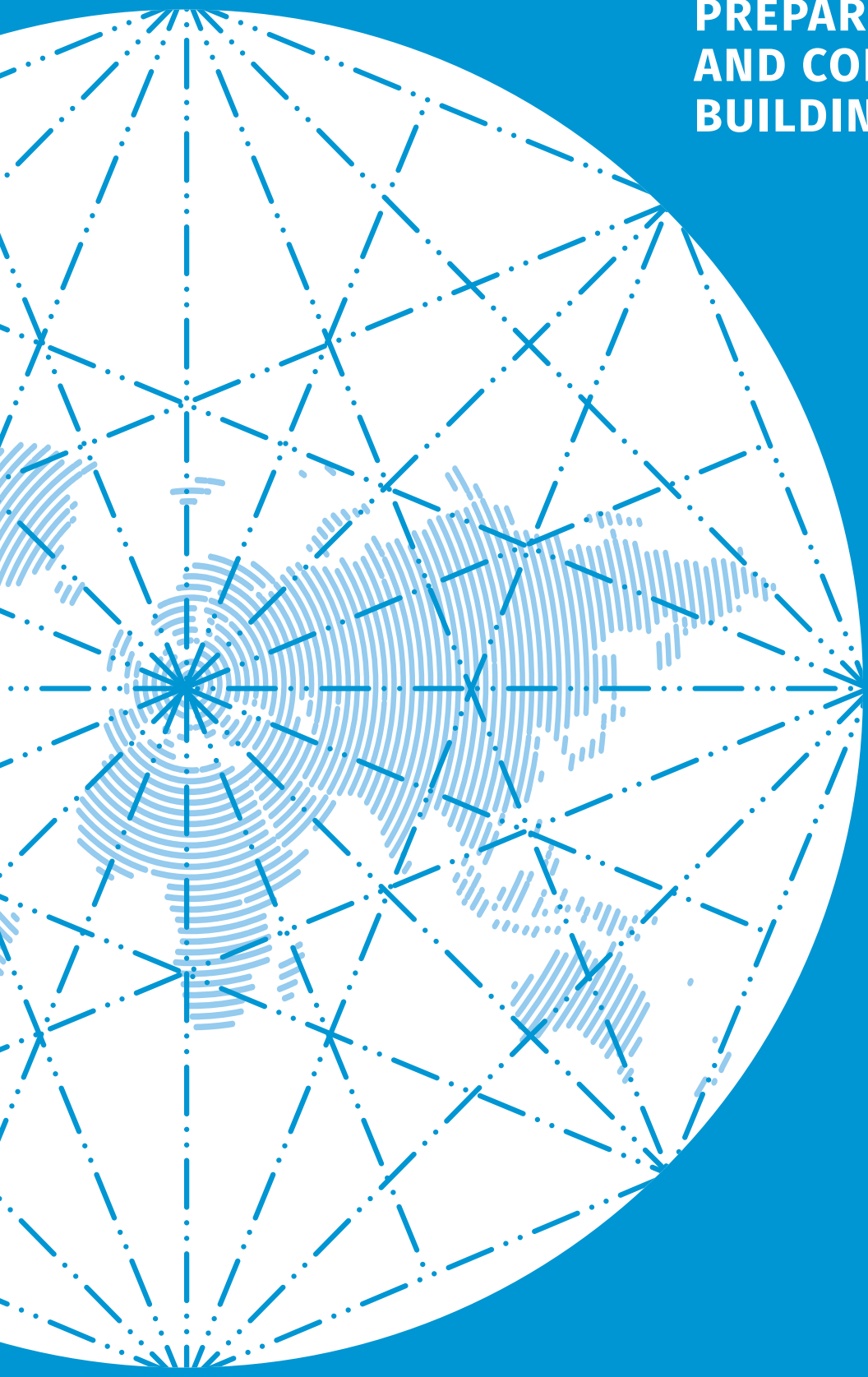
World Health Organization

COUNTRY HEALTH EMERGENCY PREPAREDNESS & IHR

PREPAREDNESS AND CORE CAPACITY BUILDING UNIT



WHO LYON OFFICE: ADVANCED TECHNICAL SUPPORT TO COUNTRIES

HEALTH EMERGENCIES programme | WHO HEALTH EMERGENCIES PROGRAMME

ACTIVITY REPORT
OCT. 2016—OCT. 2017

Dr Tedros Adhanom Ghebreyesus
WHO Director-General

“I envision a world in which everyone can live healthy, productive lives, regardless of who they are or where they live.”

