

The 'Enlargement, international collaboration and capacity building' Project in the context of the BTSF Programme



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"2nd International Workshop of GMO-analysis Networking"

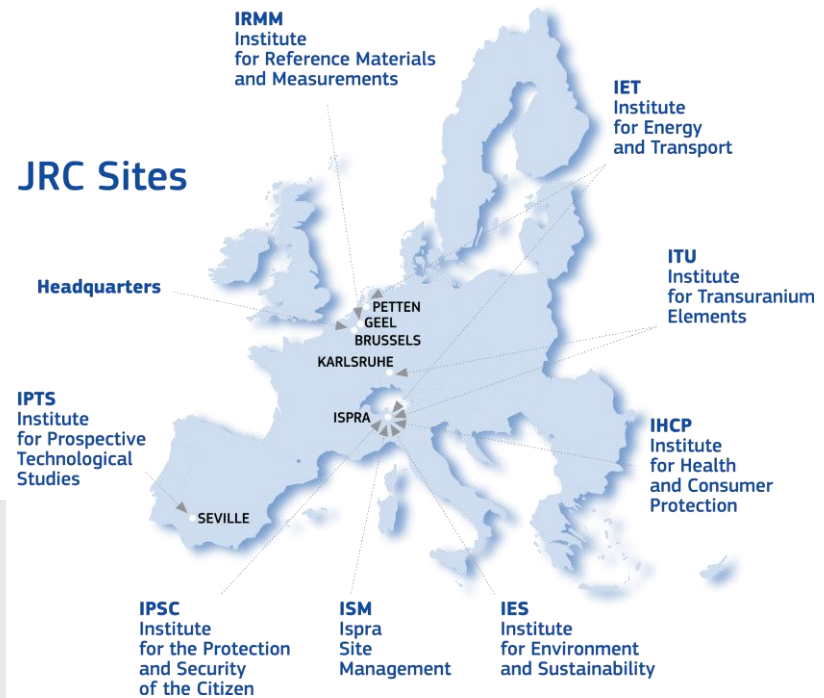
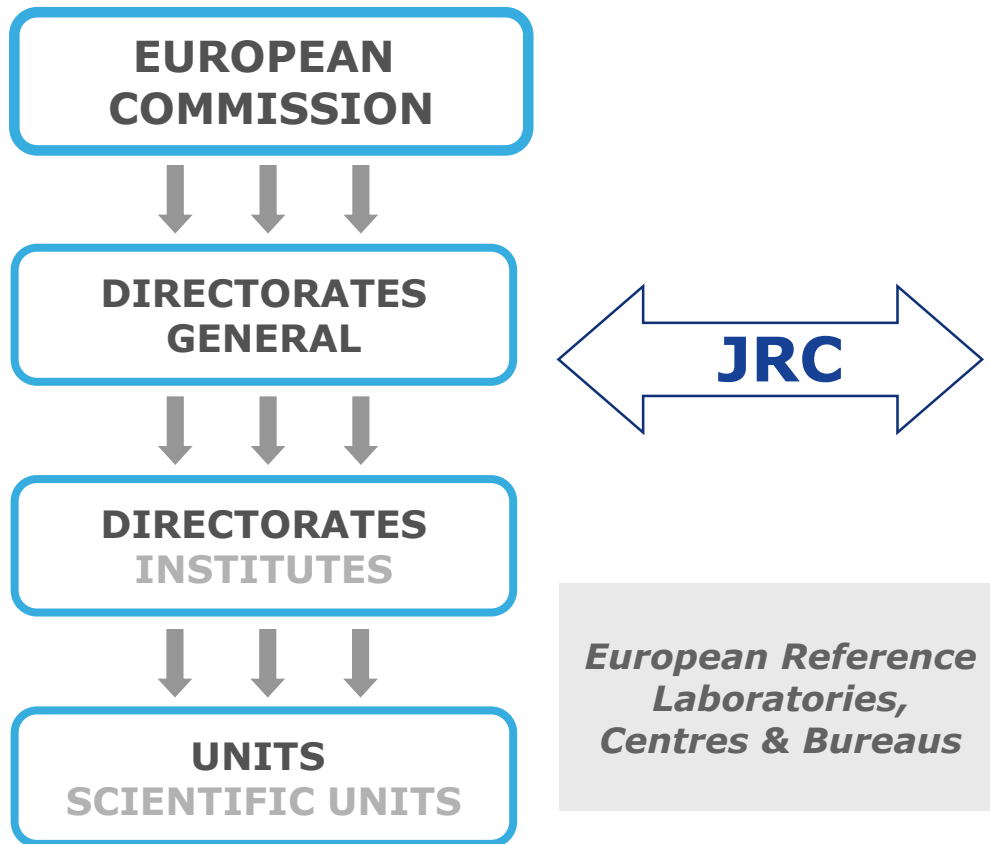
Varese, 21 – 23 July 2015

