

**EPI SOUTH: A NETWORK FOR THE CONTROL OF HEALTH AND SECURITY
THREATS AND OTHER BIO-SECURITY RISKS IN THE MEDITERRANEAN
REGION AND SOUTH-EAST EUROPE**

Project reference:

DEVCO: IFS/2010 / 238-194

Final Report (including 6th Progress Report 14Apr2013-14Jan2014)

15 October 2010 – 14 January 2014



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.



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



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1. PROJECT FACT SHEET

Contract number:	DEVCO: IFS/2010 / 238-194
Proposal title:	Episouth: A Network for The Control of Health and Security Threats and Other Bio- Security Risks In The Mediterranean Region and South-East Europe
Acronym:	Episouth Plus

Starting date:	15/10/2010
Duration of the project:	30 months in original, <u>but extended until 14/1/2014</u>
Reporting period:	15/10/2010 -14/1/2014 (including 6th Progress Report 14Apr2013-14Jan2014)

The contractor for DEVCO Service Contract : ISS – Istituto Superiore di Sanità (Italy) **WP1, WP2 and WP7 co-leader**

Consortium DEVCO Service Contract:

1. Institut de Veille Sanitaire (InVS), France **WP6 co-leader** (until 14 April 2013)
2. Instituto de Salud Carlos III (ISCIII), Spain **WP5 co-leader**
3. Institut Pasteur (IP), France **WP 4 co-leader**
4. Azienda Sanitaria Locale di Torino (ASLTO1), Italy **WP3 leader** (consortium agreement not finalised)
5. Azienda Ospedaliera di Padova (Padua GH), Veneto Region, Italy (until 14 April 2013)

Collaborative Partners:

1. Institute of Public Health - Tirana, ALBANIA
2. Institut National de Santé Publique - Alger, ALGERIA **WP5 co-leader**
3. Ministry of Civil Affairs – Sarajevo, BOSNIA AND HERZEGOVINA
4. Public Health Institute of Republika Srpska - Banja Luka, Republika Srpska, BOSNIA AND HERZEGOVINA
5. Ministry of Health of Federation of B & H Mostar, Federation of Bosnia and Herzegovina BOSNIA AND HERZEGOVINA
6. Ministry of Health and Population - Cairo, EGYPT
7. Institute for Health Protection and Clinic for Infectious Diseases - Skopje, Former Yugoslav Republic of Macedonia (FYROM)
8. Ministry of Health and Israel Center for Diseases Control - Tel Hashomer, ISRAEL
9. Ministry of Health Amman, JORDAN
10. National Institute for Public Health of Kosova - Prishtina, KOSOVO UNSCR 1244
11. Ministry of Public Health - Beirut, LEBANON
12. National center for infectious disease prevention and control - Tripoli LIBYA
13. Institute of Public Health - Podgorica, MONTENEGRO **WP2 co-leader**



14. Ministry of Health - Rabat, MOROCCO
15. Public Health Central Laboratory - Ministry of Health Ramallah, PALESTINE
16. Institute of Public Health of Serbia "Dr. Milan Jovanovic Batut" - Belgrade, SERBIA
WP5 co-leader (from November 2012)
17. Ministry of Health - Damascus, SYRIA
18. Ministère de la Santé Publique - Tunis, TUNISIA **WP1 co-leader**
19. Ministry of Health - Ankara, TURKEY **WP4 co-leader**
20. MECIDS - ISRAEL, JORDAN and PALESTINE **WP6 co-leader**
21. WHO-LYO/HQ - Lyon, FRANCE **WP7 co-leader**

FOREWORD

This report is the final technical report of EpiSouth Plus Project covering the whole period of activities' implementation (15 October 2010-14 January 2014), including the no-cost extension period of 9 months approved by the EC DEVCO.

It is worth reporting that EpiSouth Plus is a multi-financed initiative (DG SANCO, DG DEVCO and the Italian Ministry of Health), therefore it should be kept in mind that not all the activities reported in the present report have been supported with the funds available under the DG DEVCO Service Contract. For example activities related to EU participants were supported by DG SANCO (unless otherwise reported).

The costs of the activities supported by DGDEVCO are reported in the VI and last Financial Report and were reported biannually with the previous I, II, III, IV and V financial reports.

EpiSouth-Plus was unique among projects funded by the EU and other international initiatives in this field for its focus on the Mediterranean region as a whole, including non-UE countries and all three WHO Regional Offices that cover the Mediterranean area.

The aim of the EpiSouth Plus project was to increase the health security in the Mediterranean area and South East Europe by enhancing and strengthening preparedness to common health threats and bio-security risks at national and regional levels and in the framework of the WHO-International Health Regulations implementation (IHR).

For the above scope:

- A *Mediterranean Regional Laboratories Network* was established to facilitate common threat detection and its capacity on Dengue and West Nile Viruses and Biosecurity was consolidated through trainings, site visits and External Quality Assessment (EQA).

- A capacity building process on preparedness to common health threats was set up through *training modules and workshops* culminating in the implementation of the *Nautilus Simulation Exercise* and the preparation of the *EPREP Tool* (Emergency Preparedness Planning) aimed at supporting EpiSouth Countries in setting up their Preparedness Plans.

- The creation of a *culture of epidemic intelligence* was supported. This facilitated the possibility of *sharing confidential information* among countries of the Mediterranean region through the creation of a *dedicated secure platform*.

- In the framework of the *WHO IHR*, *EpiSouth Plus* identified the need to enhance the coordination of surveillance between Points of Entry and National Health Systems and contributed to the development of knowledge in this area by conducting the



EpiSouth Plus National Situation Analysis (the ENSA study). Its findings are being used to enrich the contents of the WHO global guidance.

In terms of outputs more than 300 people from the 27 EpiSouth Countries were involved in the capacity building events/activities, which have enhanced countries capacities and promoted the development of national know how, leading to the implementation of new activities within participating countries. EpiSouth partners have experienced the advantages of sharing information, expertise and practices overcoming an initial reluctance and distrust which then characterized, often jeopardizing, this sector of activity.

The project's final outcomes (three Strategic Documents: the EPREP Tool; The Recommendations for the institution and consolidation of a Laboratory Network; The ENSA Report) have addressed relevant critical issues for enhancing countries' capacity on preparedness and response and might be used in other contexts and other countries especially to facilitate the implementation of the new EC decision on "serious cross border threats to health".

ACKNOWLEDGEMENTS

The present report is dedicated to all those who have inspired, participated, supported, and advised the EpiSouth Network. It is thanks to those experts that the implementation of the EpiSouth and the EpiSouth Plus Projects' activities was possible and that the Projects' results were achieved.

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Keywords (using Mesh terms)

1. Preparedness
2. Epidemiology
3. Capacity Building
4. Threats, health
5. Laboratory
6. Network
4. Early Warning
5. Epidemic Intelligence
6. Surveillance
7. WHO IHR



2. Executive Summary

Description of the project scope and objectives

The EpiSouth-plus Project was aimed at increasing health security in the Mediterranean Area and Balkans by enhancing preparedness to threats which can affect health security and to bio-security risks at national/regional levels in the framework of IHR implementation.

EpiSouth-plus had new strategic lines of activities relying on the Network of 27 EU and non-EU Countries established by the previous project EpiSouth (2006-2010).

The project has strengthened the countries' capacity to cope with health threats through concerted and coordinated capacity building activities. These were carried out in the framework of four synergic core/vertical Work Packages (WP), supported by the three horizontal ones (Coordination, Dissemination and Evaluation), which aimed at the following specific objectives:

- i) Establishment of a Mediterranean Regional Laboratories network (WP4)
- ii) Promotion of common procedures in interoperable Generic Preparedness and Risk management among the countries involved in the Network (WP5)
- iii) Enhancement of Mediterranean Early Warning Systems (EWS) allowing alerts and Epidemic Intelligence (EI) information sharing among EpiSouth countries and developing interoperability with other Early Warning Systems, including the European EWRS (WP6)
- iv) Production of guidelines and a strategic document based on assessments and surveys aimed at facilitating IHR implementation (WP7)

Work achieved including methods and means

The methods identified for the implementation of the activities were carefully discussed in order to be reasonably sure that they would be effective in achieving : expected results; participation and capacity building of the partners involved; prolonged impact at national level (by increasing partner' sense of ownership and by addressing local priorities); visibility, accountability and relevance of the Network at national and international level; consolidation of the trusted network; collaboration strengthening between EU and non-EU MS in line with the existing EU legal acquires for the implementation of the EWRS and WHO-IHR; information sharing and lessons learned; cost-effectiveness; sustainability.

Representativeness of the related MoH or IPH was ensured by Focal Points (FPs) officially appointed by the countries' authorities.

FPs were selected among those involved in preparedness and risk management of Communicable Diseases and other Public Health threats, possibly WHO IHR or EWRS Focal Points. Participation to the activities was on a voluntary basis.

Staff from the countries involved in the project's activities have not been paid, however all the costs related to participation to trainings, meetings, working sessions, etc., have been covered by the project.

Each WP was lead by two co-leaders (one from an EU and one from a non-EU Country/Organization), with the exception of the WP3 "Evaluation", led by the only Institution not involved in the management and implementation of WPs activities (Fig 1.- EpiSouth co-leadership)

Figure 1. Enlargement of EpiSouth Plus Project WPs co-leadership





In order to facilitate countries' participation and WPs activities implementation, Steering Teams (WPSTs) were established for each WP to identify the countries' needs, develop the tools and the conducive project environment in accordance with the specific objective and requirements of the related WP.

Working and training priorities were identified through needs assessments.

A Mediterranean Regional Laboratories Network was established to facilitate common threat detection and build regional capacity on the diagnosis of Dengue, West Nile Viruses and on Biosecurity. This network was consolidated through trainings, site visits and an External Quality Assessment (EQA).

A capacity building process on preparedness to common health threats was set up with training modules and workshops culminating in the implementation of the Nautilus Simulation Exercise and the preparation of the EPREP Tool (Emergency Preparedness Planning) aimed at supporting EpiSouth Countries in setting up their Preparedness Plans.

EpiSouth has worked since 2006 towards the creation of a culture of epidemic intelligence (EI) and towards the possibility of sharing confidential information among countries of the Mediterranean region. The focus of activities has been on epidemic intelligence, sharing of information, the publication of bulletins and thematic notes and residential stages on EI/Event Based Surveillance.

In order to facilitate information sharing, the EpiSouth Network set up and facilitated a dedicated secure platform. Since late 2012, to ensure its sustainability after the end of EpiSouth Plus and interoperability, this secure platform is hosted and managed by the European Centre for Disease Prevention and Control (ECDC).

In order to increase health security in the Mediterranean Area and Balkans, it is necessary to enhance preparedness, detection and response capacity at national/regional levels to face threats to public health. The framework of the International Health Regulations (IHR) is particularly useful in this effect because it is not only legally binding for all EpiSouth partners but it also declines a set of capacities to be met, detailing a mechanism for information exchange and response collaboration under the umbrella of WHO.

In particular, the need to enhance the coordination of surveillance between Points of Entry, (i.e. ports, airports and ground crossings), and the National Health Systems in the Mediterranean Region was stressed during some dedicated meetings. Having consulted all WHO regions, WHO concluded that coordination of surveillance with PoE was a global priority and initiated the development of a WHO global guidance on this topic.

EpiSouth Plus contributed to the development of knowledge in this area, by conducting in four countries of the Network the EpiSouth Plus National Situation Analysis on coordination of surveillance between PoE and NHS (also known as ENSA). This study included site visits in each participating country involving both the Ministries of Health and PoEs.

The ENSA was designed in close collaboration with WHO subject-matter experts and implemented thanks to the strong commitment of the four participating countries. Its findings are being used to enrich the contents of the WHO global guidance.

Final results in terms of outputs and outcomes, and their potential impact and use by the target group (including benefits).

The EpiSouth Plus capacity building events/activities have involved globally more than 200 people from the 27 EpiSouth Countries. These include: two project



meetings, two workshops/trainings on preparedness, two training on applied epidemiology, one simulation exercise, one lab training on Dengue, one lab training on WNV, EQA for Dengue and WNV, lab experts site visits, three residential stages' periods (for 12 peoples) on Early Warning and Epidemic Intelligence, four site visits carried out in the framework of the WP7 ENSA). Figures 2. 3. and 4.

Figure 2. EU and non-EU participation to Capacity Building Activities

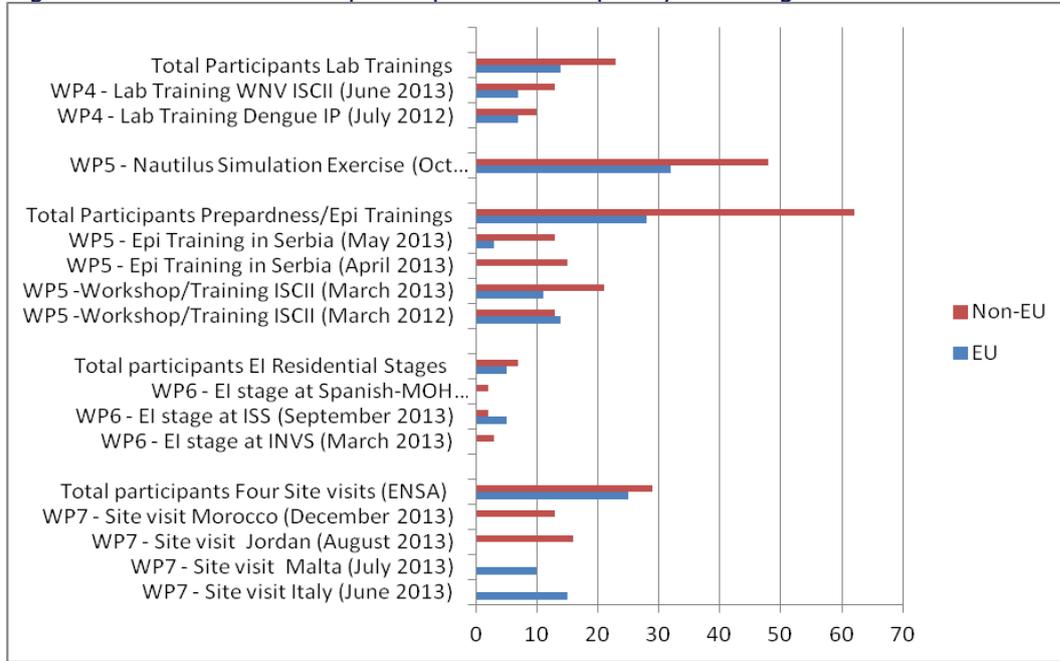


Figure 3. EU and non-EU participation to Networking and technical meetings

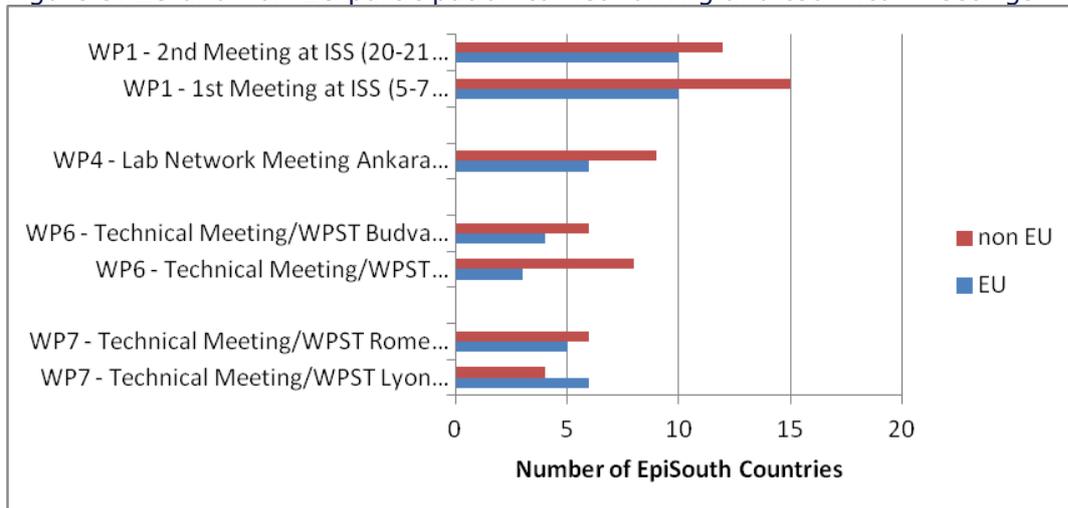
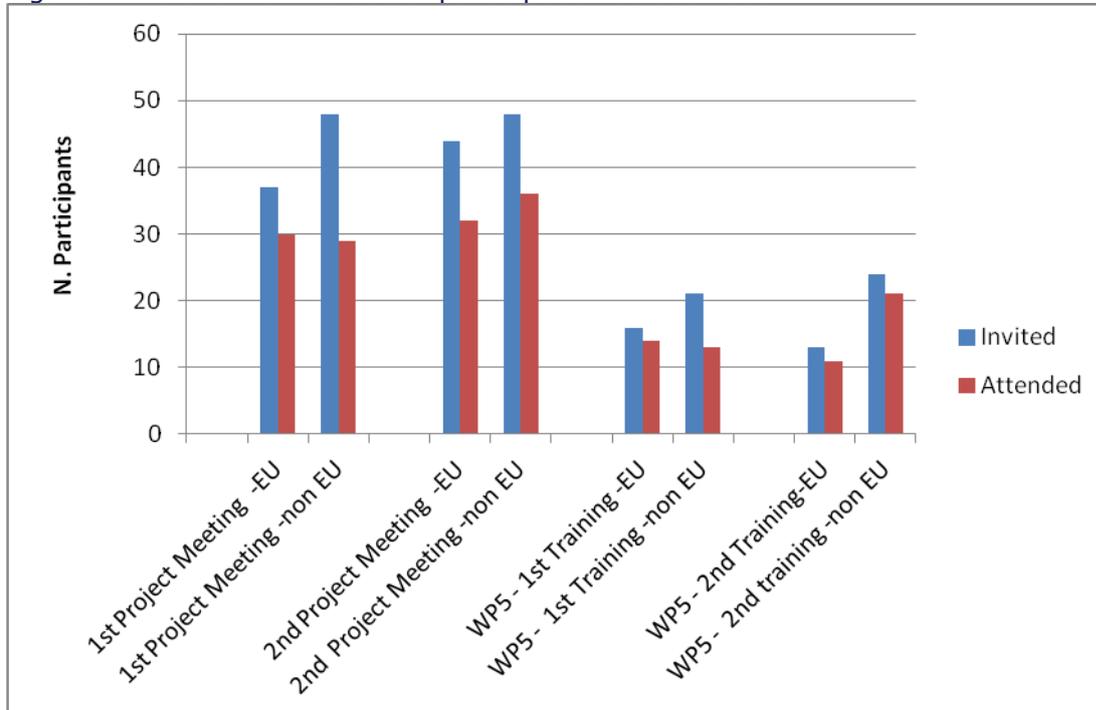




Figure 4. EU and non-EU actual participation to activities



DG Sanco supported the participation of EU Countries to the above events, while DG DEVCO supported non-EU Countries.

The main final Outcomes/Deliverables have been three Strategic Documents:

- The EPREP Tool (Emergency Preparedness Planning) for supporting the EpiSouth Countries in setting up their Preparedness Plans;
- Recommendations for the Institutions and consolidation of relevant lab networks and their capacity building process;
- The Report on Coordination of Epidemiological Surveillance between Points of Entry and the National Health System in the framework of the International Health Regulations 2005 in the EpiSouth Region. Looking at the recurring strengths and challenges in coordinating surveillance between PoE and NHS in Mediterranean countries, this document presents strategic lines that have been successfully adopted in specific national contexts and that might be beneficial to other countries in the region.

Strategic relevance and contribution to the Health Programme.

During the year 2009, the Commission developed its "Strategy towards the Health Security in the European Union and Internationally". EpiSouth Plus' strategy and activities considered and developed these aspects on the basis of the constant working contacts had with the Commission and other relevant Institutions during the Project implementation. The mentioned outcomes have addressed critical issues for enhancing national capacity on preparedness and response and might be used in other contexts and EU countries especially to facilitate the implementation of the new EC decision on "serious cross border threats to health".



Conclusions and recommendations

EpiSouth-Plus was unique among projects funded by the EU and other international initiatives in this field for its focus on the Mediterranean region as a whole, including non-UE countries and all three WHO Regional Offices that cover the Mediterranean.

The approach based on the countries' expectations and on regional needs, facilitated interest in participation. In addition to facilitating epidemiological communication and practical training, this regional approach strengthened solidarity and cohesion within the European Community and between EU and non-EU countries. This enabled information sharing on cross-border public health threats and facilitated the implementation of IHR, which has among its challenges that of interacting with national procedures and legislations to make a common international action in case of need possible.

Moreover, the adopted methodology enhanced co-ownership by bringing together all the countries in all the planned activities, while the collaboration of international institutions (EC, ECDC, and WHO) allowed sharing views while avoiding overlapping. In several occasions data made available by EpiSouth e-web bulletins were used by ECDC and support was provided for international risk assessments.

Ultimately, EpiSouth-Plus contributed to the stability of the region as well as to improve public health protection.

The strategies adopted and the Tools produced should be further valorised through other Initiatives and the results achieved consolidated and extended. In part this has been already ensured with the approval by EC DG DEVCO of other relevant Projects aimed at consolidating sectors of activities addressed by EpiSouth (Consolidation of Lab activities and Epi Training in the Mediterranean Area).



3. Technical aspects of the project

Background and project scope

To control public health threats and bio-security risks is still a problem in the European Community and even more in several applicant countries. EpiSouth is a large, multidisciplinary network of EU member States and 17 countries from the Balkans, North Africa and Middle East.

The scope of the EpiSouth plus Project was to increase health security in the Mediterranean Area and South East Europe by enhancing and strengthening the preparedness to common health threats and other bio-security risks. It intended to contribute to strengthening solidarity and cohesion within the Community and co-operation between Member States and non-MS in the area of cross-border public health threats in the framework of the International Health Regulations.

General objective of the project

To increase health security in the Mediterranean Area and South East Europe by enhancing and strengthening the preparedness to common health threats and other bio-security risks at national and regional levels in the EU Countries of the existing EpiSouth Network in the framework of the International Health Regulations implementation.