THE WHO LYON OFFICE[1] – A KEY COMPONENT OF THE WHO HEALTH EMERGENCIES PROGRAMME

In September 2015 the UN General Assembly adopted the 17 Sustainable development goals and 169 targets codified in the 2030 Agenda for Sustainable Development. This is an optimistic impetus for the world. Nevertheless, the members of the General Assembly also sounded a note of caution: *“global health threats are more frequent and intense natural disasters, spiralling conflicts, violent extremism and related humanitarian crises and forced displacement of people threaten to reverse much of progress made in recent decades.”*

Indeed the cost of health emergencies to the world continues to grow. Since 2011 more than 1100 epidemic events have occurred around the world and in 2016 over 80 million people needed aid from health partners across 25 humanitarian emergencies. These emergencies can have extensive political, economic, social and public health impacts with potential long-term consequences.

In 2016 the G20 put health on the agenda and issued the Action Plan on the 2030 Agenda for Sustainable Development, and committed “to support international efforts, including those of the WHO, to manage health risks and crisis in a comprehensive way, from preparedness and early identification of disease risks to effective response and recovery efforts in the context of the International Health Regulations *(IHR)*.”

In May 2017 the Berlin declaration issued at the first-ever G20 Health Ministers’ meeting stated *“efficient global health crisis management can only be ensured through compliance with the International Health Regulations (IHR). We will act accordingly within our obligations under the IHR and support the leadership and coordination of WHO in the event of health crises of international concern.”*

The importance of building public health capacity and ensuring quality at national, regional and global level in order to promptly deploy trained personnel to emergencies and outbreaks is strongly emphasized as well as the importance of implementing the International Health Regulations *(IHR 2005)*, including by building and strengthening required core capacities within the context of health systems strengthening for prevention, detection, preparedness and response, as a key priority.

All stakeholders, partners and donors in the global health arena support the swift and comprehensive translation of the IHR into practice at national, regional and international level. As an example, France signed in April 2017 a grant in the amount of EUR 5M to support WHO Lyon Office activities on “Strengthening countries preparedness to health emergencies”. This includes strengthened and coordinated assistance to countries to implement the IHR.

Within this global context, the WHO Lyon office constitutes an essential element of the new WHO Health Emergencies *(WHE)*, particularly of its Country Health Preparedness and IHR department *(CPI)* by supporting global, regional and country efforts on countries’ preparedness and capacity building.

