Episouth plus project

WP7

SITUATION ANALYSIS ON COORDINATION OF SURVEILLANCE BETWEEN POINTS OF ENTRY AND THE NATIONAL HEALTH SYSTEM

Morocco

Ahmed Rguig[1], Abdel Aziz Barkia[1], Gerardo Priotto[2], Flavia Riccardo[3], Maria Grazia Dente[3]

[1]Ministry of Health, Rabat, Morocco,
[2]World Health Organization HQ, Lyon, France,
[3] Istituto Superiore di Sanità, Rome, Italy,

on behalf of the EpiSouth Network

December 2013

The EpiSouth Plus project is co-funded by the European Union DG-SANCO/EAHC and DEVCO/EuropeAid together with the participating national partner Institutions. The financial support of the Italian Ministry of Health and ECDC is also acknowledged.

The Project is led by the Italian National Institute of Health and counselled by an Advisory Board composed by EC, ECDC, WHO and other international experts.

Suggested citation: A. Rguig, A. Barkia, G. Priotto, F. Riccardo and M. G. Dente on behalf of the EpiSouth Network. The EpiSouth Plus Project. Situation analysis on coordination of surveillance between points of entry and the national health system- Country Report, Morocco

Contents

Acknowledgements

The Morocco site visit was conducted by the EpiSouth SA investigators: Ahmed Rguig (Moroccan MoH, EpiSouth Focal Point for Morocco); Abdelaziz Barkia (Head of the Central Unit of Contrôle Sanitaire aux Frontières, Moroccan MoH, IHR NFP) and Gerardo Priotto (WHO, HQ). Flavia Riccardo (ISS, Episouth WP7 coleader) contributed both in the preparation of the study tools and in the finalization of this report. Maria Grazia Dente (Episouth Project coordinator) and Alex Leventhal (Israeli MoH), although unable to participate to the site visit, have fully participated in the implementation of the study and the results obtained have greatly benefited from their contribution.

Many thanks go to Yves Souteyrand (WHO Country Office, Morocco); Lou Goudi (SCSF Office, Bab Sebta), Abderrahim Rachdi (Head of the Tanger SCSF office) and his staff Abdelhafib Hamman, Tesien Moulana, Layla Bouzian, Rachid Chamel and Amouar Bakal; Khalid Badahi,(Mdiq-Fnideq Provincial Health delegate); Mohamed Bellot (Head of the Marrakech SCSF office) and his staff Mohamed Zaffa, for their support and availability during the country visit and their willingness to share information and relevant documentation with the investigator team as well as for the comments and suggestions they provided in the revision phase of this report.

The contribution of Pierre Nabeth (WHO HQ), Tanya Melillo (Maltese MoH, EpiSouth Focal Point for Malta); Martin Anthony Williams (Maltese MoH, IHR National Focal Point); Loredana Vellucci (Italian MoH, EpiSouth Focal Point for Italy), of Dr Assad Rahhal (Jordanian MoH, IHR NFP) and of Dr Sultan Abdullah Saleh (Jordanian MoH, EpiSouth Focal Point for Jordan), co-investigators of the EpiSouth SA, in the production of the methodology, tools as well in their inputs on the study results are acknowledged.

Acronyms

ANP	Agence Nationale des Ports
CD	Communicable Diseases
CNRP	Centre National de Radioprotection
CPE	Cellules provinciales/préfectorales de santé
SCPVOV	Service du Contrôle des Produits Végétaux et d'Origine Végétale
DELM	Directorate for Epidemiology and Disease Control (Direction de l'Epidémiologie et de la Lutte contre les Maladies)
DG	Directorate General
DGSN	Direction générale de la sûreté nationale
DM	Ministerial Decree
DPMS	Délégation provinciale/préfectorale du Ministère de la Santé -Provincial Health Unit
DRS	Direction Régionale de Santé - Regional Directorate of Health
DSA	Division de la Santé Animale
DVHA	Division Vétérinaire de l'Hygiène Alimentaire
IHR	International health regulations
IHR NFP	IHR National Focal Point
MD	Medical Doctor
MoH	Ministry of Health
ONDA	Office National des Aéroports
ONSSA	Office National de Sécurité Sanitaire des Produits Alimentaires
PCC	Poste de Coordination Central
PIF	Poste d'Inspection aux Frontières
PoE	Point of Entry
RASFF	Rapid Alert for Food and Feed
SA	Situation Analysis
SCSF	Service de Contrôle Sanitaire aux Frontières – Borders Health Control Service
SOP	Standard Operating Procedures
WHO	World Health Organization
SME	Service des Maladies Epidémiques
SSE	Service de Surveillance Epidémiologique
WP	Work Package

1. Introduction

1.1. THE EPISOUTH NETWORK

The EpiSouth Plus project is aimed at increasing health security in the Mediterranean area and South-East Europe by strengthening the preparedness for 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 (2005) (hereinafter referred to as IHR).

With its 27 countries (10 EU and 17 non-EU) EpiSouth is the biggest inter-country collaborative effort in the Mediterranean region. Focal Points from each participating country have been appointed and asked for active involvement in the project's activities.

The project is organized in seven Work Packages (WP), each jointly co-led by an EU and a non-EU country/International Organization. WP leaders work in close contact with the corresponding WP Steering Team (ST), 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.

1.2. WORK PACKAGE 7– FACILITATING IHR IMPLEMENTATION

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 (ST).

The goal of WP7 is to improve capacities required by the IHR , 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.

Through its yearly monitoring, WHO assesses in each country the level of implementation of capacities required by the IHR. However, the approach adopted is purely quantitative: no information on how the capacity was acquired is available. In addition, disaggregated data by region or group of countries is usually not made available by WHO, the 1st report of the EpiSouth Plus Project[1] being an exception.

