EpiSouth

Network for the Control of Public Health Threats
in the Mediterranean Region and South East Europe

EPISOUTH PLUS REPORT 1/2011

THE EPISOUTH PLUS PROJECT

LEVEL OF IMPLEMENTATION OF IHR 2005 IN THE EPISOUTH REGION

Analysis of WHO data and identification of priority areas

NOVEMBER 2011

ISTITVTO SVPERIORE DI SANITA

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ACRONYMS

CC: Core Capacity

EU: European Union

EWS: Early Warning Systems

EWRS: Early Warning and Response System

IHR: International Health Regulations

ISS : Istituto Superiore di Sanità - Italian National Institute of Health

MoH: Ministry of Health

NFP: National Focal Point

NRL: National Reference Laboratory

PH: Public Health

PHEIC: Public Health Emergency of International Concern

PoE: Point of Entry

SOP: Standard Operating Procedure

WHO: World Health Organization

WP: Work Package

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Members of the EpiSouth Plus WP7 Steering Team and experts present during the 1st WP7 ST meeting held in July 2011, discussed and validated the results presented in this report and their input is gratefully acknowledged.

EXECUTIVE SUMMARY

Work Package 7 (WP7 – Facilitating the International Health Regulations -IHR- implementation) of the EpiSouth Network aims to improve capacities required by IHR (2005), identified among those considered as priorities in the EpiSouth region. Its specific objectives are to identify capacities common to EpiSouth countries that need to be acquired or strengthened, to develop guidelines for the acquisition of these capacities and to advocate for access to resources needed for their implementation.

States Parties and WHO are required to report annually to the World Health Assembly on the implementation of the IHR. For this purpose, WHO developed a monitoring framework that involves assessing, through a checklist of indicators for each required core capacity, the status of implementation of the Regulations. In order to fulfill the objectives of the EpiSouth project, the questionnaires filled in by Episouth countries were taken into consideration and analyzed in an aggregated fashion. Data from 18 of the 27 EpiSouth countries (67%) were available.

Some capacities have been implemented in most of the EpiSouth countries examined. Legislative frameworks for the implementation of IHR have been established; coordination on events that may constitute a PHEIC has been implemented; event-based surveillance functions exist in 75% of countries and resources and management procedures for rapid response exist.

Multisectorial collaboration on zoonotic, chemical and radiation events exists but could be improved. Major gaps have been reported in the fields of risk assessment, preparedness, risk communication, human resources, laboratory biosafety and biosecurity, and in surge and response capacity at designated ports/airports and ground crossings.

In addition transversal global weaknesses have emerged in the Region such as the low sharing of experiences and resources between countries and the lack of reports and SOPs to guide the implementation of procedures.

This report analyses the findings in relation to the main areas of work of the EpiSouth Plus project (Laboratory Network, Generic Preparedness and Risk Management, Cross Border Epidemic Intelligence and IHR implementation) and identifies as a possible area of focus for WP7 the improvement of surveillance, coordination and response among national surveillance systems and designated ports/airports and ground crossings.

THE EPISOUTH NETWORK

EPISOUTH PROJECT (2006-10)

In occasion of the Year of the Mediterranean (2005), a number of countries that share the Mediterranean ecosystem and therefore have common public health problems, agreed to develop the project "EpiSouth", whose aim was to create a framework of collaboration on epidemiological issues in order to improve communicable diseases surveillance, communication and training in the Mediterranean region and South-East Europe.

The Project "EpiSouth" started in October 2006 with the financial support of the EU DG-SANCO together with the Italian Ministry of Health and has been closed in June 2010. As per June 2010, Episouth is a Network of 27 countries (9 EU and 17 non-EU countries plus 1 candidate to enlargement country). It is therefore the biggest inter-country collaborative effort in the Mediterranean region.

EPISOUTH PLUS PROJECT (2010-13)

A new phase of the EpiSouth Network activities has been approved and started on 15 October 2010 and is expected to last until 15 April 2013.

The new phase implies a shift of the Network's activities to a wider approach. Building on the knowledge of regional gaps and needs identified during the first EpiSouth implementation in the fields of Epidemic Intelligence, Vaccine Preventable Diseases and Migrants, Cross Border Emerging Zoonoses and Training in field/applied epidemiology, the new EpiSouth Plus Project aims at contributing to the control of public health threats and other bio-security risks in the Mediterranean region and South-East Europe.

OBJECTIVE AND ORGANIZATION

The EpiSouth Plus project is aimed at increasing the health security in the Mediterranean area and South-East Europe by enhancing and strengthening the preparedness to common health threats and bio-security risks at national and regional levels in the countries of the EpiSouth Network in the framework of the International Health Regulations implementation. The reinforcement of relations of trust in the region is an objective and an instrument in the scope of Project's implementation.

Ensuring a successful response to this challenge requires a solid framework of collaboration and information exchange among the 27 participating Countries. To this purpose, Focal Points from each participating country have been appointed and asked for active involvement and collaboration in the project's activities.

The project is organized in seven Work Packages (WP), jointly co-led by EU and non-EU countries. WP leaders work in strict contact with the corresponding WP Steering Team, while a Steering Committee, constituted by all WP leaders, and the Project General Assembly, constituted by all participants, are responsible for the general strategic decisions. Finally, an Advisory Board, constituted by representatives of the collaborating institutions and external experts, provide support for the revision of relevant documents and recommendations.

ACTIVITIES

Apart from three transversal WPs (i.e., WP1-Coordination; WP2-Dissemination; WP3- Evaluation) the project's activities are articulated in four WPs:

1) Establishment of a Mediterranean Regional Laboratories Network to facilitate common threats detection in the countries involved (WP4).

2) Promotion of common procedures in Generic Preparedness and Risk Management Plans among the countries involved (WP5).

3) Enhancing Mediterranean Early Warning Systems (EWS) and cross-border Epidemic Intelligence allowing alerts and Epidemic Intelligence information sharing among EpiSouth countries and developing interoperability with other European EW platform, especially EWRS, as forecasted by the current EU legislation (WP6).

4) Facilitating IHR implementation through the production of a strategic document, with guidelines based on specific assessments for describing how national plans/legislations can interact with IHR requirements (WP7).

1. INTRODUCTION

Work Package 7 (WP7 – Facilitating IHR implementation) of the EpiSouth Network is co-led by the World Health Organization (WHO) and the Italian National Institute of Health (ISS) with the guidance of a steering team.

The goal of WP7 is to improve capacities required by IHR (2005), identified among those considered as priorities in the EpiSouth region. Its specific objectives are to identify capacities common to EpiSouth countries that need to be acquired or strengthened, to develop guidelines for the acquisition of these capacities and to advocate for access to resources needed for implementation of these capacities.

WP7 activities complement those developed in the technical Work Packages (WP4 – Mediterranean regional laboratory network, WP5 – Generic preparedness plan and risk management procedures and WP6 – Early warning system and cross-border epidemic intelligence) as the general aim is to reinforce surveillance and response to health threats.

More specifically, WP7 should identify one or two important priorities in IHR implementation and develop guidelines for the acquisition/strengthening of the related capacity/ies, possibly also building on the experience gained through WPs 4-6.

Activity results will be presented in a strategic document and made publicly available in order to facilitate access to the resources needed for IHR implementation.

The content of WP7 will be defined based on: data in the literature, the outcome of the first WP7 Steering Team Meeting and on the data provided in 2010 by EpiSouth countries through the WHO IHR monitoring tool.

This report summarizes the findings of an EpiSouth centred analysis of data collected through the WHO IHR monitoring tool in 2010. Its aim is to support development of the EpiSouth Plus work packages through the identification of weaknesses related to laboratory capacity, preparedness and risk management, event-based surveillance and other core capacities that could be addressed by the project. Specifically its objectives are:

- To describe the level of acquisition of the different core capacities required by IHR in EpiSouth countries;
- To identify strengths and weaknesses in laboratory capacity, preparedness and risk management, and event-based surveillance, that are the core capacities addressed by WPs 4-6;
- To identify capacities that need to be reinforced, that could be addressed by WP7.

2. METHODOLOGY

With the coming into force of the International Health Regulations (2005) (IHR) on June 15, 2007, all IHR States Parties are required to assess the ability of their national structures and

resources to meet minimum national capacities for surveillance and response. IHR related capacities are defined as follows:

- **Main core capacities**: legislation policy, coordination, surveillance, response, preparedness, risk communication, human resources and laboratory capacity.
- **Capacities for Points of Entry (PoE) and IHR-relevant hazards**: points of entry, zoonotic events, food-safety events, chemical events and radiation emergencies.

These capacities reflect, in practical terms, the capacities required to detect, assess, notify and report events, and to respond to public health risks and emergencies of national and international concern.

States Parties and WHO are required to report annually to the World Health Assembly on the implementation of the Regulations. For this purpose, a monitoring framework was developed. The IHR monitoring process involves assessing, through a checklist of indicators, the status of implementation of the capacities listed above.

The monitoring framework was distributed to all States Parties. The data collection process was facilitated through the development of a web-based tool enabling States Parties to submit data on-line. In 2010, 126 States Parties completed the questionnaire, that is, 65% of the 194 States Parties.

