and the outcomes of both working groups, the meeting declared some technical recommendations for consideration and implementation towards improved leishmaniasis control in both Regions in the future.

Annex 1 contains the Agenda of the meeting and Annex 2 the List of participants.
1.1 Global overview of leishmaniasis

Daniel Argaw Dagne

Leishmaniasis is endemic in over 98 countries worldwide, with an estimated 350 000 000 people at risk of infection. The disease is prevalent in areas of the tropics, subtropics and southern Europe where more than 21 species of *Leishmania* parasites and over 30 vectors maintain transmission. Some 20 000–40 000 new cases of visceral leishmaniasis are reported worldwide each year. More than 90% of new cases are reported from six countries: Bangladesh, Brazil, Ethiopia, India, South Sudan and Sudan.

1.2 Leishmaniasis in the WHO Eastern Mediterranean Region: strategy and targets

José A. Ruiz Postigo

In 2012, the WHO Eastern Mediterranean Region reported 69% of the total number of cutaneous leishmaniasis cases worldwide (the Region of the Americas reported 26% and the African Region 5%). Of the total cases in the Region, 82% were reported from three countries: Afghanistan, the Islamic Republic of Iran and the Syrian Arab Republic; 64% were of anthropo-notic origin and the remainder were zoonotic.

In 2014, the WHO Eastern Mediterranean Regional Office published the *Manual for case management of cutaneous leishmaniasis in the WHO Eastern Mediterranean Region*¹ and the *Framework for action on cutaneous leishmaniasis in the WHO Eastern Mediterranean Region 2014–2018*² with standardized indicators and reporting forms.

1.3 Strategic framework for leishmaniasis control in the WHO European Region

Elkhan Gasimov

Leishmaniasis is a neglected and poorly reported disease, with an underestimated or undetermined burden in most countries of the WHO European Region. The incidence of visceral and cutaneous forms of the disease is estimated to be less than 2% of the global burden of leishmaniasis according to the latest WHO estimate of leishmaniasis incidence.

Cases of visceral leishmaniasis, which is due to *Leishmania infantum*, are reported in countries of western and south-eastern Europe, central Asia, south Caucasus and Turkey. The majority (nearly 75%) of cases are found in Albania, Georgia, Italy and Spain. Since the mid-1990s, the number of reported cases in children aged under 5 years has increased more than nine-fold to reach, in Georgia, more than 180 in 2007. In recent years, however, the number of adults with visceral disease has been rising as coinfection with HIV before the scale-up of


antiretroviral therapy. Human (and canine) leishmaniasis is a re-emerging problem in some parts of southern Europe, with a steady increase in prevalence.

Almost 80% of the total number of cutaneous leishmaniasis cases reported in the Region are in Israel, Turkey, Turkmenistan and Uzbekistan. Cases of anthroponotic cutaneous leishmaniasis, which is caused by \textit{L. tropica}, have been reported from Azerbaijan, Greece, Israel, Turkey and Uzbekistan. The disease is endemic predominantly in densely populated settlements where person-to-person transmission is maintained by \textit{Phlebotomus sergenti}. Cases of zoonotic cutaneous leishmaniasis caused by \textit{L. major} have been registered in central Asia, the south Caucasus, Israel and Turkey. The disease is epidemic-prone. Cases of cutaneous disease caused by \textit{L. infantum} have been reported in some south Caucasian and central Asian countries and in one European country, with proven and suspected vectors the same as those for visceral disease.

In 2014, in close cooperation with and support from WHO headquarters, the Strategic Framework for leishmaniasis control in the WHO European Region was elaborated.\textsuperscript{1} The regional goal is, by 2020, to eliminate mortality due to visceral leishmaniasis, significantly reduce morbidity due to visceral and cutaneous disease, contribute to improving the health status of populations at risk, and minimize the socioeconomic losses provoked by the disease in countries where leishmaniasis is a public health problem.