Activities performed by the EpiSouth WP7 during the first two years of the EpiSouth Plus project led to the identification of an area needing priority attention for the implementation of the IHR in the EpiSouth Region: the **coordination of surveillance between Points of Entry (PoE) and National Health Systems**.

This aspect has been also recognized as a global priority, and WHO is therefore also developing global guidance on coordination of surveillance between PoE and National Health Systems. The EpiSouth WP7 Steering Team has been among the expert groups consulted in this process.

Literature on the topic is very scarce[2]. There is still a gap in information sharing of experiences and know how in this domain among countries.

---

[1] *"Level of implementation of IHR 2005 in the EpiSouth Region: Analysis of WHO data and identification of priority areas", July 2011 available on the EpiSouth Plus website* http://www.episouthnetwork.org/sites/default/files/outputs/wp7-episouth_ihr_assessment_final-final.pdf

[2] *"In depth analysis of coordination of surveillance and response between points of entry and national systems in the EpiSouth region. Review of relevant scientific literature and of existing monitoring frameworks", December 2011 available on the EpiSouth Plus website* http://www.episouthnetwork.org/sites/default/files/outputs/wp7-

As stated by the WP7 ST in two meeting occasions (July 2011[3] and July 2012[4]), there is an added value in performing an analysis of anecdotic experiences and in sharing examples of how countries, facing similar problems in coordinating surveillance between Points of Entry and National Health Systems, approached and managed the functions required under IHR (through real-life illustrations). For this reason WP7 decided to perform a situation analysis to describe, among a selected number of countries, how coordination issues are addressed and which barriers are still in place. EpiSouth WP7 will therefore contribute to strengthening the coordination between PoE and national surveillance systems, by documenting how this works in selected countries of the EpiSouth network.

1.3. THE EPISOUTH NATIONAL SITUATION ANALYSIS ON COORDINATION OF SURVEILLANCE BETWEEN POE AND NATIONAL HEALTH SYSTEMS

The general approach chosen is that of a **national situation analysis of selected countries in the EpiSouth Region**. To keep the effort cost effective the analysis was not carried out on all 27 countries of the network, but on four countries chosen on the basis of their experience in the coordination of human health surveillance at PoE, their demographic and geo-political characteristics and their willingness to be part of the study.

As stated above, quantitative surveys are already carried out by WHO annually to assess progress in IHR implementation. This study was not aimed at duplicating this effort. In addition, countries present in the WHO workshop on coordination of surveillance between Points of Entry and National Health Systems advised not to propose additional quantitative surveys, suggesting to adopt methods that could provide qualitative information on how countries tackle coordination of surveillance[3]. The methodology was defined taking into account these considerations.

1.3.1. Objectives of the national situation analysis

General objective:

Contribute to improve the coordination of surveillance between Points of Entry (PoE) and National Health Systems (NHS) in the EpiSouth region, in the framework of the IHR .

Specific objectives:

- Describe how the exchange of information is organized between PoE and NHS in four countries representative of the diversity of the EpiSouth region;
- Identify formal procedures in place and legal constraints in these four countries,
- Describe main challenges and success stories in establishing a functional coordination of surveillance between PoE and national health systems in these four countries.

in depth analysis of coordination of surveillance and response between points of entry and national system. pdf

[3] *EpiSouth Plus project, First WP7 Steering Team Meeting, Rome, Italy, July 2011*

[4] *EpiSouth Plus Second WP7 Steering Team Meeting at the WHO 2nd informal consultation meeting on WHO technical advice for management of public health events on board ships, Lyon, France, April 2012*

2. Methodology

A full description of the methodology of the Situation Analysis (SA) is available in a separate text[5] uploaded on the EpiSouth Plus Website. Only specificities of the implementation of the analysis in Morocco are hereby reported.

2.1. SELECTION OF MOROCCO AS ONE OF THE EPISOUTH COUNTRIES PARTICIPATING IN THE SITUATION ANALYSIS

Morocco, a non-EU country, was selected among the candidate countries for the SA because of its experience in coordination of surveillance activities between Points of Entry and the Ministry of Health. After the definition of the Terms of Reference for the participation in the study, and the agreement of the country through its EpiSouth Focal Point and IHR National Contact Point, Morocco was selected as representative of the fourth scenario depicted in Table 1.

Table 1 - Scenario categorization and participating countries

SCENARIO	EXPECTED IMPACT ON COORDINATION BETWEEN POES AND NATIONAL SURVEILLANCE SYSTEM	PARTICIPATING COUNTRIES
Small coastal states and islands	No or few ground crossings, numerous ports, few airports. Small countries with possibly fewer administrative levels/ overlapping professional functions.	Malta
Large States with extensive coastlines and federal or strongly decentralized health systems	All PoE present in large numbers, numerous administrative levels with diversification of competencies and greater coordination complexities.	Italy
States with no or little coastlines	Ports absent or very limited, higher importance of airports and ground crossings for which greater experience may have been gathered.	Jordan
Large States with extensive coastlines and more centralized health systems	All PoE present in large numbers, numerous administrative levels but central bodies	Morocco

2.2. COLLATION OF AVAILABLE DATA

In advance of the site visit, documents and data on the country's government structure, its surveillance system, the type, number, size and location of PoE as well as relevant legislation and official guidance documents concerning coordination of surveillance functions between PoE and the National Health System were collected.

The fact that investigators and all staff interviewed were fluent in French further facilitated the work.

2.3. PREPARATION AND EXECUTION OF THE COUNTRY VISIT

Preliminary meetings were held, both via teleconference and face-to-face, among the EpiSouth investigators involved in the site visit to define the methods and action plan.

The visit included the Central MoH offices in Rabat, a large international port (Tangier), an international airport (Marrakech) and an international ground crossing (Bab Sebta).

