



Food and Agriculture  
Organization of the  
United Nations



## 41<sup>st</sup> General Session of the EuFMD

### IMPROVING CONTINGENCY PLANNING

Progress with modelling, contingency planning networks and support to national simulation exercises

**Fabrizio Rosso**

*Animal Health Officer, EuFMD*

# PILLAR 1 - Improve readiness

1. **Improve readiness** for FMD crisis management by Members
2. **Reduce** the risk to Members of an FMD incursion from the neighborhood
3. **Promote** the global FMD control strategy



Component 1.2 – CONTINGENCY PLANS



Component 1.3 - THRACE



Component 1.4 - BALKANS



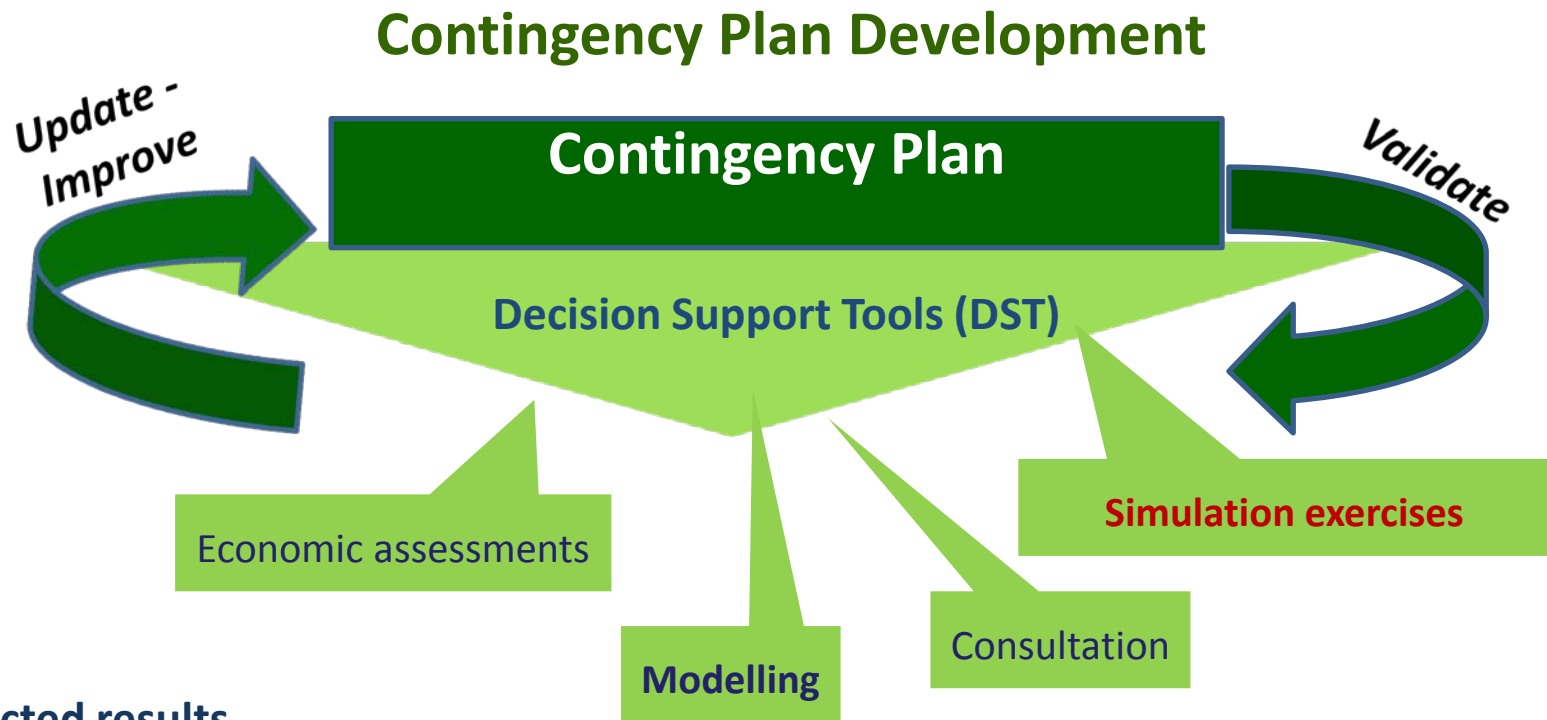
Activity indicators  
Result indicators



Impact

## Component 1.2

# Developing training material on Modelling , Decision Support Tools and Simulation Exercises



### Expected results

1. EuFMD modelling network
2. Resources for training (modelling – socio/economic analysis - simulation exercise )
3. Network of managers in contingency planning and simulation exercise

# Activity indicators

## 1. Modelling

- ✓ An **EuFMD modelling network** has been established and it is growing



82 participants

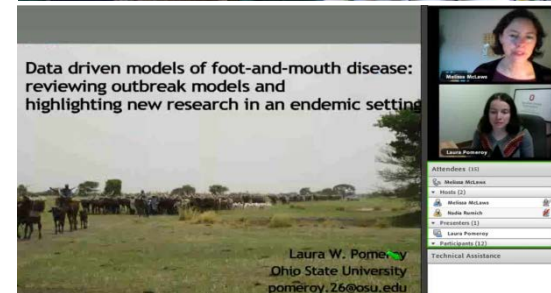
- EU
- USA - Canada
- Australia - NZ

### ✓ Resources for training:

- Workshop on ***“To vaccinate or not to vaccinate: using modelling to evaluate FMD control options”*** in October 2014 (16 participants from 11 countries)



- Webinar on ***“Making modelling useful for contingency planners”*** in January 2015



- Webinar on ***“Data-driven models of FMD dynamics: reviewing outbreak models and highlighting new research in an endemic setting”*** February 2015



- Webinar on ***“Modelling spread of highly infectious diseases in the EU before detection – the example of African Swine Fever”*** in April 2015



# Activity indicators

## 1. Modelling

- ✓ An **inventory of models** and other decision support tools implemented
- ✓ A **prototype model** for the rapid assessment of FMD impacts (RVC)

## 2-3. Contingency planning and simulation exercise

- ✓ Supporting CPs with a **Knowledge Bank**
- ✓ **Network** of CP managers
- ✓ Development of **guidelines for simulation exercises** and other exercise (*assessment of the needs*)
- ✓ **Consultation on vaccine and diagnostic banks** (report, prioritization, coordination)

The screenshot shows the EuFMD Modelling Network web page. At the top is the EuFMD logo and the title 'EuFMD Modelling Network'. Below this is a welcome message: 'Welcome to the web-page for the EuFMD Modelling Network. The overall objective of the Network is to promote a better understanding of existing decision support tools (epidemiological and economic models) that are used to inform contingency planning in Europe, and to improve the dialog and awareness between model developers and model users.' There are two buttons: 'Open all' and 'Close all'. Below these are three expandable sections: 'Discussion Forum', 'Webinar Recordings', and 'Inventory of Model Resources'. At the bottom, a message states: 'We would like to create an inventory list of existing models that could be used to support decision making for prevention and control of FMD and other transboundary animal diseases.'