The Joint Research Centre (JRC) is a Directorate-General of the European Commission under the responsibility of the European Commissioner for Education, Culture, Youth and Sport.



As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Joint Research Centre



A well-defined legislation is governing the import, commercialisation, cultivation and use of GMOs in the EU



JRC involvement in research-based support to EU GMO policy



IRMM – Geel, Belgium

- World leader in GMO Certified Reference Materials and bio-metrology



IHCP– Ispra, Italy

- S/T support for the implementation of GMO legislation, European Union Reference Laboratory for GM Food and Feed (EURL GMFF)



IPTS – Seville, Spain

- Biotechnology foresight; Model simulations and expert opinions on the co-existence of GM and non-GM crops in European agriculture

European Union Reference Laboratory for Genetically Modified Food and Feed (EURL GMFF)

mandate acc. to Reg. (EC) No 1829/2003 and implementing Regulations

Core activity: Validation of detection methods for GM Food and Feed as part of the EU authorisation procedure
(No method – no authorisation)

Also important: Provision of **control samples** to control laboratories
Provision of **guidance documents**
Role in **dispute settlements**
ad hoc policy advice

Impact: Standardised methods delivering robust analytical results
Better implementation of legal limits

European Union Reference Laboratory for Genetically Modified Food and Feed (EURL GMFF)

mandate acc. to Reg. (EC) No 882/2004

Coordination of EU National Reference Laboratories (**NRLs**)

Providing NRLs with **reference analytical methods**

Coordinating the accurate application of analytical methods, *e.g.* by organising **comparative testing** and by ensuring an appropriate follow-up

Coordinating the application of **new analytical methods**

Conducting **training** courses for the benefit of staff from NRLs in the EU and of laboratories responsible for feed and food analysis **in third countries.**

Role in **emergency situations** (unauthorised GMOs on EU market)

Impact: Analytical controls harmonised throughout Europe
Contribution to global harmonisation

JRC Capacity Building Programme (2000 -)

Objective:

1. To help control laboratories to implement proper facilities and expertise in GMO testing
 2. To contribute to the enforcement of an harmonised approach in GMO analysis
- ✓ Scientists from more than 200 laboratories trained worldwide
 - ✓ Specific training for trainees
 - ✓ External facilities as 'Training Sites'
 - ✓ Production and release of ad-hoc didactic material



Enlargement, International Collaboration and Capacity Building Project

JRC contribution to global harmonisation

Project Aim

- To share the networking experience and the advantages derived from the implementation of the ENGL in the EU
- To support the establishment of regional networks outside the EU
- To help building capacity by providing training to enforcement laboratories
- To help control laboratories to implement proper facilities and expertise in GMO testing
- To contribute to the enforcement of an harmonised approach in GMO analysis

Developed through:

- Networking workshops
- Support toward the establishment of regional networks
- Regional training courses
- Dedicated web page



The Better Training for Safer Food Programme



A DG SANTE training initiative for EU and third country officials who undertake controls on food safety and veterinary issues