[5] *National Situation Analysis on coordination of surveillance between points of entry and national health systems. Methodology*

The EpiSouth National Focal Point and the Service de Contrôle Sanitaire aux Frontières (SCSF) National Coordinator identified the key actors and informants to be interviewed at each PoE to be visited, establishing contact with them in advance. Interviewees received detailed information about the mission, in particular about the focus and scope of the investigation, in order to avoid dispersion into the numerous activities of PoE that are not pertinent to human health surveillance. Interviewees were also informed in advance about the investigators' interest in obtaining copies of pertinent documents.

The EpiSouth National Focal Point initiated clearance procedures to enable the investigator's visits to the PoE facilities that required advance application with personal documentation. The visits included meetings with presentations done by the PoE staff and a tour of key facilities in the PoE. The discussions included the analysis of real-life examples of recent health events.

A briefing and a debriefing meeting were held at the Ministry of Health (Central level), and at the WHO Country Office at the beginning and at the end of the country visit. These meetings involved the investigators of the SA and MoH officers in charge of epidemiological surveillance, including at PoE.

3. Results

3.1. COUNTRY PRESENTATION

The Kingdom of Morocco is part of the Greater Arab Maghreb and is situated to the northwest of Africa, bordered on the north by the Mediterranean and the Straits of Gibraltar and to the west by the Atlantic Ocean (more than 3,500 km of coast, 500km on the Mediterranean and 3,000km on the Atlantic Ocean). To the north it is bordered also by Spain with three small Spanish-controlled exclaves, Ceuta, Melilla, and Peñón de Vélez de la Gomera. To the south, Morocco shares a border with Mauritania, and to the east with Algeria. The population counts over 32 million inhabitants, of which more than half live in urban areas. Moroccans Living Abroad (MLA) have continued to increase over the last 50 years, and are estimated at 4.5 million.

Morocco is organized in 16 regions, which are subdivided into 45 provinces (rural) and 26 prefectures (urban). At the regional and sub-regional levels, the Ministry of Health is represented by the Regional Directorate of Health (DRS) and the Provincial/Prefectural Delegation of Health (DPMS), respectively. The number of health facilities depending on the MoH were 2662, as of December 2013. The organization of the Moroccan National Health System is shown in Figure 1.

Since the early 90's, the Ministry of Health engaged in a decentralization and strengthening process. In terms of public health surveillance, the Directorate of Epidemiology and Disease Control (DELM) has established 16 Regional Observatories of Health (ORS), which coordinate 82 Provincial and Prefectural Epidemiology Cells (CPE), responsible for epidemiological surveillance in these administrative divisions[6].

Morocco's designated national focal point for the IHR is the Directorate for Epidemiology and Disease Control (DELM), of the Ministry of Health. Under this directorate falls the office that is central to this study: *the Service de Contrôle Sanitaire aux Frontières* (SCSF) Central Unit in charge of health at Points of Entry.

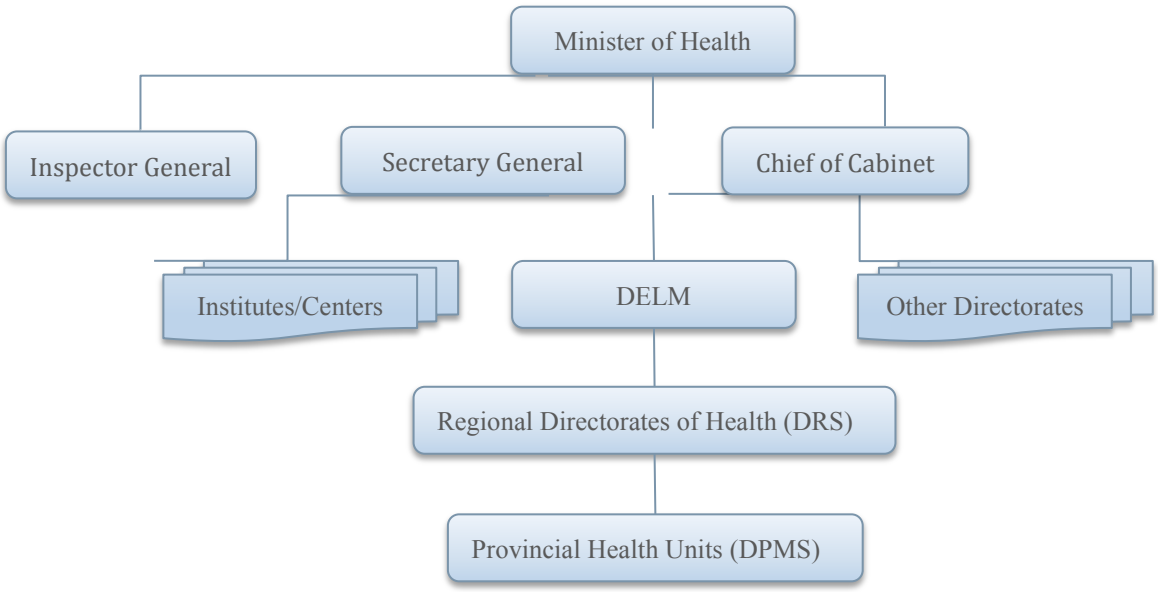

Figure 1 - Organization of the Public Health System in Morocco, MoH personal communication

[6] *Rguig A, Ziani M, Barkia A, Benmamoune A , El Menzhi O. Mise au Point : La surveillance épidémiologique au Maroc. Bulletin Epidémiologique Edition Juin 2012 available from http://srvweb.sante.gov.ma/Documents/BE%20edition%20complet.pdf?Mobile=1&Source=%2F_layouts%2Fmobile%2Fview.aspx%3FList%3D5e20d8ca-010e-4597-a15d-1c2807bd3ef6%26View%3Dd0361d38-fce9-43e6-a54d-95a9592d3374%26CurrentPage%3D1)*

3.2. PUBLIC HEALTH SURVEILLANCE IN MOROCCO

Disease surveillance and control in Morocco is under the responsibility of the Directorate for Epidemiology and Disease Control (DELM- Direction de l'Epidémiologie et de la Lutte contre les Maladies) of the Ministry of Health at Central level. Within the DELM, two different services ensure this task: the *Service de Surveillance Epidémiologique* (SSE) which applies a horizontal approach to surveillance, and the *Service des Maladies Epidémiques* (SME) that follows specific diseases with a more vertical approach. The SME is also in charge of health at points of entry, in a program called *Service de Contrôle Sanitaire aux Frontières* (SCSF) – Borders Health Control Service.