Table 1. Specific objective(s) of the project

	Title and Description	Link to the WPs (table 2.)	Link to the deliverables (table 3.)	Level of achievement (measured by the indicators specified in WP3)¹
1	Establishment of a Mediterranean Regional Laboratories network	Mediterranean Regional Laboratories Network (WP4)	- Training Packages; - Directory of Regional Laboratories involved in surveillance/early warning system in South Europe and Mediterranean area; Recommendation for a training and capacity building program.	100% 89% (24/27 Countries have one ref lab involved in the Network)
2	Promotion of common	Generic Preparedness	- A Strategic Document, called	100%

¹ Please refer to the Final Evaluation Report for further details



	procedures in interoperable Generic Preparedness and Risk management among the countries involved in the Network	Plan and Risk management procedures (WP5)	<p>"Tool for generic preparedness plan development", will be produced based on the workshop inputs and the results of the survey.</p> <ul style="list-style-type: none"> - Capacity building materials for Workshops and Sessions and Simulation Exercises 	100%
3	Enhance Mediterranean Early Warning Systems (EWS) allowing alerts and Epidemic intelligence information sharing among EpiSouth countries and developing interoperability with other European Early Warning platforms	Early warning system and cross-border epidemic intelligence (WP6)	<ul style="list-style-type: none"> - Interoperable Mediterranean Cross-border secured platform; - Weekly bulletin dissemination. 	100%
4	Production of a strategic document, with guidelines based on assessments and surveys, aimed at facilitating IHR implementation	Data collection and assessments for IHR implementation (WP7)	- Strategic document on national/international issues which may interact/interfere with IHR implementation	100%



WORKING PACKAGES

Table 2. Overview of work packages

No	Title	Leader	Starting date	Ending date	Deliverables
1	Coordination (WP1)	ISS	M1	M41	Reports of SC and Project Meetings; Interim and final technical implementation reports, including financial reports.
2	Dissemination (WP2)	ISS	M1	M39	EpiSouth quarterly electronic Bulletin
3	Evaluation (WP3)	ASLTO1	M1	M39	Final Evaluation Report
4	Mediterranean Regional Laboratories Network (WP4)	IP	M1	M39	Training Packages; Directory of Regional Laboratories involved in surveillance/early warning system in South Europe and Mediterranean area; Recommendation for a training and capacity building program.
5	Generic Preparedness Plan and Risk management procedures (WP5)	ISC III	M1	M39	A Strategic Document, called "Tool for generic preparedness plan development", will be produced based on the workshop inputs and the results of the survey. Capacity building materials for Workshops and Sessions and Simulation Exercises
6	Early warning system and cross-border epidemic intelligence (WP6)	InVS	M1	M30	Interoperable Mediterranean Cross-border secured platform; Weekly bulletin dissemination.
7	Data collection and assessments for IHR implementation (WP7)	ISS	M4	M39	Strategic document on national/international issues which may interact/ interfere with IHR implementation

Table 3. Overview of the work page and deliverables

Nr	Title	Description	Confidentiality level	Expected Month of delivery	Actual delivery month	Justification for the delay (if applicable)
1-WP1	Bi-annual and final technical implementation reports, including financial reports	The bi-annual and final technical and financial reports will be prepared in accordance with DEVCO's requirements	Confidential (the Financial Report) and Public (the Technical Report)	One month after each semester of activity 41	Bi-annual technical reports were submitted to DEVCO with minor delays. Financial Reports submitted with some delays due to difficulties in collecting evidences from the partners (D101) M 42 – The final report delivered May 2014 (D102)	
2-WP1	Reports of the Project Meetings	Reports will be done for the AB, SC and Project Meetings (M3, M27, M38)	Confidential (AB and SC) and Public (Project Meeting)	4 np 27 27 38 38	M5- D0201_Meeting_Minutes_EpiSouth_1st SC/Kick_off_meeting_3_February_2011_EN_IS ² D0202_Meeting_Minutes_EpiSouth_ 2nd SC/1st AB meeting 29-30 May 2012-EN_IS M28- D0203_Report 1st Project Meeting EpiSouth Plus 5-7 December 2012-EN_PS ³ M28-D0204_Meeting_Minutes_EpiSouth_ 3rd SC/2nd AB meeting 4 December-2012-EN_IS M39- D0205_Report Final Project EpiSouth Plus Conference 20-21 November 2013-EN_PS M38-D0206_Meeting_Minutes_EpiSouth_ 4th SC/ 3rd AB meeting 19 November 2013-EN_IS	Kick off in February 2011 (M4) 1st AB Meeting in May 2012
3-WP2	EpiSouth quarterly electronic Bulletin	A quarterly bulletin will be produced and disseminated with project's news and focus topics	Public	6, 9, 12, 15, 18, 21, 24, 27, 30, 33 and 36	6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42 As example the 1st (n.13) and last issue (n.23) have been mentioned. The others are available at http://www.episouthnetwork.org/content/episouth-electronic-bulletin	

² IS= internal use

³ PS=public use



Nr	Title	Description	Confidentiality level	Expected Month of delivery	Actual delivery month	Justification for the delay (if applicable)
		implementation				Conference inputs
6-WP4	Directory of Regional Laboratories involved in surveillance/early warning system in South Europe and Mediterranean area	A Directory of Mediterranean laboratories will be created in accordance with needs of geographic and pathogen coverage	Public	29	M21-D0600_MRLN Directory_EN_PS M21-D0600_MRLN Directory_FR_PS M21-D0600_MRLN Directory_AR_PS	
7-WP5	Capacity building materials for Workshops and Sessions and Simulation Exercise	Packages will be developed for all the capacity building activities planned	Public	17 29 30 31 35	M16-D0701_1stWorkshop Preparedness Madrid_EN_PS M29-D0702_2nd Workshop Preparedness Madrid_EN_PS M30-D0703_1st training Belgrade_EN_PS M31-D0704_2nd training Belgrade_EN_PS M36-D0705_SimulationExercise_EN_PS	
8-WP5	Strategic document on Capacity building development regarding Preparedness plans & Risk management procedures (including Standard Operational Procedures on Generic Preparedness and Response)	Tool for drafting Generic Preparedness plans	Public	36	M37-D0801_ Tool for Supporting Countries on Generic Emergency Preparedness Planning in the Health Sector_EN_PS -	
9-WP6	1. Weekly Epi Bulletin (e-WEB)	1. A weekly epidemic intelligence bulletins on international and cross-border public alerts.	Public	Every week since 1	Every week since M1 to M30 Here only some among the most relevant bulletins have been reported. All the bulletins are available at http://www.episouthnetwork.org/content/episouth-weekly-epi-bulletin-e-web D0901_1st EI e-web bulletin 135 2010_EN_PS D0902_ last EI e-web bulletin 264 2013_EN_PS D0903_200th EI e-web bulletin 2012_EN_PS	



Nr	Title	Description	Confidentiality level	Expected Month of delivery	Actual delivery month	Justification for the delay (if applicable)
	2. Mediterranean Cross-border secured platform interoperable with other EWSs (including EU)	2. National alerts of common interest among EpiSouth Countries and with other EWSs (including EU)	Confidential	Since 26	D0904_250th EI e-web bulletin 2012_EN_PS D0905_ EI e-web bulletin WNV 2010-2013_EN_PS M26- D0906_EpiS for EpiSouth Platform_EN_IS	
10. WP7	Strategic document on national/international issues which may interact/interfere with IHR implementation	Strategic document will be written on the basis of the analysis of available data and information and specific assessment run by the project.	Scientific community only	38	M39-D1001_ Coordination of Epidemiological Surveillance Between Points of Entry and the National Health System in the Framework of the International Health Regulations 2005 in the EpiSouth Region_EN_PS	

Main activities carried out including methods and means.

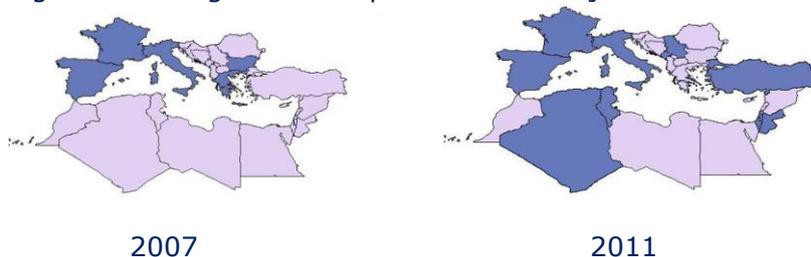
The methods identified for the implementation of the activities were carefully discussed in order to be reasonably sure that they would have helped in the following aspects: achievement of the expected results; participation and capacity building of the partners involved; prolonged impact at national level (by increasing partner's sense of ownership and by addressing local priorities); visibility, accountability and relevance of the Network at national and international level; network and trustfulness consolidation during time; strengthening of collaboration between EU and non-EU MS in line with the existing EU legal acquires for the implementation of the EWRS and WHO-IHR; sharing of information and lessons learned; cost-effectiveness; sustainability.

It was decided that the participation to the activities would have been done on voluntary basis but the representativeness of the related MoH or IPH should have been ensured by Focal Points (FPs) officially appointed by the countries' authorities. FPs were selected among those involved in preparedness and risk management of Communicable Diseases and other Public Health threats, possibly WHO IHR or EWRS Focal Points.

Staff from the collaborating countries involved in the project's activities have not been paid, although all the costs related to participation to trainings, meetings, working sessions, etc., have been covered by the project.

Each WP was led by two co-leaders (one EU and one non-EU Country), with the exception of the WP3 "Evaluation", led by the only Institution not involved in the management and implementation of WPs activities (Fig 1.- EpiSouth co-leadership).

Figure 1. Enlargement of EpiSouth Plus Project WPs co-leadership



In order to facilitate countries' participation and WPs activities implementation, Steering Teams (WPSTs) were established for each WP to identify the countries' needs, develop the tools and the conducive project environment in accordance with the specific objective and requirements of the related WP.

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EpiSouth has worked since 2006 towards the creation of a culture of epidemic



intelligence (EI) and towards the possibility of sharing confidential information among countries of the Mediterranean region. The focus of activities has been on epidemic intelligence, sharing of information, the publication of bulletins and thematic notes and residential stages on EI/Event Based Surveillance.

In order to facilitate information sharing, the EpiSouth Network set up and facilitated a dedicated secure platform. Since late 2012, to ensure its sustainability and interoperability, this secure platform is hosted and managed by the European Centre for Disease Prevention and Control (ECDC).

In order to increase health security in the Mediterranean Area and Balkans, it is necessary to enhance preparedness, detection and response capacity at national/regional levels to face threats to public health. The framework of the International Health Regulations (IHR) is particularly useful in this effect because it is not only legally binding for all EpiSouth partners but it also declines a set of capacities to be met, detailing a mechanism for information exchange and response collaboration under the umbrella of WHO.

In particular, the need to enhance the coordination of surveillance between Points of Entry, (i.e. ports, airports and ground crossings), and the National Health Systems in the Mediterranean Region was stressed during some dedicated meetings. Having consulted all WHO regions, WHO concluded that coordination of surveillance with PoE was a global priority and initiated the development of a WHO global guidance on this topic.

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The ENSA was designed in close collaboration with WHO subject-matter experts and implemented thanks to the strong commitment of the four participating countries. Its findings are being used to enrich the contents of the WHO global guidance.

Target groups

In terms of Countries, the Project involved 10 EU Member States (Italy, France, Spain, Bulgaria, Greece, Cyprus, Malta, Romania, Slovenia and Croatia) and 17 non-EU Countries of the Mediterranean and Balkans which are members of EpiSouth Network.

The project addressed relevant officers involved in preparedness and risk management of Communicable Diseases and other Public Health threats mainly at central level and working in IHR and/or EWRS Focal Point departments. Other officers selected by the countries were involved in capacity building workshops and cross-border exercises ensuring a "cascade process" aimed at strengthening the countries' capacity in IHR implementation.

Officers at peripheral level benefited from the exchange of information which has been ensured by the Quarterly EpiSouth bulletins, the Weekly Epidemiological Bulletins, Thematic Notes and by the cross-border Mediterranean early warning secure platform.

We can estimate that all the staff of the countries' Unit dealing with PH threats have directly or indirectly benefited of the implemented activities.

Considering this collaborative and multi-source effort, the EpiSouth-plus initiative ultimately benefited 27 Countries, with some 80 FPs involved and some 200 officers participating in multi-country exercises, workshops and technical meetings.



Evaluation of the degree of achievement of the objectives and discussion based on the project's indicators as outlined in your evaluation plan/ WP3.

EpiSouth Plus was evaluated with an external mid-term and an external final evaluation (see Deliverable 4.). The WP3 leader provided only the Monitoring of the WPs activities in coordination with the WP1.

As per the final evaluation, the assessment of the milestones has shown that minor and major delays occurred in all work packages. The reason for the major delays was due to the political instability in certain countries as well as the freezing of Work Package 6 - Epidemic Intelligent platform due to negotiations between EpiSouth Plus and the European Commission (EAHC/DG SANCO, DEVCO).

The evaluation of indicators shows that all process, output and outcome indicators in all work packages were achieved ensuring consequently the achievement of the Project's Objectives.

All of the above outcomes had impacts beyond expectations. In fact, the EPREP tool has been released also as an Interactive Programme which will allow the Countries to insert data of their preparedness plans in order to evaluate their status, to identify weak areas to be addressed. The EPREP tool is being also used in the context of other Projects/Initiatives aimed at facilitating the implementation of the new EC Decision on Serious cross-border threats to health at EU MS.

The Recommendations for the Institution and consolidation of a Laboratory Network for facilitating the institution of relevant lab networks and their capacity building process is being used in a new Project financed by DGDEVCO aimed at consolidating the Lab activities in the Mediterranean area.

The capacity building process has provided methodological inputs and practices and contributed to the development of the new MediEPIET Project financed by DGDEVCO. The Report on Coordination of Epidemiological Surveillance between Points of Entry and the National Health System is being used at National Level for improving Surveillance at PoE, but in addition, is being used to enrich the content of the global WHO Guidance on this issue. Finally, in order to facilitate information sharing, the EpiSouth Network set up and facilitated a dedicated secure platform. Since late 2012, to ensure its sustainability and interoperability, this secure platform is hosted and managed by the European Centre for Disease Prevention and Control (ECDC) that will ensure its functioning after the end of the project itself.

On the basis of the discussion held during the session on the Project's evaluation at the Final EpiSouth Conference (20-21 November 2013), which was held after having shared all the project's achievements through specific sessions, it might be added that overall the Project's outcomes and related impact were well received both by the members of the Networks and the stakeholders (internal, interface, external) present at the Conference (see the related Conference's Report for further details). The fact that the consolidation of some lines of activity might have further enhanced their impact was mentioned.



Results and key findings

The EpiSouth Plus capacity building events/activities have involved globally more than 200 people from the 27 EpiSouth Countries. These include: two project meetings, two workshops/trainings on preparedness, two training on applied epidemiology, one simulation exercise, one lab training on Dengue, one lab training on WNV, EQA for Dengue and WNV, lab experts site visits, three residential stages' periods (for 12 peoples) on Early Warning and Epidemic Intelligence, four site visits carried out in the framework of the WP7 *ENSA*). Figures 2. 3. and 4.

Figure 2. EU and non-EU participation to Capacity Building Activities

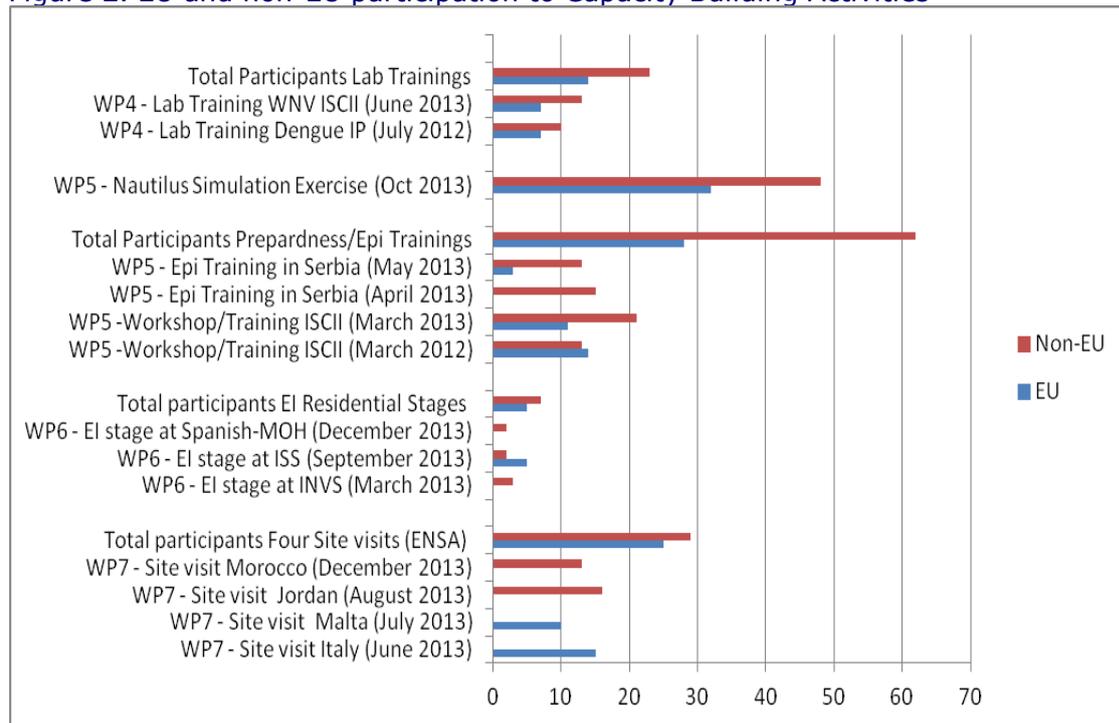




Figure 3. EU and non-EU participation to Networking and technical meetings

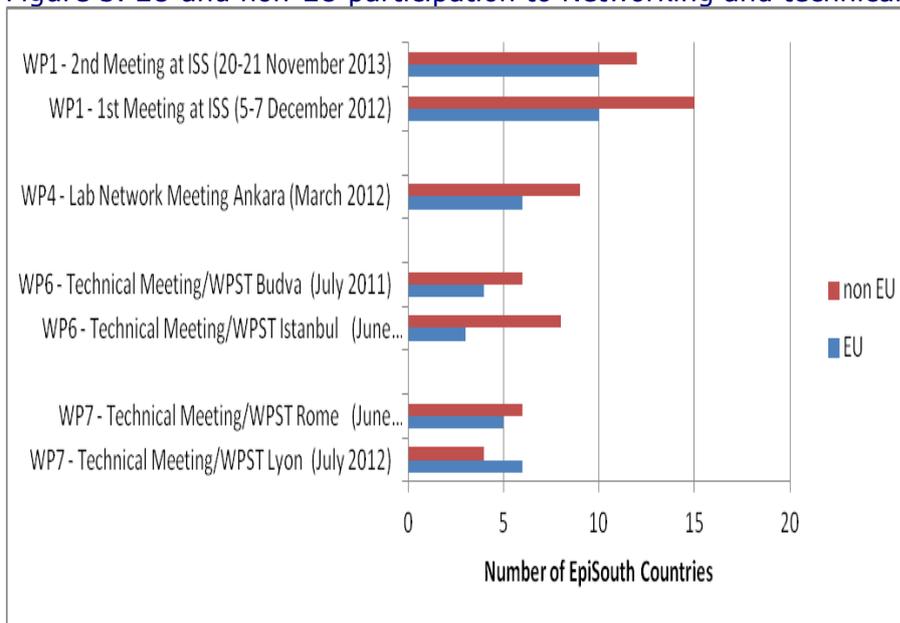
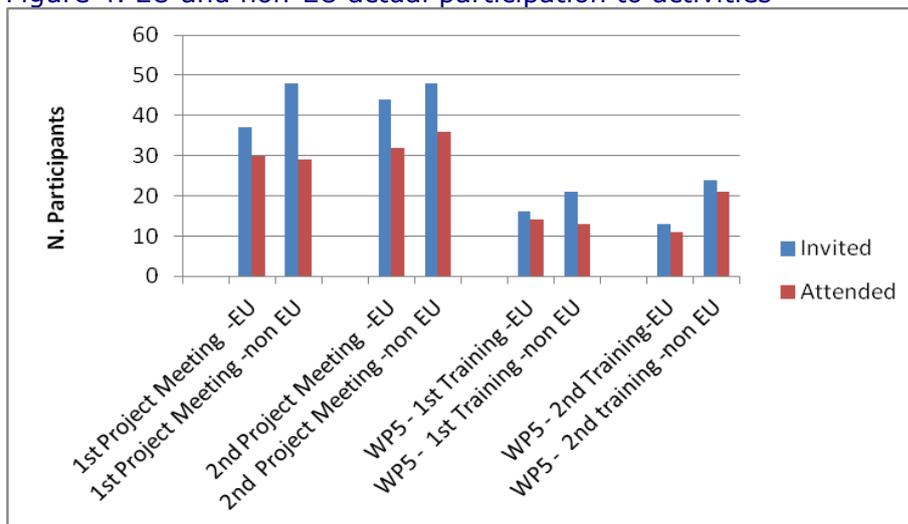


Figure 4. EU and non-EU actual participation to activities



DG Sanco supported the participation of EU Countries to the above events, while DG DEVCO supported non-EU Countries.

The main final Outcomes/Deliverables have been three Strategic Documents:

- The EPREP Tool (Emergency Preparedness Planning) for supporting the EpiSouth Countries in setting their Preparedness Plans;
- Recommendations for the Institution and consolidation of a Laboratory Network for facilitating the institution of relevant lab networks and their capacity building process;
- The Report on Coordination of Epidemiological Surveillance between Points of Entry and the National Health System in the framework of the International Health Regulations 2005 in the EpiSouth Region. Looking at the recurring strengths and challenges in coordinating surveillance between PoE and NHS in Mediterranean countries, this document presents strategic lines that have been successfully adopted in specific national contexts and that might be beneficial to other countries in the region.



Coordination with other projects or activities at European, National and International level

Several Networks and Projects were in place dealing with the sectors addressed by EpiSouth Plus.

Efforts have been done to know in detail their activities, to share methodologies and tools, etc..

Some Networks were directly involved in the Project's activities: the Institute Pasteur International Network; EuroNetP4; SHIPSAN; SEEHN - South Eastern Europe Health Network; MECIDS - Middle East Consortium for Infectious Diseases Surveillance; PPRD - Civil Protection Mediterranean Network: Prevention, Preparedness and Response to Disasters South Programme; CHORDS - Connecting Health Organizations for Regional Disease Surveillance).

EpiSouth Plus also relied on the tools and materials developed by other Projects and experts from other Projects were invited to participate in the technical meeting organised by EpiSouth Plus (i.e. REACT - Response to Emerging infectious disease: Assessment and development of Core capacities and Tools; EQADeBa - Establishment of Quality Assurances for Detection of Highly Pathogenic Bacteria of Potential Bioterrorism Risk), or EpiSouth Plus experts were invited in technical Meetings of other Projects (i.e. ShipSan; ETIDE - European Training in Infectious Disease Emergencies)

Finally, several times EpiSouth Plus experts were invited to take part in EC, ECDC and WHO Meetings addressing the project's sectors.

For further details see WPs activities description and in particular WP2.

Strategic relevance, contribution to the Health Programme, EU added value and level of innovation.

During the year 2009, the Commission developed its "Strategy towards the Health Security in the European Union and Internationally" and the project's strategy and its activities considered and developed these aspects on the basis of the constant working contacts had with the Commission and other relevant Institutions during the Project implementation.

The above mentioned project's outcomes have addressed critical issues relevant for enhancing countries' capacity on preparedness and response and will be used in other contexts and other countries especially to facilitate the implementation of the new EC decision on "serious cross border threats to health".

In several occasions data made available by EpiSouth e-web bulletins were used by ECDC and support was provided for international risk assessments.

Effectiveness of the dissemination

The dissemination of the project's results has targeted several groups, using different dissemination channels. These groups include the following profiles:

- Focal points of the EpiSouth Network
- Representatives from other networks
- Other public health officers and operators interested in issues dealt with by EpiSouth-Plus
- EC, ECDC and WHO representatives and staff
- Technical and political representatives from governments and Ministries of Health.



In June 2011 the project's web site (<http://www.episouthnetwork.org/>) was officially launched and since then it has been continuously updated. The electronic bulletin was released quarterly. Moreover, since December 2011, a multilingual version (English, French and Arabic) of the web site and of the quarterly electronic bulletins have been made available.

A final issue of the quarterly electronic bulletin will be released in April 2014 in order to disseminate fully all the final outcomes produced by the Project.

Presently the Bulletin is being sent to about 1200 people.

In addition EpiSouth staff was tirelessly present in all the appropriate contexts to disseminate the project's results at national and international levels (see WP1 and WP2 description for further details).

For further details see WP2 activities description and Final Evaluation Report.

Conclusions and recommendations, sustainability of the project (after EC co-funding) and lessons learned.

EpiSouth-Plus was unique among projects funded by the EU and other international initiatives in this field for its focus on the Mediterranean region as a whole, including non-UE countries and all three WHO Regional Offices that cover the Mediterranean.

The approach based on countries expectations and regional needs, facilitated interest in participation. In addition to facilitating epidemiological communication and practical training, this regional approach strengthened solidarity and cohesion within the European Community and between EU and non-EU countries.

This was particularly important to enable information sharing on cross-border public health threats and for IHR implementation which requires common international action in case of need. Countries need to adapt their national procedures and legislations to this effect.

Moreover, the adopted methodology enhanced co-ownership by bringing together all the countries in all the planned activities, while the collaboration of international institutions (EC, ECDC, and WHO) allowed sharing views while avoiding overlapping. Ultimately, EpiSouth-Plus contributed to the stability of the region as well as to improve public health protection.

The strategies adopted and the Tools produced should be further valorised through other Initiatives and the results achieved consolidated and extended.

In part this has been already ensured with the approval by EC DG DEVCO of other relevant Projects aimed at consolidating sectors of activities addressed by EpiSouth (consolidation of Lab activities and Epi Training in the Mediterranean Area).