The screenshot shows a video conference interface. The main part of the screen displays a presentation slide titled 'Guidance on exercises to assess CPs'. The slide features a circular diagram with four quadrants: 'Adjusting', 'Planning', 'Controlling', and 'Implementing', with 'CP' in the center. Surrounding the diagram are four boxes containing text: 'CP review', 'SOPs', 'Trainings', 'Contracts', 'Meetings'; 'Contingency plan and operation manual'; 'Simulation exercises, other exercises'; and 'Contracts with suppliers, meetings with stakeholders, training of personnel, financial plans, etc.'. To the right of the slide is a list of attendees: 'Attendees (43)', 'Hosts (2)', 'Presenters (3)', and 'Technical Assistance'. The names listed are Fabrizio Rosso, Chris Kench, Elsa and Keith, Fabrizio Rosso, Francisco Perez, and Melissa. At the bottom of the slide, there is a contact information box: 'Please contact me for more information or to join the network! melissa.mclaws@fao.org'.

# What are the possible needs ?

According on what we have learned

- Continue the **Modelling network** webinar series.
- Development of an accessible and **easy-to-use calculator** to assess the socio-economic impact of FMD and resources needed.
- Implementation of **webinars focused on contingency planning**: Risk Communication, Diagnostic Banks and Planning Simulation Exercises.
- Development of **guidelines** with categorization and definitions of **CP exercises**
- Support on **vaccination issue** for CPs development

## Component 1.3

**Establish a system which provides continuous confidence in disease freedom and which improves the chances of detecting an out break at an early stage**



### Expected results

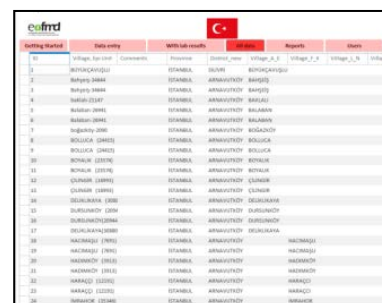
1. Establishment a **co-ordination framework**
2. Establishment **system for real-time data entry** to support management of surveillance activities aimed at maintaining disease freedom confidence
3. Achieving **two years of risk based surveillance** results for FMD (and other diseases as requested by the beneficiaries countries)

# Activity indicators

## 1. Management and tripartite meetings →

Tripartite meetings	Management meeting
November 2013	November 2013
April 2014	February 2014
October 2014	August 2014
	December 2014

## 2. Database and regular reporting →



Country	Status	Comments
Bulgaria	Active	
Greece	Active	
Turkey	Active	



## 3. Active and passive surveillance and laboratory support ↙ ↘

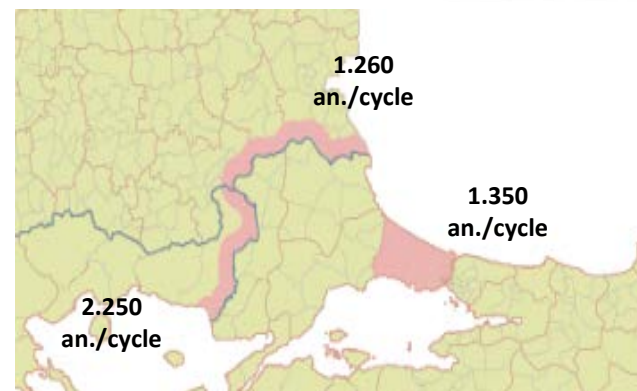
THRACE : FMD Report 2013-2014

Country	N. controls in epi-units	N. animals sampled	N. cattle inspected
BULGARIA	126	5,722	13,140
GREECE	1013	5,179	7,315
TURKEY	1809	6,843	69,107*
TOTAL	2,948	17,744	89,562*

\*The surveillance performed in low risk area of Turkey has been reported and included in the model

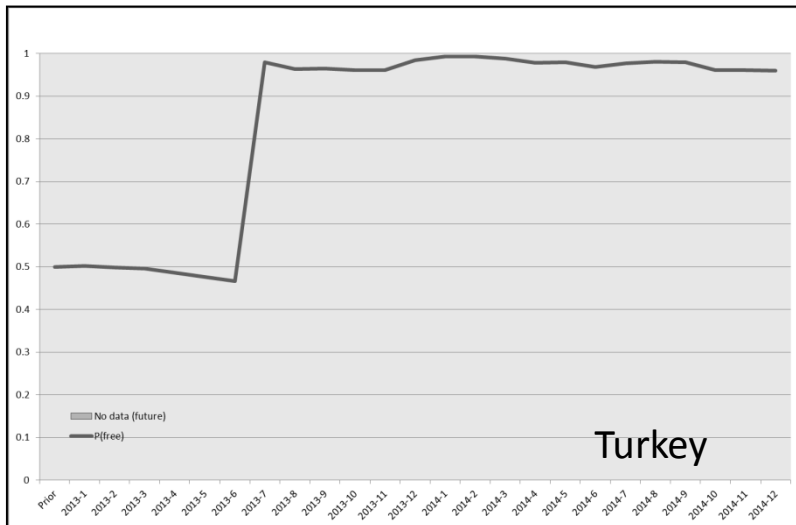
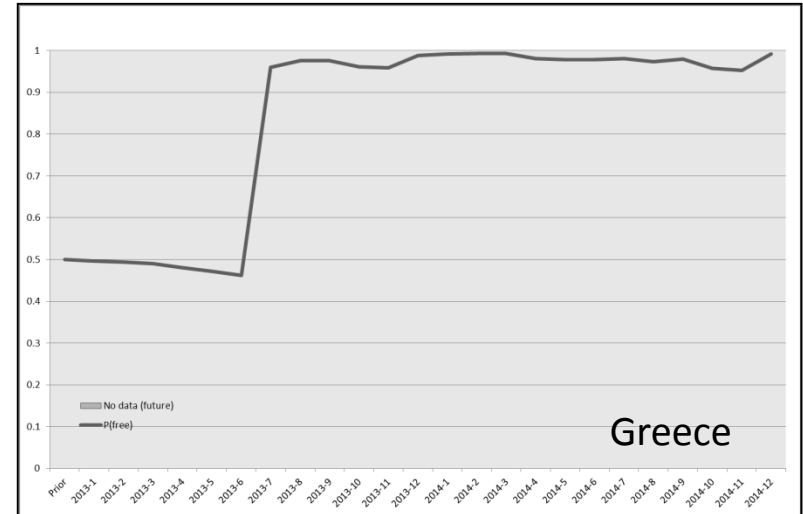
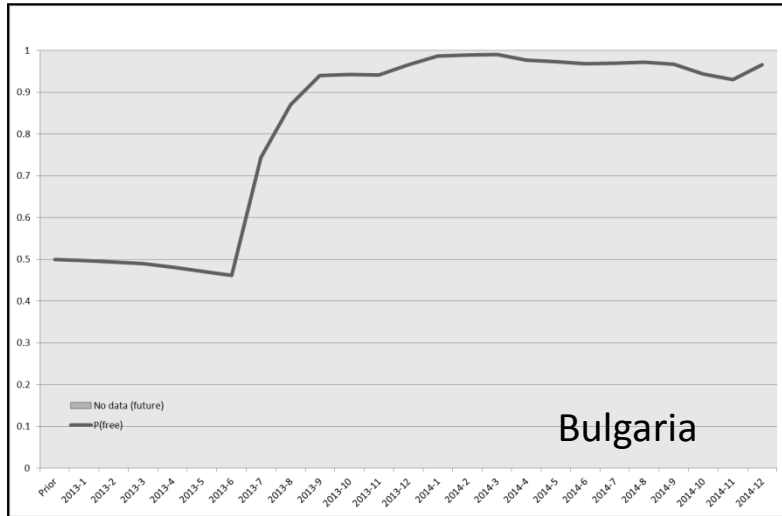
Kits delivered