The health surveillance pyramid is constituted, from base to apex, of the health facilities (Health Centers and Hospitals) that report to Provincial units - the CPE (*Cellules Provinciales de Santé*), which in turn report to Regional Observatories - the ORS (*Observatoire Régional de la Santé*), which in turn report to the DELM.

National coordination of plans and activities related to Radio-nuclear risks is ensured by the *Centre National de Radioprotection* (CNRP), while coordination of activities related to Chemical risks is managed by a dedicated national committee**.** The Ministry of Agriculture ensures surveillance of Animal Health and food safety.

3.2.1. National Communicable Diseases Surveillance in Morocco

3.2.1.1. Legislation

Since 1992, the Directorate of Epidemiology and Disease Control (DELM) established Epidemiology Cells at provincial and prefectural level (CPE), in charge of epidemiological surveillance, managed by the Delegations of health of the provinces (rural) and prefectures (urban). In 2002, Circular No. 47 of 19/07/2002[7] formally specified the tasks and operating procedures of the CPE and the Regional Observatories of Epidemiology, which later became Regional Observatories of Health (ORS)[8]. The main mission of these structures is to implement public health surveillance across the country, taking into account regional specificities.

3.2.1.2. General organization

According to the type of disease, the information gathered is different. Diseases that are epidemic prone, serious, in view to be eliminated/eradicated or biohazards that could be intentionally released require increased timeliness and higher detail of information compared with endemic and less serious conditions.

Diseases that require immediate notification include Fevers, Cholera, Yellow Fever, Relapsing Fever, Plague, Poliomyelitis, Epidemic Louse Born Typhus Fever, Botulism, Rabies and Tetanus.

Diseases that are reported on a weekly basis, in aggregated figures, include pertussis, meningitis, diphtheria, typhoid fever, viral hepatitis, leptospirosis, food-borne infectious outbreaks, gastroenteritis, measles and influenza.

Finally some diseases are reported on a monthly basis: bilharzia, leishmaniasis, leprosy, malaria, conjunctivitis, rabies, syphilis, TB, tetanus, trachoma, urethritis, Acute Flaccid Paralysis, Rheumatic Fever (RAA).

Specific diseases such as polio, measles, pertussis, and diphtheria are notified in *ad hoc* notification forms that provide individual case information on specific aspects such as risk factors, stages/form of disease and treatment[9].

---

[7] Circulaire du Ministère de la Santé n°47 du 19/07/2002

[8] Décision du Ministere de la Santé n°1/DRC/00 du 18/09/2008

[9] *Rguig A, Ziani M, Barkia A, Benmamoune A , El Menzhi O. Mise au Point : La surveillance épidémiologique au Maroc. Bulletin Epidémiologique Edition Juin 2012 available from http://srvweb.sante.gov.ma/Documents/BE%20edition%20complet.pdf?Mobile=1&Source=%2F_layouts%2Fmobile%2Fview.as*

3.3. HEALTH AT POINTS OF ENTRY

Morocco has nine designated ports, 14 designated airports and one ground crossing. The Competent Health Authority for PoEs in Morocco is the Ministry of Health, which operates by means of the Borders Health Control Service (**SCSF- *Service de Contrôle Sanitaire aux Frontières***). The SCSF offices depend directly from the SCSF Central Unit, located at the DELM of the Ministry of Health, which is also the IHR NFP.

Human Health controls at Points of Entry in Morocco, aimed at limiting spread of infectious diseases and with responsibility on cross-border health of people, goods (drugs, food products of non-animal origin and dangerous products) and conveyances (mostly ships and aircraft), are managed by 92 SCSF teams. Medical controls and requirements for conveyances are regulated by 23 Standard Operating Procedures (SOPs) which are compiled in a document called *Contrôle Sanitaire aux Frontières*[10]. The SOPs are available for consultation on the Moroccan MoH's website (santé.gov.ma).

In the field of animal health and Food safety, the ONSSA (*Office National de Sécurité Sanitaire des Produits Alimentaires*), positioned at the Ministry of Agriculture, is charged with controls at PoE. The Animal Health Division (DSA-*Division de la Santé Animale*), the Division of Food of Animal Origin (DVHA-*Division Vétérinaire de l'Hygiène Alimentaire*) and the section in charge of vegetal products - SCPVOV (*Service du Contrôle des Produits Végétaux et d'Origine Végétale*) operate by means of three Border Inspection Posts (PIF- *Poste d'Inspection aux Frontières*) which are charged of health inspections on live animals and food products of animal or vegetal origin, respectively. Their functions will not be addressed in detail in this study.

3.3.1. Organization, functions and staffing of the SCSF network in Morocco

The Moroccan network of Port, Airport and Ground Crossing Health Offices (SCSF) comprises one SCSF Central Unit (hosted at the DELM, MoH in Rabat), and 28 PoE offices across the country (Table 2). The Central Unit is also responsible for prevention and preparedness against biological, chemical and radio-nuclear terrorism.