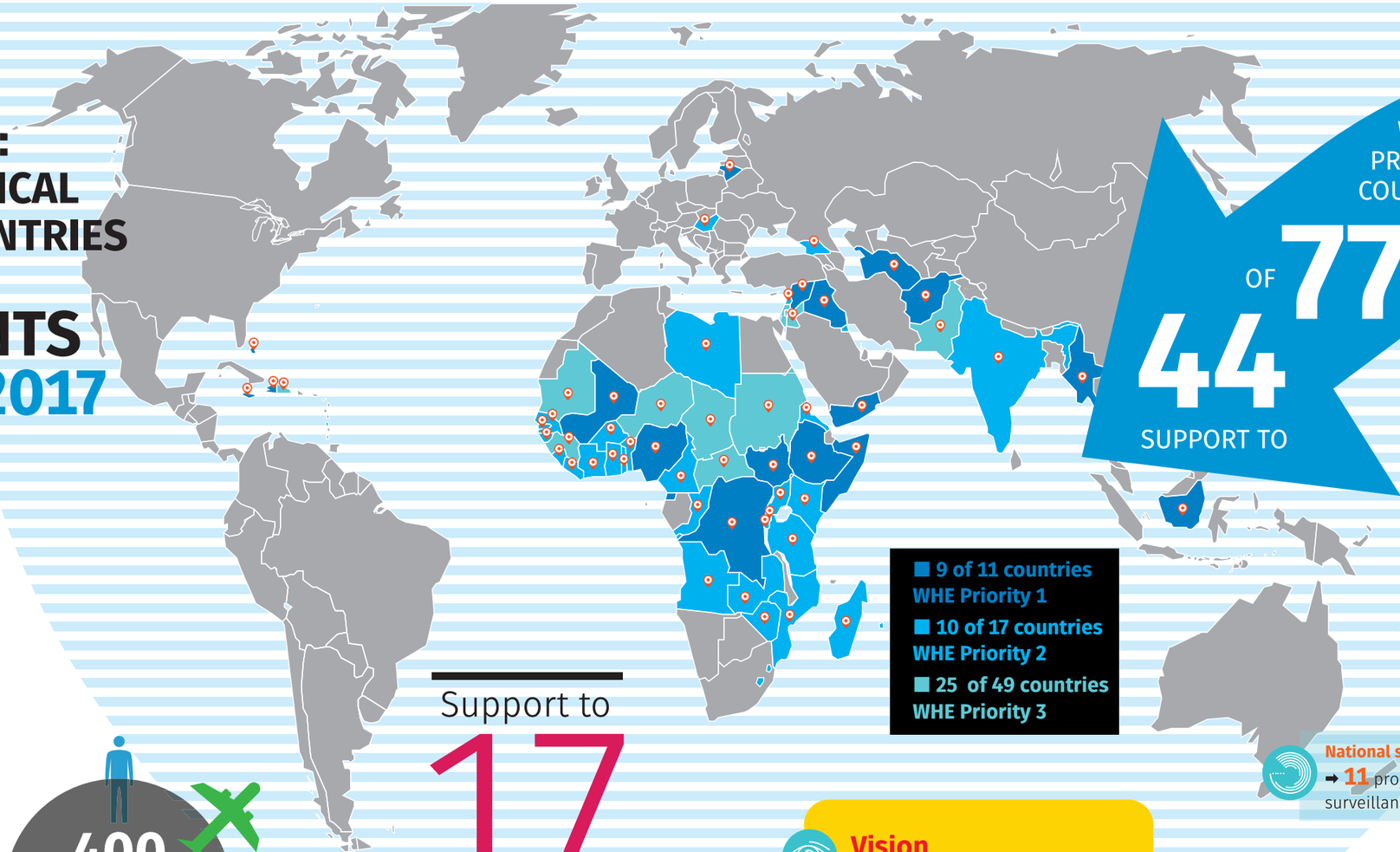
WHE vision:
Protecting health and saving lives in outbreaks and emergencies

[1]The WHO Lyon Office is the technical unit, Preparedness, Readiness & Core Capacity Building of the Department of Country Health Emergency Preparedness & IHR (CPI)

WHO LYON OFFICE: ADVANCED TECHNICAL SUPPORT TO COUNTRIES

ACHIEVEMENTS OCT. 2016—2017

All projects are carried out in close collaboration with the **6** WHO regional offices and more than **150** country offices around the world



WHE PRIORITY COUNTRIES **44** OF **77**

\+ **21** OTHER COUNTRIES

SUPPORT TO

- **9 of 11 countries WHE Priority 1**
- **10 of 17 countries WHE Priority 2**
- **25 of 49 countries WHE Priority 3**

1000 Public health professionals

400 Professionals at ports and airports

Received training to support health security

200 Laboratory experts

Support to **17** out of **56** WHO Joint External Evaluation (WHO JEE) assessed countries

Vision

- **All vulnerable countries are prepared for the full emergency-cycle management**
- **All countries are engaged in fulfilling their obligations to develop core capacities under the IHR (2005)**

Mission

- **Establish and continually improve national capacities for the prevention, detection, preparedness and response to health events and encourage international networking and partnership**

Laboratory strengthening
➡ **12** laboratory strengthening projects in the **6** WHO regions
➡ Key guidance and reference tools translated into **8** languages

National surveillance
➡ **11** projects to support national surveillance strengthening in **8** countries

Learning solutions and training
➡ over **23** trainings on health security in **50** countries
➡ over **400** public health professionals trained

Intersectoral collaboration in travel and transport
➡ **7** projects to strengthen public health measures in travel, tourism and tranport in **20** countries

Mass gatherings
➡ **4** technical consultations in **4** countries for preparedness to mass gatherings

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STRENGTHENING NATIONAL SURVEILLANCE CAPACITIES INCLUDING EARLY WARNING AND EARLY LABORATORY DETECTION

CHAPTER 1

1. LABORATORY STRENGTHENING AND BIORISK MANAGEMENT

Laboratory services are essential to identify and confirm the agents involved in important public health events, including those which may cause public health emergencies of international concern *(PHEICs)*. To meet IHR *(2005)* requirements, each State Party needs access to safe and reliable laboratory services, domestically or internationally through adequate sample transportation systems. In addition, basic laboratory services in biochemistry, haematology or blood safety are critical to provide essential health care during other emergencies, such as natural disasters or humanitarian crises. In this context, laboratory strengthening remains an important area for improvement for many vulnerable countries.