Areas covered

- **Food law**
- **Feed law**
- **Animal health rules**
- **Animal welfare rules**
- **Plant health rules**

BTSF initiative: principles



- ✓ To complement initial training in areas where difficulties exist at EU level
- ✓ To favour knowledge sharing and networking to increase compatibility of control procedures throughout the EU
- ✓ To follow a train-the-trainer approach and favour dissemination of knowledge

⇒ **Training as a key element in this effort**

BTSF General objectives

- Competence & awareness of EU rules amongst official control staff
- Uniform, objective and efficient controls throughout the EU
- High levels of consumer protection, animal health and welfare, and plant health
- Level playing field for food businesses
- Enhance trade of safe food



BTSF specific objectives for non-EU countries

- Ensure fair trade with non-EU countries, particularly developing countries
- Help non-EU countries to better understand and meet more easily EU rules/standards
- Reduce rejections at EU borders and facilitate access to the EU market
- Contribute to safer food for non-EU country consumers and a more diverse range of safe food products in the EU
- Enhance Sanitary and phytosanitary regulatory cooperation with non-EU countries



BTSF in figures from 2006 to 2014

More than 1100 events

More than 48.000 participants

Budget of approx. € 110 million

***Approx. 33% of this activity covers
third countries***

BTSF training for EU countries

2015 onwards

Around 170 events
40 activities approx.
Around 6300 participants
Budget of almost €15 million

On-going EU programmes

- HACCP
- Animal Health Controls (bees/zoo)
- Contingency planning and animal disease control
- Food additives
- Veterinary Medicinal Products
- Risk Assessment
- Transmissible Spongiform Encephalopathy
- Animal traceability
- Emerging plant health risks
- Union overview reports
- Sustainable use of Plant Protection Products
- Food Hygiene at primary production
- Food hygiene and flexibility
- New food investigation techniques
- RASFF
- Control of semen/embryos sectors

Re-starting EU programme

- Animal By-Products
- Feed law
- Control of contaminants
- Checks at BIPs
- Import control on FNAO
- TRACES
- Control of movements of pets
- Microbiological criteria
- Food borne outbreaks investigations
- Animal welfare rules

New EU programmes

- Food contact materials (plastic recycling processes)
- Pesticides application equipment control
- Zoonoses/Anti-microbial Resistance
- Plant Health Control

Non-EU country programmes

Food testing

- ⇒ *hands-on laboratory training in an EU laboratory on a variety of topics*
- Control of Highly Pathogenic Avian Influenza and other animal diseases
 - EU food standards
 - Food testing and sanitary and phytosanitary issues
 - Rapid Alert System for Food and Feed and introducing a similar system in other regions of the world

Analysis of Genetically Modified Organisms

- ⇒ *To provide laboratory training to laboratory staff dealing with GMO analysis*

***New* Non-EU country programmes**

BTSF International Standards-Setting Bodies

- ⇒ **To train participants on how to set international Sanitary Phytosanitary (SPS) standards**

BTSF World

- ⇒ **To provide technical training to both authorities and private sector in order to improve and reinforce the SPS framework**

BTSF-ISSB – Main features

- **Covering 2014-2015**
- **Five 3-day regional workshops:**
 - 2 workshops on the Codex Alimentarius
 - 2 workshops on the World Organisation for Animal Health (OIE)
 - 1 workshops on the International Plant Protection Convention (IPPC)
- **Close collaboration with Commission staff and international standards setting bodies**
- **Tutors mainly from the above and EU Member States' experts**

BTSF World – Main features

- **Covering 2013-2016**
- **Covering two main topics:**
 - Food safety and plant health
 - Animal health and welfare
- **Covering three different regions in the world**
 - Africa and ENP countries,
 - Latin America and the Caribbean
 - Asia and the Pacific

BTSF e-learning project

Running e-learning courses

- FCM: February 2014 (EN, FR, DE)
- Animal Welfare: March 2014 (EN, FR, DE)
- RASFF: November 2014 (EN) and April 2015 (FR, DE)
- Feed law: November 2014 (EN)
- Animal health for aquaculture animals: December 2014 (EN)
- Hazard Analysis and Critical Control Point (HACCP): May 2015 (EN)