In order to fulfil the objectives of the EpiSouth project, as described above, the questionnaires filled in by EpiSouth countries were taken into consideration.

Among the 261 questions of the monitoring framework, 126 questions relevant to the EpiSouth Plus Project were selected (see Annex 1: Questionnaire).
For each question, countries were required to answer “Yes”, “No”, or “Unknown”.
In this report, only the proportion of positive answers was considered. However, when all countries had provided a clear answer (“Yes” or “No” and absence of “Unknown”), negative answers were also taken into account (see Annex 2: Limitations of the study).
For reasons of confidentiality, only aggregated results are provided.

3. RESULTS

Data from 18 of the 27 EpiSouth countries (67%) were available.

3.1. CORE CAPACITY 1: LEGISLATION POLICY

Seventy-eight per cent of countries have assessed the existence of relevant legislation for IHR implementation and 44% of them have documentation showing that recommendations following assessments have been implemented.

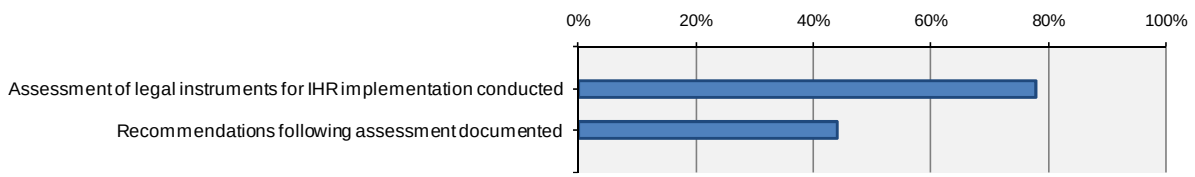

FIGURE 1 - ASSESSMENT OF CORE CAPACITY IN EPISOUTH COUNTRIES 2010 (N=18) / CC1: LEGISLATION POLICY

3.2. CORE CAPACITY 2: COORDINATION

All countries have established the IHR NFP. Coordination among relevant ministries on events that may constitute a PHEIC is implemented, but generally not supported by SOPs (available in 22% of countries only).

Information on IHR requirements is disseminated among national stakeholders in 72% of countries.

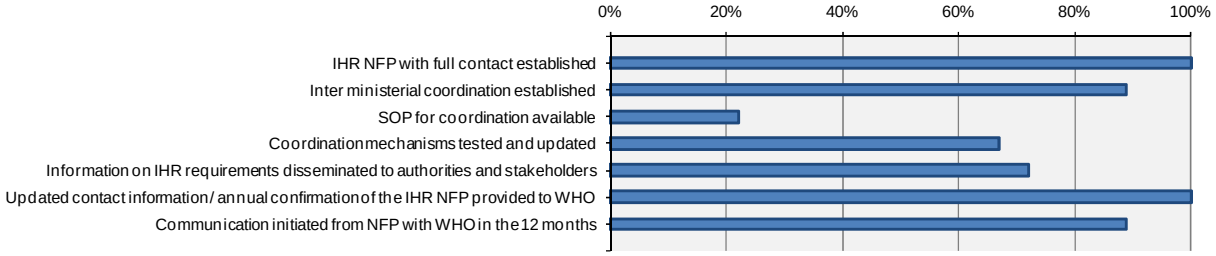

FIGURE 2 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC2: COORDINATION

3.3. CORE CAPACITY 3: SURVEILLANCE

Almost all countries have established the list of priority diseases/conditions to keep under surveillance.

Forty-four per cent of them have declared that units designated for surveillance report on time and 39% have evaluated their early warning systems sharing the results with the global community.

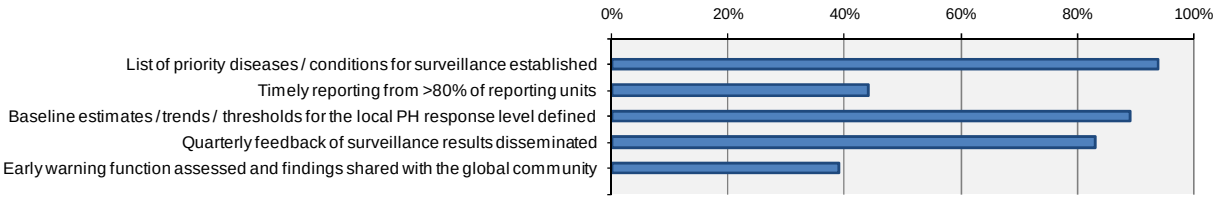

FIGURE 3 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC3: SURVEILLANCE, INDICATOR BASED OR ROUTINE SURVEILLANCE

Seventy-two per cent of countries have acquired event-based surveillance functions, and developed SOPs and guidelines. Further, 22% have documented and shared their experiences and findings in this field with the global community.

Risk assessment has been systematically carried out for all events identified as urgent in 39% of countries, and IHR NFP respond on time to all verification requests from WHO in 50% of countries.

Ninety-four per cent of countries have declared that they use the decision instrument; 50% have shared their experiences with the global community.

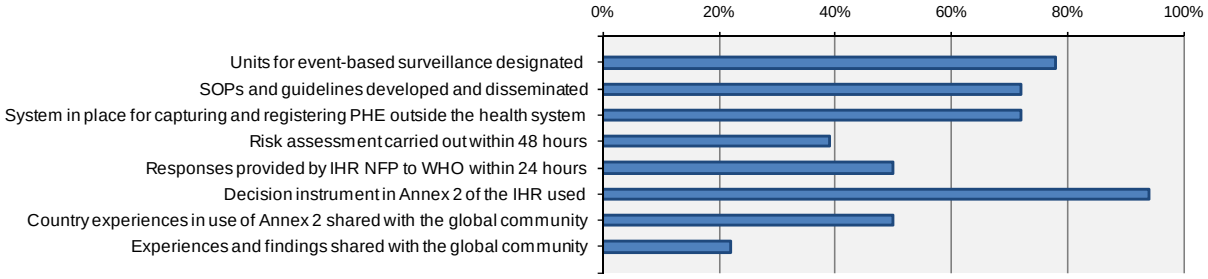

FIGURE 4 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC3: SURVEILLANCE, EVENT BASED SURVEILLANCE

3.4. CORE CAPACITY 4: RESPONSE

Resources for rapid response during outbreaks are available, and management procedures have been established and evaluated in 78% of countries.
Thirty-nine per cent have offered assistance to other States Parties.

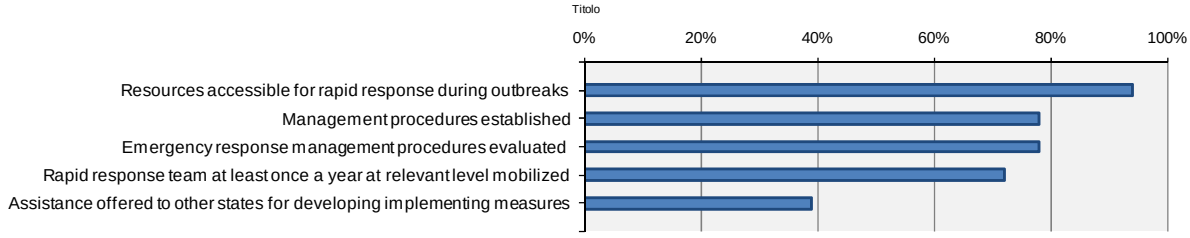

FIGURE 5 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC4 : RESPONSE

3.5. CORE CAPACITY 5: PREPAREDNESS

Fifty per cent of the countries assessed the level of implementation of core capacities and shared the results with relevant stakeholders. Sixty-one per cent developed a national plan for IHR implementation, and 50% one for national emergency response at PoE.
Fifty per cent of countries have a strategy to facilitate development of surge capacity and 39% have shared their experiences with the global community.

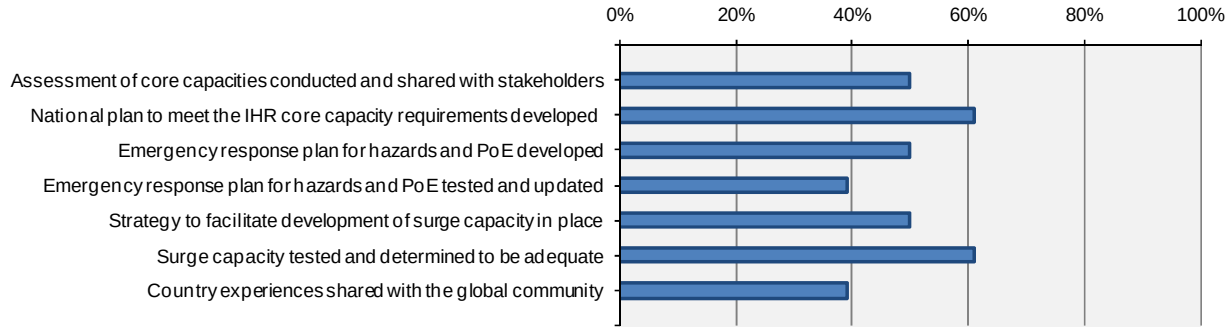

FIGURE 6 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC5: PREPAREDNESS, PUBLIC HEALTH EMERGENCY PREPAREDNESS AND RESPONSE

Sixty-six per cent of countries have a directory of experts to support a response to IHR-related hazards. National resources to address priority risks have been assessed by 61% of the countries. Risk profile and resources are regularly assessed by 22% of the countries.