4. Horizontal Work packages

Work package title : **Coordination of the project**
Work package Number : **1**
Work package Leader : ISS
Starting Date. Ending date : **M1 : M39**

Project management

- **EpiSouth Plus Project Organisation** **yes**
- **Project's Annual Work Plans** **yes**
- **Sustainability plan available, describing the measures taken to ensure the continuation of the action after the end of the EC funding** **yes**
(Annex Ia.)

Partnership Internal Agreement **yes**

Specific Agreements between the ISS and the members of the Consortium have been drafted in the framework of the EC DEVCO service contract in order to guide and facilitate the activities implementation considering responsibilities, resources and time frame.

The process was quite complex and time consuming, but has had the merit of creating the framework for clarifying many administrative, managerial and technical aspects with all the involved partners.

Description of the work package

Activities undertaken to ensure the coordination and management of the project and the partnership and to ensure that the activities are implemented as planned.

i) setting Project's Organisation and Governance

The document "EpiSouth Plus Project Organization" was drafted and finalized on the basis of the comments raised during the 1st SC Meeting in LXB: several Project's "Organs" were identified and established in order to ensure the management, the governance and the full participation of all the Countries of the Network (Annex Ib).

The **Steering Committee** (SC) was set up with all the WPs co-leaders. ST members met during ST Meetings and share documents and information through the dedicated NWA of EpiSouth website.

The Project **Advisory Board** (AB) was established with 17 international experts (from EU and non EU Institutions) and representatives of the Institutions acting as collaborating partners of the EpiSouth Project (i.e. HSC, SANCO, EAHC, DEVCO, ECDC, WHO) but not involved in its management and implementation, with the role of advising the Project Coordination and the Steering Committee especially on technical critical issues (AnnexII).

The consultation for request of specific advice has been done by the coordination team through e-mail or teleconferences. In addition, a dedicated area for the AB members has been open in the Network Working Area (NWA) of EpiSouth web site to allow documents uploading/downloading (documents area) and information exchanging and discussion (forum).

The AB Members have been invited to the Project Meetings and in other occasions (Steering Committee, Steering Team Meetings, etc.) according to the needs.

Country focal points (FPs) were identified in accordance with the set criteria



Considering the past experience and the new challenges posed by EpiSouth Plus, all the Partner Countries were requested to consider the following criteria for the selection and appointment of their FPs:

- FP should be staff belonging to the National Public Health Institute and/or Ministry of Health and/or National Reference Laboratory
- Decision making position
- Access to national early warning and surveillance systems data (EWRS Focal Points, for EU countries)/IHR Focal points (for EU and non-EU countries)
- In contact with the National Reference Laboratory if not part of it

The **WP Steering Team** (WPST) were created to enhance both the participation of the Countries to the activities (as countries participate on the basis of their interests and needs) and the efficacy (as the reduced amount of participant countries (9-10) speeds up the decision process and facilitates the preparation of tools and documents).

The WPST are a good means to enhance sense of ownership, efficacy and future sustainability.

The **Yearly Project Work Plans** were drafted on the basis of the Project's schedule with all the WPs and presented and shared during the Steering Committee/Advisory Board Meetings (Annex III). The final yearly Work Plans were shared with all the EpiSouth Focal Points through the NWA of EpiSouth Network website.

ii) coordination meetings and teleconferences (TC)

With the aim of preparing the WP's Action Plans and discussing implementation strategies and status of the activities, several meetings and TC were carried out during the whole implementation period with the WP co-leaders (Annex IV).

List of project meetings, dates, venues, annotated agenda, action oriented minutes

Project meetings

i) 1st SC/Kick off Meeting

The 1st Project Steering Committee has been organized in Luxembourg, 3 February 2011 (**Deliverable D0201**-D0201_Meeting_Minutes_EpiSouth_1st SC/Kick_off_meeting_3_February_2011_EN_IS) see DEL annex.

ii) 2nd Steering Committee(SC) and 1st Advisory Board(AB) Meeting at DGDEVCO in BXL, 29-30 May 2012 (**Deliverable D0202** D0202_Meeting_Minutes_EpiSouth_ 2nd SC/1st AB meeting 29-30 May 2012-EN_IS) see DEL annex.

iii) the 3rd Steering Committee(SC) and 2nd Advisory Board(AB) took place in Rome at Italian MoH on 4 December 2012 (**Deliverable D0204** D0204_Meeting_Minutes_EpiSouth_3rd SC/ 2nd AB meeting 4 December-2012-EN_IS) see DEL annex.

iv)the 1st EpiSouth Plus Project Meeting took place in Rome at Italian MoH on 5, 6 and 7 December 2012. The meeting was hosted by the Italian Ministry of Health and organised by the National Institute of Health (ISS), Project Coordination (WP1) in cooperation with representatives of the Padua General Hospital (**Deliverable D0203** (D0203_Report 1st Project Meeting EpiSouth Plus 5-7 December 2012-EN_PS) see DEL annex)

v) the 4th Steering Committee(SC) /3rd Advisory Board(AB) Meeting took place in Rome at ISS on 19 November 2013 (**Deliverable D0206** (D0206_Meeting_Minutes_EpiSouth_ 4th SC/3rd AB meeting 19 November 2013-EN_IS see see DEL annex).



vi) the Final EpiSouth Plus Conference took place in Rome at ISS on 20 and 21 November 2013 (**Deliverable D0205** (D0205_Report Final Project Meeting EpiSouth Plus 20-21 November 2013-EN_PS) see DEL annex)

Main EU and International Meetings

- i) the project leader has participated in the "Twenty fourth meeting of the South-eastern Europe Health Network" - Tirana, Albania, 10-11 November 2010 (see WP2)
- ii) the project coordinator has participated in the "Meeting of the EWRS component of the Community Network for the Epidemiological Surveillance and Control of Communicable Diseases", held in Luxembourg on the 1st and 2nd of December 2010 (see WP2)
- iii) the project leader has participated in the Albania MoH-WHO-UNICEF jointly organized meeting Meeting on "Shared solutions to common threats" - Tirana, 28-29 April 2011(see WP2)
- iv) the experience gained also with the 1st phase of EpiSouth, made one researcher (Dr Valeria Alfonsi) to participate in Meeting and technical session on Vaccination Strategies (February and May 2011).
- v) the project leader and the WP1 co-leader from Tunisia have participated to the "Union For The Mediterranean- Health Forum" - Health Senior Official meeting in Bruxelles, 30 June 2011 (see WP2)
- vi) the WP7 leader discussed EpiSouth at the EWRS component of the Community Network for the Epidemiological Surveillance and Control of Communicable Diseases -LXB, 23-26 January 2012 (see WP2)
- vii)the project leader and coordinator discussed EpiSouth at the "Intercountry Meeting on Strengthening of Surveillance and Response Capacities Under IHR 2005" - Beirut, 27-29 March 2012 (see WP2)
- viii) the project coordinator presented EpiSouth Plus at the "WHO European Strategy Meeting for implementation of the International Health regulations (2005)", which was held in Luxembourg on 26-27 February 2013 (see WP2)

For other participations to Conferences and Workshops see WP2 description.

Implementation of activities due under WP6

During the whole project's implementation period the WP1 (and often WP2) supported the activities planned under WP6 and, during the extension period, some activities were carried out to consolidate the WP6 activities.

i) request of official adhesion of EpiSouth Public Health Institutions and Ministries of Health to the EpiS for EpiSouth Platform.

Starting from February 2013, following the outcomes of the Project Meeting held in December 2012 and in coordination with the ECDC, the EpiSouth Focal Points have been requested to formally adhere to the EpiS for EpiSouth Platform (Annex V and VI). A total of 23 Countries (12 EU) had given their adhesion to the EpiS for EpiSouth Platform.

ii) InVS partner did not accept to be involved in the project's extension period asked with the amendment.

Although the WP6 activities under the InVS coordination would have been accomplished by 14 of April 2013 (original end of the Project), the EC EAHC/SANCO and DEVCO asked the EpiSouth partners to consolidate the WP6's achievements during the extension period.

Therefore, new strategies for WP6 activities' consolidation were discussed with the partners and the final proposal inserted in the project amendment documentation. This has put an additional load on the remaining partners as per the following:



- Organisation of a Workshop at ISS, Rome on “Simulation Exercise Organisation and related use of the EpiS for EpiSouth Platform”, 16-17 September 2013 (Annex VII)
- Residential stages on EI/EBS:
 - a. at ISS, Rome, 17-20 September 2013 (Annex VIII and IX)
 - b. at Spanish MoH, Madrid, 16-20 December 2013

Finally ISS Coordination team has also produced two thematic notes: “Impact of MERS CoV on epidemic preparedness in countries of the EpiSouth Network in view of Hajj 2013” (Annex Xa) and Wild Polio Virus re-emergence in the Mediterranean” (Annex Xb)

- Monitoring and supervision

As reported above, several coordination meetings and TCs were carried out in order to monitor and supervise the activities.

In particular the WP1 supported WP3 in Monitoring WPs activities through the compilations and discussion of the bi-annual WPs Monitoring Sheets.

WP1 supported also the implementation of three external evaluation:

i) DEVCO ROM Mission

In the framework of the European Commission’s Results-Oriented Monitoring (ROM) a mission assessment of EpiSouth Plus has been conducted between 17/10 and 21/10/2011.

Two sessions have been conducted at ISS in Rome (17 and 21 October) and the EpiSouth coordination team plus the WP7 co-leader have taken part in them.

Other two sessions have been carried out at InVS (Paris) with WP4 and WP6 teams and at ISCIII (Madrid) with WP3 and WP5 teams on 18 and 20 October respectively.

The project coordinator has participated in all the sessions in Rome, Paris and Rome (Annex XI) .

ii) DEVCO IfS Evaluation

In the framework of the European Commission’s Instrument for Stability (IfS) second evaluation, to assess the results of the activities implemented under the IfS, priority 1 since 2010, a day meeting on EpiSouth was held in Rome at ISS on the 20 April 2012.

The IfS P1 programme responds to a broader set of EU strategies and policies in the areas of assistance and cooperation, partnership building, safety and security. It closely relates to the objectives set out in pertinent EU strategies and policies, in particular the European Security Strategy of 2003 (reviewed in 2008).

The final evaluation report was finalized in November 2012 but not yet officially disseminated and it is for internal use.

Interesting aspects/lessons learnt of EpiSouth Project have been reported in the final report mainly in the field of relevance, monitoring and evaluation and sustainability.

iii) Project’s midterm and final Evaluation.

See details under WP3 description.

- Problems that have occurred and how they were solved or envisaged solutions

i) the Mediterranean Crises (**Arabic Spring 2011**), has affected the activities implementation mainly for two aspects:

- some National Governments (i.e. Tunisia, Libya, Egypt, Algeria, Syria) were in a transitional phase during the implementation of the Project and many high level officials and directors were not yet officially appointed;
- meetings and training sessions planned in those countries have to be moved to other less unstable countries.



Despite the impossibility of organizing events in the Mediterranean Countries such as Tunisia, Algeria, Egypt, Syria and Libya, most representatives were very actively participating in the Project activities.

ii) **Argumentation with DG SANCO and DEVCO on *WP6 criteria for implementation***

Starting from February 2011, the EC DG SANCO started to ask to the Project Coordination to guarantee that the project activities in general, and those of WP6 in particular, were implemented within the EC legal framework.

The Coordination and WP6 leadership efforts went towards the objective of showing and proving to the EC that all the activities were being implemented in accordance with the EC legal aquis as stated in the Project's document.

Unfortunately the EC deemed insufficient the documentation provided by the EpiSouth Coordination and WP6 until December 2011, and the WP6 activities were kept frozen from 5 July to 9 December 2011 (Annex XII).

Although the WP6 routine activities of epidemic intelligence were maintained (including collaboration with ECDC for risk assessment and production of weekly bulletins), this issue has indeed created many collateral repercussions on the other WPs activities and on the entire project's plan and related schedule.

Among others, the 1st Project Meeting was planned to be held in Paris in February 2012. This would have been the 1st occasion where all the EpiSouth Focal Points could have met vis a vis for discussing the several issues on which it has been worked on during this first year of activity.

Many activities were connected to this 1st Meeting: the WPs Steering Team Meetings; the Head of Med Laboratories Meeting; the discussion of research, governance and sustainability issues with the FPs; the presentation of the project's achievements to the AB and collaborating Institutions, the discussion of the ECDC/Epis platform etc..

Moreover, unexpectedly, starting from July 2011, InVS shared with the Project Coordination some concerns regarding InVS administrative and logistic constraints which might have implied the postponing of the Meetings to the 2013 first quarter.

Considering that this postponing would have affected greatly the project's implementation schedule and related expected results, ISS verified the possibility of taking in charge the organization of the Meetings.

Finally, in agreement with InVS, EAHC/SANCO and DEVCO, it was decided to move the Meetings under the ISS organization and their location from Paris to Rome.

Therefore new suitable dates for the meetings were identified as per 4-7 December 2012.

From September 2012 the Project coordination at ISS was therefore very busily involved in the organization of the planned meetings.

The coordination in collaboration with all the WPs leadership has adapted the project's plan taking in consideration the above described aspects and the possibility for a no-cost extension was assessed with the partners and accepted by the EC DEVCO and SANCO.

iii) ***InVS disengagement*** as per 14 of April 2013 (original end of the Project)

InVS partner did not accept to be involved in the project's extension period asked with the amendment.

Although the WP6 activities under the InVS coordination would have been accomplished by 14 of April 2013 (original end of the Project), the EC EAHC/SANCO and DEVCO asked the EpiSouth partners to consolidate the WP6's achievements during the extension period.



New strategies for WP6 activities' consolidation were discussed with the partners and the final proposal inserted in the project amendment documentation. As reported above, this has put an additional load on the remaining partners.

- Amendments incurred or requested during the reporting period

A request of the project no-cost extension and related amendment was submitted to DEVCO and SANCO on 22 November 2012.

After negotiation and the delays in receiving the needed documentation by the InVS partner, the grant agreement amendment was finally signed in November 2013.

The planned Milestones were changed only in their schedules and the contents of deliverables were not changed.

The partnership did not change, but InVS partner did not extend its participation to the Project for the extension period of 9 months approved with the amendment.

- Conclusions

The approach and strategy deployed for the EpiSouth Plus implementation were aimed at guaranteeing and ensuring the effectiveness of the implementation with long term changes which could have ensured future sustainability.

In the framework of EpiSouth activities efficiency may appear, at a first view, poor and hampered by obstacles. The standard indicators for efficiency might also mislead.

In fact, the project's success is linked to the concrete participation of the partners which, step by step, has facilitated the countries' sense of ownership and the taking in charge of responsibilities and tasks related to the activities.

For examples some project's events were organized and carried out by the non-EU co-leaders in their respective countries (for example trainings in Serbia, technical meetings in Montenegro and Turkey, etc.).

Also some unexpected events (like the Arabic Spring, the long lasting negotiation with the EC in relation to WP6 legal aspects, the additional activities due to the withdrawn of WP6) have imposed to the Project's Coordination continuous re-planning, flexibility and unexpected efforts.

Finally also the relevant number of partners (15) and collaborators has posed several coordination challenges.

Despite the above, the coordination/WP1 has ensured the proper implementation of the Project and produced the planned Deliverables.

The Coordination has also tried to stimulate discussions and debates among the partners in relation to issues relevant to the Project's sectors.

Among them, particularly relevant was the discussion/sharing of ideas among the EpiSouth SC Partners on the "Proposal for a Decision of the European Parliament and of the Council on serious cross-border threats to health. Brussels: European Commission; 8 Dec 2011. COM(2011) 866 final.

The discussion has produced a not published document reporting the EpiSouth lessons learnt on cross border threats in a global environment (Annex XIII)



List of deliverable(s) linked to this work package

Deliverable

	Title
1	Reports of the SC and Project Meetings
2	Interim and final technical implementation reports, including financial reports

Milestones reached by this WP

	Milestone title	Month of achievement
1	1st Steering Committee in Luxembourg	4
2	Sustainability plan (1 st draft on the basis of discussion at the SC in LXB)	4
3	Annual Project Work Plans	4, 16 and 30
4	3 rd nd Steering Committee/AB & 1 st Project Meeting in Rome	26
5	2 nd Project Meeting (with SC) & Final Conference in Rome	37

Horizontal Work packages

Work package title : **Dissemination of the project**
Work package Number : **2**
Work package Leader: ISS
Starting Date. Ending date : M1 : M39

Dissemination plan available **yes**
Project leaflet/brochure/newsletters **yes**
Project website: <http://www.episouthnetwork.org/>
The EU funding disclaim and EU logo are visible in the project website and public presentations **yes**

Description of the work package

The Project’s dissemination strategy and plan, including the identification of target groups and dissemination contents and means, has been drafted and then presented and discussed at the first Steering Committee Meeting held in Luxembourg on 3 February 2011. Based on the comments collected at that time and on other comments/suggestions received in the following months, the final version has been finalized (Annex XIV), as well as uploaded in the members’ area of the web site

The dissemination of the project’s results has targeted several groups using different dissemination channels, as summarized in the table below for the project’s deliverables. These groups include the following profiles:



- Focal points of the EpiSouth Network
- Representatives from other networks
- Other public health officers and operators interested in issues dealt with by EpiSouth-Plus
- EC, ECDC and WHO representatives and staff
- Technical and political representatives from governments and Ministries of Health

Table 4. Dissemination channels and target groups for all the project's deliverables:

N	Deliverable	Dissemination channel	Target group
1	Inception, Interim and final technical implementation reports, including financial reports	a) Full reports reserved to EU DG/SANCO-EAHC and DG/DEVCO-EuropeAid. b) Technical annexes available in the public area of the web-site	EU DG/SANCO/EAHC and EuropeAid Officers
2	Reports of the project meetings	the public area of EpiSouth website: Executive summary of the reports NWA of EpiSouth website: full text of reports	Public health operators who are interested in the issues dealt with by EpiSouth. The link to EpiSouth is available in several websites of other PH Institutions, Ministries of Health, etc. All the FPs of EpiSouth network
3	EpiSouth quarterly electronic bulletin	via e-mail using a continuously updated mailing list Public area of EpiSouth website	Public health operators, policy makers, EC delegations, ECDC, WHO staff, and all people who have registered in the previous phase of the project or have registered on-line for receiving the bulletin
4	Final Evaluation Report	the public area of EpiSouth website; annexed to the final project report; presented at the final project conference	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives; Governments and MoH representatives.
5	Laboratory Training packages and Recommendation for training and capacity building program	a) the public area of EpiSouth website; b) annexed to the final project report; c) presented at the final project conference.	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives; Governments and MoH representatives.
6	Directory of Regional laboratories involved in surveillance/early warning system in South Europe and Mediterranean area	a) the public area of EpiSouth website; b) presented at international conferences and workshops	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives; governments and MoH representatives.



7	Preparedness plans & Risk management capacity building materials for Workshops and Sessions and Simulation Exercise.	a) the public area of EpiSouth website; b) annexed to final project report; d) presented at the final project conference	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives, Governments and MoH representatives.
8	Strategic document on Capacity building development regarding Preparedness plans & Risk management procedures: EPREP Tool	the public area of EpiSouth website; annexed to final project report; presented at the final project conference.	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives; Governments and MoH representatives.
9	EPIS based secured platform interop. with EU & other EWSs(subject to ECDC delivery & countries agreement) & Epi Bulletins	a) Secured Members Area of EpiSouth website until December 2012 b) EPIS starting from January 2013 c) weekly epidemic intelligence bulletins sent by e-mail: d) The public area of EpiSouth web site	EpiSouth FPs and partners. The member states of each Early warning systems with whom the EpiSouth platform will be interconnected (e.g. EU member states for the connection with the EWS); EC, WHO and ECDC representatives. Epi-Bulletin distributed to all people who have registered in the previous phase of the project or have registered on-line for receiving the bulletin
10	Strategic document on national/international issues which may interact/interfere with IHR implementation	the public area of EpiSouth website; annexed to final project report; presented at the final project conference.	EpiSouth FPs; public health operators; EC, WHO and ECDC representatives; governments and MoH representatives.

In the period January-February 2011, an evaluation survey among the EpiSouth focal points was conducted to collect opinions on the web-site contents and tools, the quarterly electronic bulletin and needs for a multilingual web-site. Data from this survey was analysed and results summarised in a report made available in the Members' area of the EpiSouth portal and annexed to this report (Annex XV).

Based on the result of this survey, a test version of the new network's web site has been developed in collaboration with CINECA in April 2011. Due to an unexpected delay in collecting needed information from partners and to unexpected technical problems, the official opening of both the public area and members' area of the new web-site foreseen for April 2011 has shifted to May 2011. As a consequence, the first issue of the Quarterly Electronic Bulletin, which should launch the new contents presented in the project's web site, has been postponed to June 2011, after the official opening of the project's web site. Once the web site was officially opened, it has been continuously updated and the electronic bulletin released quarterly. Moreover, since December 2011, a multilingual version of the web site (English, French and Arabic) has also been made available, and the quarterly electronic bulletin released in three languages. A final issue of the quarterly electronic bulletin will be released in April 2014 in order to reach the number of issues initially planned (**Deliverable D0301 and Deliverable D0302** (D0301_EpiSouthElectronicBulletin-PS and D0302_EpiSouthElectronicBulletin-PS) see DEL annex).

Since the opening of the web site, a particular effort has been devoted to develop ways aimed at facilitating the participation of the Focal Points to the project's activities also through the members' area of the Project web site. For example, each participant is constantly kept informed, through a customised interface, about recent documents, activities to be accomplished, and



incoming events.

The screenshot displays the EpiSouth Network Working Area website. The header includes the EpiSouth logo and the tagline "Network for the Control of Public Health Threats in the Mediterranean Region and South East Europe". The navigation menu contains links for Home, Meetings & Events, Document Discussion Forum, Enter data, Cross Border Alerts, Search, Contacts, Guide, Platform Settings, and Web stats EPISOUTH Home. The main content area is divided into several sections: "User Data" (Name: Maria Grazia Dente, Organization: Italy - Istituto Superiore di Sanità (ISS)), "Workspaces" (General Assembly (IPs), WP Network Working Area, WP Steering Teams Working Area, Project Steering Committee Working Area), "Cross Border Alerts" (Recent alerts: MALARIA in GREECE, WEST NILE FEVER in TUNISIA, LEGIONELLOSIS in GREECE, HEMOLYTIC UREMIC SYNDROME in FRANCE, METROPOLITAN), "Enter Data" (No new questionnaires to be filled in), "Meetings & Events" (No Upcoming Events), and "Documents Consultation". The footer shows the system tray with the date 07/11/2011 and time 15:49.

In the period May 2011 – January 2014, the public area of the web site was accessed by 10,210 different visitors for a total of 19,109 visits, with an average of 4.57 pages per visit and a visit duration of about 4 minutes. The members' area was accessed at least once by 121 authorized users with a total of 344 uploaded documents and 2207 downloads (average: 6.4 downloads per document).

During the project's implementation the whole EpiSouth-Plus Project was presented at several conferences/workshops/meetings held in different context and identified as relevant for dissemination purposes. Moreover, the EpiSouth Network was requested to participate and was presented to nine meetings for competent bodies and contact points.

In particular, 2 posters (Annex XVI) and 18 oral presentations (Annex XVII) were made at 20 different conferences, meetings etc.

