

EUROPEAN COMMISSION
DIRECTORATE-GENERAL
JOINT RESEARCH CENTRE
Directorate A - Policy Support Coordination (Brussels)
Interinstitutional, International and Stakeholder Relations

Contact:

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1 Brussels Headquarters

1.1 JRC National Contact Points

Status: active

<u>Description:</u> The JRC has put in place a network of National Contact Points (NCPs) whose mission is to act as intermediaries and operational contact points between the JRC and stakeholders from the scientific community, industry and public authorities in their respective countries.

Our NCP network is the main source of information about the JRC in all Member States and Horizon 2020 Associated Countries. All other thematic areas of Horizon 2020 also operate networks of NCPs. The JRC NCPs are nominated by the relevant national authorities in their country. Their main tasks relate to:

- raising awareness about the JRC in their country;
- providing information about the JRC to relevant stakeholders in their country;
- advising and supporting relevant stakeholders regarding the practical modalities to collaborate with or work at the JRC;
- fostering the contacts and collaboration between the JRC and scientific stakeholders in their country;
- acting as a source of information and support for JRC activities in relation to their country.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> "Practical guidance and information for the National Contact Points of the Joint Research Centre" (JRC Interinstitutional and Stakeholder Relations Unit, September 2013)

Members: 53

Coordinator: JRC A.5

Website: https://ec.europa.eu/jrc/en/working-with-us/jrc-national-contact-points

Contact at the JRC: Moritz Haller, JRC A.5

JRC Role: Coordinator

1.2 European Forum for Science and Industry (EFSI)

Status: active

<u>Description</u>: In 2012, the JRC established a permanent European Forum for Science and Industry (EFSI) in cooperation with the Directorate-General for Enterprise and Industry in order to provide a reliable platform to (1) exchange views on the needs of the industry concerning science and innovation and (2) to strengthen the dialogue and cooperation between science and industry in key sectors for European competitiveness and economic growth.

The Forum has more than 1,000 members and brings together public institutions, private companies, the scientific community, European associations, industrial organisations and related networks through regularly organised conferences, roundtable discussions, and bilateral meetings.

<u>Formal/informal:</u> informal <u>Members:</u> more than 1500 <u>Coordinator:</u> JRC A.5

Website: https://ec.europa.eu/jrc/efsi

Contact at the JRC: Vena Nievergelt, JRC A.5

JRC Role: Coordinator

1.3 European Technology Transfer Offices Circle (TTO-Circle)

Status: active

Description: In line with the Innovation Union flagship initiative and with the challenges that Europe is facing in mind, the European TTO CIRCLE network was established with the aim to bring together the major European public research organisations in order to play a collective role in driving changes to the Technology Transfer landscape in Europe. The European TTO CIRCLE partner organisations are leading European public research organisations (PROs) whose prime mission is to perform research. They have agreed to join forces on Technology Transfer to boost innovation in Europe through a set of initiatives, including: fostering the use of their knowledge portfolio; sharing best practices, knowledge and expertise; performing joint activities; establishing informal channels of communication with policymakers; organising training programmes; and common approach towards international standards developing a professionalisation of Technology Transfer.

Formal/informal: formal

The terms of cooperation are defined in: Memorandum of Understanding

Members: 25

Coordinator: JRC A.4

Website: https://ec.europa.eu/jrc/tto-circle

Contact at the JRC: Giancarlo Caratti, Bernard Denis, JRC A.4

JRC Role: Coordinator

2 IRMM – Institute for Reference Materials and Measurements

2.1 European Reference Materials Network ERM®

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> The ERM® is a joint collaboration of the three major European reference materials producers which are the Institute for Reference Materials and Measurements (JRC-IRMM), the Bundesanstalt für Materialforschung und -prüfung (BAM), Germany and LGC, United Kingdom, to create a European brand of CRMs (certified reference materials): ERM® of the highest metrological quality. They commit themselves to use the most advanced principles currently available described in ISO Guides 34 and 35 for the production of certified reference materials. Partners are signatories or designated laboratories of the CIPM Mutual Recognition Arrangement (MRA).

Formal/informal: formal

The terms of cooperation are defined in: CIPM Mutual Recognition Arrangement

Start Date: 08.10.2003

Members: 3

Coordinator: JRC-IRMM

Website: http://www.erm-crm.org/

Contact at the JRC: Marco Maginia, JRC-IRMM

<u>JRC Role</u>: Co-ordinator of the ERM network, providing reference system for measurements in ERA

Deliverables: Certified reference materials

2.2 EURAMET

Involved JRC-Institutes: IRMM

Status: active

<u>Description</u>: EURAMET is a Regional Metrology Organisation (RMO) of Europe. It coordinates the cooperation of National Metrology Institutes (NMI) of Europe in fields like research in metrology, traceability of measurements to the SI units, international recognition of national measurement standards and related Calibration and Measurement Capabilities (CMC) of its members. Through Knowledge Transfer and cooperation among its members EURAMET facilitates the development of the national metrology infrastructures.