BTSF e-learning projet

2015: Next courses available

- TSE: 3rd Trimester 2015
- EU plant quarantine regime for imports: 3rd Trimester 2015
- Food hygiene and control on fishery products and Live Bivalve Molluscs: 3rd Trimester 2015
- Animal Welfare at slaughter for poultry: 4th Trimester 2015

2016: Feedback and evaluation

- ⇒ Conclusions and recommendations for future e-learning implementation within BTSF
- ⇒ DG SANTE Management decision

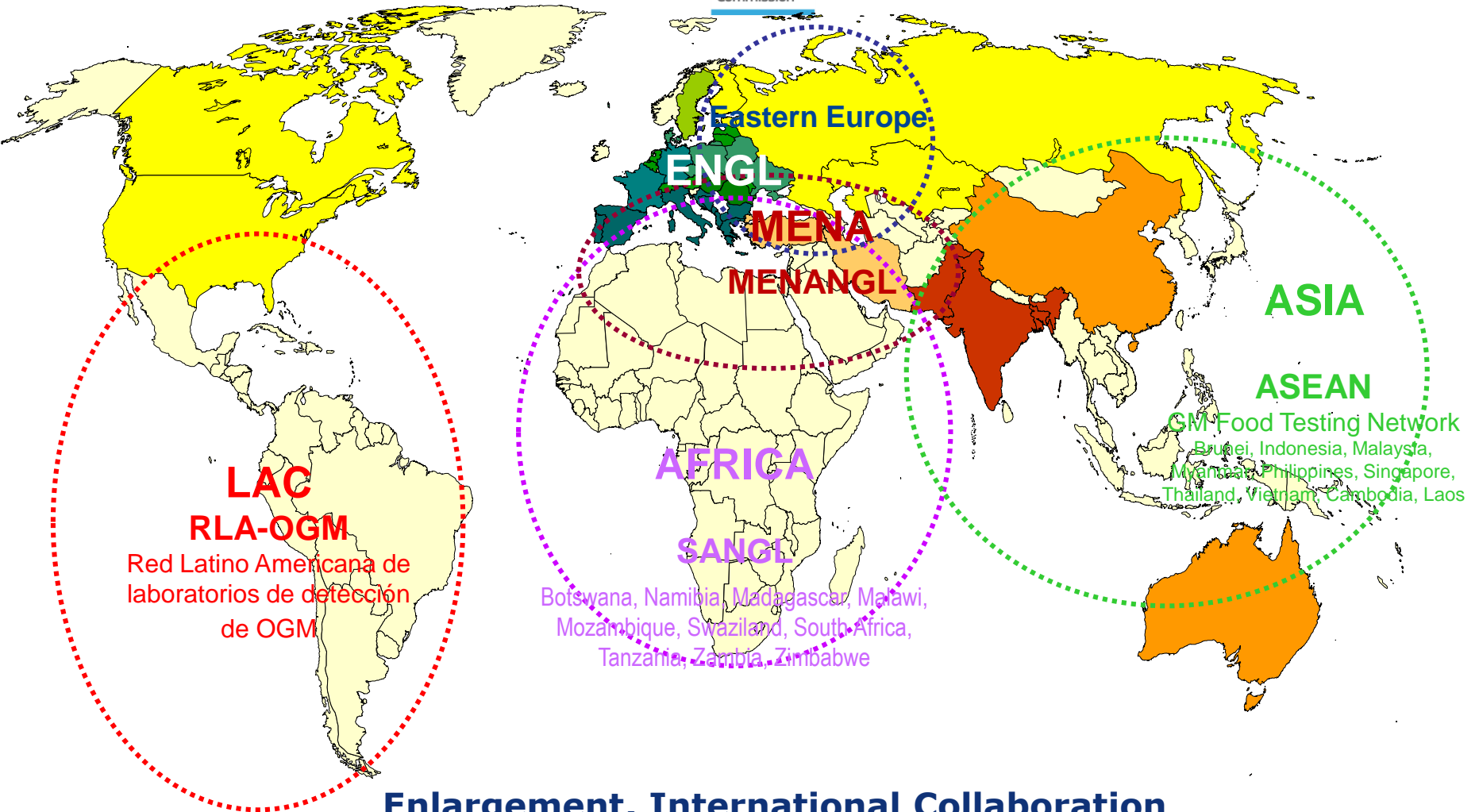
For more information

SANTE-TRAININGFORSAFERFOOD@ec.europa.eu

http://ec.europa.eu/food/training_strategy/index_en.htm

<http://ec.europa.eu/chafea/food/index.html>

<http://www.btsf.eu>

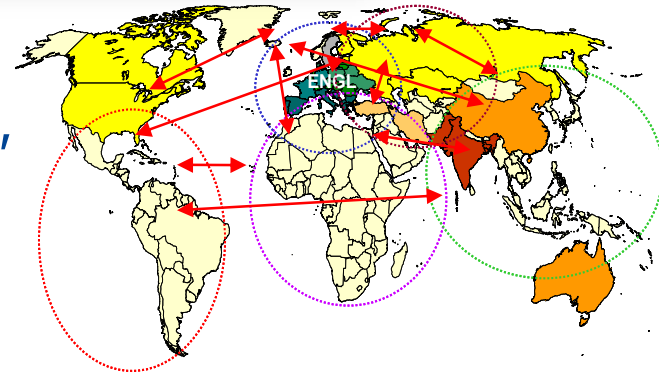


Enlargement, International Collaboration and Capacity Building Project



International Workshop of GMO-analysis networking
8 – 9 April 2013
JRC Ispra (VA) Italy

Objective: to "network the GMO networks"



Format: 2-day workshop

1st day – Focus on technical needs for GMO analysis and future challenges

2nd day – Testimony of regional networks (in place or being built) and share of views on global dialogue

Participants: invited delegates from **all regions**

Including representatives from

- Regional Networks
- Individual Countries





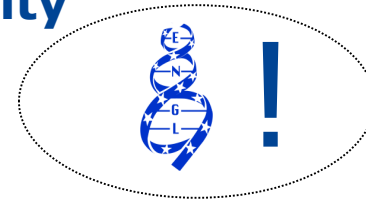
International Workshop of GMO-analysis networking
8 – 9 April 2013
JRC Ispra (VA) Italy
Regional meetings

Key discussion point:

- 1. Forthcoming regional technical challenges for GMO analysis*
- 2. Regional needs to meet these challenges*
- 3. Road map / Prioritisation of necessary actions*
- 4. Next steps at regional level / training needs that JRC could help to meet*

(Reported) Available technical capacity

In Europe – (progressing) good



In other regions – in leopard spots

- Within same region different laboratories capacity levels (capability, infrastructure and expertise)
- Technical capacity (sometimes) not mainstreamed into broader national plans
- Technical capacity (sometimes) not embedded into institutional mandate /legal frame
- Technical capacity (where present) hampered by lack of samples to be analysed (lack sustainability)

Gaps and challenges identified by the participants

- Harmonised and cost-effective sampling & detection strategies
- Commercial product support and access to equipment and reagents (some countries)
- Lack of a mandate to perform GM detection, e.g. in terms of regulatory frameworks (some countries)

General burden:

- Cost and difficulty of method validation
- Cost and difficulty of laboratory accreditation

Technical needs

- Infrastructure development / improvement
- (Need for) training
 - according to level of expertise
 - to cope with increasing complexity
- Capacity building in relation to:
 - Sampling, DNA extraction, LMO detection & quantification, data management, laboratory- and quality management
- Access to / supply of:
 - (C)RMs & control samples
 - information on newly developed GMOs