- Presentation at the Meeting of ECDC National Focal Points for Threat Detection, Stockholm Sweden 4 November 2013
- Presentation to participants to the Health Governance Unit Project during the study visit "Research and Surveillance for Health", Rome, Italy 15 May 2013
- Presentation at the EC-TAIEX - ECDC Workshop with European Neighbourhood Policy Countries on the EU acquis in the area of communicable diseases, Stockholm, Sweden 22-23 April 2013
- Presentation at the WHO European Strategy Meeting for Implementation of the International Health Regulations (2005), Luxembourg 26-27 February 2013
- Presentation at the Meeting "Why is it important to be vaccinated? - Lessons learned from outbreaks of vaccine preventable diseases", Luxembourg 15-16 October 2012
- Poster presented at the High Level Conference "EU Health Programmes: results and perspectives", Brussels, Belgium 3 May 2012
- Presentation at the Intercountry Meeting on Strengthening of Surveillance and Response Capacities under IHR 2005, Beirut, Lebanon 26-28 March 2012
- Presentation at Inter-Agency Meeting on environmental health in Southern and Eastern Mediterranean , Marseille, France 14 March 2012
- Presentation at EWRS Meeting, Luxembourg, 24 January 2012
- Poster presented at the 14th European Health Forum - Workshop on Health Security, Gastein, Austria 5 October 2011
- Presentation at the Union for the Mediterranean-Health Forum, Brussels, Belgium, 30 June 2011



- Presentation at the 4th Eurasia Congress of Infectious Diseases, Sarajevo, Bosnia & Herzegovina, 1-5 June 2011
- Presentation at the Forum Mediterraneo in Sanità 2011, Palermo, Italy 24-26 May 2011
- Presentation at the Subregional Meeting on Shared Solutions to Common Threats - Vaccination and Vulnerable Populations in South East Europe, Tirana, Albania 28-29 April 2011
- Presentation at the International Meeting on Emerging Diseases and Surveillance - IMED 2011, Vienna, Austria 4-7 February 2011
- Presentation at EWRS Meeting, Luxembourg 1-2 December 2010
- Presentation at Mecids Executive Boarding Meeting, Jerusalem, Israel 26-27 November 2010
- Presentation at the annual meeting of Arbo-zoonet, Rabat, Morocco 22-24 November 2010
- Presentation at XXIV Meeting of the South-eastern Europe Health Network, Tirana, Albania 10-11 November 2010
- Presentation to Delegation of Egyptian Ministry of Health, Rome, Italy 19 October 2010

Moreover, other 16 presentations focusing on specific activities implemented by the project have been made by the other WPs teams.

At today, a scientific article based on data collected within the EpiSouth Network has been published in the European Journal of Public Health and 10 Technical Reports and 3 Strategic Documents have been edited and made available in the web-site. A booklet containing the three strategic documents, including forewords from different institutions, will be disseminated through the website.

A draft version of the document summarising rules for visibility, authorship acknowledgements and logos has been presented and discussed among partners during the first steering committee meeting. Based on the comments received at that time and other comments received in the following weeks, the document has been finalised and the final version annexed to the dissemination strategy and plan and made available in the members' area of the web site together with graphic tools such as layout for slides presentations and official banner and logos.

A leaflet (Annex XVIII) describing the project's organization and activities was prepared and made available to partners for dissemination purposes in both the members' area and the public area of the web site. After the first release, the leaflet has been updated and an outline (annex XIX) with a more extended description of the project has been also prepared and made available in both the public area and the members' area of the web-site.

Due to the delay in the opening of the project's web-site, the request to partners to activate links to it in the official web sites of their institutions was delayed two months. Although a written solicitation has been sent to speed-up the process, only six partner Institutes have activated such a link, even because some of them do not have an official web-site and others have a web-site with a structure that doesn't allow the logical placing of links to external web sites, nor a multilingual version. However, the link to the EpiSouth Network website has been made available in some web sites other than those of the partner Institutes (e.g., EpiCentro, EuroSurveillance, EAHC), thus increasing the project's visibility.

The Final project Conference was held at the Italian National Institute of Health (ISS) in Rome (Italy) on 20-21 November 2013. The report of the conference has been edited and made available in the public area of the web-site.

Twenty communications concerning eleven project's related events were published by different press agencies, mainly using as source the nine press releases prepared and made available by the WP2 team (Annex XX).

The main Project's features and lessons learned have been reported in a audio-video realised by CINECA in collaboration with ISS and the other main partners. This will be soon uploaded in the web-site and announced in the last issue of the quarterly electronic bulletin expected in April-2014.

Finally, an evaluation including feedback from participants to the project about dissemination activities is included in the external final evaluation report (Deliverable D0401 see DEL Annex).



List of deliverable(s) linked to this work package

Deliverable

	Title
3	Quarterly Electronic Bulletin

Milestones reached by this WP

	Milestone title	Month of achievement
1	Dissemination Plan	February 2011 (M4)
2	WEB site (both restricted and public area) opening, updating and maintenance	May 2011 – January 2014 (M7-M39)
3	Presentations at conferences/workshops and stimulating the production of articles for possible publications and technical reports	October 2010 – January 2014 (M1-M4, M6-M8, M12-M15, M17, M19, M20, M24, M27-M30, M31, M35, M37, M39)
4	Outline and leaflet release and updating	February 2011- December 2013 (M4-M38)

Horizontal Work packages

Work package title : **Evaluation of the project**

Work package Number : **3**

Work package Leader: ASLTO1

Starting Date. Ending date : M1 : M39

Evaluation plan available: **yes** (Annex XXI)

External evaluation: **yes**

Description of the work package

i) Work packages (WPs) bi-annual monitoring sheets

The WP1 and WP3 were constantly monitoring the activities through the bi-annual monitoring sheets filled in by the WPs leaders (annex XXII).

This methodology was shared and agreed with the SC and AB members during the Meeting held in Brussels in May 2012.

The revision and discussion of the monitoring sheets with the WPs leaders was done during TCs and coordination meetings.



ii) Midterm and final evaluation

The ASLTO1 (WP3 leader) has had unexpected problems for signing the contract with the non-key expert. The ASLTO1 permanent staff (ie Dott. Giuseppe Salamina) has continued to carry out the monitoring, but he was not in the position to carry out the midterm and final evaluations.

It has been internally discussed to commit the task to an external evaluator to be selected among staff of Projects/Networks which are implementing activities in the same EpiSouth's domains.

During the AB Meeting the proposal has been discussed and accepted and the Coordination, with the support of the WP3, has proceed accordingly.

ToR has been prepared for the midterm (August 2012) and for the final evaluation (August 2013), shared with EAHC/SANCO and DEVCO Project officers and sent to five potential candidates (see annex XXIII and XXIV).

At the end of the selections the University of Thessaly (Greece) has been tasked for carrying out both the evaluations.

The midterm evaluation process started in September 2012 and the preliminary results of the evaluation were shared and discussed during a dedicated session held during the 1st Project Meeting in December 2012. Than the final report was finalised and made available to all the project's stakeholders (annex XXV).

During the midterm evaluation process the Project's indicators have been discussed and revised if needed and the amended table reported below was submitted with the amendment documentation to DGSANCO.

All the indicators reported in the table below were analyzed and discussed in the midterm and in the final evaluation.

The final evaluation process started in September 2013 and the preliminary results of the evaluation were shared and discussed during a dedicated plenary session held at the EpiSouth Plus Final Conference. Than the final evaluation report was finalised and made available to all the project's stakeholders (**Deliverable D0401** (D0401_EpiSouthFinalEvaluationReport_EN_PS) see DEL annex).

An external evaluation was carried out also during the Simulation Exercise (SE) implementation. The expert of the University of Thessaly was at the Spanish MoH during the implementation days (2-3 October 2013). **Deliverable D0402** (D0402_EpiSouthFinalEvaluationReport_EN_PS) see DEL annex)

Evaluation of the 1st Project's Meeting and Final Conference

Evaluation questionnaires were prepared and distributed to the participants of the Project Meeting (December 2012) and of the Final Conference (November 2013). The results were inserted in the Report of the 1st Meeting and in the Report of the Conference.

Table n.5 Project's indicators

Specific Objective 1	Establishment of a Mediterranean Regional Laboratories network (WP4)	
Process indicators	Output indicators	Outcome indicators
Number of participants attending the Meeting organised by the Pasteur Institute for Laboratories Representatives out of the total number of	Number of trainees attending the training courses (>=60%) and the number of participants attending the meetings organised	Reference procedures available in the recommendation for training and capacity building program and considered by each country for the collaboration between PH



those selected	by the Pasteur Institute (>=60%)	Institutions and laboratories of the EpiSouth Network
The list of the laboratories from the EUROMED region eligible to participate in the network is developed	>80% satisfied trainees from the training courses	Laboratory needs in the Mediterranean Area identified and shared with stakeholders and European and international Institutions
Capacities assessment of the laboratories participating in the network is completed	Number of Laboratories which accept to participate in the Network out of the total number of those whose standards were adequate to the project's objectives (50%)	
Training material is developed on time		
Specific Objective 2	Promotion of common procedures in interoperable Generic Preparedness and Risk management among the countries involved in the Network (WP5)	
Process indicators	Output indicators	Outcome indicators
In-depth capacity needs assessment carried out, based on information collected from a sample of participating countries	At least 70% of EpiSouth countries participate in the simulation exercise	At least 50% of EpiSouth countries consider the usage of the <i>tool for generic preparedness plan development</i>
Two Workshops carried out	At least 70% of EpiSouth countries attending each Workshop out of the 27 countries in the Network	
Training material and simulation exercise is prepared	>70% satisfied participants in the simulation exercise	
Training courses are organised	At least 70% satisfied participants from the workshops	
Specific Objective 3	Enhance Mediterranean Early Warning Systems (EWS) allowing alerts and Epidemic intelligence information sharing among EpiSouth countries and developing interoperability with other European Early Warning platforms (WP6)	
Process indicators	Output indicators	Outcome indicators
EpiS based cross-border secured platform developed	>70% satisfied with the platform's functionality (accessibility, user-friendly, timeliness)	Increase of the number of alerts published and their distribution among the Partners
Reference procedures available and endorsed by countries for information sharing within EpiSouth secured platform and among it	Number of eweb bulletins (EpiSouth Weekly Epidemic Intelligence)	Increase of the number of episodes of collaboration within the network between EU and non-EU countries and between the Network and other EW platforms



and other EW systems		
Development of eweb bulletins (EpiSouth Weekly Epidemic Intelligence)	Increasing in the number of registration in the eweb bulletin mailing list	Willingness of countries to continue the usage of the platform and level of appreciation of the platform's usefulness and need measured through core packages evaluation questionnaires
Specific Objective 4	Production of a strategic document, with guidelines based on assessments and surveys, aimed at facilitating IHR implementation (WP7)	
Process indicators	Output indicators	Outcome indicators
WP 7 Workshops conducted	Number of EpiSouth participants out of the total invited in the workshops	Number of EpiSouth countries which have been helped by the results produced by the Situation Analysis and the lessons learned/case studies collected by the EpiSouth WP7 ($\geq 50\%$) measured through core packages evaluation questionnaires
Literature review report on IHR implementation in the EpiSouth Region is prepared and areas of priority are identified	Final report of in depth analysis of priority area (literature review and analysis of existing monitoring frameworks) produced	Number of EpiSouth countries which have been helped by the EpiSouth WP7 documentation in the identification of priority areas and the IHR implementation ($\geq 50\%$) measured through core packages evaluation questionnaires
The methodology for the situation analysis on coordination of surveillance and response between points of entry and national surveillance systems is developed	The situation analysis on coordination of surveillance and response between points of entry and national surveillance systems is carried out and results fed into the WP7 strategic document	

List of deliverable(s) linked to this work package

Deliverable

	Title
4	Final Evaluation Report

Milestones reached by this WP

Milestone Title	Month of achievement
Evaluation plan	4



WPs Monitoring sheets	6
WPs activities evaluation questionnaires	inserted in the midterm evaluation (external service)> 24
Meeting evaluation Questionnaires	25
Networking Evaluation Questionnaires	inserted in the midterm evaluation (external service)> 24
Mid-term Evaluation Report	18 (external service)> 26
Presentation of the Final Evaluation results to the Review Meeting with EC Experts Committees	After 18> at the final Project Meeting
Final Evaluation and Report	35-38



5. Specific Work packages

Work package title : Mediterranean Regional Laboratories Network

Work package Number : WP4

Work package Leader : IP

Starting Date. Ending date : M1 :M39

Description of the work package

Methodology and activities

WP4 Steering team

WP4 Steering Team (ST) has been identified and consolidated. The WP4 ST consists of representatives from Croatia, Cyprus, Italy INMI, Italy Padua-GH, Jordan, Lebanon and Tunisia. One additional country which has shown interest in participating to the WP4ST could not be included (Libya) due to political instability.

Exchanges between WP co-leaders

The Turkish co-leader (Handan Kalaycioğlu, Refik Saydam National Public Health Agency) has been changed in June 2012. The new co-leader is Gülay Korukluoğlu, head of the Microbiology department of the same institution, recently renamed as Turkish Public Health Institution. From the beginning, regular exchanges by e-mails and phone have been established. Each question, direction to follow and decision is discussed and validated by both co-leaders.

Activities

The presentation of the mission of WP4 and the corresponding activities were presented by an informative letter and Action Plan to all the ST members (03 August 2011 – Annex XXVI and XXVII).

A questionnaire was joined to determine jointly the priority areas which will be addressed (Annex XXVIII). The proposed issues were selected according to their importance in the region, emergence or re-emergence (West-Nile, Dengue, MDR tuberculosis, new influenza strains), cross-importance with other work packages (Biosafety, zoonoses, vector-borne diseases) and previously identified as important in EpiSouth (See EpiSouth Report 4/2008).

A first WP4ST teleconference (TC) was organised on the 20th of September 2011 to discuss the results of the Questionnaire. Lebanon and Cyprus who could not participate to the TC were called later to inform them on the discussions and to collect their point of view (Annex XXIX).

All agreed on the following points:

Identification of the priority areas

The identified priority areas for the WP4 are West Nile Virus, Biosafety and Dengue (Annex XXX) which are also crosscutting issues with the other WPs (zoonoses, vector-borne diseases [WP6], of IHR concern [WP7]). Influenza was identified as a priority according to the results, but it was agreed, however, that since a lot of influenza-related training and meetings were organised during the past



years, due to the A/H1N1pdm 2009 pandemic, additional training was not a priority. As such, it was decided that only networking activities would be organised concerning influenza. Multidrug-resistant Tuberculosis issues will be further discussed with regard to specific activities.

WP4 Steering team teleconference, 22 November 2012

Seven institutions out of 10 represented in the WP4ST have attended a conference that has been organised on the 22 November 2012 (participation rate: 70%). The WP4 team gave its ST a feedback on the WP4 activities. The ST has advised to the WP4 to add some items on the agenda of the joint session WP4ST/MRLN within the 1st project meeting in December 2012 in Rome (Annex XXXI)

Regular update have been made by email and face to face meetings have been done in Rome at the intermediate and Final Project Meetings.

The Experts committee and the identification of laboratories

Experts on the priority issues were contacted and asked to participate to the WP4 Experts committee and an informative letter was sent to the experts, to explain the issues of EpiSouth Plus, and more specifically the WP4 (Annex XXXII).

A first questionnaire (Annex XXXIII), aiming at the identification of the minimum requirements (laboratory capacities) for selection of the laboratories which will be involved per country, has been prepared by the WP4 team and shared with the expert team for validation.

Once validated, this questionnaire was sent to the EpiSouth national focal points (FPs) who forwarded it to the concerned Laboratory(ies) (human and animal fields) of their countries. The aimed laboratories should be national references for Dengue and West Nile or a Virology unit which has the best possible expertise on diagnosis and identification with these pathogens or related viruses if no specific reference laboratory exists. The meeting with the Expert Committee took place at the Institut Pasteur (Paris, France) on the 13 January 2012 (Annexe XXXIV). During this meeting, from the 29 Laboratories proposed by 20 countries, the Laboratories to be part of the MRLN core group have been identified. The other laboratories (9) are involved as associated laboratories (Veterinary + other Human labs).

One more laboratory from another EpiSouth country was added to the core group after the Expert meeting due to delayed response.

Mediterranean Regional Laboratory Network (MRLN)

During the meeting with the Expert Committee (13 January 2012), from the 29 Laboratories proposed by 20 countries, 20 laboratories have been identified to be part of the MRLN core group. The other laboratories (9) are involved as associated laboratories (Veterinary + other Human labs).

Two more laboratories from 2 other EpiSouth countries were added to the core group after the Expert meeting due to delayed response. One more laboratory has joined the MRLN on September 2012. One more laboratory (Montenegro) has joined the MRLN on February 2013. To date, the MRLN involves 24 laboratories (1 per country). (**Deliverable D0600** (D0600_MRLN Directory_EN_PS) see DEL annex).

Mapping of the existing biological expertise

First, an inventory of the networks existing in the Mediterranean and the Balkans Region has been performed.

Second, all national reference laboratories or related laboratories (Virology), on the priority issues of each country of the area, were listed. All the National influenza centres (WHO NIC) and the Institut Pasteur International Network members of the area were also included in the list. We found at least one laboratory per country that could be included in the Laboratory network.

A regular update was done.



Identification of laboratory needs

Needs of laboratories selected for the MRLN were first identified from their answers to the Questionnaire on Laboratory capacities (part 1) and from discussion during the Meeting with the Heads of laboratory. This first assessment has been completed with the analysis of their answers to the Questionnaire on laboratory capacities - Part 2 and with discussion during training. The results of the analysis of the questionnaire part 1 & 2 are shown in the Annexes Report_Needs-assessment.

The main conclusion is the following:

To face the heterogeneity of the laboratory capacities on these priority issues, the WP4 would take into account the different capacities by involving all the members and creating a supportive network.

The WP4 activities will answer partly the expectations of the laboratories, in consequence of available time and funds. However, each step forward brings new issues that were not known at the beginning of the project. The development of the laboratory network and the trust between members and the WP4 as well as the whole EpiSouth network to help us to foster the emergence of new ideas and the expression of new needs and requests.

There is a necessity to make this MRLN and the EpiSouth network sustainable in order to continue to answer the laboratories' needs and more broadly of the countries of the Mediterranean and Balkans region.

Presentation of a poster at the 15th annual conference of the European biosafety association (EBSA) on 12 & 13 June 2012, Manchester (UK) Annex XXXV

Oral presentation at the ISNTD Bites 2013 in London (UK) October 2013 (Annex XXXVI).

Meeting with the Heads of laboratory

The meeting with the Heads of laboratory took place at the Refik Saydam National Public Health Agency (Ankara, Turkey) on 08 & 09 March 2012 (Annex XXXVII). During this meeting, from the 20 laboratories identified (one per country) on January 2012, 13 heads of laboratory could attend (65%). Three more laboratories were identified in February, so could not participate to this meeting due to logistical and time restraints. Heads of these laboratories have exchanged on biosafety, West Nile and dengue issues and answered the "Questionnaire on Laboratory capacities – part 2". Strengths and needs of the different laboratories have been identified to better tailor the forthcoming activities. This "Questionnaire on Laboratory capacities – part 2" was sent by e-mail to the 9 heads of laboratories who were not at the meeting and were asked to answer by the end of May 2012.

First training session on "Dengue and Biosafety in the lab"

From 02 to 06 July 2012, 17 trainees have attended the 1st training session on Dengue and Biosafety in the lab (over 22 member laboratories at date). Two candidates could not attend because they could not get a Visa for France (Libya and Turkey). The course has been organised with the help of Philippe Dubois previously WHO Biosafety and Quality trainer and member of the Urgent Response to Biological Threats (CIBU, IP) and Philippe Desprès with the POLARBO structure hosted in the Flavivirus-Host Molecular Interaction (FHMI, IP). After the Meeting with the Heads of Laboratory, it has been the second step in building up and strengthening links between laboratories within the EpiSouth MRLN. The training combined theoretical and practical courses concerning biosafety and laboratory diagnosis of dengue. Trainees worked in pairs during theoretical and practical courses. They have also compared results from different available commercial diagnostic kits for dengue diagnosis in order to address limits and differences of the methods. This, in order to have the most complete overview of the dengue diagnosis possibilities and to allow



the trainees to implement in their home situation the most adapted testing (**Deliverable D0501** (D0501_DengueandBiosafetyTraining_EN_PS) see DEL annex).

Participation to the 1st EpiSouth plus project meeting and 2nd Meeting of the Heads of lab of the MRLN + WP4ST

The 1st EpiSouth plus project meeting in Rome has enabled all the EpiSouth plus partners to meet in person and to exchange. It has been the first time that all the Public Health officials, epidemiologists and heads of laboratory, member of the EpiSouth network, have met.

During the global project meeting, the WP4 had the opportunity to have a dedicated WP4ST-MRLN joint session. This session was considered as the second Meeting of the heads of laboratory. This has been the occasion to reinforce the bonds between the lab members and to discuss with the WP4ST members representing the countries. Some differences between the point of view of the epidemiologists and laboratory staff have been highlighted.

The WP4 has presented the realised activities already and the upcoming activities were discussed with participants:

- The content of the 2nd training that is eagerly awaited by all the participants has been reviewed to be perfectly in line with the expectations of everyone;

- A stage at the Institut Pasteur for 3 to 4 weeks for 2 non-EU countries has been proposed to the heads of laboratory. Due to the reorganisation of the Laboratory for Arboviruses within the IP, the WP4 has discussed with the Urgent response for biological threats lab (CIBU) of the IP that agreed to provide a 3 to 4-weeks stage for 2 persons for BSL3 training. The WP4 has proposed that the laboratories just starting with BSL3 facility and corresponding activities should be prioritised for training. The Algerian laboratory was selected for a training on BSL3. However, the other laboratories having a BSL3 soon available/functional had different training requests (onsite visit of expert, support in obtaining certification, etc.). The remaining training possibility for 1 more person from a non-EU country was difficult to redefine and another host laboratory was not found.

- A preliminary list of supportive laboratories has been established. These 6 pre-identified laboratories (France, Greece, Italy, Slovenia, Spain and Turkey) are those with the best capacity within the MRLN that could provide diagnostic support for the other MRLN members in case of emergency/outbreak. France, Greece and Slovenia agreed to be contacted for a support by the other MRLN lab members. Slovenia has been for cases by the Torlac laboratory from Belgrade.

During the project meeting in Rome, interaction has been reinforced and the laboratories have understood the importance of sharing information between them but also with the epidemiologists or officials. Furthermore, this meeting has enhanced trust towards the other laboratories but also towards the WP4. Afterwards, one new country (Montenegro) has joined the MRLN and the heads of laboratory have been more reactive and active within the WP4 activities. (Annex XXXVIII)

Second training session on "West Nile and Biosafety in the lab"

The second EpiSouth laboratory training session took place at the Instituto de Salud "Carlos III", Madrid (Spain) from 24 to 28 June 2013. It has been organised by the WP4 team with the Laboratory of Arboviruses and imported viral diseases of the ISCIII and Philippe Dubois, consultant on Biosafety, previously WHO trainer.

The objectives of this training were to improve the diagnosis of West Nile and the level of biosafety in the laboratories of the EpiSouth MRLN and to enhance the networking among participating laboratories. The biosafety modules were complementary to the modules discussed on the first training, but could be attended by new trainees.



The WP4 requested the heads of laboratories that were represented during the first training to nominate the same trainee if possible. For the new participating laboratories, the criteria were the same than for the first training: permanent staff of the laboratory, active person working at the bench, English and/or French speaker, able to provide training at the return in her/his laboratory.

As for the first training on Dengue and Biosafety, the training combined theoretical and practical courses related to the laboratory diagnosis of West Nile and Biosafety.

Likewise, trainees worked in pairs during theoretical and practical courses and compared results from different available commercial serological diagnostic kits for West Nile diagnosis in order to address limits and differences between the techniques. Such an organisation had offered to the laboratories to implement in their home situation the most adapted testing for Dengue and thus we expected the same spinoff from the West Nile training (Deliverable **D0502** (D0502_WestNileandBiosafetyTraining_EN_PS) see DEL Annex)

Assessment of the existing networks and possibilities for the transport of laboratory samples and reagents

An assessment was done on the availability of carrier systems in the countries (see Annex Transport inventory for questionnaire) 17 Heads of Lab contributed.

The main conclusions of the assessment are:

- 7 laboratories (41%) do not have SOPs for export and import of goods
- Packaging material is not always available but can be provided by courier companies
- 5 laboratories (29%) do not have a dedicated expedition service available and have to perform all formalities.

The best available courier system is also the most expensive one. All the others accept to carry limited material and not to all possible destinations.

Organisation of the External quality assessment (EQA)

The WP4 has been in contact with ENIVD, IQLS and QCMD in order to organise an EQA programme for the MRLN for assessing the laboratory capacity to diagnose the 2 priority viruses (WNV and DENV). QCMD has been selected by the WP4 because it is an independent international organisation specialised in the provision and management of External Quality Assessment (EQA)/Proficiency Testing (PT) programmes. Furthermore they are focusing on infectious diseases and have already provided EQA on Dengue and West Nile viruses at an international level. They have an ISO 9001:2000 certification and an ISO/IEC 17043 accreditation. The EQA specifications have been described with QCMD in March/April 2013.