The SCSF offices are in charge of health controls and preventive measures for in and out-coming international travellers, health and safety controls on conveyances and in PoE premises, health controls on food intended for human consumption in conveyances and in PoE restaurants, sanitary control of goods and materials imported or in transit. They also ensure the dissemination of information on health risks and preventive measures to travellers.

All SCSF offices are equipped for sampling, controlling, for entomological surveillance, and for disinfection, disinsection and de-ratting. They are also equipped with informatics and telecommunication means.

3.3.2. Norms and legislation

The activities of human health surveillance at Points of Entry are regulated by the following legal regulations:

- Dahir No. 1-09-210 of 26 October 2009 adopting the International Health Regulations;
- Dahir of 5 January 1916 on the reorganization of marine health police;
- Vizierial Order 23-11/1946 organizing the public health control at land, sea and air borders ;
- Ministerial Circular No. 41/DELM/DRC/10 06/08/1999 enacting the organization and operation of public health border control.

px%3FList%3D5e20d8ca-010e-4597-a15d-1c2807bd3ef6%26View%3Dd0361d38-fce9-43e6-a54d-95a9592d3374%26CurrentPage%3D1)

[10] Manuel de Procédures de Contrôle Sanitaire aux Frontières (ports, aéroports et points d'entrée terrestres). Ministère de la Santé, Direction de l'Epidémiologie et de la Lutte contre les Maladies. September 2012

3.3.3. Standard Operating Procedures (SOPs)

An updated, documented and agreed upon National SOP for the public health activities at Points of Entry exists: the *Manuel de Procédures de Contrôle Sanitaire aux* Frontières *(ports, aéroports et points d'entrée terrestres)*, Ministère de la Santé, Direction de l'Epidémiologie et de la Lutte contre les Maladies. September 2012.

This document describes in detail who are the actors responsible for each procedure and the procedures themselves, including the procedures for communication, as follows:

- Development and update of SOPs
- Control of food safety
- Control of drinking water
- Vector control
- Disinfection
- Control of conveyances
- Disinsection of aircraft
- Hygiene control of PoE sites
- De-ratting
- Surveillance of sick passengers
- Implementation of standardized measures for Public Health Emergencies of International Concern
- Control of vaccination
- Information to passengers and staff
- Medical evacuation
- Control of transport of coffins
- Rules for issuing Certificates of Health Surveillance of Ships
- Rules for issuing Certificates of Free Pratique
- Control of postal parcels
- Control of Freight
- Checking radioactivity
- Veterinary import sanitary controls
- Control of imported food products and agricultural products
- Phyto-sanitary import controls

On the basis of this national framework, SCSF offices have derived context-specific and PoE-specific SOPs that include updated details of each member of staff's responsibilities, and contact details of relevant actors representing the detection and response capacity at the PoE. These documents were discussed during the site visits to PoE.

3.3.3.1. Human resources

Each SCSF office at a PoE is staffed with one MD, two nurses specialized in environmental health, two polyvalent nurses, and more health professionals when needed. As of December 2013, the personnel of SCSF offices in Morocco was comprised of 10 Medical Doctors, 80 Health and Technical Professionals (including nurses, health inspectors and health technical officers) and 2 Administrative Staff.

Staff are trained according to a Training Program managed by the SCSF Central Unit. Trainings are aimed at updating the PoE staff on topics relevant to routine and emergency activities in their work environment. Training is also done via simulation exercises, such as the one organized in Tanger-Med port in 2013 focusing on a radiological incident. In 2013 topics included medical management of radiological contamination, forensic medicine relevant to travel. Staff are provided with uniforms with specific features denoting their grade and function.

Table 2 – List of SCSF offices as of December 2013

Office	Corresponding DPMS
AIRPORTS	
Agadir – Al Massira	Agadir ida outanane
Casablanca – Mohammed V	Casablanca
Fès – Saiss	Fès
Laayoune	Laayoune
Marrakech – Ménara	Marrakech
Nador – El Aroui	Nador
Ouarzazate	Ourzazate
Oujda – Angads	Oujda angads
Rabat – Salé	Salé
Tanger – Ibn Battouta	Tanger Assillah
Dakhla	Dakhala
Errachidia – Moulay Ali Chérif	Errachidia
PORTS	
Agadir	Agadir Ida Outanane
Casablanca	Casablanca
Dakhla	Dakhala
El Jadida	El jadida
Kénitra	Kénitra
Laayoune	Laayoune
Mohammadia	Mohaammadia
Nador	Nador
Safi	Safi
Tan Tan	Tan - Tan
Tanger-Med	Fahs Anjra
GROUND CROSSINGS	
Bab Sebta	Mdiq-Fnideq
Oujda	Oujda angads (closed)

3.4. COORDINATION OF HEALTH SURVEILLANCE BETWEEN POINTS OF ENTRY AND THE NATIONAL SURVEILLANCE SYSTEM

Peripheral SCSF Offices located at the PoE transmit information on health events directly to the SCSF Central Unit and (simultaneously) to the corresponding MoH Province delegation (DPMS). Communication takes place initially via telephone, then by e-mail and finally via paper reports.