EURAMET is responsible for the elaboration and execution of the European Metrology Research Programme (EMRP) which is designed to encourage collaboration between European National Metrology Institutes (NMIs) and partners in industry or academia. The programme funds joint research projects in specific fields of metrology with over 50 projects selected for funding so far and many more expected over the coming years.

Formal/informal: formal

The terms of cooperation are defined in: EURAMET e.V. <u>Byelaws and Rules of Procedure</u> (the EUROMET <u>MoU</u> was terminated in 2007).

<u>Start Date:</u> The Euromet Network was launched in 1987. It was transformed into EURAMET e.V. in 2007.

Members: 38 NMIs from the 28 member states, AL, BA, CH, IS, ME, MK, NO, RS, TR

Associate members: several Institutes from the 38 countries, JRC-IRMM

Secretariat: EURAMET Secretariat in Braunschweig, Germany

Coordinator: NLP

Website: http://www.euramet.org/index.php?id=homepage

Contact at the JRC: E. Anklam/P.Taylor / H.Emons /W. Mondelaers, JRC-IRMM JRC Role: IRMM is an associate member having an observer status in EURAMET's General Assembly. IRMM represents the European Commission as its Metrology Institute. It is represented in several Technical Committees. IRMM is especially active in organising key comparisons primarily for radioactivity and chemical measurements.

<u>Deliverables:</u> Organisation of key comparisons (linked to the BIPM key comparisons) especially for radioactivity and chemical measurements.

2.3 European Accreditation (EA)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> EA exists to coordinate and lead the European accreditation infrastructure to allow the results of conformity assessment services in one country to be accepted by Regulators and the market place in another country without further examination, for the benefit of the European community and the global economy."

Formal/informal: formal

EA is a not-for-profit association set up in November 1997 and registered in the Netherlands in June 2000 (Articles of Association).

Members: 48

Coordinator: Martine Blum, EA Paris

Website: http://www.european-accreditation.org/

Contact at the JRC: B. De La Calle / P.Taylor JRC-IRMM

JRC Role: Activities in the working group for inter-laboratory comparisons in the field of

testing and the Laboratory Committee <u>Deliverables:</u> harmonised guidelines

2.4 European Network of GMO Laboratories (ENGL)

Involved JRC- Institutes: IHCP (leading), IRMM

Status: active
See section 8.1.

2.5 Consortium of national reference laboratories to assist the EU Union reference laboratory for polycyclic aromatic hydrocarbons (EURL-PAHs)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: EU and national reference laboratories should contribute to a high quality and uniformity of analytical results. This objective can be achieved by activities such as the application of validated analytical methods, ensuring that reference materials are available, the organisation of comparative testing and the training of staff from laboratories. These activities refer in particular to Commission Regulation (EC) No 1881/2006 as amended by Commission Regulation 835/2011 setting maximum levels of benzo[a]pyrene (BaP) and the sum of benzo(a)pyrene, Benz(a)anthracene, Benzo(b)fluoranthene and chrysene in various types of food, and to Commission Regulation (EC) No 333/2007 as amended by Commission Regulation 836/2011 laying down sampling and analysis measures for the official control of the levels of BaP in foodstuffs. To achieve these goals, the EURL works in close collaboration with national reference laboratories (NRLs).

Regulation (EC) No 776/2006 designates the JRC Institute for Reference Materials and Measurements as the European Union Reference Laboratory (EURL) for Polycyclic Aromatic Hydrocarbons (PAHs).

Formal/informal: formal

<u>Legal basis and terms of cooperation</u>: Regulation (EC) No 882/2004, Regulation (EC) No 776/2006, Regulation (EC) No 1881/2006 as amended by Regulation (EC) 835/2011, Regulation (EC) No 333/2007 as amended by Regulation 836/2011

Start Date: 2006 Members: 27

Secretariat: JRC-IRMM

Website: https://ec.europa.eu/jrc/en/eurl/pahs

Contact at the JRC: Thomas Wenzl, IRMM

JRC Role: Operation of the EURL and coordination of the network of NRLs

<u>Deliverables</u>: Annual reports to DG SANCO, annual newsletter, reports on the outcome of the annual proficiency tests, reports for ad-hoc questions directed by DG SANCO to the EURL