The objectives of the programme are:
- to strengthen public health services’ institutional capacities and enhance the capacity for decision-making related to leishmaniasis and its control;
- to improve capacities for early detection as well as access to appropriate and affordable diagnosis and treatment of cases of visceral and cutaneous leishmaniasis;
- to reinforce disease surveillance;
- to improve capacities for the prompt response to and prevention of leishmaniasis outbreaks;
- to strengthen appropriate vector and reservoir control interventions;
- to strengthen research capabilities;
- to increase community awareness and participation in leishmaniasis prevention;
- to build and scale up partnership action for leishmaniasis control;
- to enhance intersectoral collaboration; and
- to strengthen cross-border coordination and cooperation.

The regional framework outlines the following strategic approaches and priority interventions.
- Programme management
- Case detection and management
- Disease surveillance

- Control of reservoir hosts
- Integrated vector control
- Environmental management and personal protection
- Epidemic preparedness and response
- Operational research
- Capacity-building
- Community participation and health education
- Cross-border cooperation
- Intersectoral collaboration
- Partnership action

The WHO Regional Office for Europe plans to strengthen leishmaniasis surveillance at the regional level (through more comprehensive data collection and establishment of a regional database) and the national level; to continue provision of technical assistance to countries in assessing problems and needs; and, together with WHO headquarters, to provide strategic guidance and technical assistance to countries in developing and implementing their national strategies and action plans, strengthening institutional capacities, improving capacities for disease management and prevention, reinforcing disease surveillance and strengthening research capabilities.
2. Country presentations

2.1 Armenia

Luisine Paronyan

Cutaneous leishmaniasis was officially reported for the first time in Armenia in 1920. In the period 1938–1970, a total of 135 cases were reported. Since 1999, no local cases have been registered.

The first case of visceral leishmaniasis was reported in 1913. In the period 1926–1969, a total of 919 cases were reported. Most of these cases were detected in children aged under 13 years old. Foci of the disease were recorded at different altitudes (from 700 m to 1580 m). More than 80% of cases were reported in Yerevan, the capital city of Armenia. From 1969 to 1999, no indigenous cases were registered. From 1999 to date, local cases of visceral leishmaniasis have been reported almost every year (except in 2000 and 2006). The maximum number of cases (14) was reported in 2009. In 2013, only 7 local cases were reported.

Diagnosis of leishmaniasis is based on clinical signs, epidemiological data and laboratory confirmation (for visceral leishmaniasis, the detection of amastigotes in bone marrow/positive ELISA; for cutaneous leishmaniasis, the preparation of slides from ulcers).

Health care is provided free of charge to patients. Treatment is conducted according to WHO recommendations: meglumine antimoniate (Glucantime) – first-line; liposomal amphotericin B (Ambisome).

The vectors of Leishmania in Armenia are: Phlebotomus papatasi, Ph. balcanicus, Ph. kandelakii, Ph. caucasicus, Ph. mongolensis, Ph. jacusiel, Ph. transcaucasicus, Ph. alexandri, Ph. minutus, Ph. tobbi, Ph. neglectus and S. hodzoni pavlovski.

The main challenges are: lack of awareness; inadequate training of health personnel; delayed diagnosis of leishmaniasis; lack of modern laboratory diagnostic equipment; poor supply of antileishmanial medicines; inadequate intersectoral cooperation; and weak regulatory and methodological capacities.

2.2 Azerbaijan

Suleyman Mammadov

Anthropoontic cutaneous leishmaniasis has been reported for many years and can be considered a classic form of the disease in Azerbaijan. Cases of zoonotic cutaneous leishmaniasis have been registered in the lowlands of the country since the late 1980s. The most persistent endemic foci are Agdash, Geokchay and Ujar regions.
In the period 1990–2013, a total of 1643 cases of cutaneous leishmaniasis were officially reported. The highest number of cases (193) was reported in 1991. In 2013, only 33 cases were reported.

Cases of visceral leishmaniasis have been registered in Azerbaijan for more than 100 years where, as in Europe in general, the Mediterranean type (*L. donovani infantum*) is the predominant form of the disease. The first case was detected in 1912. From 1912 to 1956, a total of 186 cases were officially reported. In 1957, the Ministry of Health of Azerbaijan implemented measures to control leishmaniasis, but sporadic cases were still reported. In the period 1990–2013, a total of 397 cases were officially reported. The highest number of cases (35) was reported in 2008. In 2013, only 14 cases were reported. Most patients were children aged under 2 years. Some 86% of cases occurred in the foothill areas.