	ELISA Ab	ELISA Ag
Bulgaria	21	1
Greece	25	1
Turkey	28	2
TOTAL	74	4





### 3. A **model** for the analysis of FMD surveillance data to calculate the **progressive probability of freedom** from FMD over time



**Design prevalence values**

- Herd level design prevalence: 0.02  $P^*$
- Animal-level design prevalence: 0.2  $P^*$

**Probability of introduction**

- Annual  $P(\text{intro})$ : 0.2 annually
- Seasonal variation? Yes
- Unadjusted monthly  $P(\text{intro})$ : 0.0184 monthly
- Monthly relative risk scores

Score	Adjusted $P(\text{intro})$
1	0.0005
2	0.0005
3	0.0005
4	0.0195
5	0.0195
6	0.0195
7	0.0195
8	0.0195
9	0.0195
10	0.0386
11	0.0386
12	0.0005

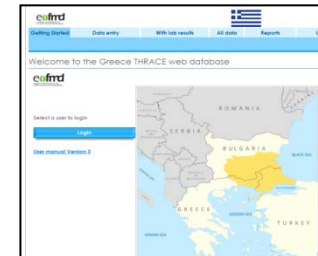
**Herd level risk factor**

Risk factor name	Region	RR	PrP	AR	EPI
High risk group	East	3	0.2	2.14286	0.04286
Low risk group	West	1	0.8	0.71429	0.01429

**Prior probability of freedom**: 0.5 Prior  $P(\text{free})$

**Surveillance sensitivity**

Type	Combined Sensitivity
Herdsurvey	0.92
Risk factor exam	0.2
Knott test clinical	0.3
Surveillance type 4	0
Surveillance type 5	0
Surveillance type 6	0



**euFMD**

Country	Region	Province	County	City	Province	County	City	Province	County	City
1	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
2	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
3	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
4	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
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9	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
10	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
11	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
12	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
13	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
14	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
15	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
16	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
17	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
18	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
19	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania
20	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania	Albania

The **Coordination framework requested** (with support of FAO/OIE) to apply the surveillance implemented for FMD to **other diseases**:

**“Sheep and Goat Pox, Peste des Petits Ruminants, Lumpy Skin Disease”**

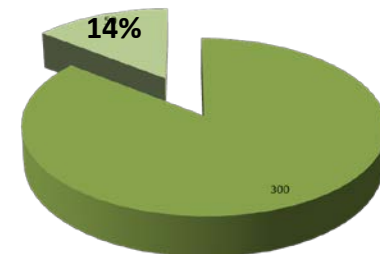
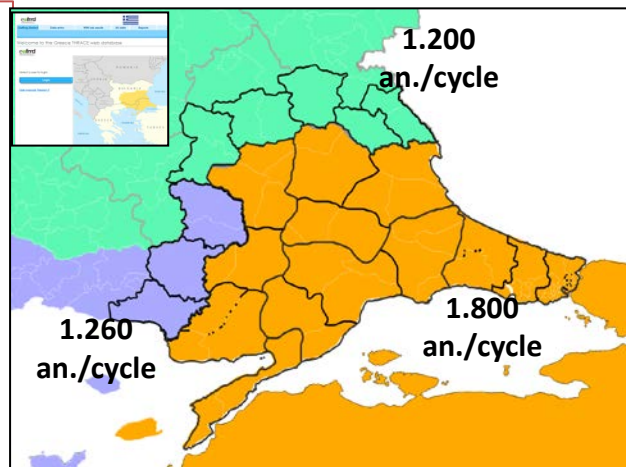
## PPR ,SGP, LSD surveillance

### ACTIVE SURVEILLANCE

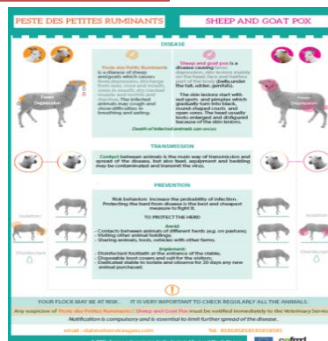
- Clinical surveillance for PPR,SGP,LSD
- Database upgrated
- Laboratory workshop on PPR/SGP/LSD
- PPR diagnostic kits delivered to BG – GR
- Model for PPR
- Field exercise on LSD

### PASSIVE SURVEILLANCE

- leaflets and posters



Budget allocated



Passive farmer reporting sensitivity parameters				
Animals shows clear signs of disease		Point estimate	Min	Most likely Max
Vaccinated	Sheep	20	0.8	0.9
	Goat	10	0.95	0.98
	Sheep	20	0.95	0.98
	Goat	10	0.95	0.98
Farmer notices disease				
Naïve	Lactating	25	0.95	0.98
	Dry	14		
Vaccinated	Lactating	12	0.6	0.8
	Dry	10.8		
Farmer calls veterinarian				
High awareness (high risk zone)		12	0.8	0.9
Lower awareness		10.8		
Vet suspects PPR (or other notifiable disease)		10	0.8	0.9
Samples taken for lab and tested for PPR		50	0.95	0.99
PCR Sensitivity		20	0.95	0.98