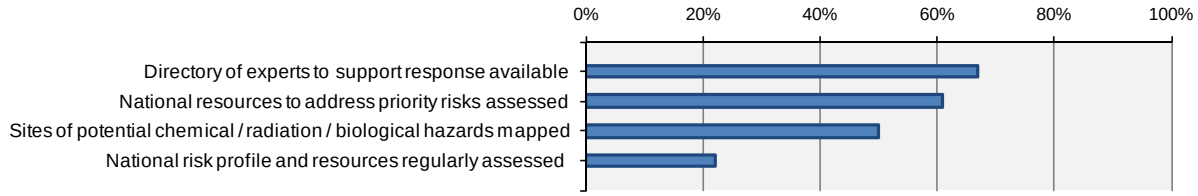

FIGURE 7 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC5: PREPAREDNESS, RISK AND RESOURCE MANAGEMENT FOR IHR PREPAREDNESS

3.6. CORE CAPACITY 6: RISK COMMUNICATION

All countries have identified risk communication partners and 56% of them have developed a risk communication plan. Ninety-four per cent state that Information/Education/Communication materials are tailored to the population's needs.

Thirty-nine per cent of countries have conducted an evaluation of public health communication efforts after emergencies; 86% have shared the results of this evaluation with the global community.

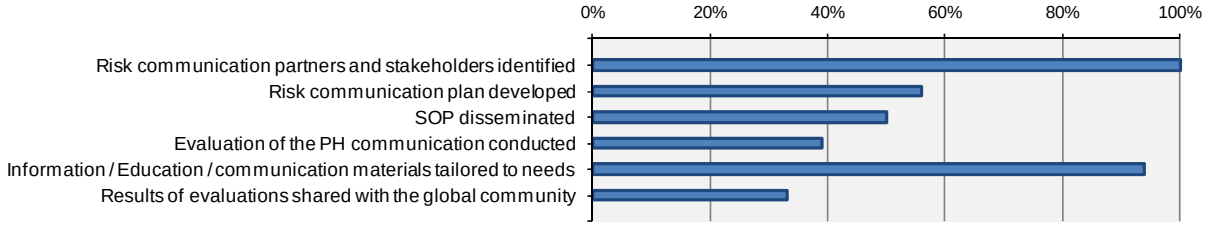

FIGURE 8 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC6: RISK COMMUNICATION

3.7. CORE CAPACITY 7: HUMAN RESOURCE CAPACITY

A unit responsible of the IHR human resource (HR) capacity assessment has been identified in 61% of countries and a training needs assessment was performed by 44%. Critical gaps in HR were identified by 56% of countries.

Training opportunities or resources were offered also to non-national staff by 28% of countries.

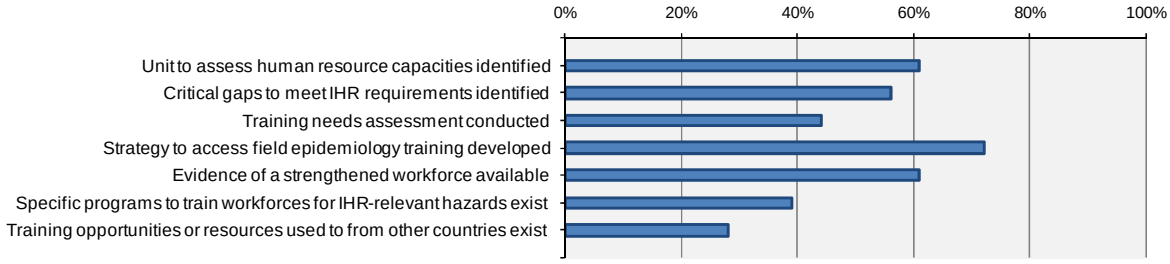

FIGURE 9 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC7: HUMAN RESOURCE CAPACITY

3.8. CORE CAPACITY 8: LABORATORY CAPACITY

Twenty-two per cent of countries declare that they do not have a policy to ensure the quality of laboratory diagnostic capacities and the same proportion is missing an inventory of laboratories. A network of laboratories for diagnostics and support to outbreak investigations exists in 78% of countries. Forty-four per cent have a reference laboratory contributing to diagnostic services in another country.

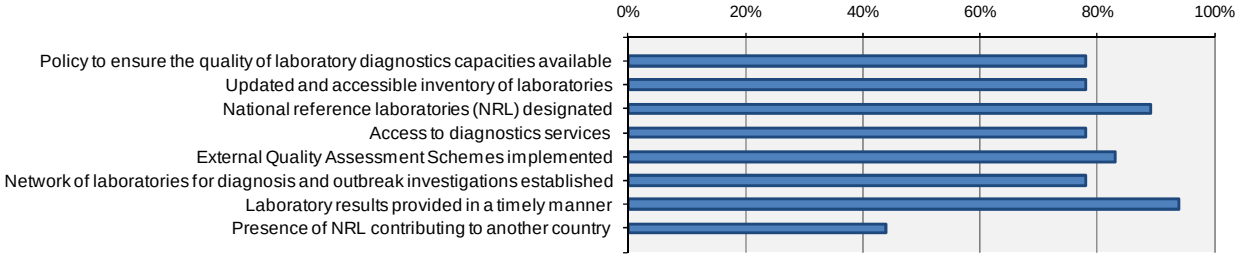

FIGURE 10 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC8: LABORATORY, LABORATORY DIAGNOSTICS AND CONFIRMATION CAPACITY

Biosafety guidelines and SOPs exist and have been disseminated in 72% of countries.
A laboratory bio-risk assessment was conducted in 56%.
Reports on experience and findings related to biosafety were shared with the global community by 44% of countries.

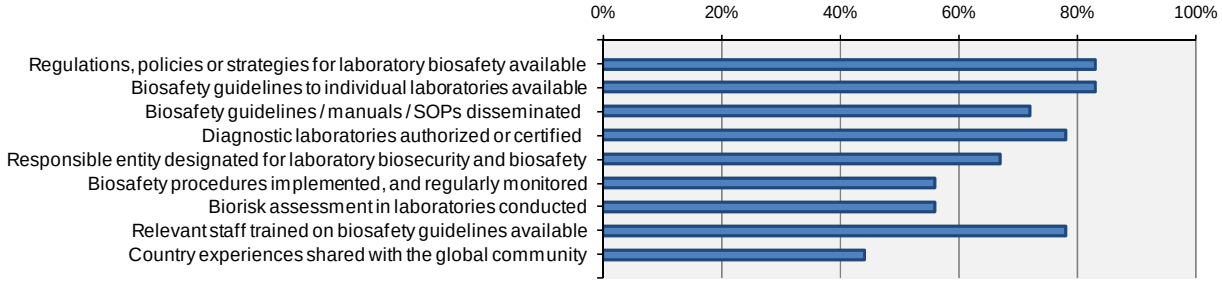

FIGURE 11 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / CC8: LABORATORY, LABORATORY BIOSAFETY AND BIOSECURITY

3.9. CAPACITY 9: POINTS OF ENTRY

Seventy-eight per cent of countries have identified designated ports (/airports) for development of capacities as specified in Annex 1 of IHR, and have sent the list of ports authorized to offer ship sanitation certificates to WHO. Fifty per cent and 33% of countries have a competent authority in all designated airports and ports, respectively.
Thirty-three per cent and 22% of countries have assessed all their designated airports and ports, respectively.
Experience and findings on the process of meeting PoE requirements were shared and documented by 28% of countries.

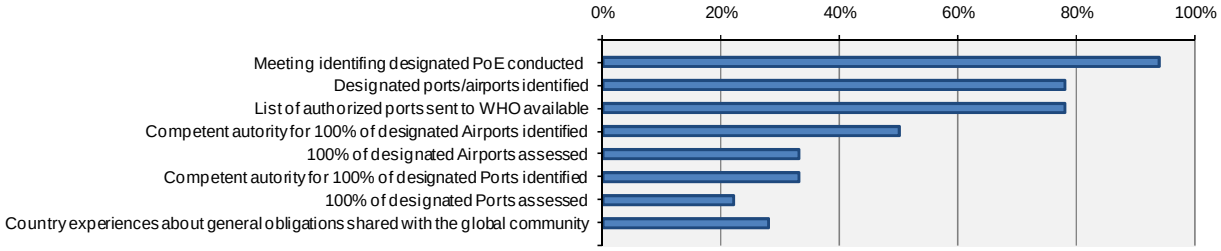

FIGURE 12 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C9: POINTS OF ENTRY, GENERAL REQUIREMENTS AT POE

Sixty-one per cent of countries have identified priority conditions for surveillance at PoE.
Sharing of surveillance information between the designated PoE and the national surveillance unit, and mechanisms for the exchange of information between PoE and medical facilities exist in 67% and 78% of countries, respectively.
In the 12 months preceding the completion of the survey, 28% of countries had carried out an analysis of the surveillance of health threats at PoE and had published the results.