The main vectors of leishmaniasis in Azerbaijan are *Ph. sergenti* (for cutaneous disease) and *Ph. kandelakii* and *Ph. transcaucasicus* (for visceral disease). Importantly, however, during the past years special studies on leishmaniasis vectors have not been conducted.

The main challenges are: developing a national strategy for leishmaniasis control; improving the case registration system; strengthening laboratory facilities for leishmaniasis diagnosis; raising the level of knowledge of medical staff on diagnosis, prevention and treatment of the disease; social mobilization; and provision of antileishmanial medicines.

### 2.3 Georgia

*Merab Iosava*

Leishmaniasis is one of the most serious public health concerns in Georgia. It is therefore essential that national authorities establish an appropriate control strategy.

The first four cases of visceral leishmaniasis were described in 1913, which was presumably the first report about the disease in the entire Caucasus region. In the period 1928–1964, a total of 845 patients were reported (based on the records of the clinical department of the Institute of Parasitology). Isoenzyme typing of *Leishmania* isolates from patients and dogs with visceral disease has shown that leishmaniasis in this region is caused by *L. infantum*.

In the past 20 years, the number of cases of visceral disease reported annually has increased substantially, from 10–12 cases in the early 1990s to 168 cases in 2009. Of the 2220 cases registered in the period 1991–2013, 1271 were from Tbilisi, the capital city of Georgia. Tbilisi city covers an area of 726 km² (280.3 square miles) and has 1 480 000 inhabitants. Unusually, the natural foci of visceral leishmaniasis are in the centre of the city. These popular residential areas are located close to the hills and forest from where wild animals (jackals, foxes) appear and are known to be the likely reservoirs of *Leishmania*.

In 2007, a total of 3 cases of visceral leishmaniasis were detected in children in Kutaisi, the second largest city of Georgia by its area and population. One child was only 1 year of age and had never left the city. Active surveillance was carried out by the National Center for Disease Control and Public Health (NCDC) in Kutaisi the same year. Since 1957, none of the
Leishmaniasis vectors has been found in western Georgia. Furthermore, no cases of the disease had been registered in Kutaisi before 1957 and there are no references either of the existence of its vectors. A vector survey done subsequently by the NCDC collected and identified several species of Phlebotomus using the morphology ID keys: Ph. halepensis, Ph. balcanicus and Ph. sergenti. The identification of three sandfly species collected in Kutaisi suggests the potential for transmission of leishmaniasis in this area of the country.

The main reservoirs of infection are domestic and stray dogs. Foxes, jackals and badgers are recognized reservoirs as well.

Diagnosis of visceral leishmaniasis is based on clinical signs, epidemiological data and, crucially, detection of amastigotes in bone marrow. Diagnosis of cutaneous leishmaniasis is based on making slides from ulcers.

Leishmaniasis treatment is government-funded and covers 50–80% of the cost of treatment depending on the patient’s age: 0–18 years (80%) and 18 years and older (50%).

The following 16 vectors have been found in Georgia: Ph. kandelakii, Ph. halepensis, Ph. balcanicus, Ph. wenioni, Ph. sergenti, Ph. perfiliewi transcaucasicus, Ph. tobbi, Ph. alexandri, Ph. caucasicus, Ph. jacusieli, Ph. mongolensis, Ph. papatasi, Ph. grimi, Ph. major syriacus, Ph. chinensis simici and Ph. chinensis rauriaa. However, studies conducted in the past 2 years have revealed that the major vectors in Tbilisi, Kvemo, Kartli and Kutaisi are Ph. kandelakii, Ph. halepensis, Ph. balcanicus, Ph. wenioni and Ph. sergenti. The studies also revealed a high seroprevalence of Leishmania infection among dogs.

The Government of Georgia provides funding for the treatment of visceral leishmaniasis cases and professional capacity is sufficient at the central level. However, support from the WHO Regional Office for Europe for leishmaniasis control and prevention would be helpful and appreciated. Collaboration with WHO on leishmaniasis is among the highest priorities for Georgia.