Probability of introduction of PPR			
	Greece	Turkey	Bulgaria
Overall value	5%	5%	5%
Relative risks for high risk area	20	10	20

Consequences of infection (number of secondary outbreaks)			
	Greece	Turkey	Bulgaria
Low risk	10	10	30
Relative risk	2.5	3	0.33

Population parameters (total holdings)			
	High risk	Rest of country	Pa
Sheep	Goats	Sheep	Goats
			Hi





## Results indicators

- ✓ **Early warning surveillance system** in high risk area for Europe
- ✓ **Network between countries** with rapid information exchange and collaboration in the area
- ✓ **Preparedness** of laboratories (regular support and testing)
- ✓ **Regular monitoring** and possibility to **adapt** to other geographic areas the programme aimed to produce an **outcome** easy to understand for policy/decision makers.
- ✓ Pilot programme for **integrated animal diseases surveillance** (FMD, PPR, SGP, LSD) implemented between different countries

# Major issues



- ❑ **Sustainability** of the activities in case of lack of resources;
- ❑ **Overlooking risks** not previously identified in the development of the targeted surveillance in 2013;
- ❑ **Adequate preparedness** of Thrace for the possible introduction of other diseases (e.g. LSD) and consequences;

## What are the possible needs ?

According on what we have learnt

- Maintaining and promoting the **collaboration** between countries;
- Providing **regular support** for preserving the targeted risk-based surveillance and allowing continuous improvement of awareness;
- **Using the model developed** for FMD to analyze the surveillance implemented for other diseases (e.g. PPR)
- Assessing the **needs** (CP), if Turkey will stop FMD vaccination in Turkish Thrace
- Programme develop might be relevant for **other regions** for confidence in disease freedom



## Component 1.4

### Support the development of FMD emergency capacity in the Balkan region



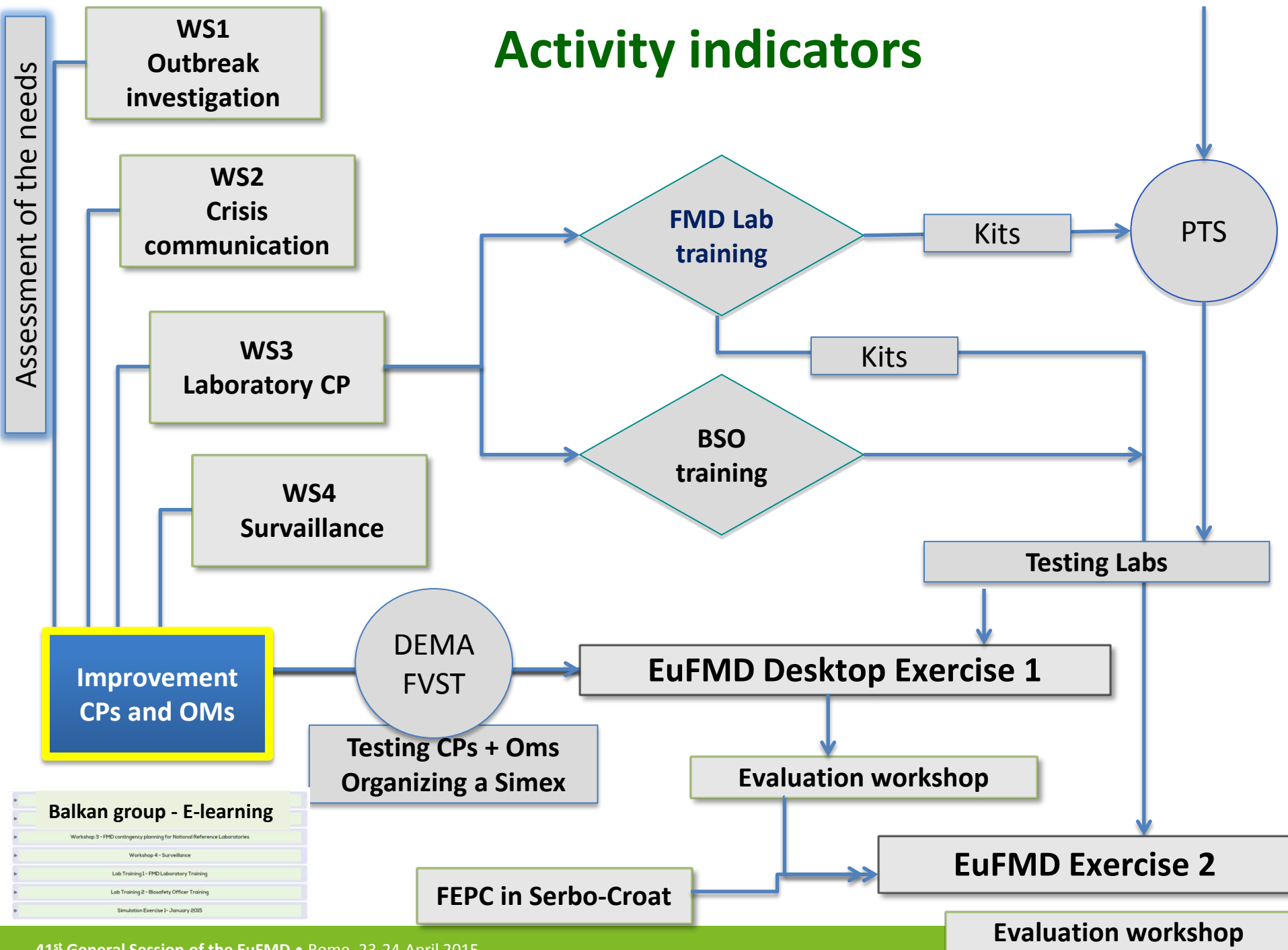
***EuFMD Members:*** Bulgaria, Serbia, FYRO Macedonia, Croatia, Bosnia and Herzegovina, Albania,, and Greece (more recently); ***EuFMD Non-members:*** Montenegro, Kosovo and Moldova.