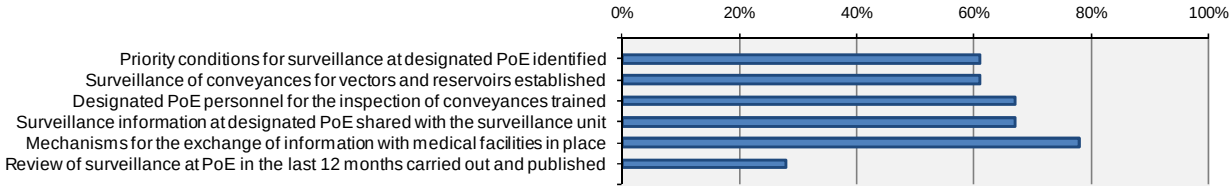

FIGURE 13 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C9: POINTS OF ENTRY, SURVEILLANCE AT POE

Thirty-nine per cent of countries have developed SOPs for response and 33% a contingency response plan at PoE. When it exists, this plan is integrated with other response plans in 66% of countries.
A referral system for the transport of sick travellers to medical facilities is in place in 72% of countries.
Eleven per cent of countries have published the results of the evaluation of response effectiveness to public health events at PoE.

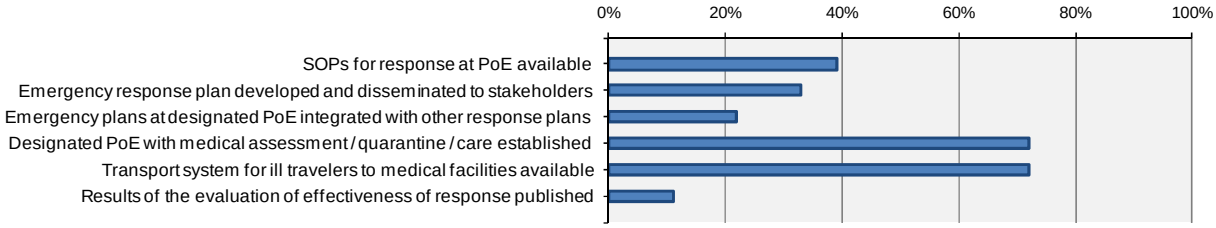

FIGURE 14 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C9: POINTS OF ENTRY, RESPONSE AT POE

3.10. CAPACITY 10: ZOONOTIC EVENTS

Detection of and response to zoonotic events is coordinated at governmental level in 83% of countries, and a national policy/strategy for surveillance of these events is in place in 89% of them.

Eighty-three per cent of countries have a documented list of priority zoonotic diseases. A focal point for animal health has been designated in 78% of countries.
Mechanisms for collaboration between human and animal health surveillance units are documented in 67% of countries.
Country experiences are shared with the global community by 44% of countries.

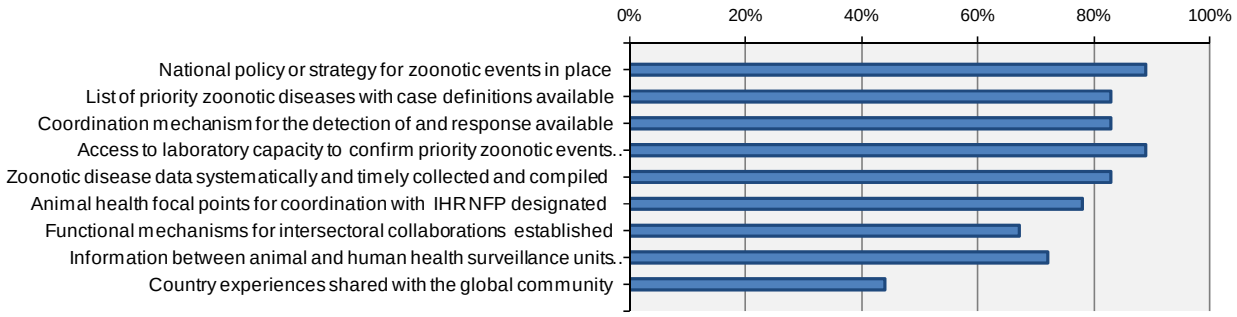

FIGURE 15 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C10: ZOONOTIC EVENTS

3.11. CAPACITY 11: FOOD SAFETY EVENTS

Standards and regulations for food safety control are available in 89% and 94% of countries, respectively. Access to laboratory capacity to confirm food safety events is available in 83% of countries. Seventy-two per cent of countries are members of the INFOSAN network.
In 78% of countries, food safety authorities report systematically on events to the surveillance unit.
Publications on the analysis of events related to food safety are available in 44% of countries.

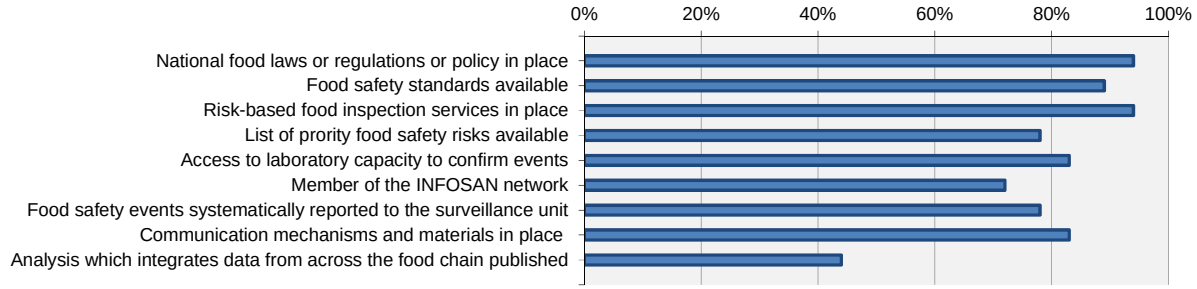

FIGURE 16 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C11: FOOD SAFETY EVENTS

3.12. CAPACITY 12: CHEMICAL EVENTS

Regulations and SOPs for surveillance and control of chemical events exist in 78% and 44% of countries, respectively. Surveillance is in place for 56% of countries but a list of priority chemical events is available in only 33% of countries.
An inventory of major sites at risk of a chemical emergency was carried out in 50% of countries. Access to laboratory capacity to confirm chemical events is available for 72% of countries. Rapid communication mechanisms with IHR NFP exist in 39% of countries. Country experiences are shared with the global community by 22% of countries.

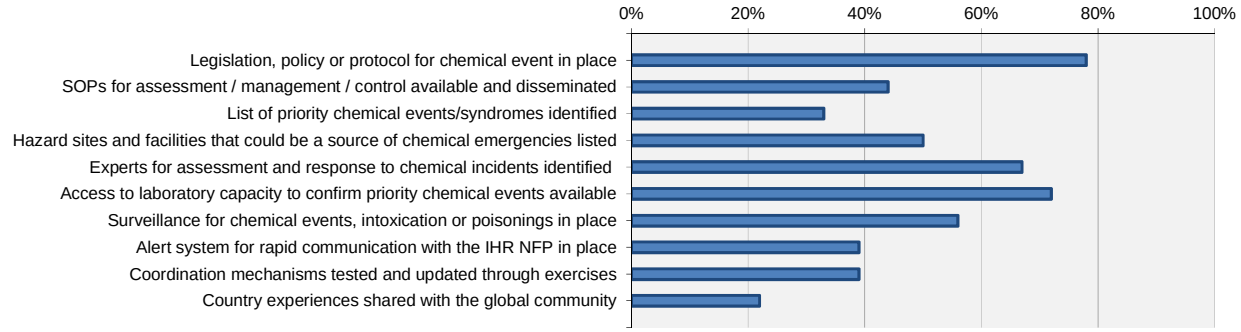

FIGURE 17 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C12: CHEMICAL EVENTS

3.13. CAPACITY 13: RADIATION EMERGENCIES

National plans for the management of radiation emergencies and transport of radioactive materials are available in 66% and 72% of countries, respectively. SOPs and plans for surveillance and response to radiation emergencies are available in 50% of countries.

A list of major sites at risk of a radiation emergency and the mapping of radiological risks were carried out in 72% and 50% of countries, respectively.

Access to laboratory capacity to confirm and identify radiation events is available in 78% of countries.

Coordination and communication mechanisms with national authorities and systematic information exchange with human health surveillance units exist in 61% of countries. Country experiences are shared with the global community by 28% of countries.

FIGURE 18 - ASSESSMENT OF CORE CAPACITIES IN EPISOUTH COUNTRIES 2010 (N=18) / C13: RADIATION EMERGENCIES

4. DISCUSSION

4.1. MAIN FINDINGS

Only half the countries have assessed core capacities and only 61% of them have developed a national plan for IHR implementation, as required in Annex 1 of IHR.

4.1.1. Capacities acquired

– Coordination on events that may constitute a PHEIC has been implemented;

- Event-based surveillance functions exist in 75% of countries;
- Resources and management procedures for rapid response exist.