2.4 Russian Federation

Evgenii N. Ponirovsky

Leishmaniasis has been observed in some regions of northern Caucasus and Crimea.

Analysis of entomological observations indicates the presence of sandfly species in the fauna of northern Caucasus and Crimea capable of transmitting Leishmania. Natural and climatic conditions in these regions are favourable for various species of sandflies. The following proven vectors of pathogens of leishmaniasis have been detected: Ph. papatasi, Ph. alexandri, Ph. caucasicus, Ph. sergenti, Ph. kandelakii, Ph. neglectus, Ph. (lar.)perfiliewi, Ph. balcanicus and Ph. longiductus.

In the period 1995–2014, a total of 56 cases of leishmaniasis were confirmed by the diagnostic centre of the Martsinovsky Institute in 32 men and 24 women. Of these 56 cases, 20 were anthroponotic cutaneous leishmaniasis, 13 zoonotic cutaneous leishmaniasis, 22
visceral leishmaniasis and 1 mucocutaneous leishmaniasis. Nineteen were aged 1–4 years; 6 aged 5–9 years; 4 aged 10–14 years; and 27 aged 14 years and older. Leishmaniasis was imported from 16 countries (Azerbaijan, Armenia, Afghanistan, Greece, Georgia, Israel, the Islamic Republic of Iran, Costa Rica, the Syrian Arab Republic, Sudan, Tajikistan, Tunis, Turkmenistan, Turkey, Uzbekistan and Jordan). Some 20 patients were foreign nationals; the rest were residents of the Russian Federation.

In the past, cases of visceral leishmaniasis have been registered on Russian Federation territory in Dagestan, which apparently can be regarded as local cases of leishmaniasis. In 2010, a diagnosis was made in a man born in 1972 who was a permanent resident of Dagestan (Makhachkala city). In 2013, a case was registered in a 4-year-old girl in Dagestan (Kiyatinsky district, Alhodjakoz village) who had never travelled to an endemic country. In 2014, 2 cases were reported in children aged 2 years, locals of Dagestan (Tabasaran district, Ersi village, and Kayakent district, Kayakent village) who also had never travelled outside of Dagestan. These cases relate the territory of Dagestan to the endemicity of leishmaniasis. This indicates the necessity for further, more detailed research in this region of the Russian Federation.

2.5 Tajikistan
Saifuddin Karimov

Leishmaniasis is endemic in Tajikistan and control activities are considered a national priority. Cases of both cutaneous leishmaniasis and visceral leishmaniasis are recorded.

Areas endemic for visceral leishmaniasis include Gorno-Badakhshan Autonomous Province (cities Darvoz, Khorog and Vanj) and Sughd Province (Aini, Chkalovsk, Istaravshan, Panjakent and Spitamen). A total of 606 398 people are at risk of contracting visceral disease. In the period 1994–2013, a total of 418 cases were reported. In 2013, a total of 60 cases were reported.

Areas affected by cutaneous leishmaniasis include Sughd Province (Aini, Asht, B. Gafurov, Chkalov, Ganic, Hudzhand, Istaravshan, J. Rasulov, Kanibadam, Panjakent, Spitamen and Zafarabad) and Khatlon Province (Shahrituz) where a total of 312 800 people are at risk. In the period 2007–2013, a total of 181 cases were reported. The incidence of the disease is on the rise: 3 cases were reported in 2010, 13 in 2011, 26 in 2012, 86 in 2013 and 95 cases for 9 months of 2014.

Challenges include: lack of measures against insects and reservoirs of infection (especially rodents and stray dogs); lack of public knowledge about leishmaniasis and means to control it; lack of funds for vector control and studies for identification of infection reservoirs; limited opportunities for early diagnosis and effective treatment of leishmaniasis, especially in remote endemic areas; lack of modern laboratory equipment and supplies; inadequate training and experience of medical personnel in the prevention, diagnosis and treatment of leishmaniasis; and lack of financial resources for leishmaniasis control.
These challenges can be solved by improving the technical and managerial capacity of the Republican Tropical Diseases Control Center and the general health services for prevention and early detection, diagnosis and treatment of leishmaniasis; conducting research on leishmaniasis vectors and their geographical distribution; improving the system for the detection and control of leishmaniasis foci; involving partners and donors in leishmaniasis control activities in the country; providing specialized training in the diagnosis and treatment of leishmaniasis; conducting combined activities to control sandflies in areas of intense transmission of leishmaniasis; raising awareness of the population; involving communities in leishmaniasis control activities; and strengthening intersectoral collaboration and partnerships with international organizations and neighbouring countries.