### Expected results

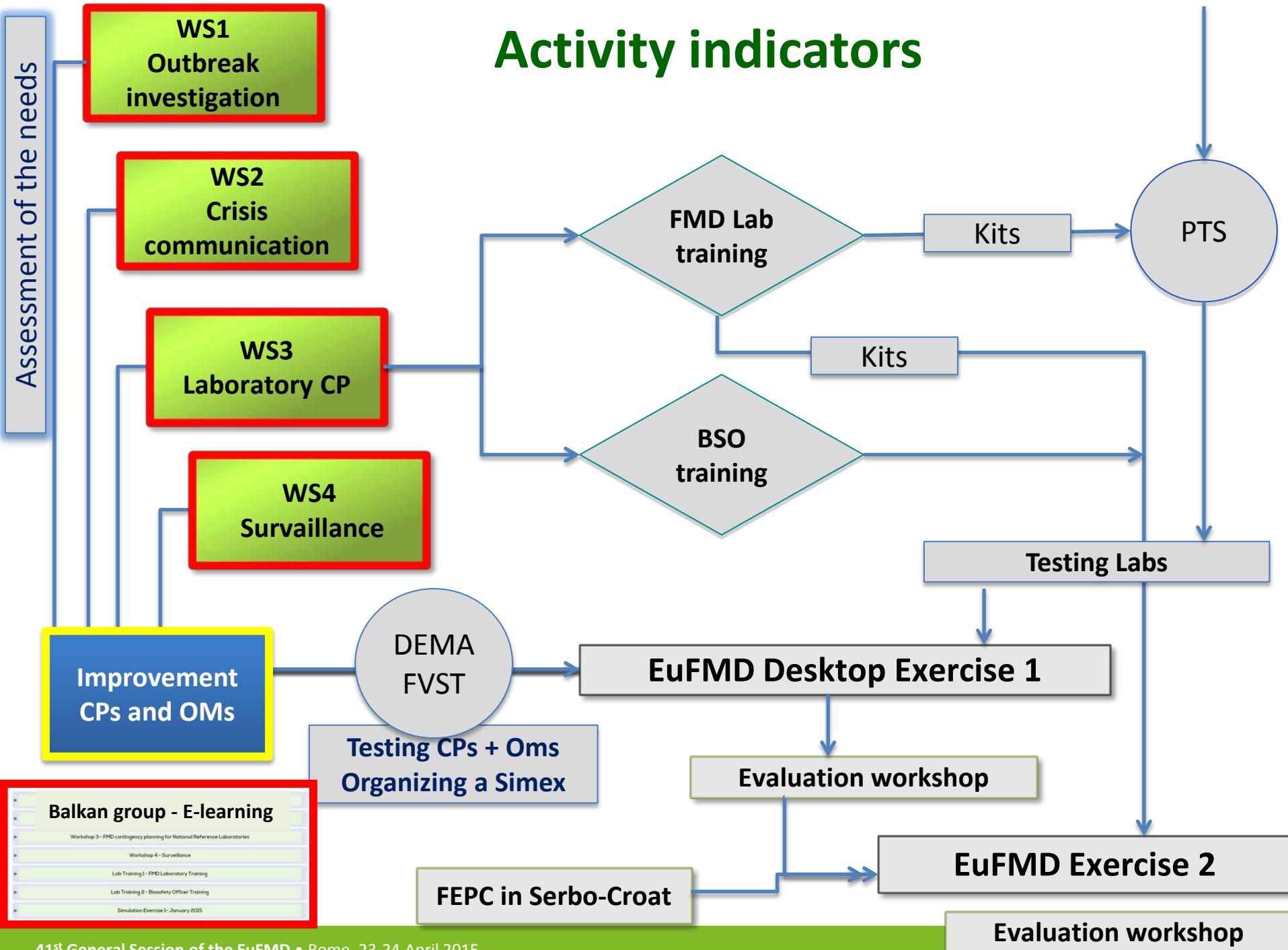
1. **Co-ordination framework** for the western Balkan countries for emergency planning including laboratory sub-network
2. **Improving contingency plans** (training, simulation exercises)
3. Integration of **national FMD reference centres** in national CPs and **improvement of regional FMD diagnostic capacity**