4.1.2. Missing capacities

- Reactive surveillance systems: Events are reported on time in 50% of countries; risk assessment is systematically carried out for all urgent events in 39% of countries; IHR NFP respond on time to all verification requests from WHO in 50% of countries.
- Human resources: A directory of experts to support a response to IHR-related hazards is available in two-thirds of countries and resources to address priority risks were assessed by 61% of them; a training needs assessment was performed by 44%; critical gaps in HR were identified by 56% of countries.

4.1.3 Global weaknesses

Sharing of experiences and resources between countries is low

Sharing of experiences, studies and reports between countries varies from 11% (evaluation of the effectiveness of response at PoE) to 86% (evaluation of public health communication efforts after emergencies) (median= 34%).

More specifically, 28% countries have invited staff from other countries to the training courses they have organized, 39% have offered assistance for response to other States Parties, and 44% have provided reference laboratory diagnostic services to another country.

Little documentation: lack of reports and SOPs

Less than half of countries (44%) have documentation showing that recommendations following assessments have been implemented; coordination among relevant ministries on events that may constitute a PHEIC is generally not supported by SOPs (available only in 22% of countries).

National plans for the management of radiation emergencies and transport of radioactive material are available in 66% and 72% of countries, respectively. SOPs and plans for surveillance and response to radiation emergencies are available in 50% of countries.

4.2. CAPACITY STRENGTHS AND WEAKNESSES

4.2.1. Legislation Policy

Generally, legislation for IHR implementation is in place and has been assessed. However, few countries have documentation showing that recommendations following assessments have been implemented.

4.2.2. Coordination

All the countries have established the IHR NFP with full contact but very few have developed SOPs on coordination. Multi-sectoral collaboration on zoonotic, chemical, and radiation events exists but should be improved.

4.2.3. Surveillance

Broad establishment of the list of priority diseases/conditions to keep under surveillance is a strong point; timely reporting of events is missing.

For most specific events, surveillance is in place (food safety, chemical, zoonosis) but their coordination with the National human health surveillance system should be strengthened.

Even if their role in surveillance is quite new, event-based surveillance functions are well-acquired and SOPs and guidelines are in place.

Risk assessment needs to be strengthened.

4.2.4. Response

Response capacity is generally acquired.

4.2.5. Preparedness

Member states were asked to acquire IHR related capacities and develop plans of action before June 2009. However, only half of them have carried out a formal assessment and two-thirds have developed a national plan for IHR implementation. Focus should now be directed to the development of plans to guide acquisition of core capacities thereby improving IHR implementation.

Full mapping of major sites presenting chemical or radiation risks is not available and should be completed.

4.2.6. Risk Communication

Weaknesses are related to the absence of risk communication plans and evaluation of public health communication efforts after emergencies.

4.2.7. Human Resource Capacity

Availability of competent human resources is a key element for IHR implementation and the acquisition of required capacities. This is well perceived by countries but few of them have identified their training needs.

4.2.8. Laboratory Capacity

Most countries have developed the necessary framework, producing a policy to ensure the quality of laboratory diagnostic capacities, developing biosafety SOPs and guidelines, drawing up an inventory of laboratories and setting up a network of laboratories.
The main weakness is related to the absence of knowledge on bio-risks.
Access to laboratory capacity to confirm specific events (food safety, chemical, and radiation) is available in a majority of countries.

4.2.9. Points of Entry (PoE)

Most countries have a list of designated ports and airports, as specified in Annex 1, and they have informed WHO of authorized ports.

Weaknesses at PoE are related to the absence of a competent authority in all designated ports/airports, to the absence of capacity assessments, and more generally to the lack of efficient surge and response capacities.

4.3. LIMITATIONS OF THE STUDY

Countries were asked to fill in an online questionnaire by WHO in 2010. One third of those in the EpiSouth Network have not done so. As countries that have not replied might have different characteristics from those that have done so, it is clear that results might be biased.

Due to the database format, when no choice was selected, it was not possible to determine whether the intended answer was "unknown" or "no". Consequently, for most questions, it was chosen to take into account only positive answers risking an underestimation of core capacity acquisition.

4.4. IDENTIFIED SUPPORT TO THE EPISOUTH PLUS WORK PACKAGES

4.4.1. Mediterranean Regional Laboratories Network (WP4)

This Work Package aims at contributing to improved detection of common public health threats across the Mediterranean, through a valorisation of existing facilities and diagnostic capacities in the EpiSouth area.
Its goal is to establish a regional laboratory network with selected laboratories and to facilitate interactions between public health institutions, national reference laboratories, and the Pasteur Institute Network. Its specific objectives are to map existing laboratories, assess their diagnostic and confirmation capacity, facilitate rapid access to laboratory facilities and facilitate communication between national reference laboratories in the participating countries.

According to the results of the assessment, most countries have developed national networks. However, it should be pointed out that the existence of an inventory is not known for one third of countries (those that have not replied to the questionnaire) and these countries might have the weakest capacities.
In order to propose the implementation of a laboratory network at the Episouth region level, all data related to laboratory capacities in the countries which have already mapped their capacities should be collected and completed with assessments from the other countries.

According to the results of this assessment, activities needed in the area of interest to WP4 are:

- producing a policy to ensure the quality of laboratory diagnostic capacities;
- updating and making available the inventory of public and private laboratories with relevant diagnostic capacities;
- having access to diagnostic services (through a national laboratory or through written agreement with international laboratory/s) for priority diseases, for pathogens listed in Annex 2 of the IHR (2005) and for public health threats including hazardous substances;
- establishing a national network of laboratories for diagnostic and support to outbreak investigations;

- providing laboratory test results from diagnostic laboratories in a timely manner to inform decision-making and actions, and
- having national reference laboratories contributing to the EpiSouth laboratory network, in sharing experiences, tools, resources, and providing diagnostic services to other countries.

This study has also pointed out the absence of knowledge on bio-risks that could also be addressed by WP4.

4.4.2. Generic Preparedness and Risk management procedures (WP5)

The aim of this WP is to increase health security in the Mediterranean and south eastern Europe by enhancing and strengthening preparedness to common health threats.

WP5 objectives are to promote the development of common procedures on preparedness and risk management among the countries involved in the network.

One of the key milestones for IHR implementation was the assessment of surveillance and response capacities by June 2009, and the development and implementation of plans of action to ensure that these core capacities are functioning by 2012.

According to this study, countries are lagging behind the schedule as only half of them have formally conducted the initial assessment as required by IHR and have developed national plans for IHR implementation and emergency response plans for hazards and PoE.

This could be due to an absence of a clear vision of what capacities need to be acquired or strengthened. Lack of competent human resources is probably at the base of the problem.
This assessment therefore confirms the need for the activities planned in the context of WP5: to provide support to countries for elaborating IHR plans of action through training and simulation exercises.
According to the results of this assessment, further activities needed in the area of interest to WP5 are: encourage countries to develop SOPs for risk management, and improve coordination among national stakeholders involved in the implementation of IHR.

4.4.3. Early warning system and cross-border Epidemic Intelligence (WP6)

Enhancing Early Warning System (EWS) in the Mediterranean is essential to reinforce health security in the area. Formalized procedures exist at an international level: IHR (2005) that give WHO a worldwide mandate, and EWRS that sets the notification regulation for EU countries. However, surveillance and alert networks developed by European and international organizations are not interconnected and none fulfil the need of enhanced health information exchange across the Mediterranean.

The objective of WP6 is to enhance Mediterranean Early Warning Systems through the sharing of alerts and epidemic intelligence information among EpiSouth countries, and to develop interoperability with other EWS platforms.

According to the results of our study, event-based surveillance functions are well-acquired, and developed SOPs and guidelines are in place. However events are reported late and communication between the NFPs and WHO as well as risk assessments are delayed.

In addition to facilitating the sharing of information between countries on public health events threatening their populations, WP6 could probably also contribute to improving communication between different stakeholders involved in early warning, risk assessment and event notification.

4.4.4. Data collection and assessment of IHR implementation (WP7)

The goal of WP7 is to improve capacities required by IHR (2005), identified among those considered as priorities in the EpiSouth region. Its specific objectives are to identify capacities common to EpiSouth countries that need to be acquired or strengthened, to develop guidelines for the acquisition of these capacities and to advocate for access to resources needed for their implementation.

This report contributes to the documentation of strengths and weaknesses for each core capacity in the EpiSouth countries. It will also help WP4, WP5, WP6 and WP7 to identify cross cutting issues in the realm of IHR capacity strengthening and possibly common activities to fine tune their plans of action.

The Mediterranean region has been an area of exchange for travellers, merchants and goods for centuries. With the development of modern transportation and the abolition of custom barriers between many countries of the region, the risk of cross-border spread of diseases has increased and the control of health hazards has been made more difficult.
The capacity to detect early and control imported diseases is therefore a major challenge for the countries of the region.

According to the results of the assessment, sharing of information between surveillance units at PoE and the National Surveillance System exist in most countries. However, systematic exchange of information should be available in all countries, and its efficiency confirmed.

Response capacities at PoE need to be strengthened and evaluated: SOPs and plans are rarely available, and integration with national plans should be effective.

Based on the results of this assessment, WP7 should probably focus on the acquisition of capacities required for surveillance and response at Points of Entry and their integration with National surveillance systems.