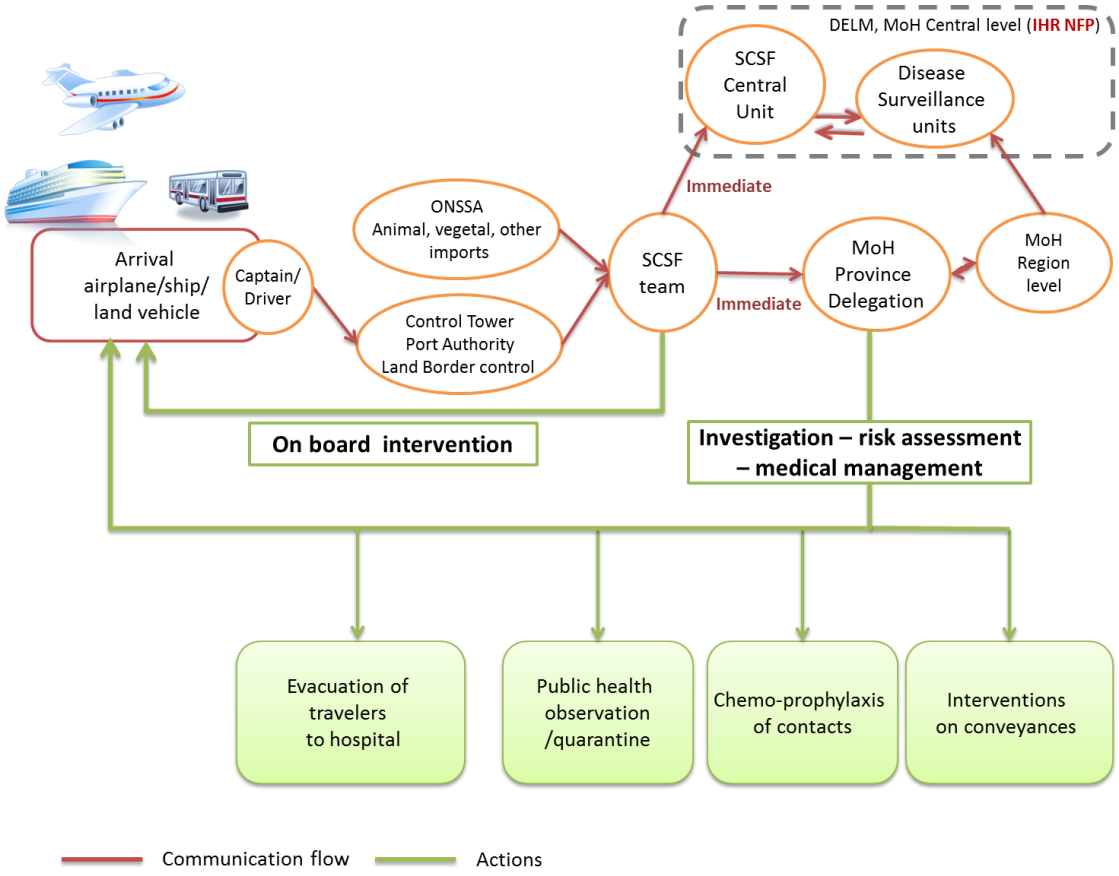

Figure 2 – Flow chart of communication between PoE and the MoH; main actors involved and connections with the notification systems for communicable diseases

The SCSF Central Unit is located at the DELM and shares offices and personnel with the other public health surveillance services. This ensures a strong connection and consequently a defined data flow.

We note the existence of a double information flow: disease events are reported immediately by the peripheral SCSF both through the SCSF channel and through the local health units (DPMS - Provincial Delegations) which will transmit the same information through the routine health surveillance system (Figure 1).

The SCSF peripheral offices may communicate with each other without prior authorization. They are required to copy in the message the SCSF Central Unit. International communications are managed only at the MoH central level, by the SCSF Central Unit or other concerned offices in the Ministry.

3.4.1. General Organization

Communication of a relevant human health event occurring on board a conveyance is initiated by the Captain of the airplane or ship to the airport control tower, or maritime/port authority. From here the SCSF office is contacted and the medical officer on call at the PoE initiates actions to verify and manage the case, and informs the local health authorities (DPMS) and the SCSF Central Unit according to the pre-established communication

lines (Figure 2). The SCSF mainly uses the phone to communicate to all relevant actors, who are all equipped with a telephone line belonging to a governmental internal network ("*flotte*"). All numbers are listed in an electronic contact list, which is kept updated. A similar network exists on email. This allows the transmission of written data and documents as well as exchanges among all actors country-wide.

3.4.2. Coordination of human health surveillance in the SCSF Central Unit

The SCSF Central Unit is located in the Ministry of Health, in Rabat, and is part of the DELM. The Office is charged of coordinating all the peripheral SCSF offices and is also responsible of prevention and preparedness against biological, chemical and radio-nuclear events, which is done in collaboration with the respective offices in charge of disease surveillance and control of the DELM, as well as those specialized in environmental and radiological issues.

3.4.3. Coordination of human health surveillance in the International Airport of Marrakech

The International Airport of Marrakech is located in the Region of Marrakech-Tensift-Al Haouz, in Central Morocco, at a distance of 3 km from the city of Marrakech. It is the second largest airport in Morocco. It is dedicated almost exclusively to passenger traffic, with a capacity of 4 million passengers/year. After its current rehabilitation it will increase its capacity to 8 million passengers/year. Currently the airport caters for 8 different airlines reaching over 100 destinations in 22 countries, including many European ones, in three continents[11]. This makes this airport also an important transit hub to Europe.

Figure 3 – SCSF team in the Marrakech airport

3.4.3.1. General organization

The **SCSF Marrakech unit** manages a secluded area composed of three interconnected rooms: an isolation room with two beds, a resting room and an office. Rooms are equipped for medical exams and emergency assistance of travellers and staff with medical materials and protective devices. During the flu pandemic, non-contact infrared thermometers (NCIT) were installed to screen passengers for high temperature as they entered the airport.