The first Dengue EQA PCR test was done in July/August but the final report was only available by December 2013. Only 15 non EU were sent test panels but only 13 countries participated, some due to lack of border clearance (Serbia) and some because of not yet adapted tests (Tunisia). Some countries had difficulties getting the EQA panel in (Palestine and Lebanon) but eventually all could perform. The overall result was good correct data detection was between 84,6% and 100%. US CDC graciously provided free of charge dengue pcr detection kits, which seemed more performing than some in-house methods.

The second EQA test was done on West Nile. 15 non EU and countries participated to the test, Malta was included in the testing countries since they did never did any EQA. Only one country did not respond. Primers and probes were delivered to 5 countries who did not have any before, they were corresponding to the protocol which was used during the training session on West Nile in ISCIII in Madrid,



Spain in June 2013. All in-house pcr's performed well others performed between 50 and 100% showing that some labs need some fine tuning.

Onsite visit of experts

In February 2013, the WP4 has asked to the heads of laboratory to answer to an assessment (Annex XXXIX) about their eventual need for an onsite visit of an expert, leading to onsite tailored training to improve in the short-term the capacities, according to the WP4 priorities.

In March 2013, the WP4 has made a list of needs that could be addressed and to identify the corresponding experts. Unfortunately, due to the overload of work of the experts and the WNV season that should last from July to September most of them could not visit labs before the end of summer. The activity is being rescheduled to fall 2013 according to the availabilities of the experts.

For all long and short stays an assessment was done with the different partners to identify their needs. To more advanced laboratories were asked to list which thematics and specificities they could help less advanced laboratories with. As such a match between offer and demand was looked for.

Difficulties encountered were essentially due agenda issues and lack of offer for specific demands, indeed to find corresponding dates for experts and host laboratories proved to be in some cases impossible.

Expert visits

1) Dr Isabelle LEPARC-GOFFART (Responsible of the French National Reference Center for Arboviruses, ERRIT, IRBA - French Armed Forces Biomedical Research Institute), visited the Laboratory of Clinical Virology, Institut Pasteur in Tunis 14-17 October 2013. Main objective of the visit was to provide an onsite assessment of the laboratory capacity focusing on the diagnosis of West Nile virus and provide tailored recommendations to improve this diagnosis. (Annex XXXX).

2) Aykut OZKUL, DVM, PhD, (Professor of Virology, Department of Virology, Faculty of Veterinary Medicine, Ankara University) visited West Nile Virus Laboratory in Albania (head of lab. Majlinda Kota) 18-20 December 2013. The main objective(s) of the visit was to participate theoretical and practical issues focused on serology (mainly on Plaque Reduction Neutralization Test – PRNT) and molecular diagnosis (qRT-PCR and evaluating results) of West Nile virus and basic concepts of BSL-3 facility and its maintenance in safe. This program was proposed in order to provide an assessment of the laboratory capacity focusing on the improvement of diagnosis of West Nile virus (Annex XXXXI).

Long term training (3 weeks) at the Pasteur Institute in Paris

Main points addressed during 3 weeks stay (23/09/2013 – 11/10/2013) of Dr Aissam Achid (Virology Laboratory of Institut Pasteur in Algeria) in the Laboratory for Urgent Response to Biological Threats under the supervision of Dr Jean Claude Manuguerra (Head) and Christophe Badejat (Technician).

Synopsis of the goals of the training :

Regulatory aspects and procedures :

- French, European reglementation of BSL3 and BSL2 laboratories
- WHO and Canadian guidelines and norms
- Safetycabinets : maintenance and controls
- Standard operating procedures and good laboratory practices
- Decontamination procedures
- Specific regulations and procedures for animalhouse



Practical aspects :

- Handling of an emergency situation
- Technical aspects of a BSL3 laboratory (ventilation, filtration, periodical maintenance, ...)
- Decontamination methods , waste management and liquid treatment
- Personnel Protection Equipment (which different items, when to use, proper wearing,...)

Hands on sessions :

- Visit of different BSL3 laboratories
- Visit of technical installations
- Session on correct manipulation in a BSL3 laboratory
- Simulation excercises on decontamination
- Difference of handling in a decontaminates BSL3 and operational BSL3
- Simulation of an emergency situations
- Excercise on the writing of entry/exit procedures of a BSL3 laboratory(French)
- Excercise on the writing of an emergency procedure (Annex XXXXII)

Strategic Document

The Strategic Document "Recommendations for the institution and consolidation of a Laboratory Network" was prepared on the basis of the experience gained by establishing the Network of Laboratories and by conducting trainings on priorities for the Countries Mediterranean Area ([Deliverable D0503](#) (D0503_RecommendationsfortheInstitutionandconsolidationofaLaboratoryNetwork_EN_PS) see DEL annex)

Coordination with other projects and activities

In addition in the framework of participation to meetings of parallel initiatives, the final Meeting of the EU Project EQADeBa, was attended in Brussels on the 11th and 12th of April 2011.

Participation to the first WP7 Steering team (ST) meeting in Rome (21st of July 2011)

The issues of the WP7 were discussed and were crosscutting issues with other WPs as well as for WP4.

Regular meetings with WP6 (InVS, visit and phone calls) on coordination activities.

There is also regular exchange by emails and phone with the coordination unit (WP1).

The WP1, WP2 and WP6 participated to the Expert Committee meeting in order to have a good communication and coordination for common activities. Indeed,

Wp 4 and wp6 activities will be linked in subject and the networks will be complementary. The use of the EpiSouth website was discussed with WP2 for the members of the Laboratory Network.

The use of the EpiSouth website for the MRLN has been discussed with WP2 for the members of the Laboratory Network which led to the creation of a private area for the MRLN members on September 2012.

WP4 also actively participated to the training sessions of WP5 on risk assessment and participated to the set up of the table top exercise organised by WP5.

Synergies with Networks/Projects

Collaboration with ENIVD, EurLop and EuroWestNile project



Outcomes and deliverables achieved

Configuration of the ST
Questionnaire to identify the priority issues (Part1) and the results
Minutes of the TC
Meeting of the Expert Committee
Report of the Expert Committee meeting
Identification of the laboratories of the MRLN
List of the MRLN core group and associated laboratories
Poster presented at the 15th annual conference of the European biosafety association (EBSA)
Report on the 1st Meeting with the Heads of laboratory
1st training session on 'Dengue and Biosafety in the lab'
Report of the 1st training session on 'Dengue and Biosafety in the lab'
Course documents available on the website (WP4 ENWA + MRLN ENWA)
Report on the 2nd Meeting with the Heads of laboratory / WP4-MRLN joint session within the 1st EpiSouth plus project meeting
2nd training session on "West Nile and Biosafety in the lab"
EQA on Dengue and West Nile essentially for non EU countries
Expert visits
3 week training session of non EU country at IP
Strategic Document

Problems encountered

Organisation of planned activities took more time than expected, especially towards the delays to get the responses back / of the exchanges with the partners. This was also partly due to political instability in the Region.

Additionally, WP6 constraints (SANCO) have influenced our progress.

Political and diplomatic tensions between France and Turkey, which hampered the participation of the Turkish co-leader and Turkish experts to the expert meeting.

To organise training at the IP there is an important administrative part and there are some legal constraints concerning the contents of the courses that have to be taken into consideration.

Internal reorganisation of the Turkish Refik Saydam National Public Health Institute (WP4 co-leader).

Due to the political situation in Tunisia, it has not been possible to organise the 2nd training session at the Institut Pasteur in Tunis and the place has been redefined. This change of location has led to delays in the organisation of the training.

It took more time than expected to organise the EQA (identification of adapted professionals, proving PCR reagents, etc.). Therefore the organisation of the EQA programme has started with some delays.

Due to agenda problems of training sites and trainees (some of them could not leave the lab for more than one week) it was difficult to organise 2 times a training of 3 weeks.

Since it is also not allowed to have two trainees at the same time in a BSL3 facility at IP, it was impossible to have two trainees at the same time.

Additionally requests from recipient countries did not match with expertise available on the spot in IP, but what was requested was did fit better with an on-site expertise.

How were problems solved

According to the identified problems, the agenda was rescheduled and the participation of the non-key expert helped with the planning and execution of the activities.

Possibilities of rescheduling the training were performed with Maria Rosaria Capobianchi (INMI, Rome) and Antonio Tenorio (ISCIII, Madrid), leader of the EuroWestNile project, to organise the 2nd training. Discussions led to the



organisation of the 2nd training at the ISCIII in Madrid due to the availability of a well-equipped training centre and to relevance of the Spanish team towards the EuroWestNile project expertise.

The only complete available kit for the detection of WNV by RT-PCR is provided by the CDC (Puerto Rico). The WP4 has contacted the CDC to order kits for the EpiSouth MRLN and material will be delivered at the beginning of summer, for West Nile WP4.

Instead of having long term stays at the IP we sent out experts for on-site visits.

Specific objectives of this WP

	Title
1	Establishment of a Mediterranean Regional Laboratories network

List of deliverable(s) linked to this work package

Deliverable

	Title
5	Directory of Regional Laboratories involved in surveillance/early warning system in EpiSouth Countries
6	Training packages and Recommendation for training and capacity building program

Milestones reached by this WP

	Milestone title	Month of achievement
1	Meeting of expert committee and assessment to set minimum requirements needed (Paris)	15
2	Mapping of existing biological expertise	14
3	Meeting with the heads of Laboratories interested in the approach and corresponding to the minimum requirements	17
4	Identification of needs of laboratories for diagnoses for priority diseases in the region: human, technical and organizational	23
5	Piloting of the Directory of Regional Laboratories on the website	23-36
6	Preliminary recommendations on training and capacity building	33
7	One week training module at PI Paris for 26 lab staff (17 non-EU participants)	21
8	One week training module (ISCIII, Spain) Rome, Italy) for 17 non-EU lab staff	32



9	Stages at Pasteur or other Institute of the MRLN (2 persons for 1 month each or more for shorter period of time, according to the local possibilities)	27-30
10	Follow up	Until 38

Work package title : Generic Preparedness and Risk management procedures for IHR

Work package Number : WP5

Work package Leader : ISCIII

Starting Date. Ending date : M1 :M39

Description of the work package

Methodology:

Guided by the Capacity Needs Assessment results carried out in the Region the WP5 developed its activities in accordance to the detected needs such as: development of PH Generic Preparedness Plans, reinforcement of Risk Assessment Capacities and Spatial Analysis of Surveillance and strengthen Outbreak Investigation capacities (devoted to peripheral epidemiologists of the national surveillance systems) were developed.

The main strategy for capacity development was active involvement of participant’s countries in different issues through workshops and Parallel sessions: Communication, Risk mapping, how to trigger the Generic Preparedness plan in case of a PHEIC, defining criteria for Simulation Exercise and close coordination with the rest of WP’s were essential for reaching the goal.

Involvement of partners and target groups: Inter- Institutional agreements. The WP5 co-leader, Algerian National Focal Points informed us about their demission as EPISOUTH FP. Institut National de Santé Public of Algeria did not designate any other during the subsequent months. Several institutions were then contacted in order to concretise the co-leadership (Egypt: several tries without success; Lebanon decline our offer because of neighbouring situation (civil war in Syria and its impact on their own country).

Serbia, Greece, Malta, Romania, Morocco were also considered as alternatives.

Institute of Public Health of Serbia, “Dr. Milan Jovanovic Batut” accepted to launch the process of Collaboration Agreement Signature. It will be reached around mid December 2012. Once the Agreement entered into force, all foreseen activities were performed: two one-week-modules were the most important.

- Activities shared with co-leader: attendance to the WP7 meeting in Rome in July 2011
- WP5 Steering Team partially involved in the preparation of the Questionnaire for Capacity building needs survey and in the TOOL “WP5 Strategic Document”.



Coordination with other projects or activities

- WP4: several meetings (Madrid Feb 2012, Madrid and Paris March 2013, Madrid June 2013, Rome Sept 2013) for Simulation Exercise scenario, pathogens, etc
- WP 6: Epidemic Intelligence coordination activities and Stages (for Stages to be held at Spanish MoH in Dec 2013), EPISOUTH Platform and Epis for EPISOUTH, Madrid Feb 2012, Madrid and Paris March 2013.
- WP7: Coordination Activities related to PoE to be included in the SE (Madrid Feb 2012, Lyon July 2012, Paris March 2013, Rome Sept 2013)
- WHO Lyo- HQ for supporting Simulation Exercise development
- SHIPSAN: Continuation of administrative tasks related to the Training held in January in Athens
- ECDC: EPIS for EPISOUTH Platform and assessment for SE Scenario
- EC-SANCO C3: For supporting WP5 activities SE related to: Madrid Module 2013 and SE Command Post Madrid Oct 2013
- Attendance of a representative of Training WP of EPISOUTH in MediPIET 1.

Outcomes and deliverables achieved

- Two Training Modules held in Madrid on Generic Preparedness and Risk Management (3 days workshop + two days training), including a Role Playing Table Top Simulation Exercise.

- Report on In Depth Capacity Needs Assessment

- Two One-week Training Courses on "Outbreak Investigation with Epi Info 7 and Spatial Analysis of Surveillance Data held in Belgrade

- Simulation Exercise materials (MEL List, Scenario, Injects, Instructions For Participants and Evaluators, List of participants, etc)

- Training Materials developed for all training activities

- Directory of Training and Fellowship

- Strategic Document on Capacity Building: TOOL for supporting countries to develop PH Generic Preparedness Plans + an extra Interactive Programme to insert and adapt their plans. Parallel session and specific discussion groups during the Workshops held in Madrid with other pilot-like phase of the Tool development were performed during the extension period.

Problems encountered

- Difficulties for hiring training expert forced the WP5 Coordination to look for alternatives for fully developing the foreseen activities. Once permissions for contracting were got, only 6,5 months were ahead the end of the project.

- Steering Team partially involved in the preparation of the WP 5 activities due to effects of geo-political situation in the region.

- The majority of not responded participation in Modules and Training courses and in Simulation Exercise were affected by socio-political disturbs or civil war in different countries of the region.

How were problems resolved

- Before permissions for contracting were got, two external experts were involved through DEVCO budget. Once permission for contracting staff was reached two experts were hired. One for 6,5 months and the second one for 2 months and



few days. The extension period + the two experts working dates do not exceed the 275 days foreseen under SANCO budget.

Activities not planned

In general WP5 activities have been highly appreciated within the network. The strong commitment and trust reached for the whole WP's work have been essential for success.

A Role playing Table Top Simulation Exercise was held during the Second Madrid Module that were not included in the planning neither the Interactive Programme for supporting countries Generic Preparedness Plan development.

Contracting Training Experts

The contract for training expert was effective on July 2013 (Vinciane Sizaire). The WP5 Coordination decided to hire a new external expert in order to reach all the expected results (Marie Roseline Belizaire). Before contracting them both experts were involved as external experts through technical assistance formula with DEVCO funds.

Due to this, the activities related to Simulation Exercise were done under External Experts advisors for specific documents development such as Main Event List document, the Scenario, preparation of templates for internal evaluations.

An Interactive Programme for the Use of the Emergency Generic Preparedness Plans Development Tool has also been developed through technical assistance. The Tool development has being one of the strategic activities developed in the process of capacity building, and crucial for the Simulation Exercise.

At the 1st Project Meeting (December 2012) a parallel session was conducted for discussing the WP5 Strategic Document: A Tool for helping countries to develop their own Generic Preparedness and Response National Plan. Relevant inputs for the continuation of the elaboration were obtained.

In depth-core capacity needs assessment. Final Report

An in depth –core capacity needs assessment was launched in the last third of 2011 in order to determine the current situation of Emergency Preparedness Response in the EpiSouth region as perceived by an institutional point of view and identifying training needs

- Developing a comprehensive map of resources, experiences and capacities at institutional level in situations of occurrence of a possible Public Health threat that might cause a transnational PH emergency within the EpiSouth countries
- Identifying existing gaps and common training needs of all project partners in order to improve transnational cooperation in situations of PH emergencies
- Providing input for an upcoming simulation exercise

The process of collecting information from countries was extended in order to increase the rate response. Face to face interviews were held during the Madrid workshop, and additional questionnaires were included during extension period.



The final report last draft was sent to the WP5 Steering Team in May and the final report was finalised (Annex XXXXIII).

First Madrid Module on PH Preparedness and Response (27 February-2 March 2012)

The module aimed at introducing PH professionals on essential aspects to be taken into account when PH institutions start to develop a National Generic Preparedness and Response Plans. Communication and Risk assessment, management and decision making, intersectorial coordination and laboratory issues were topics discussed among working groups.

Preliminary results of the Capacity needs assessment were presented and further face-to face interviews were performed during the workshop in order to fill the pending countries' Q.

Simulation Exercise development was also part of the discussion groups during a specific session devoted to uses, players and objectives.

Spatial Analysis of Surveillance Data was the topics chosen for the Training part of the Module (**Deliverable D0701** (D0701_1stWorkshop Preparedness Madrid_EN_ PS) see DEL annex.

Second Madrid Module on PH Preparedness and Response (4-8 March 2013)

Three-day workshop focus on Generic Preparedness and Response, Simulation Exercise and two- days training on Quantitative Risk Assessment.

The module aimed at discussing essential aspects to be taken into account when a National Generic Preparedness and Response Plans is developed. Discussions on the TOOL FOR HELPING COUNTRIES TO DEVELOP THEIR OWN PLAN were conducted: what a country has to put in place for facing PHEIC's in within the region (Public Health Events of International Concern), and the key points we will test within the region by running the EPISOUTH Simulation Exercise.

29 Participants from 19 countries attended the module, 13 of them where Non EU countries.

Workshop focused on Generic Preparedness and Response Plans; Tool for developing GP&R Plans and Orientation Simulation Exercise.

The module started with an overview of the main risks mapped in the region and discussed around the strategies and the composition of the Management Team, sectors to be involved in, etc. Countries capacity inventory was also one of the topics and the lessons learnt shared by participants give an overview on the capacities in the region.

Regarding the Tool for guiding countries to develop their own generic preparedness and response plans, chapters related to Emergency Committee and communication were also discussed in plenary.

An orientation simulation exercise was also played during the workshop to make participants aware on what has to be put in place for the oncoming EPISOUTH SE.

The training was devoted to Rapid and Formal Risk Assessment.

The whole module was very much appreciated by participants and highly valorised. (**Deliverable D0702** (D0702_2nd Workshop Preparedness Madrid_EN_ PS) see DEL annex)



Two One-week Training Course in Serbia (8-12 April and 20-24 May 2013)

The courses aimed at:

- Perform the successive steps related to outbreak management
- Perform descriptive analysis
- Select the best study design for the analytical study
- Interpret the results of the various analysis
- Learn the role of the laboratory in outbreak investigation
- Identify the key communications messages for different target audiences
- Learn the Epi Info 7 for outbreak data analysis

And regarding Spatial analysis:

- Describe and analyse the spatial distribution of surveillance data
- Improve computer skills using Geographical Information Systems (GIS) and Google Earth
- Perform statistical analysis of cluster data
- Interpret and discuss the results obtained

Methodology

Outbreak investigation:

The course was built around a case study. During the three days, all steps involved in outbreak investigation were addressed, from creation of a data entry file to the stratified analysis, even though the practical exercise focussed only on data analysis (descriptive and analytical) due to the length of the course (only three days). Epi-Info was the main software used during the three days and MS-Excel for the epidemic curve. There were also some presentations.

Spatial analysis:

The last two days targetted the spatial analysis of infectious diseases. The training focussed on practical frameworks and research methods derived from epidemiology. GvSIG and SatScan were the main software used during these days.

The target audience was mid-level epidemiologists working at central and peripheral level in the countries.

16 participants were registered from 7 Non EU countries.

The course was high valorized, specifically the use of the software proposed (Epi Info, Google Earth, GvSIG and SatScan).

(**Deliverable D0703** (D0703_1st training Belgrade_EN_ PS) and **Deliverable D0704** (D0704_2nd training Belgrade_EN_ PS) see DEL annex)

WP5 Strategic Document: TOOL for supporting countries' MoH to develop their Generic Preparedness Plans

The "Tool" was submitted for piloting, a process that consisted in request information from 4 FP of four countries (Algeria, Greece, Palestine and Montenegro) through a questionnaire regarding the last Draft of the tool for getting inputs for finalising it.

An interactive programme has been added in developed for ease the potential users to adapt the Tool to their own country needs. Additional user guide for the interactive programme in English and in French has been elaborate within the WP5 work (**Deliverable D0801** (D0801_ Tool for Supporting Countries on Generic Emergency Preparedness Planning in the Health Sector_EN_ PS) see DEL annex)



Directory of Training and Fellowships

This activity delayed in its starting and has had less impact than other WP5 activities.

Nautilus Simulation Exercise

Preparation:

The preparation of the Simulation Exercise started at the end of 2010. Revision of bibliography, discussions held during the two workshops held in Madrid in 2012 and 2013 were different steps on the preparatory process that aimed at building capacities in the region on Generic Preparedness for facing PHEIC under IHR approach.

After the Role Playing Simulation Exercise performed during the second Madrid Module, some aspects were detected as potential threats for the smooth development of the SE to be held in October. One of the most important was the proper use of the EPIS for EPISOUTH (EfE) platform. The support of the WP1 was crucial at this point, pushing for ECDC to put in place the needed tool for alerts sharing.

Several activities for coordinating the good development of the Nautilus SE were done. Taking the opportunity of the WP4 Training held at ISCIII, the WP5 Team, including Spanish MoH representative met the Pasteur Institut team (WP4) for last details in the scenario, and the specific inject (pathogens, diagnosis procedures, periods for having the different confirmation test, etc) that were later used during SE.

During the workshop held in Rome additional coordination meetings were carried out with WHO-Lyo, ECDC, WP7, WP1.

Additional coordination was done with WHO-HQ, EC through SANCO-C3.

WP5 Team responded also to the External Evaluators requirements.

The core documents of Scenario, MEL list, Injects, Progress Evaluation Forms, Templates, Timeline, Epidemic Curve, etc were elaborated with the support of External Experts Technical assistance

Exercise:

A two-days exercise was carried out early October 2013. Twenty countries participated, (four other excused their participation because relevant events in their countries). More than 250 people involved in within the whole region. Nineteen evaluators provided the items that the platform EPIS for EPISOUTH couldn't work.

International Organizations that supported the WP5 Team were: WHO (Lyo and HQ), ECDC, European Commission through its SANCO –C3.

In the Command Post:

Rosa Cano (WP5 Co-leader), Vinciane Sizaire, Marie Roseline Belizaire (Technical Assistant), Ana Sarasa (Spanish FETP Fellow), Fernando Simón (Coordinator of the CCAES - Coordination Centre for PH Alerts and Emergencies at the Spanish MoH); Berta Suarez (officer of the CCAES), Germain Thinus (C3-SANCO-EC), Tamara Curtin (External Expert working at WHO-HQ not representing WHO), Concha Martin (Coordinator of the Exercise).

Platform support EPIS for EPISOUTH (ECDC, coordinated by ECDC)



In the room the External Evaluators attended the two days exercise.

Facilities used: the crisis room of Coordination Centre for PH Alerts and Emergencies at the Spanish MoH.

Two Teleconferences were carried out with unbalanced participation from EU and Non EU countries.

(**Deliverable D0705** (D0705_SimulationExercise_EN_ PS) see DEL annex)

Other activities undertaken:

-WHO Meeting for PoE Lyon July 2012

WP5 participated in the WHO Meeting held in Lyon for discussing common points POE related and the possibility of testing the WHO guide in the EPISOUTH Region.

-Establishing links with the EPIET, EUPHEM and Field Epidemiology Training Programmes continued and fellow from the three programmes participated as facilitators in the training activities.

-Contacts with the John Hopkins Preparedness and Emergency Response Research Centre has been established. Dr.Barnett accepted to be part of the WP5 Advisory Board for revising the EPREP TOOL.

-Participation in activities regarding MediPIET: the consultancy related the MEDITERRANEAN EPIET, held in Verrier du Lac – France in April; Kick-off Meeting Zagreb May, 2013 and Meeting Stockholm October 2013, as well as external experts in the TC working groups.