5. CONCLUSION

Rather than set up a new survey, available information on the assessment of IHR implementation was considered in this analysis.

Using this, Work Package 7 identified the main strengths / weaknesses of the implementation of the regulation and determined which aspects could be specifically worked on, in the context of EpiSouth.

However, the information gathered was not precise enough to develop a plan of action. More data is needed and will be collected through specifically designed tools and further discussions will be initiated with the various steering teams of the different WPs.

More specifically for WP7, one important area of work could be to improve surveillance, coordination and response among national surveillance systems and points of entry.

6. ANNEX 1 - Questionnaire

(selected questions are bolded)

CC1: LEGISLATION POLICY
1.1.1.1 Has an assessment of relevant legislation, regulations, administrative requirements and other government instruments for IHR (2005) implementation been carried out?
1.1.1.2 Is there documentation that recommendations following assessment of relevant legislation, regulations, administrative requirements and other government instruments have been implemented in your country?
1.1.1.3 Has there been a review of national policies to facilitate the implementation of IHR NFP functions and the implementation of technical core capacities?
1.1.1.4 Is there documentation that policies to facilitate IHR NFP core and expanded functions and strengthening of technical core capacities have been implemented?
1.1.1.5 Is there a published compilation of national IHR-related legislation?
CC2: COORDINATION
2.1.1.1 Is there coordination within relevant ministries on events that may constitute a public health event of national or international concern?
2.1.1.10 Have updates on the IHR been conducted with relevant stakeholders on at least an annual basis ?
2.1.1.2 Are Standard Operating Procedures (SOP) available for coordination between IHR NFP and stakeholders of relevant sectors?
2.1.1.3 Is a multisectoral, multidisciplinary committee, body or task force in place in order to address IHR requirements on surveillance and response for public health emergencies of national and international concern?
2.1.1.4 Are coordination mechanisms tested through an actual event occurrence or through exercises and updated as needed?
2.1.1.5 Is there a list of national stakeholders involved in the implementation of IHR?
2.1.1.6 Have the roles and responsibilities of various stakeholders under the IHR been defined?
2.1.1.7 Have plans been developed to sensitize all relevant stakeholders to their roles and responsibilities under the IHR?
2.1.1.8 Have plans to sensitize stakeholders to their roles and responsibilities been implemented ?
2.1.1.9 Has your country established an active IHR website?
2.1.2.1 Has the IHR NFP been established?
2.1.2.2 Has information on obligations under the IHR been disseminated to relevant national authorities and stakeholders?
2.1.2.3 Has the IHR NFP provided WHO with updated contact information as well as annual confirmation of the IHR NFP?
2.1.2.4 Has the NFP accessed IHR Event Information Site (EIS) at least monthly in the past 12 months?
2.1.2.5 Has there been at least one (written) NFP-initiated communication with WHO (consultation, notification or information sharing on a public health event) in the past 12 months?
2.1.2.6 Is there documentation of actions taken by the IHR NFP and relevant stakeholders following communications with WHO?
2.1.2.7 Has the country implemented any roles and responsibilities which are additional to the IHR NFP functions?
CC3: SURVEILLANCE
3.1.1.1 Is there a list of priority diseases or conditions for surveillance?
3.1.1.3 Are there specific units designated for surveillance of public health risks?
3.1.1.4a Has there been timely reporting from at least 60% of reporting units?
3.1.1.4b Has there been timely reporting from >80% of reporting units?

3.1.1.5 Are surveillance data on epidemic prone and priority diseases analysed at least weekly at national and sub-national levels?
3.1.1.6 Have baseline estimates, trends, and thresholds for alert and action been defined for the local public health response level for priority diseases/events?
3.1.1.7 Are there reports or other documentation showing that deviations or values exceeding thresholds are detected and used for action at the primary public health response level ?
3.1.1.8 Is there at least quarterly feedback of surveillance results disseminated to all levels and other relevant stakeholders?
3.1.1.9 Have evaluations of the early warning function of routine surveillance been carried out and country experiences, findings, lessons learnt shared with the global community?
3.2.1.1 Have information sources for public health events and risks been identified?
3.2.1.10 Do reported events contain essential information specified in the IHR?
3.2.1.11a Has risk assessment been carried out within 48 hours of reporting to national level for >60% of events identified as urgent in the last 12 months?
3.2.1.11b Has risk assessment been carried out within 48 hours of reporting to national level for100% of events identified as urgent in the last 12 months?
3.2.1.12a Does the IHR NFP respond to >60% of verification requests from WHO within 24 hours (Art 10)?
3.2.1.12b Does the IHR NFP respond to100% of verification requests from WHO within 24 hours (Art 10)?
3.2.1.13 Is the decision instrument in Annex 2 of the IHR (2005) used to notify WHO?
3.2.1.14 Has a 100% of events that meet criteria for notification under Annex 2 of IHR been notified by NFP to WHO (Annex 1A Art 6b) within 24 hours of conducting risk assessments over the last 12 months?
3.2.1.15 Has the use of the decision instrument been reviewed, with procedures for decision making updated on the basis of lessons learnt?
3.2.1.16 Are country experiences and findings in notification and use of Annex 2 of the IHR documented and shared globally?
3.2.1.2 Are there unit(s) designated for event-based surveillance that may be part of an existing routine surveillance system?
3.2.1.3 Have SOPs and guidelines for event capture, reporting, confirmation, verification, assessment and notification been developed and disseminated?
3.2.1.4 Have SOPs and guidelines for event capture, reporting, confirmation, verification, assessment and notification been implemented, reviewed and updated as needed?
3.2.1.5 Is there a system in place at national and/or sub-national levels for capturing and registering public health events from a variety of sources including, media (print, broadcast, community, electronic, internet etc.)?
3.2.1.6 Has a local community (primary response) level reporting strategy been developed?
3.2.1.7 Is there active engagement and sensitization of community leaders, networks, health volunteers, and other community members to the detection and reporting of unusual health events?
3.2.1.8 Has implementation of local community reporting been evaluated and updated as needed?
3.2.1.9 Have country experiences and findings on the implementation of event-based surveillance, and the integration with indicator-based surveillance been documented and shared with the global community?
CC4: RESPONSE
4.1.1.1 Are resources for rapid response during outbreaks of national or international concern accessible?
4.1.1.10 Do RRT submit preliminary written reports on investigation and control measures to relevant authorities in less than one week of investigation?
4.1.1.11 Are RRT mobilized for real events or through simulation exercise at least once a year at relevant levels?
4.1.1.12 Has an evaluation of response including the timeliness and quality of response been carried out?
4.1.1.14 Has the country offered assistance to other States Parties for developing their response capacities or implementing control measures?

4.1.1.2 Have management procedures been established for command, communications and control during public health emergency response operations?
4.1.1.3 Is there a functional, dedicated command and control operations centre at the national or other relevant level?
4.1.1.4 Have emergency response management procedures been evaluated after a real or simulated public health response?
4.1.1.6 Are Rapid Response Teams (RRT) available in the country?
4.1.1.7 Is there a roster of trained RRT members?
4.1.1.9 Can multidisciplinary RRT be deployed within 48 hrs from the time when the decision to respond is taken?
4.2.1.1 Has responsibility been assigned for surveillance of health-care-associated infections and anti-microbial resistance?
4.2.1.10 Does the management of patients with highly infectious diseases meet established IPC standards (national/international)?
4.2.1.11 Is there surveillance within high risk groups to promptly detect and investigate clusters of infectious disease patients, as well as unexplained illnesses in health workers?
4.2.1.12 Has a monitoring system for antimicrobial resistance been implemented, with available data on the magnitude and trends?
4.2.1.13 Are there qualified IPC professionals in place at a minimum in all tertiary hospitals?
4.2.1.14 Has compliance with infection control measures and their effectiveness been evaluated and published?
4.2.1.15 Has a national programm for protecting health care workers been implemented?
4.2.1.2 Are national infection prevention and control policies or guidelines in place?
4.2.1.4 Have infection control plans been implemented nationwide?
4.2.1.6 Are SOPs, guidelines and protocols for IPC available to all hospitals?
4.2.1.7 Are defined norms or guidelines developed for protecting health-care workers?
4.2.1.8 Is there national coordination for surveillance of relevant events such as health-care-associated infections, and infections of potential public health concern with defined strategies, objectives, and priorities in place?
4.2.1.9 Do all tertiary hospitals have designated area(s) and defined procedures for the care of patients requiring specific isolation precautions according to national or international guidelines?
CC5: PREPAREDNESS
5.1.1.1 Has an assessment of core capacities for the implementation of IHR been conducted (Annex 1A Article 2) and the report of the assessment shared with relevant national stakeholders?
5.1.1.2 Has a national plan to meet the IHR core capacity requirements been developed (Annex 1A Article 2)?
5.1.1.3 Has a national public health emergency response plan for hazards and Points of Entry (PoE) been developed (Annex 1A, Article 6g)?
5.1.1.4 Have national public health emergency response plan(s) for multiple hazards and PoE been tested in an actual emergency or simulation and updated as needed?
5.1.1.5 Is there a policy or strategy in place to facilitate development of surge capacity?
5.1.1.7 Has surge capacity been tested either through response to a public health event or during an exercise, and determined to be adequate?
5.1.1.8 Have country experiences and findings on emergency response and mobilizing surge capacity, been documented and shared with global community?
5.2.1.1 Is there a directory of experts in health and other sectors to support a response to IHR-related hazards?
5.2.1.10 Does the country contribute to international stockpiles?
5.2.1.2 Has a national risk assessment to identify the most likely sources of „urgent public health event" and vulnerable populations been conducted?
5.2.1.3 Have national resources been assessed to address priority risks?
5.2.1.4 Have major hazard sites or facilities that could be the source of chemical, radiological, nuclear or biological public health emergencies of international concern been mapped?