2.6 Turkmenistan

Sofiya Aliyeva

The climatic and geographical conditions in Turkmenistan are favourable for leishmaniasis transmission. Cases of visceral leishmaniasis, anthroponotic cutaneous leishmaniasis and zoonotic cutaneous leishmaniasis infection were frequently recorded in the past. Only cases of zoonotic cutaneous leishmaniasis are reported at present. The main vector of zoonotic cutaneous leishmaniasis is Ph. papatasi.

In the period 2003–2013, a total of 1014 cases of cutaneous leishmaniasis were reported. In 2013, a total of 59 cases were reported.

In order to strengthen epidemiological surveillance of leishmaniasis, the Programme for Prevention of Leishmaniasis in Turkmenistan for the years 2014–2020 and the Strategic Implementation Plan have been endorsed. National protocols for diagnosis, treatment and surveillance (including vector) of leishmaniasis have been developed.

The necessary antileishmanial medicines are procured on an annual basis. Treatment of patients is provided free of charge.

Despite the low burden of the disease at present, the continuing expansion of economic, social and cultural ties with leishmaniasis-endemic countries and the intensive development of new territories in the country require constant attention and improvement of existing methods. Close cooperation with neighbouring countries is particularly important to address this challenge.

2.7 Uzbekistan

Zura Abidova

In the period 2012–2013, a total of 100 patients with cutaneous leishmaniasis were treated in the Republican Specialized Research Medical Center of Dermatology and Venereology of the Ministry of Health of Uzbekistan. Of these 100 patients, 22% were from urban areas and 78% from rural areas; 48% were men and 52% were women; 57% were children aged under 14 years, 6% were aged 15–20 years, 22% aged 21–40 years and 15% aged older than 40 years.
The results of treatment showed that combined therapy for cutaneous leishmaniasis, lymphotropic therapy with Gosaldonum and administration of antibiotics and enzyme preparations (especially for complicated forms) enhances therapeutic efficacy, accelerates the healing time of ulcer elements and inflammatory infiltrates, and eliminates the causative agent of the lesions earlier.
3. Technical and cross-border issues across WHO Regions

3.1 Algeria

*Harrat Zoubir*

Cutaneous leishmaniasis is a major public health problem in Algeria. In 2005, a total of 30,227 cases were recorded with an incidence rate of 93.78 per 100,000 population, the highest annual caseload ever reported in the country. In 2006, the Ministry of Health launched an intensive control campaign with the goal of reducing the incidence of the disease by 50% from the previous year by targeting the population densities of the vector (sandflies) and the rodent reservoirs.

The vector control activities consisted of house spraying (indoor and outdoor) using a residual insecticide (deltamethrin, 0.25%). Two intervention phases were planned annually: the first (March–April) targeted the earliest generation of sandflies in order to limit their proliferation; the second (September–October), importantly, targeted the generation of potentially infective sandflies. The methods for rodent control were flooding burrows with poison and destroying burrows by deep ploughing.

The control campaign seems to have had limited success given the slight increase in the number of cases of cutaneous disease in recent years, with an average of 11,000 cases reported annually from 2009 to 2012. In 2013, a total of 6428 cases were reported, a similar number to that reported in 2007 (6764 cases).

The weaknesses identified in the strategy of the vector control programme are: the lack of regulation of vector control activities, intersectoral collaboration and supervision of spraying interventions.

No cross-border activities are being undertaken.

3.2 Syrian Arab Republic and neighbouring countries

*Lama Jalouk*

The current crisis in the Syrian Arab Republic started in mid-March 2011. Health services have degraded dramatically.