In order to consolidate WP6 Activities, Residential stages on EI/EBS were carried out at the Spanish MoH, on 16-20 December 2013 (see annex XXXIV)

Specific objectives of this WP

	Title
1	Promotion of common procedures in interoperable Generic Preparedness and Risk management among the countries involved in the Network

List of deliverable(s) linked to this work package

Deliverable

	Title
7	Capacity building materials for Workshops and Sessions and Simulation Exercise
8	Strategic document called "Tool for generic preparedness plan development" on Capacity building development regarding Preparedness and Risk management procedures



Milestones reached by this WP

	Milestone title	Month of achievement
1	Report on in-depth core-capacity needs assessment	20
2	one-week training in non-EU Country	30
3	Workshop 1 and Capacity building Session 1 in Madrid for 30 people	16
4	one-week training in non-EU Country	31
5	Workshop 2 and Capacity building Session 2 in Madrid for 30 people	29
6	Updated of the Directory of Training and Fellowships	During the whole period
7	Simulation Exercise	35

Work package title : Early warning system and cross border epidemic intelligence

Work package Number : WP6

Work package Leader : InVS

Starting Date. Ending date : M1 :M30

Description of the work package

1st semester

The WP6 co-leadership with MECIDS: Middle-East Consortium on Infectious Diseases and Surveillance

- For the EpiSouth PLUS project, it was agreed that each of the Project WP will be co-led by one EU and one non-EU Institution or Network.
- The WPs co-leaders will be responsible for the management and implementation of their respective WPs in accordance with the Project’s schedule, milestones, deliverables and expected results. The WPs co-leaders will ensure the constitution of their respective WP Steering Teams (WPST) which will collaborate to the implementation of the planned activities.
- The WP6 “Early warning system and cross-border epidemic intelligence” will be led by the Institut de veille Sanitaire (InVS) and the consortium MECIDS (Middle-East Consortium on Infectious Diseases and Surveillance).
- MECIDS is a network composed by Jordan, Israel and Palestine and works in the field of infectious diseases. The idea of integrating a network implemented between 3 countries from Middle-East region as WP6 co-leader was seen as of great relevance. MECIDS expertise in dealing with a very delicate context as well as their experience of health related data exchange will be very valuable for the network.
- First contacts were made through the participation to MECIDS executive board on 27-28 November 2010. The WP6 and WP1 teams were able to present the project, its objectives and challenges: an occasion to propose a co-leadership with one of the EpiSouth PLUS Work-package.



- The administrative process has been launched in order to formalize the agreement between MECIS, EpiSouth PLUS and the InVS in charge of the WP6 coordination.

- Due to agenda constraints and administrative constraints from both sides (MECIDS and InVS) the visit of a MECIDS representative at InVS to evaluate the work burden has been scheduled for June 2011.

The WP6 mission in Israel and Palestine

- The attendance to the MECIDS executive board meeting in November 2010 provided a cost effective opportunity to perform one of the planned mission in Non EU Countries. Both Israel and Palestine had for some time expressed their willingness to host such a mission. Although, they belong to the same organisation (Ministries of health), MECIDS representatives and EpiSouth National Focal points are different persons and should continue to play different and complementary roles in EpiSouth

- Fruitful meetings were organised by the Focal Points in both Israel and Palestine to meet their partners, present their organisation structure and work frames. Heads of the surveillance and alerts units as well as other department and external partners were met.

- All associated institutions in the EpiSouth PLUS network have been visited: the Israel Ministry of Health in Jerusalem, the Israeli Center for Disease Control (ICDC) in Tel-Hashomer, the Palestinian Primary Health care and public health division in Ramallah.

The EpiSouth-EPIS review of specifications: the plan of action (PoA)

- As per the official project agreement, one of the EpiSouth-plus' objective is the development of synergies that will allow bilateral interoperability with European and other relevant Early warning and surveillance system in collaboration with ECDC and WHO.

- In order to ease this process with EU EWRS, a new EpiSouth platform will be developed under the EPIS environment by the ECDC. Before being operational, the use of this new platform will have to be endorsed by the participating countries.

- A review of the current EpiSouth –Alert platform has been shared with ECDC and functionality should be included.

- Two constructive face to face meetings between ECDC and WP6 teams have allowed to streamline the process and the PoA has been finalised .

- In order to integrate countries needs and expectations regarding the EpiSouth alert platform, an evaluation questionnaire was developed jointly between WP6 and ECDC. This questionnaire has been shared with all participating countries through the EpiSouth website through an active collaboration with WP2 and Cineca.

- Results from this survey have been integrated in the functionality specification of the EpiSouth-EPIS-based platform.

Online eWEB bulletin registration form

- Through active collaboration of the WP2, CINECA and the WP6 steering team, a specific electronic tool allowing automatic subscription has been integrated to the EpiSouth website

- As the eWEB bulletin is public and freely accessible, the main objective of this eWEB subscription tool is to allow a larger and easier dissemination of the eWEB bulletin. From now on, any person interested in receiving the eWEB will get it automatically each week by email. This tool has also allowed to monitor the number of subscription overtime



DESCRIPTION OF INDICATORS OF ACTIVITIES AND OUTPUTS

EpiSouth Epidemiological Weekly Bulletin (eWEB)

The EpiSouth electronic weekly epidemiological bulletin (e-Web) has been issued since the 19th of March 2008. Every week, the eWEB bulletin is archived in a database hosted on the secured EpiSouth website. Since March 2009, the e-Web was publicly accessible on the EpiSouth Website (<http://www.episouthnetwork.org/content/episouth-weekly-epi-bulletin-e-web>) and was also sent through email in a PDF format (**Deliverable D0901** (D0901_1st EI e-web bulletin 2010_EN_PS) see DEL annex)

- The e-Web provided a weekly summary of new health events occurring in both non-EpiSouth and EpiSouth countries (providing that information is already public or directly provided by the affected EpiSouth country). Events are presented in a public health perspective.
- The e-Web aimed neither to present an exhaustive list of all "international health alerts" nor to provide weekly updates on previously reported health crises. E-Webs are posted every Thursday on the EpiSouth website public area.
- For the 1st EpiSouth PLUS semester (15th October 2010 to 15th April 2011): 26 eWEB bulletins (from n°135 to n°160) have been issued.

Scientific seminars and congresses

During this 6-month period, the promotion of EpiSouth epidemic intelligence and cross border alerts were presented at:

Arbozoonet conference on 22-24 November 2010 in Rabat (Morocco): presentation of the EpiSouth project, phase 1 & EpiSouth PLUS. Presentation of the Epidemic intelligence work done on two zoonoses: West Nile & Crimean Congo Haemorrhagic fever (CCHF). The participation to this annual meeting was the occasion to establish relationships and initiate a collaboration process with a sister network also supported by the UE and developing activities in fields that are of pristine interest for EpiSouth epidemic intelligence activities: i.e. emerging zoonoses (Annex XXXV).

- The IMED conference (International Meeting on Emerging Diseases and Surveillance) on 04-07 February 2011 in Vienna (Austria): presentation of the West Nile outbreaks in the Mediterranean region and EpiSouth countries. West Nile Data were collected from the 27 participating countries through a questionnaire: information on WN surveillance systems and availability of WN laboratory, epidemiological context and recent cases (Annex XXXVI).

- NATO advanced research workshop in March 2011. NATO organised an advanced research workshop on Internet-based intelligence for public health emergencies and disease outbreak: technical, medical and regulatory issues in Haifa, Israel. EpiSouth WP6 was invited to present its expertise in this domain and to participate to round tables on epidemic intelligence and data sharing (Annex XXXVII)

- CHORDS meeting. On November 29-30, 2010, Connecting Health Organizations for Regional Disease Surveillance (CHORDS) organised a data sharing workshop in Jerusalem, Israel. CHORDS was established in 2009 by the Nuclear Threat Initiative's (NTI) and Global Health and Security Initiative (GHSI) to provide a non-governmental platform where regional infectious disease surveillance networks around the world interact not only with each other, but with other global partners to



strengthen international health security. The Jerusalem workshop was the occasion to collaborate with sister networks operating similar activities in different parts of the world: SACIDS (Southern African Centre for Infectious Disease Surveillance), MBDS (Mekong Basin Disease Surveillance), MECIDS (Middle East Consortium on Infectious Disease Surveillance), Fondation Merieux, Wildlife Trust and ProMED. This workshop provided the opportunity to share experience, difficulties, lessons learned but also to establish contacts with trusted colleagues.

2nd SEMESTER

The WP6 mission in non-EU countries

- No mission performed due to the freezing of the WP6 activities.
- Usually, missions to the countries are associated to meetings into EpiSouth countries when the meeting is performed on several days. This is a way to acknowledge the EpiSouth countries in hosting the meeting and also a way to save time and money (one flight ticket for both meeting and mission visit). This time, Balkans countries were supposed to be part of the mission but unfortunately, the mission was not possible due to the freezing of activities.

The WP6 steering team meeting in Montenegro: 5-6 July 2011

The WP6 steering team meeting was kindly hosted in Montenegro on 05 & 06 July 2011 thanks to the collaboration of the Montenegro Institute of Public Health and our EpiSouth focal points, Dragan Lausevic and Zoran Vratnica.

This meeting was the opportunity to have a face-to-face meeting with the WP6 ST members, as planned in the WP6 working plan and the AIDCO agreement.

The aims of this meeting were the following:

- Overview of the Epidemic Intelligence activities 2010-2011 and the EpiSouth PLUS project
- An in-depth discussion and analysis of early warning systems and their interconnections with EpiSouth
- Optimisation of information sharing: practical issues and challenges
- Definitions of SOP (standard operating procedures) for the EpiSouth data sharing;

Participating countries for WP6 steering team meeting: 9 countries, 18 participants
Israel, Kosovo, Montenegro, Morocco, Romania, Tunisia, Turkey, France and Italy (as observer).

Partners: MECIDS, WHO- Geneva and ECDC

Missing: Algeria, Malta, Jordan (difficulties to obtain Visa) and Palestine (difficulties to obtain Schengen Visa).

(Annex XXXXVIII and Annex XXXXIX)

The EpiSouth Alert platform's assessment

The EpiSouth secure platform for alert and data exchanges was created during the 1st phase of the EpiSouth project and is operational since November 2009.

As of 14th October 2011, a total of 109 alerts were posted in the EpiSouth secure platform.

According to the EU-EpiSouth PLUS agreement, one of the EpiSouth-plus' objective is the development of synergies that will allow interoperability with other European and other relevant Early warning and surveillance systems in collaboration with ECDC and WHO.

In order to ease this process with European Union Early Warning System, a new EpiSouth platform is under development in an EPIS environment by the ECDC.



Before being operational, the use of this new platform will have to be endorsed by the participating countries

A review of the current EpiSouth –Alert platform has been performed by the WP6 team. This survey was done among all EpiSouth secure platform users in order to perform an evaluation and try during the 2nd phase of the project to improve this tool thanks to countries comments.

There were 2 objectives for this survey:

- First, to consolidate the tool developed during the phase 1, and improve its quality.
- Second, for the EpiSouth-EPIS platform under development at the ECDC: to include some modification and improvements. This new EpiSouth-EPIS platform should ease the interoperability between the different EW systems.

The evaluation-questionnaire has been shared with ECDC with the idea to explore current and new functionalities to be included in the new EPIS-EpiSouth platform. The questionnaire has been shared with all participating countries and the EpiSouth platform users through the EpiSouth website with an active collaboration with WP2 and Cineca (see attached screen shot).

The questionnaire was put on line in the secure EpiSouth platform and was on closed on 31st May 2011.

Results from this survey were available in June 2011 and have been integrated in the specifications of the future EpiSouth-EPIS-based platform.

Here below some details about this survey

Methodology:

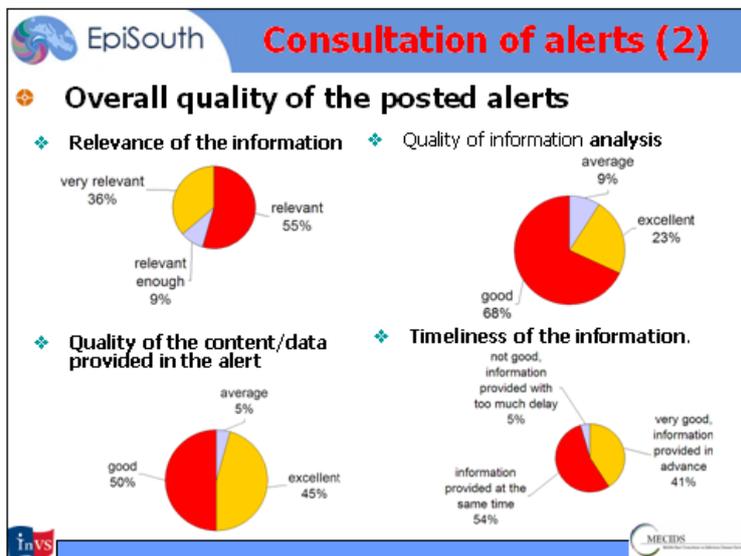
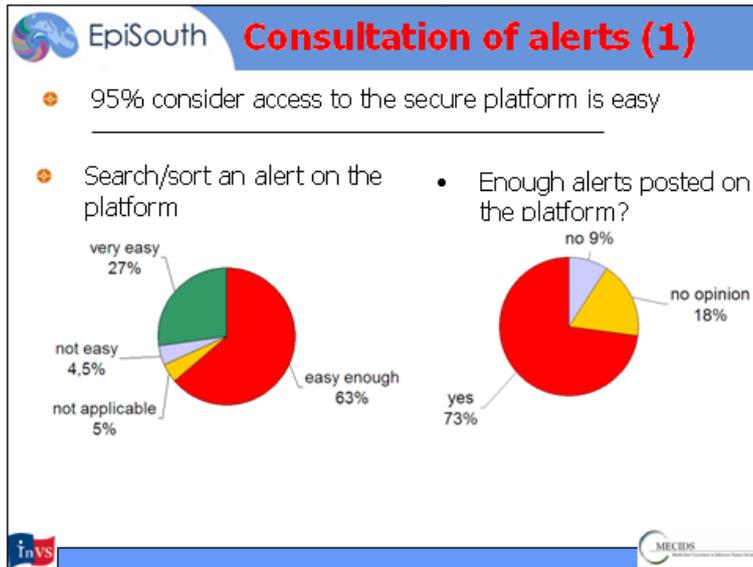
- The questionnaire was online from 21st April to 31st May 2011.
- 22 persons over 54 (40%) answered the questionnaire.
- 7 of the 22 respondents (32%) are from Non –EU countries.

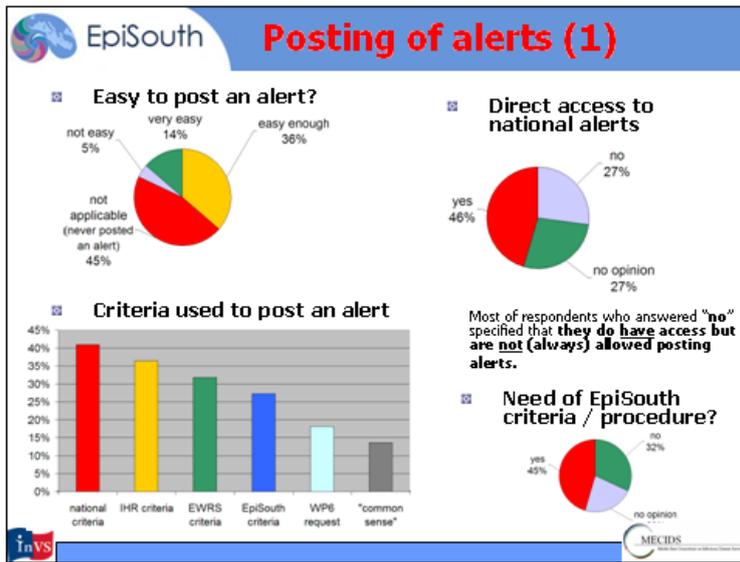
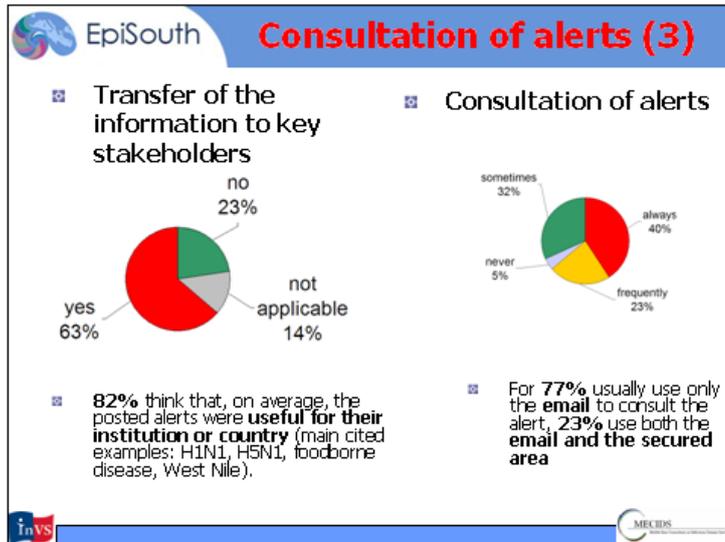
Results:

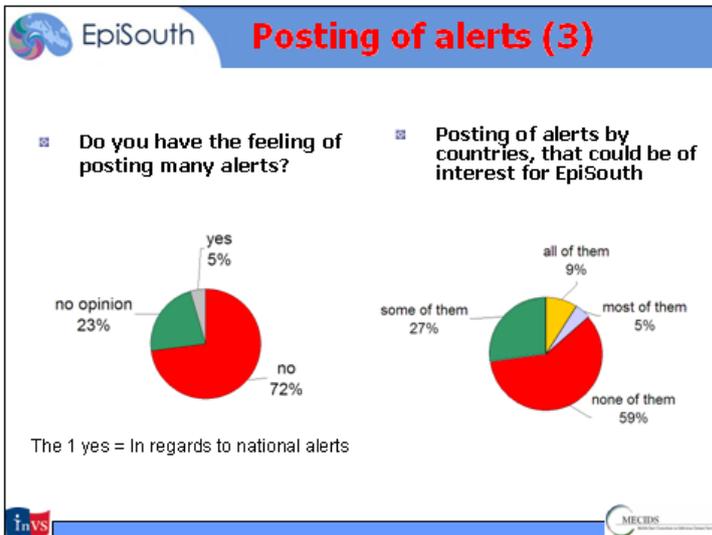
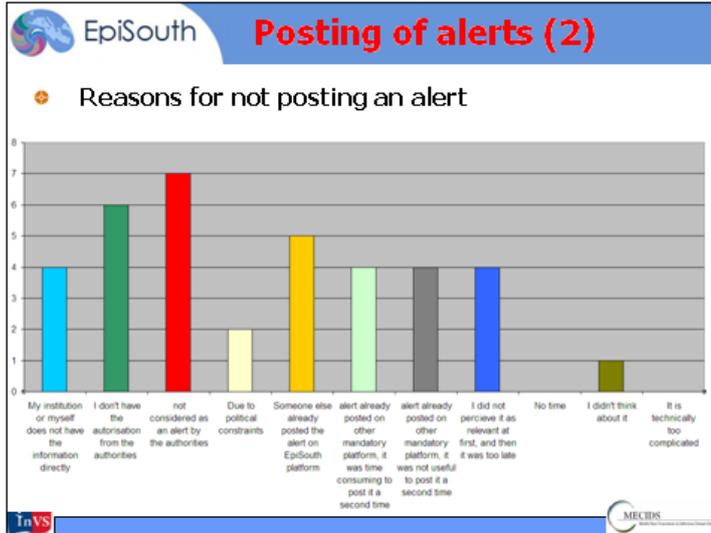
cf. slides below.

Propositions made by countries to try to ease the participation of focal points in the posting of alerts:

- Get commitment and blanket authorisation from higher levels (MOH, director of NPI) and communicable disease departments
- Having at least 1 focal point who should be at a decision making position, commitment from focal points in posting alerts,
- Increase number of focal points
- Having a clarification for EU countries of EWRS obligation/restriction,
- Having an official and written procedure (shared at a high level),
- Proceeding with an update of alerts posted (every 3 months),
- Continue to solicit countries when information is perceived as relevant for EpiSouth
- Simplify the alerts platform; ease the posting procedure, having less information on each page.







Regarding the technical development of the EPIS-EpiSouth platform with ECDC, 2 Constructive face to face meetings between ECDC and WP6 teams have allowed to streamline the process and the Plan of Action (PoA) has been finalised (Annex XXXXX).

Several teleconferences were done regularly with the ECDC developer officers. (Annex XXXXXI - Results from the evaluation of the EpiSouth secure platform from countries users)

DESCRIPTION OF INDICATORS OF ACTIVITIES AND OUTPUTS

Scientific seminars and congresses

During this 6 months period, the promotion of EpiSouth epidemic intelligence and cross border alerts was performed:

Les Journées de l'Institut de Veille Sanitaire - on 28-29 April 2011 in Paris (France). Every 2 years, the Institut de Veille Sanitaire is organising a nationwide congress on public health focusing on important public health issues and emerging diseases. This time, the WP6 team had the opportunity to present during this congress the "West Nile outbreak in the Mediterranean region, August- October



2010". It was the occasion to exchanges with French partners the EpiSouth experience in a zoonosis large outbreak.

Les Journées Inter-Cire de l'Institut de Veille Sanitaire – on 27 May 2011 in Saint Maurice (France). Every year, the Institut de Veille Sanitaire is organising internal nationwide meeting with all its representatives from all regions in France and all French overseas territories representatives. At this occasion, the EpiSouth experience on the West Nile epidemic was presented.

The 4th EurAsia congress of infectious Diseases on 01-05 June 2011 in Sarajevo (Bosnia & Herzegovina): presentation of "The Early Warning and Epidemic Intelligence in the Mediterranean regions and Balkans countries". The participation to this congress was very appreciated by Balkans countries which have seen the added value of the EpiSouth network in the Mediterranean area. It was also an opportunity to meet our Focal points from Bosnia & Herzegovina (Annex XXXXII).

PROBLEMS ENCOUNTERED and How problems were resolved

The General direction of the Institut de Veille Sanitaire brought to the attention that the frozen WP6 situation delayed the implementation of the WP6 activities and thus had an impact on the deliverables' calendar, especially:

- The next EpiSouth annual meeting was expected to be organised in Paris during the 1st quarter 2012. The organisation of such large meeting requires anticipation and down payment is necessary to secure reservations. Although we are aware of the possible impacts on other planned EpiSouth activities, the Paris meeting will have to be deferred at least to the second quarter 2012.

- The collaboration with our co-leader MECIDS (Middle-East Consortium for Infectious Diseases surveillance) and the signature of the agreement and the related funds transfer had also to be put on stand by awaiting the Commission's reply. (More details in the section 1.1)

- The non possibility to perform mission into non-EU countries.

However, as described above, the WP6 team has ensured, even during the "frozen period", the routine activities of epidemic intelligence (including e-week bulletins) and the collaboration with ECDC for risk assessment.

3rd SEMESTER

The 200th eWEB bulletin

On January 2012, the 200th eWEB bulletin was celebrated (**Deliverable D0903** (D0903_200th EI e-web bulletin 2012_EN_PS) see DEL annex). For this occasion, a rapid descriptive analysis of the events posted in all the eWEB bulletins was performed.

Since the 1st eWEB bulletin (19th March 2008), 702 events of interest for the EpiSouth network (i.e. corresponding to criteria defined by EpiSouth countries) were reported in the first 200 bulletins.

The descriptive analysis of the first 200 eWEB bulletins indicated that:

- The criteria applied for the Epidemic Intelligence tailored for EpiSouth did not change since the 1st eWEB bulletin even if – at the request of country Focal Points, attention was more focused on specific diseases such dengue, West Nile and other arboviruses.

- From a global point of view, the global distribution of type of event is quite similar: the proportion of events reported on infectious diseases has not changed over years (95%).

- Among the 29 non-infectious diseases events reported, we noticed that 23 messages (80%) were related to product recalls versus 6 events on environmental issues.



- Among the infectious diseases events reported, the proportion of alerts related to A(H5N1) epizootics was stable but the proportion of events related to A(H5N1) human infections increased: 25% for the 100 last eWEBs versus 15% for the 100 first bulletins.

Regarding the origin of the event:

- The proportion of events reported in EpiSouth countries has increased in the 100 last eWEBs bulletins: EpiSouth countries represented 18% (n=73) of events reported in the 100 first bulletins and 39% (n=122) of the 100 last eWEBs (i.e. 67% of increase).