ACTIVITIES

Laboratory quality improvement

From 2016 to 2017, the team continued to promote and disseminate tools for a stepwise implementation of internationally recognized standards towards accreditation of medical laboratories and provision of External Quality Assessment *(EQA or proficiency-testing PT)* schemes.

Participation in an EQA scheme is a critical element of any strong laboratory quality management system. After organizing the first global EQA scheme for MERS CoV and other human coronaviruses in 2016, re-emergence of arboviral diseases such as Zika and yellow fever, the team developed the first WHO global EQA scheme for the detection of arbovirus by PCR. A total of 107 reference laboratories from 84 countries received a panel of specimens for the detection of Dengue, Chikungunya, and Zika viruses by PCR and 96 laboratories from 75 countries sent back results. In addition, an optional panel for yellow fever molecular testing was shipped to 71 of those participating laboratories and 58 of them sent back results. All WHO regions were represented. The participation rate and participants' satisfaction *(assessed through a user survey)* were excellent. Results were satisfactory for most of the participating laboratories. However, 30% of the participants submitted one or more incorrect results for the arbovirus panel, and 29% of the participants submitted one or more incorrect results for the yellow fever panel. Individual results have been communicated to the participants as well as the WHO focal points in the respective regional offices so that corrective actions can be taken to improve the future performance of these laboratories. A stakeholders' meeting was convened by the WHO team in Panama in May 2017 to review this EQA scheme and the decision was made to repeat this initiative in 2018 given the excellent feedback received from participants and WHO collaborating centers involved in the project. In parallel with this global scheme for arboviruses, the team continued its long-standing support to the organization of WHO Regional Microbiology EQA programmes in Africa and the Eastern Mediterranean Region that measure performance of more than 100 reference laboratories two or three times per year for many endemic and epidemic bacterial and viral diseases such as meningitis, cholera, plague or hepatitis. The African programme has also gone through an external evaluation and the findings of this evaluation will help when revisiting the programme to address any identified weaknesses.

As mentioned in previous activity reports[1], the team developed a Laboratory Quality Stepwise Implementation *(LQSI)* tool that provides detailed guidance, templates and checklists to help any laboratory to comply with ISO 15189[2]). To ensure further dissemination, the tool was translated in Spanish and Arabic. In addition, three videos were produced and published to promote the implementation of quality systems in laboratories[3] and facilitate the use of the LQSI tool.[4]

The Laboratory quality management system – Basics" - online course component, was developed in collaboration with WHO/EURO in English *(July 2017)* and Russian *(September 2017)*.

Biosafety and biosecurity

Laboratory biosafety and biosecurity remain of utmost importance to protect laboratory workers and the general public from an accidental or deliberate release of infectious substances from laboratories. In 2017, the majority of the team resources were dedicated to the revision of the WHO Laboratory biosafety Manual *(LBM)*. The WHO LBM has provided practical yet authoritative guidance on biosafety to the biological and medical laboratories for more than three decades since its first edition released in 1983. The third and present edition published in 2004 has been translated into more than 10 UN official and other languages and considered as a reference document by the biosafety community broadly. Considerable developments have been made in the preceding 10 years in this fast-evolving field and revision became indispensable in order to keep the content current and relevant. The revision of the manual proposed initially in 2014 to the WHO's consultative mechanism entitled Extended Biosafety Advisory Group *(BAG)* was further discussed at the following BAG meeting in December 2016 that gathered more than 30 representatives from a broad range of stakeholders, including WHO Collaborating Centres, national governments, public health institutions, relevant international organizations, international and regional biosafety associations and WHO Regional Offices. An editorial committee comprised of prominent external experts was established and met four times between September 2016 and September 2017. Additional contributors and reviewers have been identified and it is expected that the manual will be published in 2018.