If a human health event occurs within the conveyances transiting through the airport, or in the airport premises, and is detected by the SCSF health services or other actors located within the airport (e.g. air company staff or the airport emergency unit), the SCSF Marrakech unit (which is the Competent Health Authority) will be

[11] Airport data available from http://www.theairdb.com/airport/RAK.html

immediately informed. The person on duty will first ensure that the MD (on call 24/24hrs) is informed immediately. If judged relevant, immediate communication will take place with the Provincial delegation of the MoH (DPMS) and with the SCSF Central Unit by phone. Depending on the nature of the event, the SCSF unit will carry out the initial intervention aboard the conveyance or at the site of the event. However, the responsibility for medical management, risk assessment and public health measures is rapidly handed over to the DPMS, who takes intervention directly. The SCSF Marrakech unit has the role of facilitating contact tracing, liaising with the airport staff and the airline companies. The unit works in close contact with the ONSSA, whose officers, usually veterinarian doctors, inspect animal health and safety of food products of animal and vegetal origin.

3.4.3.2. Legislation, Norms and Regulations

The procedures for the public health activities at the airport follow the national guidelines. As described in section 3.3.3, on the basis of the *Manuel de Procédures de Contrôle Sanitaire aux* Frontières *(ports, aéroports et points d'entrée terrestres),* SCSF offices have derived context-specific and PoE-specific SOPs that include updated details of each member of staff's responsibilities, and contact details of relevant actors representing the detection and response capacity at the PoE.

3.4.3.3. Human resources

The personnel includes one Medical Doctor (responsible for the service) and ten health technical officers.

3.4.4. Coordination of human health surveillance at Tangier-Med Port

The **Port of Tangier-Med** is a cargo and passenger port that was put into service in July 2007. It is the largest seaport in Morocco and one of the biggest in the Mediterranean Sea and in Africa. It is located about 40 km east of the city of Tangier.

Its initial cargo capacity was 3.5 million shipping containers, in 2013 it had reached over 10 million. In terms of passengers, in 2012 two million people transited through the Tangier-Med port. This number is expected to increase substantially thanks to an ongoing expansion in the context of the Tanger-Med project that includes a new station and a rail connection to Tanger Ville.

When the Tanger-Med project will be finished, it will be the largest port in Africa. The project is a strategic priority of the Moroccan government for the economic and social development of northern Morocco.

Figure 4 - The passengers station, Tangier-Med Port, Morocco

The port is structured in 3 main sectors:

- The Tangier Med port 1, which includes two container terminals, a railway terminal, a petroleum terminal, a cargo terminal, and a vehicle terminal;
- The Tanger Med port 2, which includes two container terminals;
- The Tanger Med port Passengers, including access areas and border inspections, docks for passengers, areas of regulations and the ferry terminal (Figure 4).

3.4.4.1. General organization

Significant public health events are rare, explained mainly by the routes of the ships, and by the type of passengers, for the most part European tourists and Moroccan nationals living in Europe.

The SCSF unit has a dedicated vehicle and two secluded areas located at the passenger terminal and at the cargo import area. They include isolation rooms, resting rooms and offices. Rooms are equipped for health control procedures, medical exams and emergency assistance of travellers and staff with medical materials and protective devices. During the flu pandemic, non-contact infrared thermometers (NCIT) were installed to screen passengers for high temperature as they entered the port.

3.4.4.2. Legislation, Norms and Regulations

The procedures for the public health activities at the port follow the national guidelines. As described in section 3.3.3, on the basis of the *Manuel de Procédures de Contrôle Sanitaire aux* Frontières *(ports, aéroports et points d'entrée terrestres),* SCSF offices have derived context-specific and PoE-specific SOPs that include updated details of each member of staff's responsibilities, and contact details of relevant actors representing the detection and response capacity at the PoE.

3.4.4.3. Human resources

The personnel includes one Medical Doctor (responsible for the service), three nurses and three hygiene technicians. The service is operational every day 24/24h, through a rotating duty system.

Figure 5 - SCSF team in the Tangier-Med Port, Morocco

3.4.4.4. Suspected cases of Influenza A H1N1 on a passenger ship – a practical example of communication and coordination of surveillance

A real life situation described during the site visit occurred in 2009 and involved an 800 passenger cruise ship coming from Malaga with the next port of call being Las Palmas. The ship captain informed the Port Authority of the presence of two sick passengers on board. The SCSF officer on duty was informed and contacted immediately the local DPMS (Fahs Anjra province) who dispatched a medical team to the port. Upon arrival, the DPMS/SCSF combined team boarded the ship and conducted an investigation, that led to the diagnosis of two cases of suspected H1N1 influenza and the exclusion of other cases on board. After providing treatment and preventive measures, all other passengers were allowed to disembark and/or continue the trip.

As the SCSF Central Unit had also been informed in parallel, the concerned officers at the DELM were involved in the decision making and in providing technical support to the port team. The DELM in its role of IHR NFP, notified the WHO IHR Contact Point of the Eastern Mediterranean region.

3.4.5. Coordination of human health surveillance in the International Ground Crossing of Bab Sebta

Bab Sebta is a Moroccan city located at the border of the Spanish exclave of Ceuta, an autonomous city of Spain with a territory of 18.5 km2. Ceuta, along with the Spanish exclave Melilla, is one of two permanently inhabited Spanish territories in mainland Africa.

At the border crossing of Bab Sebta around 1.5 million people cross into Morocco and a similar number cross into Spain every year. The passage is strongly concentrated during the summer months involving mainly European tourists/Moroccan residents in Europe and local population crossing back and forth to smuggle small amounts of goods.

3.4.5.1. General organization

The SCSF has a small unit reinforced during the summer months when the peak of border crossing takes place with additional staff, equipment and vehicles from the "Mohammed V Solidarity Foundation". During the peak season weekly morbidity reports are completed and transmitted to the surveillance system. The lines of communication for health surveillance information are the same as described above. During the flu pandemic in 2009, non-contact infrared thermometers (NCIT) were installed to screen people crossing the border for high temperature. Those detected as abnormally high were examined and lab specimens were collected.