Actions (reported as) needed/ potentially beneficial

- Increase political awareness
- Mapping of GMO-labs in terms of capacity, infrastructure, expertise and capacity building needs
- Development/improvement of regional networks
- Enhance networking and cooperation among regions
- Support to set up labs (infrastructure and equipment)
- Capacity building activities
- Develop regional capacities for method validation & (C)RM prod.
- Training for national accreditation bodies



- ✓ Legal frame
- ✓ Mandate & commitment
- ✓ Suitable facilities
- ✓ Access to training
- ✓ Personnel expertise
- ✓ Funding
- ✓ Access to (continuous) updating
- ✓ Maintenance of facilities
- ✓ Samples
- ✓ Implementation & maintenance of quality system
- ✓

JRC response to training needs (2014 – 2015)

Thematic Training Workshop 1

"Implementation of quality systems/ ISO 17025 accreditation"

20 - 22 May 2014, JRC Ispra (Italy)

Participants: 27 from all regions

Thematic Training Workshop 2

"Practical aspects of regulatory GMO testing"

24 - 26 September 2014, JRC Ispra (Italy)

Participants: 29 from all regions

Thematic Training Workshop 3

"Practical aspects of regulatory GMO testing"

25 - 27 March 2015, JRC Ispra (Italy)

Participants: 27 from all regions

Regional Networking (2014 – 2015)

2nd Regional Workshop for MENA countries

Date: 25-26 June 2014

Location: Rome

Participants: ~ 35 for Middle East and North African countries

International Workshop on Harmonisation of GMO Detection and Analysis (E&IA 2104)

Date: 22 – 23 October 2014

Location: Skopje, the former Yugoslav Republic of Macedonia

Participants: ~ 40 from AC, CC, PCC, ENP countries

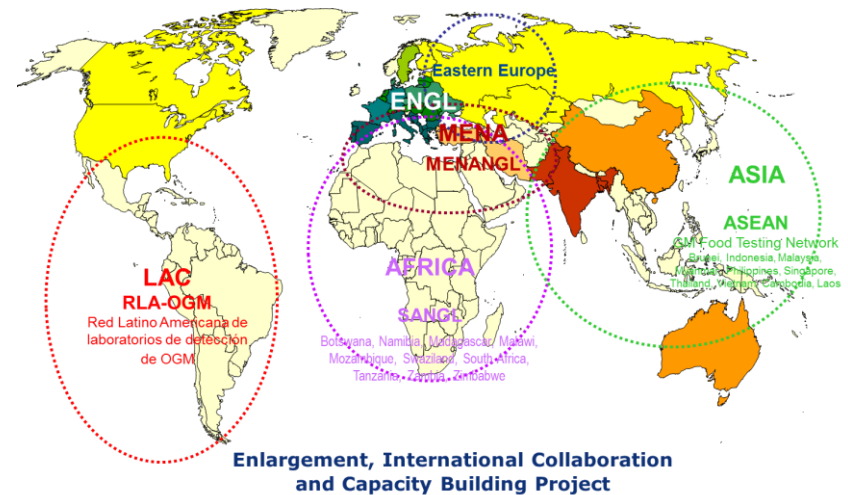
Activities - 2015

2nd International Workshop of GMO Analysis Networking

21-23 July 2015 Varese (Italy)

Aim:
to continue "networking the GMO networks"

Format: 2-day workshop + 1-day visit to EXPO



2nd International Workshop of GMO-analysis Networking

21-23 July 2015 - Centro Congressi Ville Ponti, Varese

AGENDA

21 July 2015 - DAY 1 (Chair: *Joachim Kreysa*)

09.15-9.30 Welcome and opening remarks
(*Joachim Kreysa, JRC IHCP*)

09.30-10.00 The 'Enlargement, international collaboration and capacity building' Project in the context of the BTSF Programme
(*Maddalena Querci, JRC IHCP*)

Session 1: The global context

10.00-10.30 I: How GMOs and GM food and feed are regulated in the European Union (*Ilaria Ciabatti, DG SANTE*)