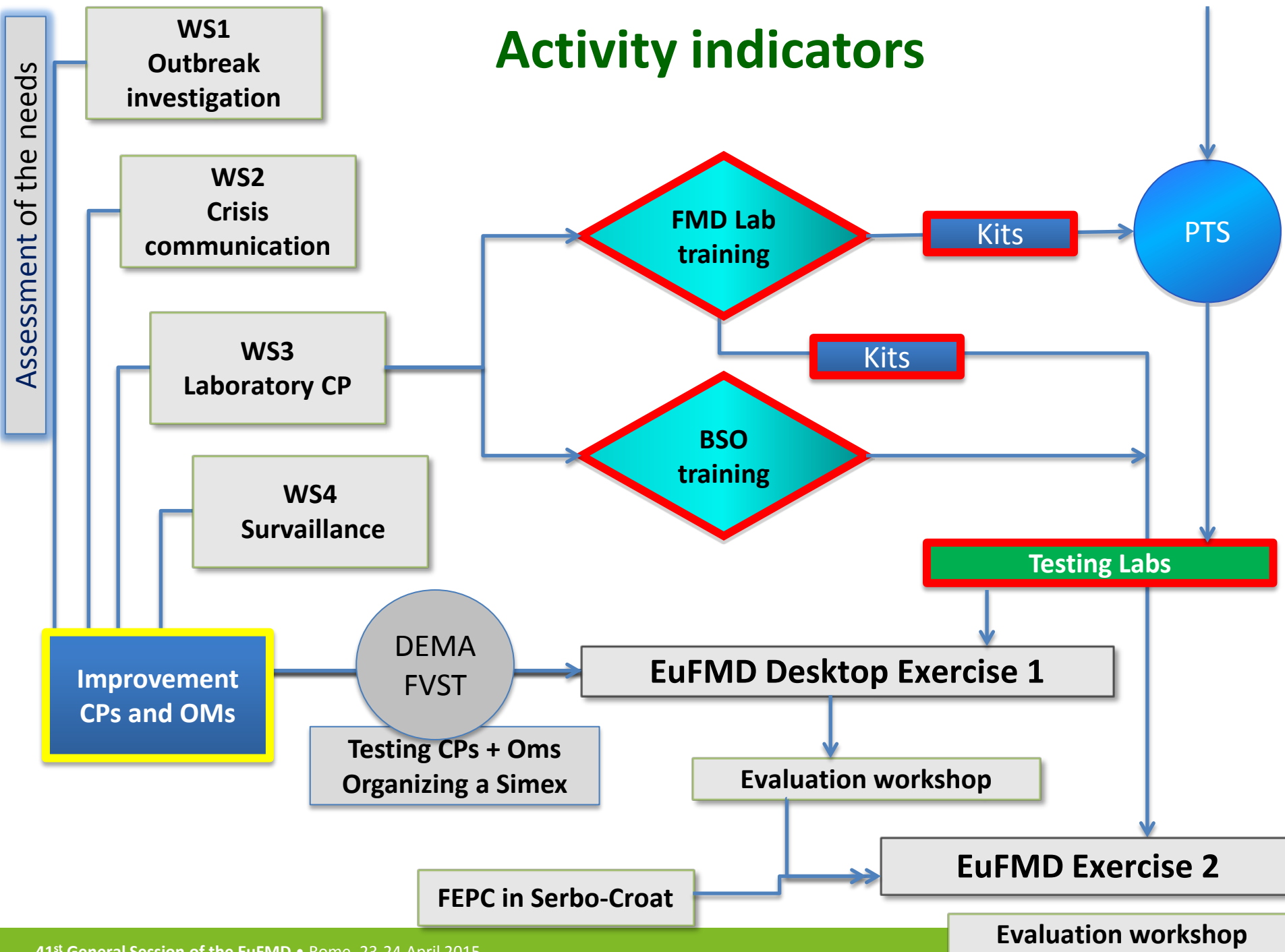
# Activity indicators



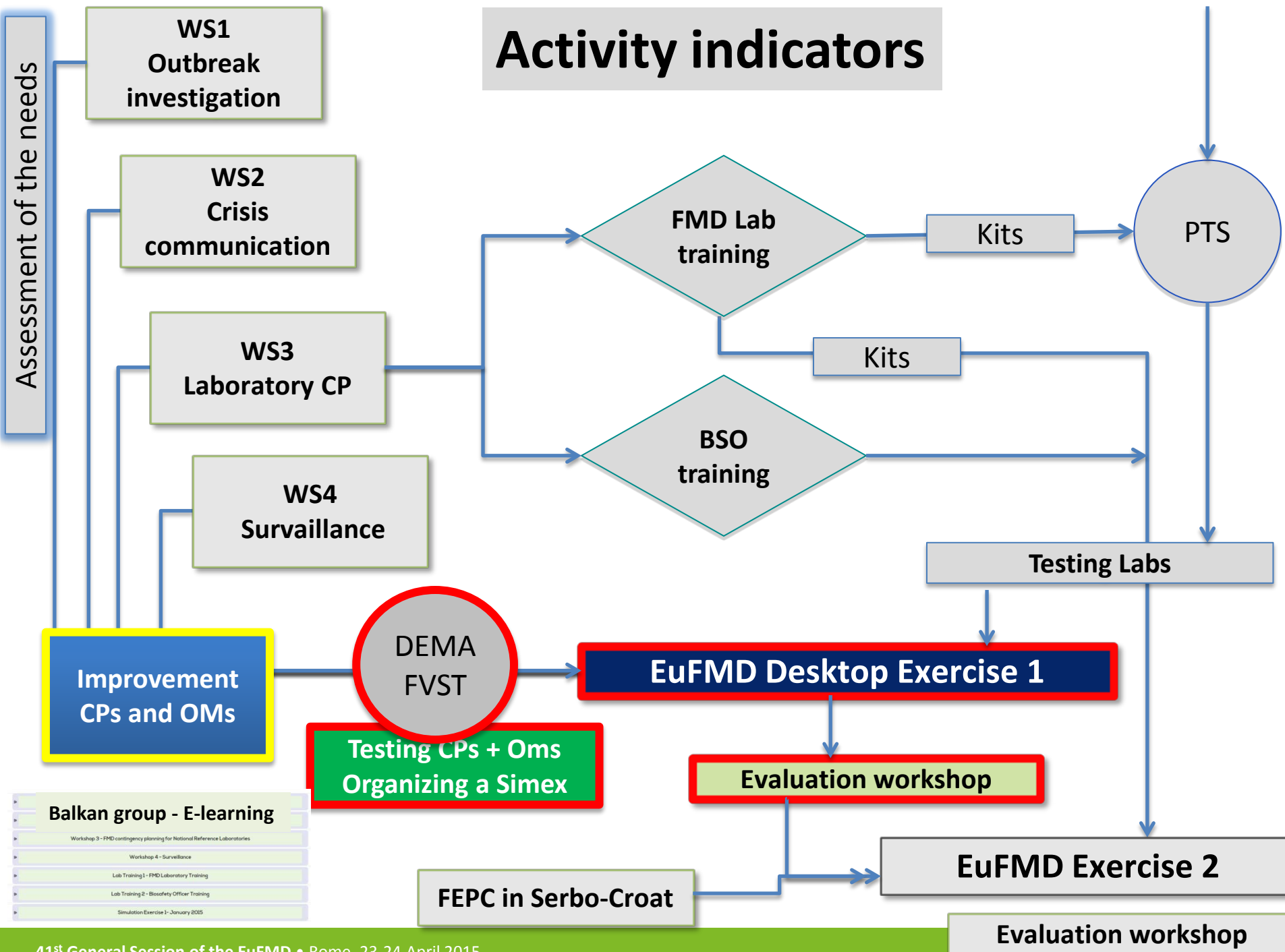
# Activity indicators



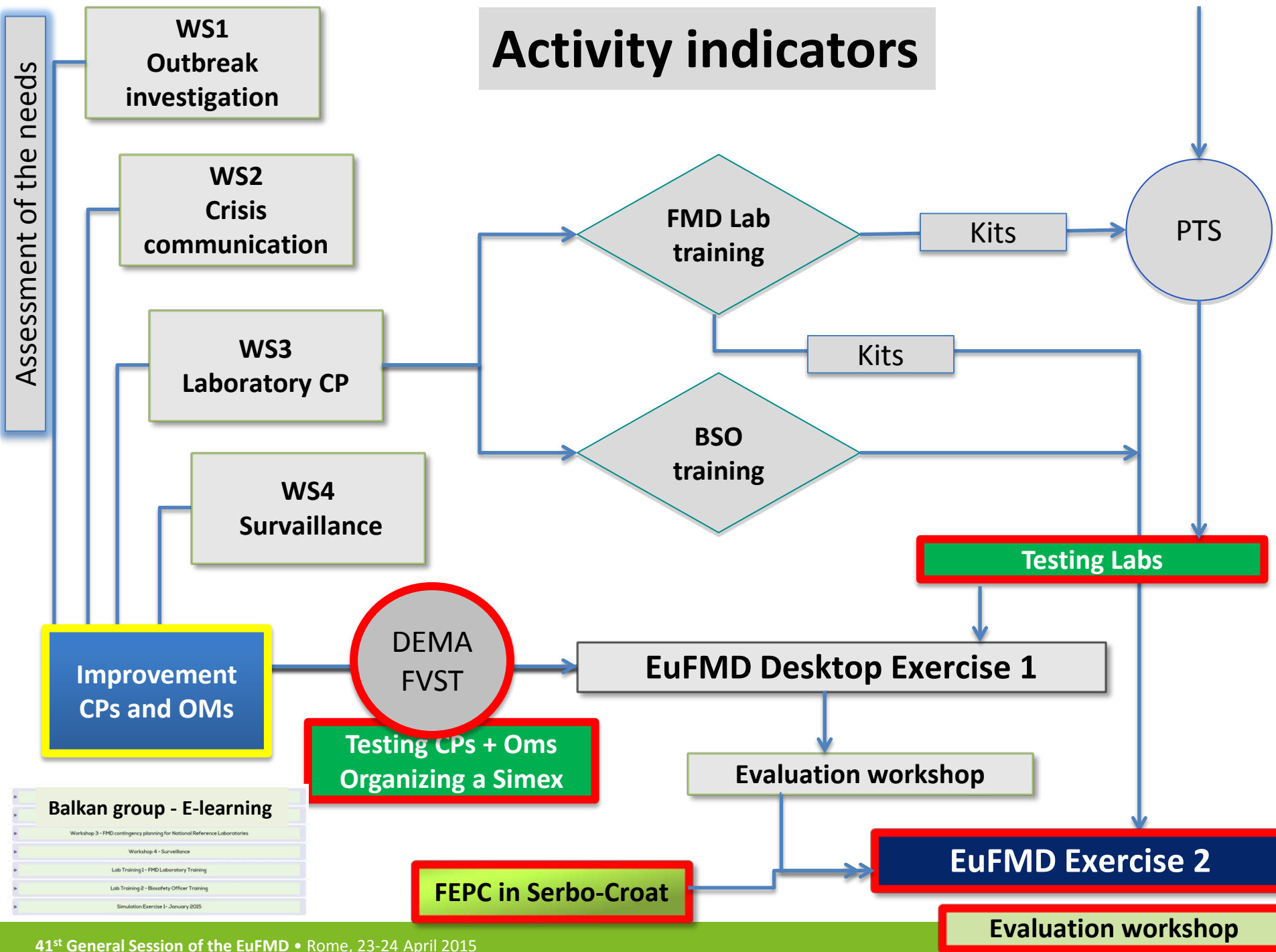
# Activity indicators



# Activity indicators



# Activity indicators





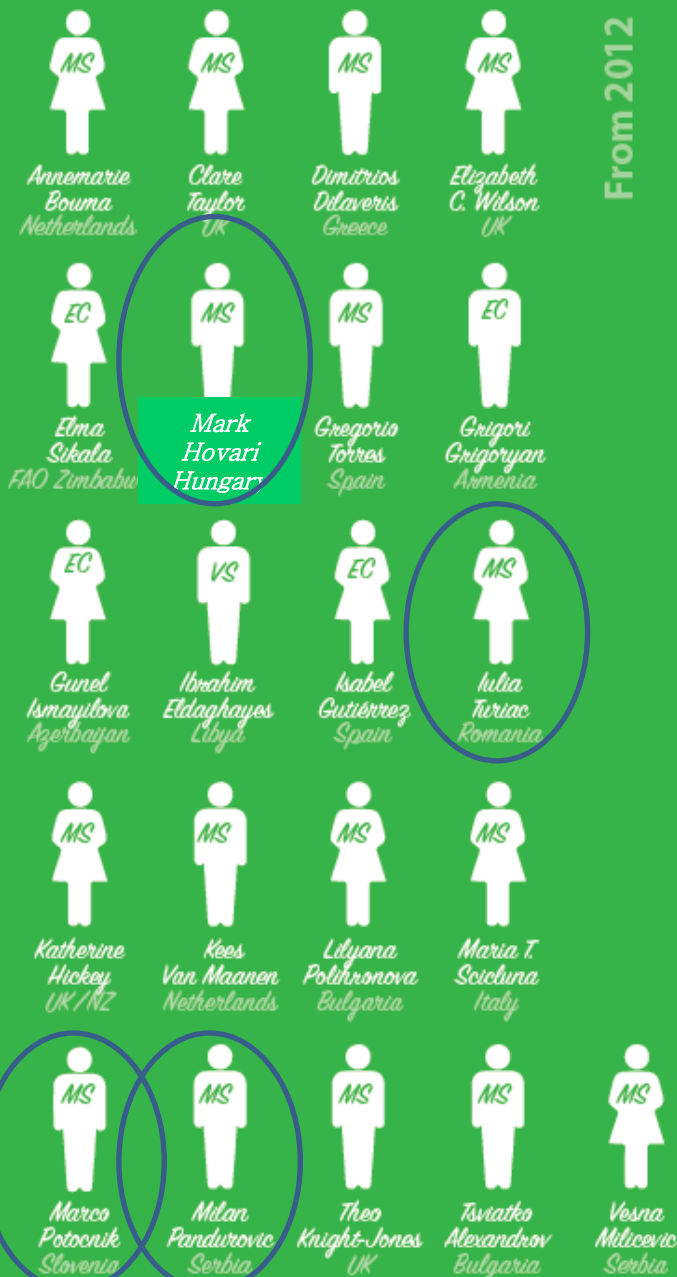
# Short Term Professionals Programme

# STP

The European Commission for the Control of FMD supports STP staff for the purpose of gaining professional experience in FMD risk management and of work in an international environment on FMD control. In 2015 the EuFMD has accepted Visiting Scientists (VS) to assist without cost.

STPs are expected to help manage work components, travel and participate in meetings and workshops, disease investigations and field missions as required and appropriate to their skill set and aspirations.