- 57% of public hospitals have been severely damaged and 37% remain out of service.
- An estimated 80,000 doctors and other health professionals have fled in fear for their lives.
- 40% of Syria’s ambulances have been destroyed and only one-third of public ambulances and health centres are functioning.
- Only 10% of locally produced essential pharmaceutical medicines are available.

The epidemiological situation has changed substantially in the past 3 years.
• Some of the highly endemic areas have shown a sharp decrease in the number of registered cases, which can be attributed to massive population movements such as from Aleppo Governorate.
• Some old stable foci have shown a marked increase in the number of cases of cutaneous leishmaniasis, such as in Deir ez-Zor Governorate.
• New epidemic foci have been recognized among internally displaced persons who had moved to much safer places such as Tarotous Governorate, where the disease was previously rarely reported.

Despite the underreporting of cases, the incidence of cutaneous leishmaniasis has sharply increased in the whole country, with 71 996 cases reported in 2013. This may be the result of:
• internal population movement to catastrophic environmental situations;
• limited access of patients to health care facilities;
• lack of trained health workers; and
• scarce supply of medicines.

With more than 3 million Syrians having fled the country, cutaneous leishmaniasis has been reported among Syrians in Jordan, Lebanon, Iraq and Turkey. In Lebanon, more than 1000 cases were reported in 2013 among Syrian citizens.

3.3 Tunisia
Afif Ben Salah

Two studies were conducted on the role of rodents in L. major transmission and dispersal. The trend in the prevalence of infection with the age of rodents revealed a steady increase from 20% for young generations to 66% for adult Psammomys obesus and 75% for adult Meriones shawi. The studies demonstrated and quantified, for the first time, the ecological niche and the migratory capacity of the M. shawi, confirming its crucial role in the geographical dispersal of L. major parasites and the emergence of epizootics and epidemics in new foci through time.

A rapid test for the diagnosis of cutaneous leishmaniasis cases was developed and tested in Tunisia showing 100% sensitivity and 96% specificity. It was registered by the Food and Drug Administration of the United States Department of Health and Human Sciences on 14 November 2014. The next step is to make the test available and cost–effective for its wide use in routine practice.

No cross-border activities are being undertaken at present.

3.4 WHO cutaneous leishmaniasis network in the African and Eastern Mediterranean Regions
José A. Ruiz Postigo

Since 2007, WHO has coordinated inter-country activities to strengthen cutaneous leishmaniasis control in the WHO Eastern Mediterranean Region. In response to the
challenges affecting the Region and the difficulties in implementing most of the recommendations made at the regional level, WHO organized a meeting to link efforts between countries in the Maghreb and the Middle East. The participants agreed to create a network aimed at supporting leishmaniasis control initiatives and to improve cross-border activities and information-sharing. The main members of the network will be from national control programmes. The network will be coordinated by WHO.

In order to better support countries, WHO is developing a global surveillance tool to disseminate the use of standardized data collection forms (Excel), facilitate regular reporting and offer the possibility of using a dedicated software for data storage, analysis and reporting.

### 3.5 USAID/Central Asia Health Programming

*Elena Samarkina*

The goal of the USAID/CAR Mission is to enhance regional cooperation and prosperity in central Asian countries. A number of health related projects are being implemented.

- The *WHO TB Partnership Project* aims to decrease the burden of TB and multidrug-resistant TB in Turkmenistan and Uzbekistan.
- The *DIALOG HIV and TB Project* aims to work with the most at-risk populations in Turkmenistan in prevention of HIV and TB.
- The *Together for Health Project* aims to improve health prevention activities among youth and at-risk groups for HIV and TB.
- The *Quality Health Care Project* covers TB, multidrug-resistant TB (treatment, care, and diagnosis), HIV/AIDS (prevention, diagnosis, treatment and care), maternal and child health/family planning and other public health threats priority health programmes, which includes also leishmaniasis.