10.30-11.00 *coffee break (+ posters exhibition)*

11.00-11.30 II: EFSA's role in the risk assessment of GMOs in the EU and in the international context
(*Zoltán Divéki, EFSA*)

11.30-12.00 III: GMOs in seed testing - the ISTA perspective (*Enrico Noli, ISTA*)

12.00-12.30 IV: The Biosafety Clearing-House and the Network of Laboratories for Detection and Identification: Two Key Elements in the Implementation of the Cartagena Protocol on Biosafety (*Manoela Pessoa de Miranda, BCH Canada*)

12.30-14.15 LUNCH BREAK

*Going beyond the EU context
→ Global view*

Session 2: Technical update

- 14.15-14.45 V: 2020 Outlook: The GM crops global pipeline and New Plant Breeding Techniques (*Claudia Parisi, JRC IPTS*)
- 14.45-15.15 VI: Challenges and what the future holds for GMO analysis: ENGL perspective (*Lutz Grohmann, Germany*)
- 15.15-15.45 VII: Towards higher throughput GMO testing: matrix-based screening approaches and multi-target detection systems (*Alexander Angers & Francesco Gatto, JRC IHCP*)
- 15.45-16:15 *coffee break (+ posters exhibition)*
- 16.15-16.45 VIII: Digital PCR and its role in GMO analysis (*David Dobnik, NIB Slovenia*)
- 16.45-17.15 IX: Next Generation Sequencing and Bioinformatics for the characterisation of unauthorized GMOs (*Mauro Petrillo, JRC IHCP*)
- 17.30 End of day 1

***A look at the technical context
Present status and future challenges***

International Workshop of GMO-analysis Networking

21-23 July 2015 - Centro Congressi Ville Ponti, Varese

AGENDA

22 July 2015 - DAY 2 (Chair: Maddalena Querci)

Session 3: Regional Meetings / 5 break out groups (Africa, Asia, Eastern Europe, Latin America & the Caribbean, MENA)

- 09.15-09.30 Framing of the regional meetings and organisation of the day
- 09.30-10:45 Regional meetings (Africa, Asia, Eastern Europe, Latin America & Caribbean, MENA)
- 10.45-11.15 *coffee break (+ posters exhibition)*
- 11.15-12:30 Regional meetings (continuation)
- 12.30-14.45 **LUNCH BREAK (+ posters exhibition)**

*Enhance networking
Discussing and taking decisions
together*

Session 4: Regional perspectives

- (a) *State of GMO analysis, incl. existing/developing regional networks and*
(b) *outcome of the regional meetings of Session 3*

***What happened in the regions
since then?***

- 14.45-15.05 Middle East North Africa (incl. MENANGL) [*Rapporteur: Gretta Abou Sleymane, Lebanon*]
- 15.05-15.25 Asia (incl. ASEAN) [*Rapporteur: Paul Chiew, Singapore*]
- 15.25-15.45 Africa (incl. SANGL) [*Rapporteur: Chris Viljoen, South Africa*]
- 15.45-16.05 Latin America & the Caribbean (incl. RLAC OGM) [*Rapporteur: Delilah Cabb, Belize*]
- 16.05-16.25 Eastern Europe [*Rapporteur: Adaleta Durmic Pasic, Bosnia Herzegovina*]
- 16.25-16.50 *coffee break (+ posters exhibition)*
- 16:50-18:00 **Round table: Turn global cooperation into benefit (Moderator: Joachim Kreysa)**

***Sharing for defining together
the best strategy ahead***

Contributing to the round table: Sandra Nnadi, Nigeria; Gurinder Randhawa, India; Zoran Popovski, the Former Yugoslav Republic of Macedonia; Jorge A. Huete-Pérez, Nicaragua; Nisreen AL-Hmoud, Jordan)

***Turn global cooperation into benefit....
What else can we do to make the best use of
our expertise and networking?***



The success of the workshop depends on your active participation!

Please ask questions and share information freely!

Make good use of the coffee breaks ☺ - networking !