5.2.1.5 Have experts been mobilized from multiple disciplines/sectors in response to an actual public health event or simulation exercise in the past twelve months?
5.2.1.6 Is the national risk profile and resources regularly assessed (e.g. annually) to accommodate emerging threats?
5.2.1.7 Is a plan for management and distribution (if applicable) of national stockpiles available?
5.2.1.8 Are stockpiles (critical stock levels) for responding to the country's priority biological, chemical and radiological events and other emergencies available and accessible at all times?
5.2.1.9 Has the stockpile management system been tested through a real or simulated exercise and updated?
CC6: RISK COMMUNICATION
6.1.1.1 Have risk communication partners and stakeholders been identified?
6.1.1.10 Are regularly updated information sources accessible to media and the public for information dissemination?
6.1.1.11 Are there accessible and relevant IEC (Information, Education and Communications) materials tailored to the needs of the population?
6.1.1.12 Have results of evaluations of risk communications efforts during a public health emergency been shared with the global community?
6.1.1.2 Is there a unit responsible for coordination of public communications during a public health event, with roles and responsibilities of the stakeholders clearly defined?
6.1.1.3 Has a risk communication plan including social mobilization of communities been developed?
6.1.1.4 Are policies, SOPs or guidelines disseminated on the clearance and release of information during a public health event?
6.1.1.5 Has a risk communication plan has been implemented in >50% of public health events of national or potential international concern in the last 12 months.?
6.1.1.6 Are policies, SOPs or guidelines available to support community-based risk communications interventions during public health emergencies?
6.1.1.7 Has an evaluation of the public health communication been conducted after emergencies, including for timeliness, transparency and appropriateness of communications?
6.1.1.9a Have populations and partners have been informed of a real or potential risk within 24 hours following confirmation in >30% of PH emergencies in the last 12 months?
6.1.1.9b Have populations and partners have been informed of a real or potential risk within 24 hours following confirmation in >50% of PH emergencies in the last 12 months?
CC7: HUMAN RESOURCE CAPACITY
7.1.1.1 Has a responsible unit been identified to assess human resource capacities to meet the country's IHR requirements?
7.1.1.10 Are training opportunities or resources being used to train staff from other countries?
7.1.1.2 Have critical gaps been identified in existing human resources (numbers and competencies) to meet IHR requirements?
7.1.1.3 Has a training needs assessment been conducted?
7.1.1.5 Have workforce development plans and funding for the implementation of the IHR been approved by responsible authorities?
7.1.1.6 Are targets being achieved for meeting workforce numbers and skills consistent with milestones set in training development plan?
7.1.1.7 Has a strategy been developed for the country to access field epidemiology training (one year or more) in-country, regionally or internationally?
7.1.1.8 Is there evidence of a strengthened workforce when tested by urgent public health event or simulation exercise?
7.1.1.9 Are there specific programs, with allocated budgets, to train workforces for IHR-relevant hazards?
CC8: LABORATORY

8.1.1.1 Is there a policy to ensure the quality of laboratory diagnostic capacities (e.g. licensing, accreditation, etc.)?
8.1.1.10 Are all diagnostic laboratories certified or accredited to international standards or to national standards adapted from international standards?
8.1.1.11 Is there a national system in place for reliable and safe detection of MDR and XDR M. tuberculosis, with quality assurance results readily available?
8.1.1.12 Does the country have one or more NRL contributing to diagnostic services in another country?
8.1.1.2 Is there an updated and accessible inventory of public and private laboratories with relevant diagnostic
8.1.1.3 Have national reference laboratories (NRL) been designated?
8.1.1.5 Does the country have access to diagnostic services for priority diseases, for pathogens listed in Annex 2 of the IHR (2005) and for public health threats including hazardous substances?
8.1.1.6 Have national or international External Quality Assessment Schemes been implemented for diagnostic laboratories in the country for major public health disciplines?
8.1.1.7 Is there a network of national and international laboratories established to meet diagnostic and confirmatory laboratory requirements and support outbreak investigations for events specified in Annex 2 of IHR (2005)?
8.1.1.8 Are more than 10 non-AFP (Acute Flaccid Paralysis) hazardous specimens per year referred to national or international reference laboratories for examination?
8.1.1.9 Are laboratory test results received from diagnostic laboratories in a timely manner to inform decision-making and actions?
8.2.1.1 Are biosafety guidelines accessible to individual laboratories?
8.2.1.10 Are diagnostic laboratories designated and authorized or certified BSL 2 or above for relevant levels of the health care system?
8.2.1.11 Have country experience and findings related to biosafety been evaluated and reports shared with the global community?
8.2.1.2 Do regulations, policies or strategies exist for laboratory biosafety?
8.2.1.3 Has a responsible entity been designated for laboratory biosafety and biosecurity?
8.2.1.4 Have biosafety guidelines, manuals or SOPs been disseminated to laboratories?
8.2.1.5 Are relevant staff trained on biosafety guidelines?
8.2.1.6 Has national classification of microorganisms by risk group been completed?
8.2.1.7 Is there an institution or person responsible for inspection, (could include certification of biosafety equipment) of laboratories for compliance with biosafety requirements?
8.2.1.8 Are biosafety procedures implemented, and regularly monitored?
8.2.1.9 Has a biorisk assessment been conducted in laboratories to guide and update biosafety regulations, procedures and practice, including for decontamination and management of infectious waste?
CC9: POINTS OF ENTRY
9.1.1.1 Was a review meeting (or other appropriate method) conducted to identify Points of Entry for designation?
9.1.1.2 Has a"Competent authority" for each PoE been designated?
9.1.1.3 Have designated ports (as relevant)/airports for development of capacities specified in Annex 1 (as specified in Article 20, no.1) been identified?
9.1.1.4 Has a list of Ports authorized to offer certificates relating to ship sanitation been sent to WHO (as specified in Article 20, no.3)?
9.1.1.5a Do >50% of designated Airports have a competent authority?
9.1.1.5b Does a 100% of designated Airports have a competent authority?
9.1.1.6a Have >50% of designated Airports been assessed?
9.1.1.6b Have a 100% of designated Airports been assessed?
9.1.1.7a Do >50% of designated Ports have a competent authority?
9.1.1.7b Does a 100% of designated Ports have a competent authority?

9.1.1.8a Have >50% of designated Ports been assessed?
9.1.1.8b Have a 100% of designated Ports been assessed?
9.1.1.9 Have country experiences and findings about the process of meeting PoE general obligations been shared and documented?
9.2.1.1 Have priority conditions for surveillance at designated PoE been identified?
9.2.1.2 Has surveillance information at designated PoE been shared with the surveillance department/unit?
9.2.1.3 Are mechanisms for the exchange of information between designated PoE and medical facilities in place?
9.2.1.4 Do designated PoE have access to appropriate medical services including diagnostic facilities for the prompt assessment and care of ill travelers, with adequate staff, equipment and premises (Annex 1b, art 1a)?
9.2.1.5 Has surveillance of conveyances for presence of vectors and reservoirs at designated PoE been established (Annex 1B art 2e)?
9.2.1.6 Do designated PoE have trained personnel for the inspection of conveyances (Annex 1b, art 1c)?
9.2.1.7 Do designated PoE have the capacity to safely dispose of potentially contaminated products?
9.2.1.8 Is there a functioning programme for the surveillance and control of vectors and reservoirs in and near Points of Entry (Annex 1A, art 6a Annex 1b, art 1e)?
9.2.1.9 Has a review of surveillance of health threats at PoE been carried out in the last 12 months and results published?
9.3.1.1 Are SOPs for response at PoE available?
9.3.1.2 Has a public health emergency contingency response plan at designated PoE been developed and disseminated to key stakeholders?
9.3.1.3 Have the public health emergency contingency plans at designated PoE been integrated with other response plans?
9.3.1.5 Do designated PoE have appropriate space, separate from other travelers, to interview suspect or affected persons (Annex 1B, art 2c)?
9.3.1.6 Can designated PoE provide medical assessment or quarantine of suspect travelers, and care for affected travelers or animals (Annex 1B, art 2b and 2d)?
9.3.1.7 Is there a referral and transport system for the safe transfer of ill travelers to appropriate medical facilities and access to relevant equipment, in place at a designated PoE (Annex 1b, art 1b and 2g)?
9.3.1.8 Can recommended public health measures (article 1B art 2e and 2f) be applied at designated PoE?
9.3.1.9 Are results of the evaluation of effectiveness of response to PH events at PoE published?
CC10: ZOONOTIC EVENTS
10.1.1.1 Is there a coordination mechanism within the responsible government authority(ies) for the detection of and response to zoonotic events?
10.1.1.10 Is there timely and systematic information exchange between animal, human health surveillance units, and other relevant sectors regarding urgent zoonotic events and risks?
10.1.1.11 Has regular (e.g. monthly) information exchange been established on zoonotic diseases among the laboratories responsible for human diseases and animal diseases?
10.1.1.12 Is there a regularly updated roster (list) of experts that can respond to zoonotic events?
10.1.1.13 Has a mechanism been established for response to outbreaks of zoonotic diseases by human and animal health sectors?
10.1.1.14 Do animal health (domestic and wildlife) authorities/units participate in a national emergency response committee?
10.1.1.15 Have operational, intersectoral public health plans for responding to zoonotic events been tested through occurrence of events or simulation exercises and updated as needed?
10.1.1.16 Is there timely (as defined by national standards) response to more than 80% of zoonotic events of potential national and international concern?