Within the framework of the leishmaniasis programme, the United States Agency for International Development, in close collaboration with WHO and the Ministry of Health of Turkmenistan, has supported the development of the Draft Action Plan for the National Leishmaniasis Control Program 2014–2020, as well as six national protocols on leishmaniasis control, namely:

1. Guidelines on epidemiological surveillance of cases of leishmaniasis in Turkmenistan
2. Protocol on epidemiological surveillance
3. Protocol on epizootiological surveillance
4. Protocol on entomological surveillance
5. Protocol on the clinical presentation and diagnosis of leishmaniasis
6. Protocol for the treatment of leishmaniasis
3.6 Common features of and challenges to cutaneous leishmaniasis case management

Mourad Mokni

Several challenges are still related to the diagnosis and treatment of cutaneous leishmaniasis. The current laboratory diagnostic methods usually available in endemic areas are based on microscopy examination of smears and are not very sensitive (65%). Clinically, up to 20 different forms have been described, which is why cases need to be classified in order to guide treatment decisions. Instead of classifying cases according to their external aspect, it is more practical to establish a severity grading (mild, moderate, severe) based on the size or number of lesions, causative species and host immunity. These criteria were incorporated in the WHO manual on case management published in 2014.

The complexities of diagnosis and the risks related to the use of pentavalent antimonials – the first-line treatment in most endemic countries – highlight the need for appropriate training of staff and improved capacity-building programmes.

3.7 Group work

On the last day of the meeting, the participants were divided into two groups to discuss the main challenges in the bordering countries and the opportunities within the countries to be shared among them for the improvement of leishmaniasis control activities. The discussions emphasized the following issues: (i) to have a unique network for leishmaniasis control to share information and provide support for the improvement of leishmaniasis control programmes worldwide, in areas such as training of staff; (ii) to regularly share the necessary information, especially among bordering countries, to have better knowledge of the disease epidemiology in the area; and (iii) to have WHO as the coordinating and leading body of the network.
4. **Recommendations**

The participants agreed the following recommendations aimed at improving leishmaniasis control programmes in the WHO Eastern Mediterranean and WHO European Regions.

- Include countries of the WHO European Region from central Asia in the leishmaniasis control network.
- WHO to lead and coordinate the network.
- Main objectives of the network:
  - to provide support for the countries using the opportunities available in any country of the network in areas such as, but not limited to, capacity-building by training staff or strengthening research capacities; and
  - to share the epidemiological information of the disease on a regular basis, including disease mapping;
- Facilitate the adaptation and implementation of the WHO leishmaniasis control strategic framework and technical manuals.
- Harmonize treatment guidelines, control strategies and reporting among countries.
- Adopt a uniform surveillance recording and reporting system for data sharing.
- Submit regular surveillance data to WHO annually. However, immediate sharing of information on new foci and outbreaks in border areas as well as information on counterfeit drugs to WHO and the neighbouring countries should not be delayed.
- Establish bilateral agreements on information-sharing, including provincial information through the central level.
- WHO to facilitate sharing of information, including feedback bulletins.
- Conduct regular meetings (at least once a year), including with other endemic countries in the Regions.
- Identify or assign focal points in each country.
- Build the capacities for mapping leishmaniasis disease cases, vectors and reservoirs, including risk mapping and stratification.
- Use regional centres of excellence for capacity building and research (and considering language issues).
• Centres of excellence to share with WHO their capacities, type of customized trainings offered and their research.

• Identify potential risk areas and risk factors: conflicts, refugee camps, disaster areas, population movements, other social determinants of health, monitoring of climatic and environmental factors, agricultural developments.

• Collaborate with other existing cross-border communicable diseases programmes.

• Identify country-specific operational research priorities and epidemiological assessments to study vectors, reservoirs, etc.

• WHO to lead, coordinate and facilitate the cross-border collaborative activities.
### Annex 1. Agenda