This result is in favour of a better data exchange. The EpiSouth network is exchanging progressively more information on a public support (bulletin on line) for the benefit of the Mediterranean region. Some bias such as the number of notification related to the West Nile epidemic in 2010 and 2011 have to be considered. However, the number of messages reporting WN infections in EpiSouth countries was only 42. The increase in the number of A(H5N1) human infections had no impact on this result.

The EPIS-EpiSouth test platform

EpiSouth secured Platform was presented and discussed at the Meeting of the EWRS component of the Community Network for the Epidemiological Surveillance and Control of Communicable Diseases -LXB, 23-26 January 2012 (Annex XXXXIII)

In order to facilitate the interoperability with European Union Early Warning System, a new EpiSouth platform is under development in an EPIS environment by the ECDC. Before being operational, the use of this new platform will have to be endorsed by the participating countries.

Several teleconferences were organised with ECDC for the development of EPIS platform.

Tests were performed to review some functionalities, the development of the platform and move forward.

During the 2nd and 3rd week of February 2012, the new platform was tested "in live" and roles have been distributed between the WP6 team, ECDC and EC: some were playing the role of the WP6 moderator, others the role of some countries, the role of WHO, etc. Daily technical teleconferences were organised at the end of days.

The next step was the organisation of tests with some EpiSouth countries. The EpiSouth countries which are members of the WP6 Steering Team were involved in this process. In order to present the new platform and discuss the improvement and modifications of its functionalities, ECDC was invited to use the WP6 Steering Team meeting in Istanbul to discuss the EPIS platform in live with the countries. A half day was dedicated in the meeting agenda.

The training of the new platform and the development of an end user manual were implemented in coordination with ECDC (Annex XXXXIV)

The preparation of the Paris EpiSouth annual meeting

Since October 2011, the WP6 team started to organise the preparation of the EpiSouth PLUS General Assembly that will be held in Paris next October 2012.

The Communication department of the Institut de Veille Sanitaire started to investigate hotel and accommodation for this important event.

The estimation of the total number of participant is around: 130 people. The participants will be EpiSouth countries Focal Points, the Advisory Board members, invited experts and partners.

- 3 people from each 27 EpiSouth participating countries will be invited. Only non-EU EpiSouth countries and invited experts will be supported by DEVCO budget.



Regarding the location of the meeting, the Institut de Veille Sanitaire kindly offer to host the General Assembly in its new building which is equipped by a large meeting room.

The estimated budget allocated for the 1ST Project Meeting, considering both DEVCO and SANCO contribution, is approximately 160.000 Euros.

The Project Steering committee members will work jointly on a provisional agenda in order to insure that all important issues related to WP thematic will be discussed.

DESCRIPTION OF INDICATORS OF ACTIVITIES AND OUTPUTS

For the 3rd EpiSouth PLUS semester (15th October 2011 to 14th April 2012): 26 eWEB bulletins (from n°187 to n°212) have been issued.

PROBLEMS ENCOUNTERED and How problems were resolved

During this semester 15 October 2011 – 14 April 2012, the freezing of the WP6 was concretely removed in January 2012.

In consequence, it has not been possible to perform some activities and some have been delayed:

- o The missions into non-EU countries were not a priority and none was performed during this period
- o The participation to congress or scientific seminars has not been done.
- o The next EpiSouth annual meeting was supposed to be organised in Paris during the 1st quarter 2012. Considering that the organisation of such large meeting requires anticipation and down payment to secure reservations, the Paris meeting was deferred to October 2012.

4th SEMESTER

- WP6 team is continuously collaborating with the ECDC epidemic intelligence team in the framework of epidemic intelligence activities.

- ECDC and WHO have full access to EpiSouth secure platform information shared by EpiSouth countries. WP6 is actively collaborating with both institutions for the sharing of relevant cross-border health information.

- Despite the fact that so far no formal agreement has been elaborated with the co-leader MECIDS, this partner was involved in any main activity, including presentations, submission of abstracts, and organisation of the 2nd WP6 Steering team meeting in Istanbul.

Coordination with other WPs' activities

- The WP4 was involved in the elaboration of the note on West Nile virus circulation in EpiSouth countries and neighbouring areas, seasons 2010 and 2011. Actually, data collected by the WP6 about the WNV circulation were consolidated with data provided by the WP4 about WNV laboratory capacities.

- ECDC, WP1, WP2 and CINECA are strongly involved in the development of the Epi-EpiSouth platform.

- WP1, WP2 attended the 2nd WP6 Steering Team meeting, held in Istanbul on 4th and 5th June 2012.

- The WP6 attended the EpiSouth Steering Committee meeting in Brussels on 29th and 30th May 2012

The WP6 attended the WHO/WP7 ST meeting in Lyon on 16-17-18 July 2012, in order to represent in the working group the EpiSouth epidemic intelligence expertise.



- *EpiSouth Epidemiological Weekly Bulletin (eWEB)*
 - As of 14th October 2012, 452 persons registered to the newsletter system to receive the eWEB through email.
 - For the 4th EpiSouth PLUS semester (15th April 2012 to 14th October 2012): 26 eWEB bulletins (from n°213 to n°238) have been issued.

- *Note on West Nile virus (WNV) circulation in EpiSouth countries and neighbouring areas, seasons 2010-2012*
 - On 27th January 2012, questionnaires regarding WNV circulation and WNV surveillance and laboratory capacities were sent to all EpiSouth focal points. WN Data (season 2010 and 2011) collected through questionnaires were also consolidated with data provided by the WP4 on Laboratory networks, official reports issued by OIE and MoH/MoA.
 - On 1st July 2012, the WP6 team published a note on the West Nile virus circulation in EpiSouth countries and neighbouring areas. This note was updated with 2012 data and released in June 2013 in collaboration with the ISS team ([Deliverable D0905](#) (D0905_EI e-web bulletin WNV 2010-2013_EN_PS) see DEL annex).

- *The Epis-EpiSouth test platform*
 - The Epis-EpiSouth platform was tested by the WP6 team before the WP6 Steering Team meeting in Istanbul held in June 2012. Comments and remarks were collected and transmitted to ECDC before the WP6 Steering Team so as to present the most finalised platform as possible to the WP6 Steering team.
 - During the WP6 Steering team meeting in Istanbul (4-5 June 2012), half a day was dedicated to ECDC presentation of the last version of the EPIS-EpiSouth platform. Additional remarks and comments were collected during the meeting and communicated to ECDC for assessment and implementation.
 - From 8 June to 22 June 2012, the revised version of the platform was open to the WP6 Steering team members for testing. Comments and propositions were collected by the WP6 team and sent to ECDC for additional modifications.

- *2nd WP6 steering team meeting in Istanbul in June 2012*
 - The 2nd WP6 steering team meeting took place on 4th and 5th June 2012 in Istanbul, Turkey. It was organised in close collaboration with the Turkish Ministry of Health and the Turkish EpiSouth Plus focal points. (This meeting was the opportunity to have a face-to-face meeting with the WP6 ST members, WHO, EC and ECDC as planned in the WP6 working plan and the AIDCO agreement).
 - The main points discussed during the meeting were as followed:
 - o Overview of the Epidemic Intelligence activities 2011-2012
 - o Update and overview of EpiSouth Plus project activities (WP1);
 - o Presentation of the new secure alert platform: Epis- EpiSouth platform
 - o Early warning system at WHO with the participation of WHO-EURO and the WHO country office in Turkey
 - o Definitions of EpiSouth Standard Operating Procedures(Annex XXXXXV) for EpiSouth alert posting (brainstorming in working groups)
 - o The 2012-2013 work plan.
 - The following participating countries were invited for the WP6 steering team meeting:
 - Israel, Jordan, Kosovo, Malta, Montenegro, Morocco, Palestine, Romania, Tunisia, Turkey, France as well as MECIDS WP6 team, WP1 & WP2 leaders. Partners: WHO (EURO, EMRO, Geneva and country office), ECDC and EC. All countries and institutions were represented except Malta and Israel Annex XXXXXVI and Annex XXXXXVII.



- *Scientific seminars and congresses*
 - During this 6 month's period (15th April 2012 to 14th October 2012), the WP6 team presented 2 posters at the 15th International Congress for Infectious Diseases (ICID) in Bangkok, Thailand (Annex XXXXXVIII and Annex XXXXXIX)
 - o 'West Nile virus outbreak in the Mediterranean region, 2010-2011'
 - o 'Early warning and epidemic intelligence in the Mediterranean region and Balkan countries: an EpiSouth network challenge'

- *Transfer and amendment of the 1st EpiSouth Project Meeting*
 - Due to InVS's administrative and financial difficulties, it has been agreed by EC and WP1 that the EpiSouth 1st Project meeting had to be organised in Italy by the WP1 (instead of Paris as initially planned). Accordingly, an amendment of the project's agreement and a transfer of the allocated funds were done.

- *The WP6 mission in non-EU countries*
 - Due to the freeze of activities the priorities were set on maintaining major outputs. In this context, it has not been possible to carry out support mission in participating non –EU countries during the reporting period.

Problems encountered

- The freezing of the WP6 activities resulted in a delay of the activities and had an impact on the deliverables' calendar. In addition, due to financial difficulties relating to reimbursement of invoices, activities requiring further engagements of funds had to be put on standby in order to have time to obtain reimbursements. InVS was not in a capacity to financially support the organisation of the Annual meeting initially planned in Paris
 - Therefore, priorities were put on the main activities and it has not been possible to perform some activities such as:
 - o The organisation of missions in non-EU countries
 - o The organisation of the EpiSouth annual meeting was transferred to the ISS as well as the related funds.
 - Due to administrative and legal issues, it has also not been possible to formalise an Agreement with MECIDS. Especially, the transfer of funds initially planned could not be implemented because of MECIDS legal status.
 - The WP6 staff has been reduced for at least 6 weeks due to the sick leave of the coordinator

How were problems solved

- Besides these difficulties, the Institut de Veille Sanitaire and the WP6 team remained highly committed and mains deliverables and milestones have been met.
- As agreed with EC, ISS and InVS, the EpiSouth annual General Assembly, will be organised in Rome, Italy.
- Concerning the Agreement with MECIDS, the possibilities of a Technical agreement (without transfer of funds) is being studied.

5th SEMESTER

Coordination with other WPs' activities

During this 5th semester strong collaboration activities were carried out especially with WP1 and WP5 in order to plan the consolidation of WP6 activities after the 14 April 2013.



In particular the consolidation of the use of EpiS for EpiSouth was discussed as well as the possibility to carry out some stages at Spanish MoH and ISS.

Outcomes and deliverables achieved

- EpiSouth Epidemiological Weekly Bulletin (eWEB) For the 5th EpiSouth Plus semester 26 eWEB bulletins: from n°239 to the last issue n°264 on 11 April 2013 have been issued (**Deliverable D0902** (D0902_ last EI e-web bulletin 264 2013_EN_PS) see DEL annex)

- The Note on Novel Coronavirus (NCoV), Worldwide - Situation up to 1 March 2013 –was prepared and disseminated (Annex XXXXXX).

- The EpiS-EpiSouth test platform
 - From 8 June to 22 June 2012, the revised version of the platform was open to the WP6 Steering team members for testing. Comments and propositions were collected by the WP6 team and sent to ECDC for additional modifications. After a period of piloting, aspects related to the platform (technical, institutional etc) were discussed both in plenary and parallel session, during the 1st Project Meeting in Rome.

Starting from January 2013 all the EpiSouth Countries were motivated to use the EpiS Platform for sharing info and alerts and an official adhesion was requested to them

- A preparatory meeting on the involvement of the EpiS for EpiSouth platform for the simulation exercise was held at the Institut de Veille Sanitaire on the 25 March 2013.

InVS, ISS, ECDC, ISCIII and Spanish Ministry of Health discussed about needs in terms of early warning and epidemic intelligence for the EpiSouth no-cost extension period.

- *Stages at InVS (March 2013)*
Three participants from non-EU Countries attended a one-week training at InVS as per attached Programme (Annex XXXXXXI).

Collaboration with International Organisations

In several occasions data made available by EpiSouth e-web bulletins were used by ECDC and support was provided for international risk assessments (Annex XXXXXXII).

Specific objectives of this WP

	Title
1	Enhance Mediterranean Early warning systems (EWS) allowing cross border alerts and Epidemic Intelligence information sharing between EpiSouth countries and develop interoperability with EU Early Warning platforms



List of deliverable(s) linked to this work package

Deliverable

	Title
9a	Weekly epidemic intelligence bulletin
9b	Mediterranean Cross-border secured platform interoperable with other EWS

Milestones reached by this WP

	Milestone title	Month of achievement
1	Management of the Mediterranean Cross-border secured platform	From 1
2	Review of functional specification for EPIS	6
3	One-week stage at InVS of non-EU participants	29
4	Testing phase for EW Platform in EPIS and assessment process, including formalisation of agreements with Partners and training	16-27
5	Launching of EpiSouth/EPIS (if consensus met) after 1st Project Meeting	27
6	Handing over to ECDC and EpiSouth Partners:	29-30
	ECDC: EPIS for EpiSouth Platform technical management	31-39
	Activities under EpiSouth Partners:	
	Stages at Spanish Ministry of Health and Istituto Superiore di Sanità	35-38
	WP6ST Workshop/Simulation Exercise	36

Work package title : Data collection and assessments for IHR implementation

Work package Number : WP7

Work package Leader : ISS

Starting Date. Ending date : M1 :M39

Description of the work package

The WP7 methodology, as described in the EpiSouth Plus SANCO Grant Agreement No 2009 11 05, implied the design of two surveys, of which one to identify priority



capacities to acquire in the EpiSouth Region and one to carry out an in depth analysis of a selected priority.

This initial plan underwent changes that were ratified in Amendment No 1 in September 2013. The need to modify the methodology of this Work Package arose thanks to the close collaboration with the World Health Organization (WHO). WP7 benefited from available data collected by WHO and defined with WHO the best tools to use to integrate missing information.

Specifically WHO provided subject-matter expert advice and enabled EpiSouth Plus to access regionally aggregated data collected through the WHO yearly monitoring of IHR implementation, therefore avoiding an ad hoc survey that would have duplicated this effort. This was the factual basis of a subsequent expert meeting (the first WP7 ST meeting) in July 2011. In this forum, those results were discussed and validated by the WP7 Steering Team and invited experts.

This work was instrumental in putting the spotlight on the need to enhance the coordination of surveillance at Points of Entry (PoE) in the Mediterranean. Following this, EpiSouth Plus contributed to the development of knowledge in this area, substituting a second survey, initially planned, with a focussed literature review and a national situation analysis involving four countries of the EpiSouth Region (2 EU and 2 non EU). The situation analysis was found to be better suited than a survey to collect the type of information still not available on coordination of surveillance at PoE. WHO subject matter experts suggested that a purely quantitative approach would have duplicated work already carried out by WHO and Member States.

The situation analysis was designed in close collaboration with WHO subject-matter experts and implemented thanks to the strong commitment of the four participating countries. Its findings are being now used to enrich the contents of a WHO global guidance on coordination of surveillance between PoE and National Health Systems.

Involvement of partners and target groups

Involvement of partners and target experts was fostered throughout the duration of the project as this was perceived as crucial in the work of this WP. As stated in the Action Plan shared with SANCO in the EpiSouth Plus Kick off meeting on January 31st 2011: "It is important to ensure that activities implemented by WP7 address aspects that are priorities for countries, and that activities are conducted with high levels of participation. For the procedures suggested by the WP to be possibly taken into account for a future pilot implementation in national policies, and therefore to prove useful for countries, this aspect is considered crucial."

The process was step wise and lead to a gradual progression from a Mediterranean Regional standpoint to a National and then Local one (due to the priority area identified, centred on Points of Entry) in four very different Mediterranean Countries. The recurring strengths observed by analysing current processes, procedures and performance in Points of Entry of four countries of the Region were then distilled in possible strategic lines viewed from a Mediterranean perspective.

The first step of this process was the consolidation of the WP7 Steering Team (ST). This ST was among the most numerous of the project and included subject matter experts from nine countries and one international network in addition to the coleaders (WHO and the ISS).

The second step was to adopt a participatory approach for the first WP7 Steering Team Meeting, Rome, Italy 20-21 July 2011 when the priority area of action was identified. In this occasion an EpiSouth Plus sub-regional meeting was organized involving all the WP7ST as well as other EpiSouth Plus WP coleaders and Focal Points of EpiSouth countries in the sub-region not part of the ST. This meeting enabled validation of the preliminary results of the assessment of regional priorities for



capacity implementation in the framework of IHR, coordination with the other WPs of the EpiSouth Plus Project and interaction with IHR focal and contact points at national and WHO regional level. This approach was functional to engaging key stakeholders and experts not originally part of the WP7 ST such as Malta and Morocco, who later agreed to participate in the National Situation Analysis, and the IHR Contact Person for WHO EURO who, since this meeting, provided input and advice.

The third step was to engage and benefit from inputs of subject matter experts within the WHO/HSE/GCR Lyon Office. Four WHO experts were actively involved in the work of WP7. Aside the coleader Pierre Nabeth, we acknowledge the work of Anne Castex (WHO HQ) in the revision and analysis of the WHO data aggregated for the EpiSouth region, of Daniel Menucci (WHO HQ) expert on aspects concerning IHR implementation at Points of Entry for his inputs during the First EpiSouth Plus Project Meeting and Third WP7 ST meeting in Rome (December 2013) and Gerardo Priotto (WHO HQ) for his active engagement in the design and implementation of the National Situation Analysis of coordination of surveillance between Points of Entry and the National Health Systems as well as his inputs during the final EpiSouth Plus Project Meeting held in Rome in November 2013.

Thanks to the support and coordination with WHO, when EpiSouth Plus put the spotlight on the need to enhance the coordination of surveillance at Points of Entry (PoE) in the Mediterranean in July 2011, WHO reacted immediately by consulting other expert groups and organizing the WP7 Steering Team Meeting at the WHO Meeting, Lyon, France 16-18 July 2012. In this occasion WHO decided to elaborate a global guidance on coordination of surveillance at Points of Entry.

Lastly in four selected countries in the EpiSouth Region the WP7 not only engaged IHR NFPs but also stakeholders at MoH and PoE level and, where applicable, WHO country representatives. The four WP7 Situation Analysis Country reports include a full list of the informants that were consulted in the collection of data that constitutes, along with the other studies performed by the WP, the concrete factual basis of the WP7 strategic document.

Coordination with other projects or activities

During the above mentioned process, contacts were made with the REACT project, the SEEHN network (which is part of the WP7 ST) and, as mentioned above, with subject matter experts involved in relevant activities in WHO (HQ and Regional level). The Shipsan project was involved through WHO and the assessments they produced were analysed as part of a review of documents and literature that was carried out in preparation for the Situation Analysis.

Outcomes and deliverables achieved

During the duration of the EpiSouth Plus Project (15th October 2011- 15th January 2014) the following outcomes were achieved:

- WP7 co-leaders finalized the WP action plan and consolidated the Steering Team (ST) membership.
- Following this, WP7 co-leaders and the WP7 Steering Team worked to identify EpiSouth priority IHR related capacities for in depth analysis. The outcome of this work was summarized in the EpiSouth Plus Report 1/2011 - Level of implementation of IHR 2005 in the EpiSouth region - Analysis of WHO data and identification of priority areas (Annex XXXXXXIII).
- Discussion and fine tuning of the priorities to address took place during the WP7 Steering Team Meeting, Rome, Italy 20-21 July 2011. At the end of this meeting a main findings report was produced in agreement of the meeting participants (Annex XXXXXXIV).



- An analysis of available documents and literature concerning the identified area of focus of WP7 was then made in order to design an in depth analysis as planned. The outcome of this work was summarized in the EpiSouth Plus Report 2/2011 - In Depth Analysis of Coordination of Surveillance and Response Between Points of Entry and National System in the EpiSouth Region (Annex XXXXXXV).

- The WP7 ST was consulted in the framework of a WHO expert consultation on the need to establish guidance on coordination of surveillance between Points of Entry and the National Health Systems: the WP7 Steering Team Meeting at the WHO Meeting, Lyon, France 16-18 July 2012. It was agreed that the findings of the in depth study to be conducted by EpiSouth could be used to enrich the contents of this WHO global guidance.

- The methodology of the in depth study was finalized and the National Situation Analysis was the chosen study type (Annex XXXXXXVI). A Study investigator team was identified and four countries, who complied with the criteria set out in the methodology, agreed to participate in the study: Italy, Malta, Jordan and Morocco.

- Data review and site visits were performed in each of the four participating countries involving in each case members of the study investigator team and the EpiSouth Focal Point and the IHR National Focal Point of the hosting country. For each country a full report on the findings was finalized. The reports include a description of concerned institutions in coordination of human health surveillance activities at PoE and an analysis of coordination of surveillance between one of each type of PoE and the National Health System. The legal and regulatory framework, with particular attention to obstacles in IHR implementation, Standard Operating Procedures, Human Resources, Bilateral Communication, Data Management were among the aspects taken into account in each setting (Annex XXXXXXVII, Annex XXXXXXVIII, Annex XXXXXXIX, Annex XXXXXXX).

- A Strategic Document on Coordination of Surveillance between points of Entry and the National health Systems was elaborated. This document brings together all the findings of the studies performed by EpiSouth WP7 from a Mediterranean Regional Perspective and translates the recurring strengths identified in the four countries studied in the national situation analysis in lessons learned and derived strategic lines. (**Deliverable D1001** (D1001_ Coordination of Epidemiological Surveillance Between Points of Entry and the National Health System in the Framework of the International Health Regulations 2005 in the EpiSouth Region_EN_PS) see DEL annex).

Problems encountered

Since the beginning of the project implementation, the 2011-2012 Mediterranean crisis has hindered the rapidity of communications among Countries and the participation of FPs to the WP activities. In particular this state of affairs delayed the first face to face ST meeting and with it the consolidation of the WP7 ST and the selection of the priority area of work which, as described above, needed the participation of several stakeholders.

Political unrest combined with the concomitant severe Economic Crisis penalized countries in affected areas of North Africa and the Middle East in participating to face to face meetings and hosting meetings and site visits. Also countries not directly affected by unrest were subject to more strict national prioritization of activities in public health institutions and ministries and were called to respond to emergencies triggered by the indirect effects of the political unrest such as massive population displacement and migration surges. This also penalized the participation of countries in some of the WP activities.

The priority area chosen by the network for in depth analysis and policy debate is particularly complex and problematic not only in the EpiSouth Region but globally. In order to tackle this topic in a technically sound way, more time was



dedicated to refining an appropriate methodology based on the input of EpiSouth Focal Points and subject matter experts. This has led to some delays in the implementation of activities.

The strategic presence of WHO in the WP7 co-leadership is a cornerstone of the entire project's approach to IHR strengthening. This however has led to a more complex approval process for the publication of the outputs of the Work Package requiring particular support from WP1 and WP2 in addition to greater work within WP7. Although this delayed the publication of the WP7 reports, the final product elaborated in collaboration with WHO, the leading international Agency for all aspects concerning IHR 2005, has in our view a much greater value and visibility.

There have been delays in the performance of the site visits in the framework of the EpiSouth plus WP7 National Situation Analysis. Participating countries were extremely proactive and this work would not have been possible without their ability to organize the expert meetings as well as arranging for internal transports. However the visits themselves depended on the availability of the concerned experts who, as mentioned above, were affected by a number of concomitant hindering factors.

How were problems resolved

A certain level of flexibility was needed to ensure that no overlapping with activities carried out by WHO and Member States was occurring, that EpiSouth Plus research activities were really filling recognized knowledge gaps in the framework of IHR implementation in the Mediterranean and that countries were not overburdened by requirements.

This implied a substantial revision of the methodology of this WP, the production of an additional literature review and the design of a more complex and time consuming in depth analysis. In particular, the ENSA National Situation Analysis needed an ad hoc design, several tools and required the performance of site visits. All these activities had not been originally planned.

Notwithstanding political uncertainty in some countries, and migration surges in others, it was possible to perform the national situation analysis in North Africa, the Middle East and migrant recipient countries in South Europe. This was only achievable thanks to the strong engagement of partner countries that was motivated by the shared opinion that this activity carried a strong added value at national level. We should acknowledge, however, that this situation put additional pressure on health officials participating in EpiSouth Plus WP7 activities as they were called to concomitantly meet national urgencies and emergencies.