Exposure to an infectious material can occur in a laboratory but can also occur during the transportation of laboratory specimens to, or between, laboratories. **An updated version of the WHO Guidance on Regulations for the Transport of Infectious Substances was published early 2017[5].**
WHO continues to receive a significant number of requests from resource-limited countries to certify shippers of infectious substances according to the international regulations and the team is now investing resources to update and facilitate access to training opportunities for shippers, notably through an increased use of, and access to, distance learning courses as a complement or a substitute to face to face training sessions. New training modules are being developed and will be released during the next biennium 2018/2019.

The Online refresher course "Infectious substances shipping training" *(e-ISST v2.0; August 2017)* aims to train and recertify shippers of infectious substances on applicable international transport regulations. The course targets public health professionals initially certified as shippers.

In addition, WHO is developing a model regulation on biosafety that could guide WHO Member States in their efforts to update their regulatory framework in this area. WHO has contracted the Lübeck University of Applied Sciences to conduct a thorough analysis of the current regulations in place in developed and developing countries and propose options for the development of a WHO model. In this context, WHO works in close association with the International Expert Group on Biosafety and Biosecurity Regulations *(IEGBBR)* and participated in its 6th meeting in Canberra, Australia, in March 2017.

Lastly, the team organized the biannual inspections of the two authorized repositories of the variola virus at the State Research Center of Virology and Biotechnology *(VECTOR)*, Novosibirsk Region, Russian Federation in October 2016 and at the US Centers for Disease Control and Prevention *(CDC)* in Atlanta, USA, in May 2017. These inspections aim at ensuring that the conditions of storage of the virus and of research conducted in the laboratories meet the highest requirements for biosafety and biosecurity.

After two successful simulation exercices conducted in Ghana and Côte d'Ivoire in 2016, the team has further developed and finalized a set of four scenarios that are now available in French and English for adaptation and implementation in the field.

Laboratory simulation exercises as part of the IHR Monitoring and Evaluation framework

Simulation exercises are a useful means of testing countries' preparedness for response to emergency situations. WHO is proposing to support countries in conducting simulation exercises as part of the new IHR monitoring and evaluation framework. Laboratory capacities are regularly addressed during outbreak response simulation exercises, however often on a vtery superficial basis.

After two successful exercices conducted in Ghana and Côte d'Ivoire in 2016, the team has further developed and finalized a set of four scenarios that are now available in French and English for adaptation and implementation in the field. New exercises are likely to be organized during the 2018/2019 biennium since other regional offices have expressed interest in this initiative.

1 - www.who.int/ihr/publications/activity_report/en/
2 - https://extranet.who.int/lqsi
3 - (https://youtu.be/WqBsVYxbuag)
4 -https://youtu.be/V_7ofaDtMBQ
5 - www.who.int/ihr/publications/WHO-WHE-CPI-2017.10/en/

Antimicrobial resistance

The team is supporting the implementation of the WHO Global Action Plan on antimicrobial resistance (AMR) adopted by the World Health Assembly in May 2015.
One of the objectives is to improve global AMR surveillance through the Global AMR Surveillance System *(GLASS)* that relies significantly on laboratory data. However, many countries do not have capacity and training to perform antibiotic susceptibility testing according to the internationally recognized standards. The team continued to support production of short training videos demonstrating the European Committee on Antimicrobial Susceptibility Testing *(EUCAST)* method for performing an AST. These videos can be found on the EUCAST website[6] and are now available in 8 different languages. In addition, the team directly participated in several policy-level and technical meetings on antimicrobial resistance *(Switzerland, December 2016; Denmark, March 2017; Sweden, April 2017)* and in **a mission to review the capacity of the Ministry of Health in Jordan to commence national surveillance of antimicrobial resistance in January 2017.**

Global laboratory leadership program (GLLP)

To be better prepared to address public health challenges including emergencies, it is critical to strengthen the laboratory workforce. The team has long articulated the need for specialized training for laboratory directors in the areas of leadership and management, with a first stakeholders' consultation held in 2011. Since then, few initiatives have emerged that address partially the identified needs nevertheless more resources and training opportunities are still needed. In this context, WHO, the US Centers for Disease Control and Prevention and the US Association of Public Health Laboratories *(APHL)* renewed their collaborative commitments to define core competencies for laboratory leaders and further develop a Global Laboratory Leadership Program *(GLLP)* that will draw on a standardized curriculum and implementation framework designed to transform mid-level laboratory managers and scientists into effective leaders. The programme envisions a set of nested didactic components combined with mentored practical work experiences that provide a comprehensive curriculum and model that can be tailored for use by the relevant authorities and entities throughout the world.