**Tuesday 18 November 2014**

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
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<tr>
<td>08:00–09:00</td>
<td>Registration</td>
<td>Participants</td>
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<tr>
<td>09:00–09:30</td>
<td>Opening session</td>
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<tr>
<td></td>
<td>• Welcome address</td>
<td>Turkmenistan</td>
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<td></td>
<td>• Opening remarks, Ministry of Health Turkmenistan representative</td>
<td>MoH TKM</td>
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<td></td>
<td>• Sanofi partnership to support NTDs</td>
<td>Dr Sebbag</td>
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<td></td>
<td>• Introduction of participants</td>
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<td></td>
<td>• Election of Chairman and rapporteur</td>
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<tr>
<td></td>
<td>Objectives of the meeting</td>
<td>Dr Argaw Dagne</td>
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<tr>
<td>09:30–09:45</td>
<td>Leishmaniasis control: the global situation and perspective</td>
<td>Dr Argaw Dagne</td>
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<tr>
<td>09:45–10:00</td>
<td>Leishmaniasis EUR strategic framework</td>
<td>Dr Gasimov</td>
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<tr>
<td>10:00–10:15</td>
<td>Leishmaniasis EMR overview and strategic framework and targets</td>
<td>Dr Ruiz Postigo</td>
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<tr>
<td>10:15–10:30</td>
<td>Discussion</td>
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<tr>
<td>11:00–12:00</td>
<td><strong>WHO European Region countries</strong></td>
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<td>Overview of country-specific epidemiological situation, status of</td>
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<td>interventions, current practices and plans</td>
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<td>• Armenia</td>
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<td>• Georgia</td>
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<td>12:00–12:30</td>
<td>Discussion</td>
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<tr>
<td>14:00–15:00</td>
<td>• Tajikistan</td>
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<td>• Uzbekistan</td>
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<td>15:00–15:30</td>
<td>Discussion</td>
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<tr>
<td>16:00 – 16:40</td>
<td><strong>WHO Eastern Mediterranean Region countries</strong></td>
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<td></td>
<td>Overview of country specific epidemiologic situation, status of</td>
<td>Dr Sami</td>
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<td>interventions, current practices and plans</td>
<td>Dr Reza</td>
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<td>• Afghanistan</td>
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<td>• Islamic Republic of Iran</td>
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<tr>
<td>16:40–17:15</td>
<td>Discussion and wrap-up of day 1</td>
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### Wednesday 19 November 2014

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>09:00–10:00</td>
<td><strong>Cross-border issues across WHO Regions</strong></td>
<td>Dr Harrat</td>
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<td></td>
<td>• Algeria</td>
<td>Dr Jalouk</td>
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<td>• Syrian Arab Republic</td>
<td>Dr Ben-Salah</td>
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<td>10:00–10:30</td>
<td>Discussion</td>
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<td>11:00–11:15</td>
<td>USAID support for leishmaniasis control in the Region</td>
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<td>11:15–11:30</td>
<td>Initiative to establish cutaneous leishmaniasis network with the African</td>
<td>Dr Ruiz Postigo</td>
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<td></td>
<td>and the Eastern Mediterranean Regions</td>
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<td>11:30–11:45</td>
<td>Common features of and challenges to cutaneous leishmaniasis case</td>
<td>Dr Mourad</td>
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<td>management</td>
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<td>11:45–12:10</td>
<td>Discussion</td>
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<tr>
<td>12:10–12:30</td>
<td>Cross-border issues, areas for discussion and group formation</td>
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<tr>
<td>14:00–16:00</td>
<td>Group discussion</td>
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<tr>
<td>16:00–17:00</td>
<td>Group discussion wrap-up and preparation for plenary presentation</td>
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### Thursday 20 November 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>09:00–10:00</td>
<td>Group presentations</td>
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<tr>
<td>10:30–12:00</td>
<td>Plenary discussion on the group presentations</td>
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<tr>
<td>12:00–12:20</td>
<td>Recommendations and Wrap up</td>
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<tr>
<td>12:20–12:30</td>
<td>Closing remarks</td>
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<tr>
<td>14:00–17:00</td>
<td>Informal networking and site visits</td>
<td></td>
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</tbody>
</table>
Annex 2. List of participants

* Invited but unable to attend

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(Currently working in Dubai, United Arab Emirates)

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LEISHMANIASIS

STRENGTHENING CROSS-BORDER COLLABORATION FOR CONTROL IN CENTRAL ASIAN AND MIDDLE-EASTERN COUNTRIES OF THE WHO EUROPEAN AND EASTERN MEDITERRANEAN REGIONS

REPORT OF A BI-REGIONAL MEETING
AWAZA, TURKMENBASHI, TURKMENISTAN
18–20 NOVEMBER 2014

World Health Organization