10.1.1.17 In the last 12 months, have you shared country experiences and findings related to zoonotic risks and events of potential national and international concern with the global community?
10.1.1.2 Is there a national policy or strategy in place for the surveillance and response to zoonotic events?
10.1.1.3 Have focal points responsible for animal health (including wildlife) been designated for coordination with the MoH and/or IHR NFP?
10.1.1.4 Have functional mechanisms for intersectoral collaborations that include animal and human health surveillance units and laboratories been established and documented?
10.1.1.5 Is there a list of priority zoonotic diseases with case definitions available?
10.1.1.6 Is there systematic and timely collection and collation of zoonotic disease data?
10.1.1.7 Is there systematic information exchange between animal and human health surveillance units about urgent zoonotic events and potential zoonotic risks?
10.1.1.8 Does the country have access to laboratory capacity, nationally or internationally (through established procedures) to confirm priority zoonotic events?
10.1.1.9 Is zoonotic disease surveillance implemented with a community component?
CC11: FOOD SAFETY EVENTS
11.1.1.1 Are national or international food safety standards available?
11.1.1.10 Do food safety authorities report systematically on food safety events of national or international concern to the surveillance unit?
11.1.1.11 Are risk-based food inspection services in place?
11.1.1.12 Does the country have access to laboratory capacity to confirm priority food safety events of national or international concern including molecular techniques?
11.1.1.13 Is there a roster of food safety expert available for the assessment and response to food safety events?
11.1.1.14 Have operational plans for responding to food safety events been tested and updated as needed?
11.1.1.15 Are food safety events investigated by teams that include food safety experts?
11.1.1.16 Have mechanisms been established for tracing, recall and disposal of contaminated products ?
11.1.1.17 Are communication mechanisms and materials in place to deliver information, education and advice to stakeholders across the farm-to-fork continuum?
11.1.1.18 Have food safety control management systems (including for imported food) been implemented?
11.1.1.19 Has information from foodborne outbreaks and food contamination been used to strengthen food management systems, safety standards and regulations?
11.1.1.2 Are there national food laws or regulations or policy in place [94] to facilitate food safety control?
11.1.1.20 Has the analysis of food safety events, foodborne illness trends and outbreaks which integrates data from across the food chain been published ?
11.1.1.3 Is there an operational national multisectoral mechanism for food safety events in place?
11.1.1.4 Are decisions of the food safety multisectoral body implemented and outcomes documented?
11.1.1.5 Has a functioning coordination mechanism been established between the Food Safety Authorities, specifically the INFOSAN Emergency Contact Point (if member) and the IHR NFP?
11.1.1.6 Is your country an active member of the INFOSAN network?
11.1.1.7 Is a list of priority food safety risks available?
11.1.1.8 Are guidelines or manuals on the surveillance, assessment and management of priority food safety risks available?
11.1.1.9 Has epidemiological data related to food contamination been systematically collected and analyzed?
CC12: CHEMICAL EVENTS
12.1.1.1 Have experts been identified for public health assessment and response to chemical incidents?
12.1.1.10 Are manuals and SOPs for rapid assessment, case management and control of chemical events available and disseminated?

12.1.1.11 Is there timely and systematic information exchange between appropriate chemical units and surveillance units about urgent chemical events and potential chemical risks?
12.1.1.12 Is there an emergency response plan that defines the roles and responsibilities of relevant agencies in place for chemical emergencies?
12.1.1.13 Does the country have laboratory capacity or access to laboratory capacity to confirm priority chemical events?
12.1.1.14 Is there a risk communication plan for chemical events coordinated with the national risk communications plan?
12.1.1.15 Have chemical event response plans been tested through occurrence of real event or through a simulation exercise and updated as needed?
12.1.1.16 Is there an adequately-resourced Poison Centre(s) in place?
12.1.1.17 Have country experience and findings regarding chemical events and risks been shared with the global community?
12.1.1.2 Is legislation, policy or protocol in place for chemical event surveillance, alert and response?
12.1.1.3 Do national authorities responsible for chemical events have a designated focal point for coordination with the Ministry of Health and/or the IHR National Focal Point?
12.1.1.4 Is there an alert system in place for rapid communication with the IHR NFP?
12.1.1.6 Have coordination mechanisms been tested and updated through exercises?
12.1.1.7 Is surveillance in place for chemical events, intoxication or poisonings?
12.1.1.8 Has a list of priority chemical events/syndromes that may constitute a potential public health event of national and international concern been identified?
12.1.1.9 Is there an inventory of major hazard sites and facilities that could be a source of chemical public health emergencies?
CC13: RADIATION EMERGENCIES
13.1.1.1 Have experts been identified for public health assessment and response to radiological and nuclear events?
13.1.1.10 Do agencies responsible for radiation emergencies participate in a national emergency response committee and in coordinated responses to radiation emergencies?
13.1.1.11 Is there a radiation emergency response plan ?
13.1.1.12 Have radiation emergency response drills been carried out regularly at national level, including requesting international assistance (as needed) and international notification?
13.1.1.13 Is there a mechanism in place for access to hospitals or health-care facilities with capacity to manage patients from radiation emergencies (in or out of the country)?
13.1.1.14 Is there a strategy for public communication in case of a radiological or nuclear event?
13.1.1.15 Does the country have basic laboratory capacity and instruments to detect and confirm presence of radiation and identify its type (alpha, beta, or gamma) for potential radiation hazards?
13.1.1.16 Are there regularly updated collaborative mechanisms in place for access to specialized laboratories that are able to perform bioassays, biological dosimetry by cytogenetic analysis and ESR?
13.1.1.17 Are country experiences relating to the detection and response to radiological risks and events documented and shared with the global community?
13.1.1.2 Is there a national policy or plan for the detection, assessment and response to radiation emergencies?
13.1.1.3 Is there a national policy or plan for national and international transport of radioactive material and samples and waste management, including from hospitals and medical services?
13.1.1.4 Is there an established coordination and communication mechanism for risk assessments, risk communications, planning, exercising and monitoring among relevant National Competent Authorities (NCAs) responsible for nuclear regulato
13.1.1.5 Is there an inventory of hazard sites and facilities using/handling radioactive sources which may be the source of a public health emergency of international concern?
13.1.1.6 Is monitoring in place for radiation emergencies?

13.1.1.7 Is there mapping of the radiological risks that may be a source of a potential public health emergency of international concern (sources of exposure, populations at risk, etc.)?
13.1.1.8 Is there systematic information exchange between radiological competent authorities and human health surveillance units about urgent radiological events and potential risks that may constitute a public health emergency of international conce
13.1.1.9 Are there scenarios, technical guidelines and SOPs for risk assessment, reporting, event verification and notification, investigation and management of radiation emergencies?

7. ANNEX 2 – Limitations of the study

Countries were asked to fill in an online questionnaire by WHO in 2010. One third of those in the EpiSouth Network have not done so. As countries that have not replied might have different characteristics from those that have done so, it is clear that results might be biased.

Due to the database format, when no choice was selected, it was not possible to determine whether the intended answer was "unknown" or "no". Consequently, for most questions, it was chosen to take into account only positive answers risking an underestimation of core capacity acquisition. Table 1 shows the distribution of “unknown” and “no” answers for each core capacity.

Core capacity	YES (%)	NO (%)	UNKNOWN (%)	TOTAL (%)
CC1: Legislation Policy	61	39	0	100
CC2: Coordination	77	23	0	100
CC3: Surveillance	64	30	6	100
CC4: Response	73	26	1	100
CC5: Prepardness	50	41	9	100
CC6: Risk Communication	62	31	7	100
CC7: Human Resource Capacity	52	41	7	100
CC8: Laboratory	73	22	5	100
CC9: Points of Entry	52	34	14	100
CC10: Zoonotic Events	76	15	9	100
CC11: Food Safety Events	80	9	11	100
CC12: Chemical Events	48	31	21	100
CC13: Radiation Emergencies	62	10	28	100

TABLE 1 - DISTRIBUTION OF IHR CORE CAPACITIES ACCORDING TO ANSWERS (YES, NO OR UNKNOWN)