Although these delays were not foreseen, they did not impact the achievement of the outputs planned in the WP. On the contrary, the final products of this work package met more ambitious goals than initially planned and the quality achieved is such that the findings of the National Situation Analysis are being now used to enrich the contents of a WHO global guidance on coordination of surveillance between PoE and National Health Systems.

Specific objectives of this WP

	Title
1	Production of a strategic document (including guidelines) based on assessments and surveys aimed at facilitating IHR implementation



List of deliverable(s) linked to this work package

Deliverable

	Title
10	Strategic document on national/international issues which may interact/interfere with IHR implementation

Milestones reached by this WP

	Milestone title	Month of achievement
1	Analysis of WHO available data to identify priority areas to be addressed to enhance IHR implementation in the EpiSouth Region	10
2	Preliminary report of first investigation	20
3	In depth analysis of priority area identified through literature review and analysis of existing monitoring frameworks	16
4	Expert consultation for the definition of guidance tool to be developed in the priority area of interest	21
5	Preliminary report of in depth analysis	21
6	Situation analysis of PoE Guidance in EpiSouth in coordination with WP5 Simulation Exercise	32-35
7	Preliminary strategic document report	36



6. Main Activities implemented in the VI Period of implementation (15 April 2013 – 14 January 2014)

WP1

The 4th Steering Committee(SC) /3rd Advisory Board(AB) Meeting took place in Rome at ISS on 19 November 2013 (**Deliverable D0206** (D0206_Meeting_Minutes_EpiSouth_ 4th SC/3rd AB meeting 19 November 2013-EN_IS see see DEL annex).

The Final EpiSouth Plus Conference took place in Rome at ISS on 20 and 21 November 2013 (**Deliverable D0205** (D0205_Report Final Project Meeting EpiSouth Plus 20-21 November 2013-EN_PS) see DEL annex).

Implementation of activities due under WP6

During the whole project's implementation period the WP1 (and often WP2) supported the activities planned under WP6 and, during the extension period, some activities were carried out to consolidate the WP6 activities.

i) request of official adhesion of EpiSouth Public Health Institutions and Ministries of Health to the EpiS for EpiSouth Platform.

Starting from February 2013, following the outcomes of the Project Meeting held in December 2012 and in coordination with the ECDC, the EpiSouth Focal Points have been requested to formally adhere to the EpiS for EpiSouth Platform (Annex V and VI). A total of 23 Countries (12 EU) had given their adhesion to the EpiS for EpiSouth Platform.

ii) InVS partner did not accept to be involved in the project's extension period asked with the amendment.

Although the WP6 activities under the InVS coordination would have been accomplished by 14 of April 2013 (original end of the Project), the EC EAHC/SANCO and DEVCO asked the EpiSouth partners to consolidate the WP6's achievements during the extension period.

Therefore, new strategies for WP6 activities' consolidation were discussed with the partners and the final proposal inserted in the project amendment documentation. This has put an additional load on the remaining partners as per the following:

- Organisation of a Workshop at ISS, Rome on "Simulation Exercise Organisation and related use of the EpiS for EpiSouth Platform", 16-17 September 2013 (Annex VII)
- Residential stages on EI/EBS:
 - a. at ISS, Rome, 17-20 September 2013 (Annex VIII and IX)
 - b. at Spanish MoH, Madrid, 16-20 December 2013

Finally ISS Coordination team has also produced two thematic notes: "Impact of MERS CoV on epidemic preparedness in countries of the EpiSouth Network in view of Hajj 2013" (Annex Xa) and Wild Polio Virus re-emergence in the Mediterranean" (Annex Xb)

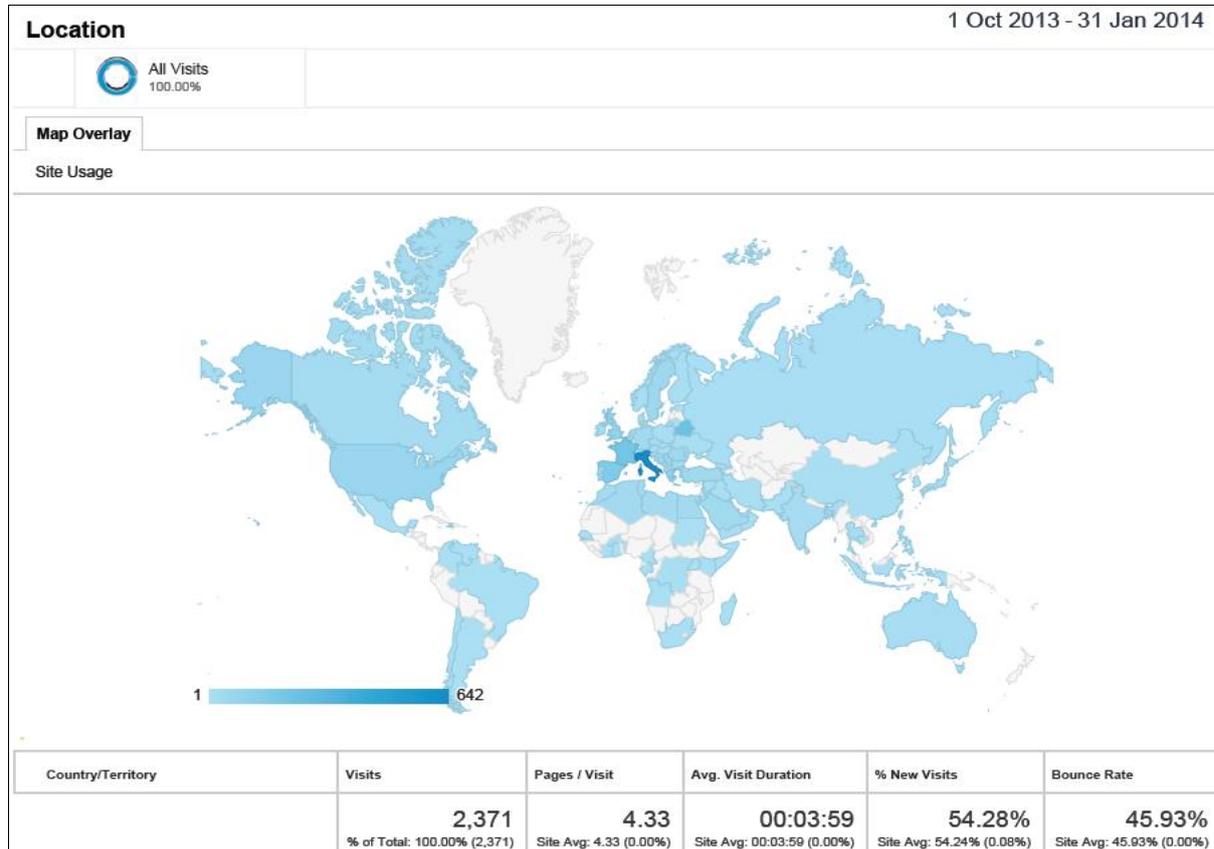
WP2

The Project's web site (both public and members' area) has been continuously updated and the quarterly electronic bulletin summarising the new contents presented in the web site has been released in June, September and December 2013. The main pages of the web-site, as well as the quarterly electronic bulletins and the reports



produced by the project, have been translated and made available also in French and Arabic.

Quarterly statistics concerning the web-site usage are available on-line.



Two technical reports focusing on the WP4 Needs Assessment of the Laboratories and Training on West Nile and Biosafety in the Laboratory were edited and disseminated through the WEB-site.

In the last nine months, EpiSouth activities were presented at the “Meeting of ECDC National Focal Points for Threat Detection”, which was held in Stockholm (Sweden) 4 November 2013. Moreover, they were presented at the “EC-TAIEX-ECDC Workshop with European Neighbourhood Policy countries on the EU Acquis in the area of Communicable Diseases”, which was held in Stockholm (Sweden) on 22-23 April 2013. Finally, the Network’s activities were presented to participants to the “Health Governance Unit Project” during the study visit “Research and Surveillance for Health”, which took place in Rome (Italy) on 15 May 2013.

A focus on EpiSouth-Plus has been published in the EU Newsletter n.111 of the 20th of June 2013



The [leaflet](#) describing the project's organization, as well as the [outline](#) with a more extended description of the project activities, was updated when necessary and made available to partners for dissemination purposes in both the members' area and the public area of the web site.

Finally, although initially not planned, three press release announcing the site visit to Italy in the framework of the National Situation Analysis on Coordination of Surveillance between Points of Entry and National Health Systems, the "Nautilus" Simulation Exercise, and the EpiSouth-Plus Final Conference were prepared and disseminated through different information channels in June, October and November 2013, respectively:

[Press releases concerning the National Situation Analysis on Coordination of Surveillance between Points of Entry and National Health Systems - Site Visit to Italy \(Italian\), June 2013](#)

[Press release from EuroMed ENPI Info Centre, 2 October 2013](#)

[Press releases concerning the EpiSouth-Plus Final Conference held in Rome, Italy 20-21 November 2013 \(Italian\)](#)

WP3

The final evaluation process started in September 2013 and the preliminary results of the evaluation were shared and discussed during a dedicated plenary session held at the EpiSouth Plus Final Conference. Then the final evaluation report was finalised and made available to all the project's stakeholders (**Deliverable D0401** (D0401_EpiSouthFinalEvaluationReport_EN_PS) see DEL annex).

An external evaluation was carried out also during the Simulation Exercise (SE) implementation. The expert of the University of Thessaly was at the Spanish MoH during the implementation days (2-3 October 2013). **Deliverable D0402** (D0402_EpiSouthFinalEvaluationReport_EN_PS) see DEL annex)

Evaluation of the 1st Project's Meeting and Final Conference

Evaluation questionnaires were prepared and distributed to the participants of the Final Conference (November 2013). The results were inserted in the Report of the Conference.

WP4

Second training session on "West Nile and Biosafety in the lab"

The second EpiSouth laboratory training session took place at the Instituto de Salud "Carlos III", Madrid (Spain) from 24 to 28 June 2013. It has been organised by the WP4 team with the Laboratory of Arboviruses and imported viral diseases of the ISCIII and Philippe Dubois, consultant on Biosafety, previously WHO trainer.

The objectives of this training were to improve the diagnosis of West Nile and the level of biosafety in the laboratories of the EpiSouth MRLN and to enhance the networking among participating laboratories. The biosafety modules were complementary to the modules discussed on the first training, but could be attended by new trainees.



The WP4 requested the heads of laboratories that were represented during the first training to nominate the same trainee if possible. For the new participating laboratories, the criteria were the same than for the first training: permanent staff of the laboratory, active person working at the bench, English and/or French speaker, able to provide training at the return in her/his laboratory.

As for the first training on Dengue and Biosafety, the training combined theoretical and practical courses related to the laboratory diagnosis of West Nile and Biosafety.

Likewise, trainees worked in pairs during theoretical and practical courses and compared results from different available commercial serological diagnostic kits for West Nile diagnosis in order to address limits and differences between the techniques. Such an organisation had offered to the laboratories to implement in their home situation the most adapted testing for Dengue and thus we expected the same spinoff from the West Nile training (Deliverable **D0502** (D0502_WestNileandBiosafetyTraining_EN_PS) see DEL Annex)

Organisation of the External quality assessment (EQA)

The WP4 has been in contact with ENIVD, IQLS and QCMD in order to organise an EQA programme for the MRLN for assessing the laboratory capacity to diagnose the 2 priority viruses (WNV and DENV). QCMD has been selected by the WP4 because it is an independent international organisation specialised in the provision and management of External Quality Assessment (EQA)/Proficiency Testing (PT) programmes. Furthermore they are focusing on infectious diseases and have already provided EQA on Dengue and West Nile viruses at an international level. They have an ISO 9001:2000 certification and an ISO/IEC 17043 accreditation. The EQA specifications have been described with QCMD in March/April 2013.

The first Dengue EQA PCR test was done in July/August but the final report was only available by December 2013. Only 15 non EU were sent test panels but only 13 countries participated, some due to lack of border clearance (Serbia) and some because of not yet adapted tests (Tunisia). Some countries had difficulties getting the EQA panel in (Palestine and Lebanon) but eventually all could perform. The overall result was good correct data detection was between 84,6% and 100%. US CDC graciously provided free of charge dengue pcr detection kits, which seemed more performing than some in-house methods.

The second EQA test was done on West Nile. 15 non EU and countries participated to the test, Malta was included in the testing countries since they did never did any EQA. Only one country did not respond. Primers and probes were delivered to 5 countries who did not have any before, they were corresponding to the protocol which was used during the training session on West Nile in ISCIII in Madrid, Spain in June 2013. All in-house pcr's performed well others performed between 50 and 100% showing that some labs need some fine tuning.

Onsite visit of experts

In February 2013, the WP4 has asked to the heads of laboratory to answer to an assessment (Annex XXXIX) about their eventual need for an onsite visit of an expert, leading to onsite tailored training to improve in the sort-term the capacities, according to the WP4 priorities.

In March 2013, the WP4 has made a list of needs that could be addressed and to identify the corresponding experts. Unfortunately, due to the overload of work of the experts and the WNV season that should last from July to September most of them could not visit labs before the end of summer. The activity is being rescheduled to fall 2013 according to the availabilities of the experts.

For all long and short stays an assessment was done with the different partners to identify their needs. To more advanced laboratories were asked to list



which thematics and specificities they could help less advanced laboratories with. As such a match between offer and demand was looked for.

Difficulties encountered were essentially due agenda issues and lack of offer for specific demands, indeed to find corresponding dates for experts and host laboratories proved to be in some cases impossible.

Expert visits

1) Dr Isabelle LEPARC-GOFFART (Responsible of the French National Reference Center for Arboviruses, ERRIT, IRBA - French Armed Forces Biomedical Research Institute), visited the Laboratory of Clinical Virology, Institut Pasteur in Tunis 14-17 October 2013. Main objective of the visit was to provide an onsite assessment of the laboratory capacity focusing on the diagnosis of West Nile virus and provide tailored recommendations to improve this diagnosis. (Annex XXXX).

2) Aykut OZKUL, DVM, PhD, (Professor of Virology, Department of Virology, Faculty of Veterinary Medicine, Ankara University) visited West Nile Virus Laboratory in Albania (head of lab. Majlinda Kota) 18-20 December 2013. The main objective(s) of the visit was to participate theoretical and practical issues focused on serology (mainly on Plaque Reduction Neutralization Test – PRNT) and molecular diagnosis (qRT-PCR and evaluating results) of West Nile virus and basic concepts of BSL-3 facility and its maintenance in safe. This program was proposed in order to provide an assessment of the laboratory capacity focusing on the improvement of diagnosis of West Nile virus (Annex XXXXI).

Long term training (3 weeks) at the Pasteur Institute in Paris

Main points adressed during 3 weeks stay (23/09/2013 – 11/10/2013) of Dr Aissam Achid (Virology Laboratory of Institut Pasteur in Algeria) in the Laboratory for Urgent Response to Biological Threats under the supervision of Dr Jean Claude Manuguerra (Head) and Christophe Badejat (Technician).

Synopsis of the goals of the training :

Regulatory aspects and procedures :

- French, European reglementation of BSL3 and BSL2 laboratories
- WHO and Canadian guidelines and norms
- Safetycabinets : maintenance and controls
- Standard operating procedures and good laboratory practices
- Decontamination procedures
- Specific regulations and procedures for animalhouse

Practical aspects :

- Handling of an emergency situation
- Technical aspects of a BSL3 laboratory (ventilation, filtration, periodical maintenance, ...)
- Decontamination methods , waste management and liquid treatment
- Personnel Protection Equipment (which different items, when to use, proper wearing,...)

Hands on sessions :

- Visit of different BSL3 laboratories
- Visit of technical installations
- Session on correct manipulation in a BSL3 laboratory
- Simulation excercises on decontamination
- Difference of handling in a decontaminates BSL3 and operational BSL3
- Simulation of an emergency situations
- Exercise on the writing of entry/exit procedures of a BSL3 laboratory(French)



- Exercise on the writing of an emergency procedure (Annex XXXII)

Strategic Document

The Strategic Document "Recommendations for the institution and consolidation of a Laboratory Network" was prepared on the basis of the experience gained by establishing the Network of Laboratories and by conducting trainings on priorities for the Countries Mediterranean Area ([Deliverable D0503](#) (D0503_RecommendationsfortheInstitutionandconsolidationofaLaboratoryNetwork_EN_PS) see DEL annex)

WPS

Two One-week Training Course in Serbia (8-12 April and 20-24 May 2013)

The courses aimed at:

- Perform the successive steps related to outbreak management
 - Perform descriptive analysis
 - Select the best study design for the analytical study
 - Interpret the results of the various analysis
 - Learn the role of the laboratory in outbreak investigation
 - Identify the key communications messages for different target audiences
 - Learn the Epi Info 7 for outbreak data analysis
- And regarding Spatial analysis:
- Describe and analyse the spatial distribution of surveillance data
 - Improve computer skills using Geographical Information Systems (GIS) and Google Earth
 - Perform statistical analysis of cluster data
 - Interpret and discuss the results obtained

Methodology

Outbreak investigation:

The course was built around a case study. During the three days, all steps involved in outbreak investigation were addressed, from creation of a data entry file to the stratified analysis, even though the practical exercise focussed only on data analysis (descriptive and analytical) due to the length of the course (only three days). Epi-Info was the main software used during the three days and MS-Excel for the epidemic curve. There were also some presentations.

Spatial analysis:

The last two days targetted the spatial analysis of infectious diseases. The training focussed on practical frameworks and research methods derived from epidemiology. GvSIG and SatScan were the main software used during these days.

The target audience was mid-level epidemiologists working at central and peripheral level in the countries.

16 participants were registered from 7 Non EU countries.

The course was high valorized, specifically the use of the software proposed (Epi Info, Google Earth, GvSIG and SatScan).

([Deliverable D0703](#) (D0703_1st training Belgrade_EN_ PS) and [Deliverable D0704](#) (D0704_2nd training Belgrade_EN_ PS) see DEL annex)



WP5 Strategic Document: TOOL for supporting countries' MoH to develop their Generic Preparedness Plans

The "Tool" was submitted for piloting, a process that consisted in request information from 4 FP of four countries (Algeria, Greece, Palestine and Montenegro) through a questionnaire regarding the last Draft of the tool for getting inputs for finalising it.

An interactive programme has been added in developed for ease the potential users to adapt the Tool to their own country needs. Additional user guide for the interactive programme in English and in French has been elaborate within the WP5 work (**Deliverable D0801** (D0801_ Tool for Supporting Countries on Generic Emergency Preparedness Planning in the Health Sector_EN_ PS) see DEL annex)

Directory of Training and Fellowships

This activity delayed in its starting and has had less impact that other WP5 activities.

Nautilus Simulation Exercise

Preparation:

The preparation of the Simulation Exercise started at the end of 2010. Revision of bibliography, discussions held during the two workshops held in Madrid in 2012 and 2013 were different steps on the preparatory process that aimed at building capacities in the region on Generic Preparedness for facing PHEIC under IHR approach.

After the Role Playing Simulation Exercise performed during the second Madrid Module, some aspects were detected as potential threats for the smoothly development of the SE to be held in October. One of the most important was the proper use of the EPIS for EPISOUTH (EfE) platform. The support of the WP1 was crucial at this point, pushing for ECDC to put in place the needed tool for alerts sharing.

Several activities for coordinating the good development of the Nautilus SE were done. Taking the opportunity of the WP4 Training held at ISCIII, the WP5 Team, including Spanish MoH representative met the Pasteur Institut team (WP4) for last details in the scenario, and the specific inject (pathogens, diagnosis procedures, periods for having the different confirmation test, etc) that were later use during SE.

During the workshop held in Rome additional coordination meetings were carried out with WHO-Lyo, ECDC, WP7, WP1.

Additional coordination was done with WHO-HQ, EC through SANCO-C3.

WP5 Team responded also to the External Evaluators requirements.

The core documents of Scenario, MEL list, Injects, Progress Evaluation Forms, Templates, Timeline, Epidemic Curve, etc were elaborated with the support of External Experts Technical assistance

Exercise:

A two-days exercise was carried out early October 2013. Twenty countries participated, (four other excuses their participation because relevant events in their countries). More than 250 people involved in within the whole region. Nineteen evaluators provided the items that the platform EPIS for EPISOUTH couldn't work.



International Organizations that supported the WP5 Team were: WHO (Lyo and HQ), ECDC, European Commission through its SANCO –C3.

In the Command Post:

Rosa Cano (WP5 Co-leader), Vinciane Sizaire, Marie Roseline Belizaire (Technical Assistant), Ana Sarasa (Spanish FETP Fellow), Fernando Simón (Coordinator of the CCAES - Coordination Centre for PH Alerts and Emergencies at the Spanish MoH); Berta Suarez (officer of the CCAES), Germain Thinus (C3-SANCO-EC), Tamara Curtin (External Expert working at WHO-HQ not representing WHO), Concha Martin (Coordinator of the Exercise).

Platform support EPIS for EPISOUTH (ECDC, coordinated by ECDC)

In the room the External Evaluators attended the two days exercise.

Facilities used: the crisis room of Coordination Centre for PH Alerts and Emergencies at the Spanish MoH.

Two Teleconferences were carried out with unbalanced participation from EU and Non EU countries.

(**Deliverable D0705** (D0705_SimulationExercise_EN_ PS) see DEL annex)

In order to consolidate WP6 Activities, Residential stages on EI/EBS were carried out at the Spanish MoH, on 16-20 December 2013 (see annex XXXXIV)

WP7

Between the 15th of April 2013 and the 14th of January 2014, WP7 carried out the four site visits planned in the Situation Analysis and completed this study. For each country involved, (Italy, Malta, Jordan, Morocco) a country report was produced with an in depth analysis of results including a legal and document framework of relevance to the topics discussed.

The findings of this and of the other two studies performed since the start of the project by WP7 (i.e. EpiSouth Plus Report 1/2011 - Level of implementation of IHR 2005 in the EpiSouth Region – analysis of WHO data and identification of priority areas and EpiSouth Plus Report 2/2011 - In depth analysis of coordination of surveillance and response between points of entry and national systems in the EpiSouth Region) were distilled in a strategic document (**Deliverable D1001** (D1001_Coordination of Epidemiological Surveillance Between Points of Entry and the National Health System in the Framework of the International Health Regulations 2005 in the EpiSouth Region_EN_PS) see DEL annex), that brings together all findings from a Mediterranean Regional Perspective and translates the recurring strengths identified in the four countries studied in the national situation analysis in lessons learned and four derived strategic lines (Annex XXXXXXVII, Annex XXXXXXVIII, Annex XXXXXXIX, Annex XXXXXXXX).

There have been delays in the performance of the site visits. Participating countries were extremely proactive and this work would not have been possible without their ability to organize the expert meetings as well as arranging for internal transports. However the visits themselves depended on the availability of the concerned experts and a certain level of flexibility was needed to ensure that all countries could be studied. Although these delays were not foreseen, they did not impact the achievement of the outputs planned in the WP.



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- Annex XXXVII – Heads of Lab Meeting Report 8-9 March 2012
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- Annex XXXXIII - Public Health Preparedness and Response Core Capacity Assessment
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- Annex XXXXV – Oral Presentation at the Arbozoonet conference on 22-24 November 2010 in Rabat
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- Annex XXXXX – Plan of Action for EpiS for EpiSouth Development
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- Annex XXXXXX – Note on Novel Coronavirus, Worldwide - March 2013
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- Annex XXXXXXIII – Report on “Level of implementation of IHR 2005 in the EpiSouth region”
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- Annex XXXXXXVI – The ENSA Methodology
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- Annex XXXXXXX – The ENSA Morocco Report

Publication list produced during the reporting period. Please include copies of the articles as pdf files.

Annex XXXXXXI

Flavia Riccardoa,*, Maria Grazia Dentea, Mira Kojouharovab, Massimo Fabiana, Valeria Alfonsia, Anna Kurchatovab, Nadezhda Vladimirovab, Silvia Declicha
Migrant's access to immunization in Mediterranean Countries Health Policy 105 (2012) 17– 24

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Deliverables (see related annex)