From 2012



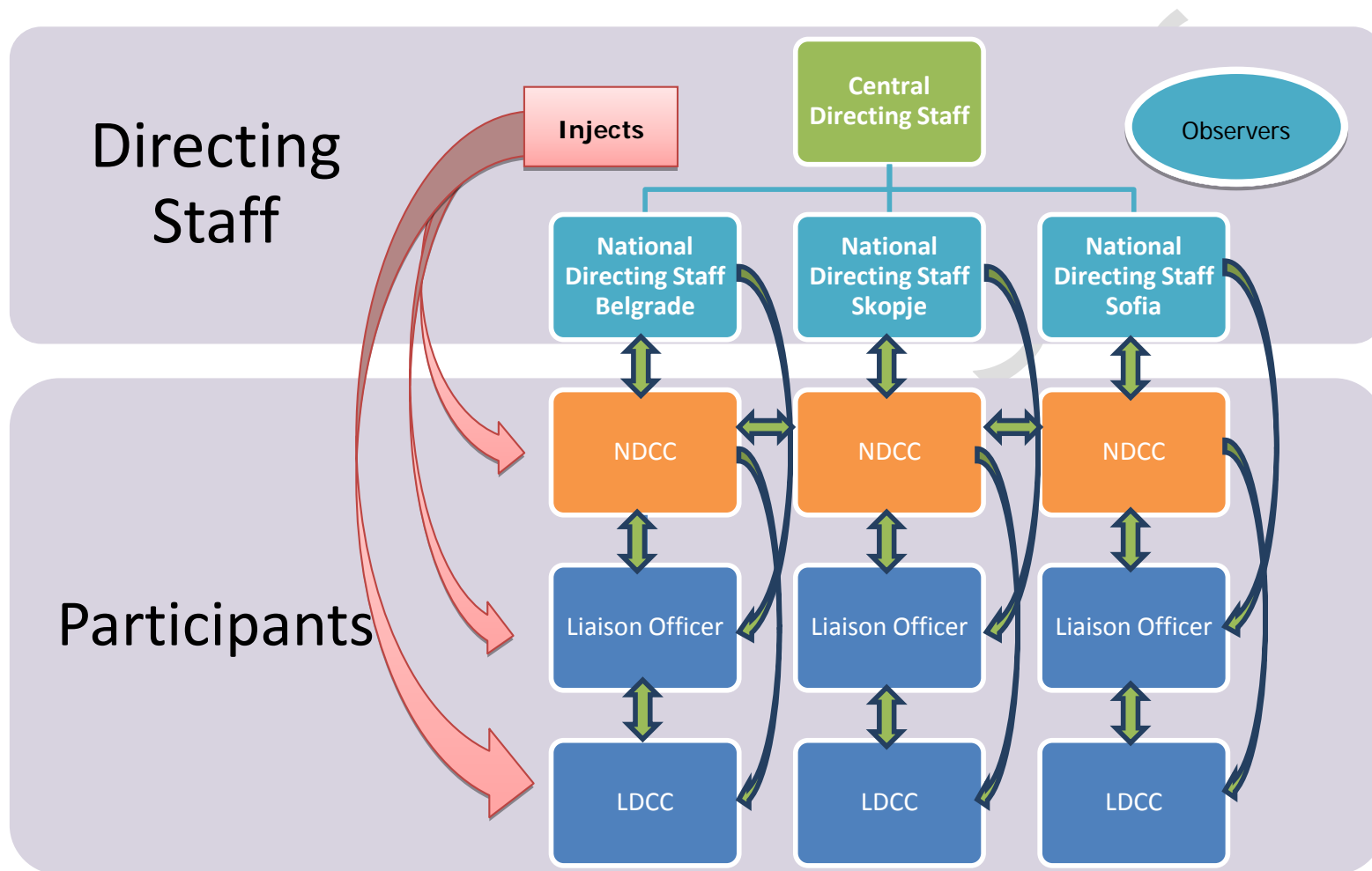
We support gender equality



# Desktop Simulation Exercise

## Objectives of the desktop simulation exercise

- 1) Assist the **organization of a simulation exercise**
- 2) Drive the veterinary services in the **self assessment of their CPs**





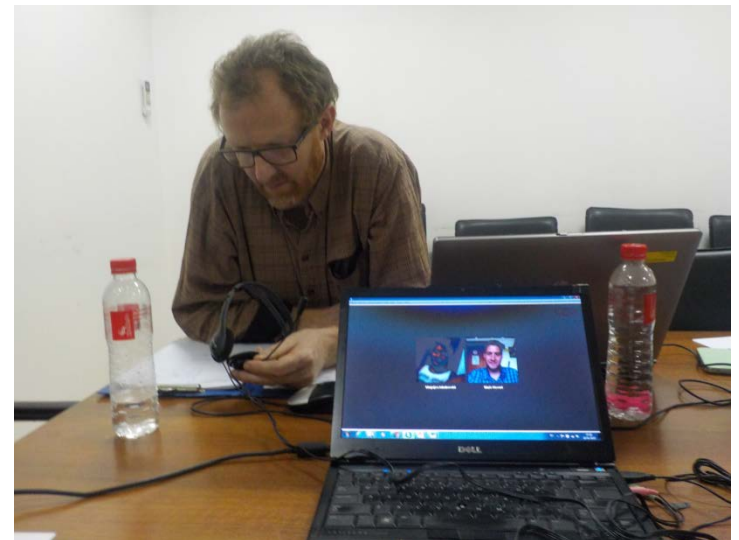
*How the exercise started*



*NDCC at work*



*Regular debriefings*



*Distaff Communication*





*How the exercise started*



*NDCC at work*



*Regular debriefings*



*Distaff Communication*

# Result indicators



- ✓ **Establishment of network** of National Focal Points and Laboratory Sub-network Contact Points
- ✓ **Positive regional impact** as the countries making progress can assist the other countries
- ✓ Development and improvement **of Contingency plans and Operational Manuals**
- ✓ Good **synergy** with other EuFMD components (1.1 and 1.2)
- ✓ **Preparedness** of laboratories (regular support and monitoring improvements)
- ✓ Development of **training material** on simulation exercise and other exercises



# Major issues



- ❑ Finalization of **national contingency plans**;
- ❑ **Procedures** of the operational manuals need to be practiced to assess their feasibility and effectiveness;
- ❑ **Lack** of sufficient dedicated **resources** can affect the contingency planning capacity
- ❑ Capability to use the '**lessons learnt**' from the activities implemented

## What are the possible needs ?

According on what we have learnt

- Providing **assistance and guidance** for contingency plans and operational manuals, including Turkey in the activities;
- Improving the sustainability through a **system for mutual assistance**
- Developing the capacity of the countries to **design, implement, evaluate** different type of exercises;
- Facilitate a **Serbo-Croatian version** of the e-learning FEPC and other training material (job aids)

# PILLAR 1 - Improve readiness

## Component 1.2 – MODELLING and CPs



## Component 1.3 - THRACE



## Component 1.4 - BALKANS



BIG THANKS TO....EuFMD admin staff Cecile, Erica, Ida, Silvia

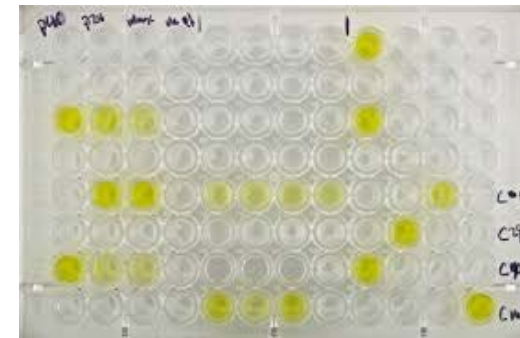
## Component 1.5 – APPLIED RESEARCH



## Component 1.6 – CRISIS MANAGEMENT



## Component 1.6 – PROFICIENCY TEST SERVICES



# Thank You