WHO, APHL and US CDC have further engaged with FAO, OIE and the European CDC that committed to contribute to the development of the training curriculum and materials and ensure that such programme is also relevant for managers of veterinary laboratories in a One-Health approach. It is envisaged that the GLLP training package will be published in 2018 for further dissemination and implementation in the coming years.

WHO-European Union partnership for "Strengthening health laboratories to minimize potential biological risks"

In collaboration with the WHO European *(EURO)* and Eastern Mediterranean *(EMRO)* regional offices, the team continued to implement a USD 6 million project, funded by European Commission DG Development and Cooperation *(EU DEVCO)*, as well as a USD 1 million project implemented in Pakistan. One of the key achievements of this project was **the adoption of an Eastern Mediterranean Region Strategic Framework for Strengthening Health Laboratory Services 2016-2020 by the 63rd Session of the Regional Committee for the Eastern Mediterranean in October 2016. The Framework was further discussed at the intercountry meeting of the directors of public health laboratories in the Eastern Mediterranean Region held in Oman in October 2016 with 48 participants, including 27 representatives from 19 Member States.**

The project also supported further activities of the WHO/EURO "Better labs for better health initiative"[7] The Better Labs for Better Health initiative aims to help Member States *(to date, primarily Kyrgyzstan, the Republic of Moldova, Tajikistan, Turkmenistan and Uzbekistan)* to meet their commitments under the International Health Regulations (2005) to respond to health emergencies by strengthening laboratory services. This year was marked by the publication of practical guides on the development of national laboratory policies and strategic plans[8], based upon the experience accrued in Central Asia in recent years. A 2nd partners' meeting held in Georgia in December 2016 to review progress made in these areas since the 1st partners' meeting that took place in June 2014. A mentoring project for implementation of laboratory quality management systems was presented, and various models of public health laboratory systems were presented and discussed. The meeting report is available online.[9]

6 - www.eucast.org/videos_from_eucast/
7 - www.euro.who.int/en/health-topics/Health-systems/laboratory-services/better-labs-for-better-health
8 - www.euro.who.int/en/health-topics/Health-systems/laboratory-services/publications
9 - www.euro.who.int/en/health-topics/Health-systems/laboratory-services/publications/better-labs-for-better-health-second-partners-meeting,-december-2016-report

2. SUPPORT TO NATIONAL SURVEILLANCE

The International Health Regulations *(2005)* include a number of procedures for event management as well as requirements related to national disease surveillance and response systems. Countries are expected to implement/improve/utilize existing national structures and resources to meet their core capacity requirements under these Regulations, including with regard to their surveillance, reporting, notification, verification, response and collaboration activities.

The overall commitment of the team for support to national surveillance is to provide strong support to the most vulnerable countries with aim of strengthening the early warning and response (EWAR) function as a key component of their national surveillance systems.

In close collaboration with the WHO regional and country offices, the team responds to the needs identified by the countries and focuses its activities on four main areas:

- Implementation/improvement of national capacities for early warning and response
- Strengthening coordinated surveillance between points of entry and national health surveillance systems
- Development of mechanisms and tools for improving quality and use of public health data
- Strengthening of human resources for surveillance

Components of the planned toolkit:
Part 1: Assessment tool of the existing national public health surveillance capacities.

Part 2: Guidance for developing a tailored plan of action and national standard operating procedures *(SOPs)* for EWAR implementation and strengthening.

Part 3: Training modules to implement and conduct EWAR.

In parallel, given the measurable importance of the contribution provided by the communities to the early detection and response to public health events, the team began the development of guidance and tools to support the implementation of efficient community-based surveillance in countries.

First step was to identify the terms that denote the concept of community-based surveillance in the literature, explore how community-based surveillance is implemented in different contexts, identify and describe existing guidance and recommendations

The EWAR assessment tool was pilot-tested in 2016 and in 2017 in India, the Islamic Republic of the Gambia, Lebanon and Togo.