The SCSF benefits also from inter-sectorial coordination with the Customs authority, security forces, local authorities and the Local Operational Committee (CLO – *Comité Local Operationnel*). There is usually little collaboration with the Spanish authorities at the border. An exception occurred during the latest avian influenza alert period when border health authorities exchanged information bilaterally. A new bilateral agreement is currently in preparation and includes the health sector.

3.4.5.2. Legislation, Norms and Regulations

The procedures for the public health activities at the crossing follow the national guidelines. As described in section 3.3.3, on the basis of the *Manuel de Procédures de Contrôle Sanitaire aux* Frontières *(ports, aéroports et points d'entrée terrestres),* SCSF offices have derived context-specific and PoE-specific SOPs that include updated details of each member of staff's responsibilities, and contact details of relevant actors representing the detection and response capacity at the PoE.

3.4.5.3. Human resources

The SCSF is a small unit with one permanent officer, who coordinates activities closely with the local DPMS of Mdiq-Fnideq province. During the summer months the unit is staffed with a larger team.

Figure 6 - SCSF officer at the Bab Sebta land crossing, with Dr A. Barkia, Head of the SCSF Central Unit

4. Discussion

The coordination of surveillance activities between PoE and the MoH surveillance system in Morocco benefits from solid links between the SCSF offices at PoE and the provincial MoH delegations on one side and the SCSF Central Unit, located at the DELM at central level on the other. The latter enables a direct and rapid communication with the IHR NFP, in case the PoE staff detect a public health event.

As the PoE health staff are employees of the MoH, they benefit from its leadership and technical support, as well as training.

We note that this system implies a double information flow, as the PoE unit informs both the DPMS and the SCSF Central Unit in parallel. However, the treatment of the information by each recipient is not the same.

We note that the information flow is strong and well defined outwards from Points of Entry, but less so for the possible inwards information flow, such as systematic feedback from the surveillance system, or alerts about events that might potentially concern the PoE (e.g. cases of infection connected to travel detected in the mainland).

Another strong point is the presence of standard, official and publicly available norms and protocols (SOPs) at central and local level. These documents clearly describe the roles, responsibilities and communication processes. This latter aspect is further confirmed by the fact that these processes were described identically by the staff at all levels during the site visit. At the PoE level, locally adapted SOPs were also available.

Communication between the PoE and all the key actors within the government is facilitated by the “Closed User Group” mobile telephone network, where calls are unlimited and all users have a structured, updated list of phone numbers.

We found that the SCSF units do not collect data on cases of human disease detected in the PoE in a structured form (databases). Reports of events are prepared and stored in hard copy archives in the SCSFs. An analysis of disease trends by type of conveyance, by route, by operator or by season are not routinely made.

4. Annex

- Legal framework
- National Documents accessed
- Key informants
- Site Visit Agenda

4.1. LEGAL FRAMEWORK

4.1.1. International norms and regulations

- **WHO International Health Regulations.** *Adopted with Dahir No. 1-09-210 of 26 October 2009 in the National Legislation*

4.1.1.National norms and regulations

- **Dahir of 5 January 1916** *on the reorganization of marine health police.*
- **Vizierial Order 23-11/1946** *organizing the public health control at land, sea and air borders.*
- **Ministerial Circular No. 41/DELM/DRC/10 06/08/1999** *enacting the organization and operation of public health border control.*
- **Circulaire du Ministère de la Santé n°47 du 19/07/2002** *formal specification of the tasks and operating procedures of the Epidemiology Cells at provincial and prefectural level.*
- **Décision du Ministere de la Santé n°1/DRC/00 du 18/09/2008** *formal specification of the tasks and operating procedures of the Regional Observatories of Health (ORS).*

4.2. RELEVANT NATIONAL DOCUMENTS

- Ministry of Health, Direction de l'Epidémiologie et de la Lutte contre les Maladies**. Manuel de Procédures de Contrôle Sanitaire aux Frontières (ports, aéroports et points d'entrée terrestres).** September 2012 **http://doc.abhatoo.net.ma/doc/spip.php?article971**

4.3. KEY INFORMANTS

Name	Institution	Location	Position
Ahmed Rguig	DELM, MoH	Rabat	EpiSouth National Focal Point, Head of the Epidemiological Surveillance Service
Abdelaziz Barkia	DELM, MoH	Rabat	Head of the Central Unit of Contrôle Sanitaire aux Frontières (SCSF)
Yves Souteyrand	WHO Country Office	Rabat	WHO Representative in Morocco
Lou Goudi	SCSF Office	Bab Sebta, border with Spain	Nurse
Abderrahim Rachdi	SCSF Office	Tanger Med Port	Head of the Tanger SCSF office
Abdelhafib Hamman	SCSF Office	Tanger Med Port	Nurse
Tesien Moulana	SCSF Office	Tanger Med Port	Hygiene Technician
Layla Bouzian	SCSF Office	Tanger Med Port	Hygiene Technician
Rachid Chamel	SCSF Office	Tanger Med Port	Nurse
Amouar Bakali	SCSF Office	Tanger Med Port	Nurse
Khalid Badahi	Provincial Health Office, MoH	Mdiq-Fnideq Province	Provincial Health delegate
Mohamed Bellot	SCSF Office	Marrakech Airport	Head of the Marrakech SCSF office
Mohamed Zaffa	SCSF Office	Marrakech Airport	Nurse

4.4. AGENDA OF THE SITE VISIT TO MOROCCO

	Activities
2 December 2013 (DAY 1)	Meeting at the DELM Presentation of the study to the Director Planning and logistics
3 December 2013 (DAY 2)	Visit to the ground crossing at Bab Sebta
4 December 2013 (DAY 3)	Visit to the Port of Tanger Med
5 December 2013 (DAY 4)	Visit to the airport of Marrakech
6 December 2013 (DAY 5)	Debriefing at Rabat and departure of participants