2.6 Consortium of national reference laboratories to assist the EU Union reference laboratory for mycotoxins (EURL-Mycotoxins)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: EU and national reference laboratories should contribute to a high quality and uniformity of analytical results. This objective can be achieved by activities such as the application of validated analytical methods, ensuring that reference materials are available, the organisation of comparative testing and the training of staff from laboratories. These activities refer in particular to Commission Regulation (EC) No 1881/2006 as amended by Commission Regulation 165/2010, and to Commission Regulation (EC) No 401/2006 as amended by Commission Regulation 178/2010 laying down sampling and analysis measures for the official control of the levels of mycotoxins in food and feed. To achieve these goals, the EURL works in close collaboration with national reference laboratories (NRLs).

Regulation (EC) No 776/2006 designates the JRC Institute for Reference Materials and Measurements as the European Union Reference Laboratory (EURL) for Mycotoxins.

Formal/informal: formal

<u>Legal basis and terms of cooperation</u>: Regulation (EC) No 882/2004, Regulation (EC) No 776/2006, Regulation (EC) No 1881/2006 as amended by Regulation (EC) 165/2010, Regulation (EC) No 401/2006 as amended by Regulation 178/2010.

Start Date: 2006 Members: 38

Coordinator: JRC-IRMM

Website: https://ec.europa.eu/jrc/en/eurl/mycotoxins

Contact at the JRC: Joerg Stroka, IRMM

JRC Role: Operation of the EURL and coordination of the network of NRLs

<u>Deliverables</u>: Annual reports to DG SANCO, annual newsletter, reports on the outcome of the annual proficiency tests, reports for ad-hoc questions directed by DG SANCO to the EURL

2.7 Consortium of national reference laboratories to assist the EU Union reference laboratory for heavy metals in food and feed (EURL-Heavy Metals)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: EU and national reference laboratories should contribute to a high quality and uniformity of analytical results. This objective can be achieved by activities such as the application of validated analytical methods, ensuring that reference materials are available, the organisation of comparative testing and the training of staff from laboratories. These activities refer in particular to Commission Regulation (EC) No 1881/2006 as amended by Commission Regulation 420/2011, and to Commission Regulation (EC) No 333/2007 as amended by Commission Regulation (EC) No 836/2011laying down sampling and analysis measures for the official control of the

levels of heavy metals in food and feed. To achieve these goals, the EURL works in close collaboration with national reference laboratories (NRLs).

Regulation (EC) No 776/2006 designates the JRC Institute for Reference Materials and Measurements as the European Union Reference Laboratory (EURL) for Heavy Metals.

Formal/informal: formal

<u>Legal basis and terms of cooperation</u>: Regulation (EC) No 882/2004, Regulation (EC) No 776/2006, Regulation (EC) No 1881/2006 as amended by Regulation (EC) 420/2011, Regulation (EC) No 333/2007 as amended by Regulation (EC) No 836/2011.

Start Date: 2006 Members: 41

Secretariat: JRC-IRMM

Website: https://ec.europa.eu/jrc/en/eurl/heavy-metals

Contact at the JRC: Piotr Robouch, IRMM

JRC Role: Operation of the EURL and coordination of the network of NRLs

<u>Deliverables:</u> Annual reports to DG SANCO, annual newsletter, reports on the outcome of the annual proficiency tests, reports for ad-hoc questions directed by DG SANCO to the EURL

2.8 Consortium of national reference laboratories to assist the Community reference laboratory for feed additives authorisation (CRL-FAA)

Involved JRC-Institutes: IRMM

Status: active

The EURL-FA is running two activities related to the use of feed additive in animal nutrient:

2.8.1 Authorisation activity

Description: Regulation (EC) No. 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition lays down a European Union laboratory lays down the procedure how feed authorisation are authorised within the European Union. The authorisation is based on the principle that (1) the European Food Safety Authority (EFSA) conducts a scientific evaluated of the dossier, (2) the EURL-Fa contributes to this step by evaluating the analytical methods and (3) DG SANCO authorised the products based on the documents provided by EFSA and the EURL. Annex II of that Regulation outlines the duties and tasks of the EURL, and designates the Joint Research Centre (JRC) of the Commission for the EURL. Furthermore the annex indicates, and that it may be assisted by consortium of national reference laboratories. The EURL is located at and operated by the Institute for Reference Materials and Measurements. Each Member State may arrange for the designation of one or more national reference laboratories that meet specific requirements in order to properly perform the duties and tasks laid down in Commission Regulation (EC) No 378/2005, lastly amended by Commission Regulation (EC) No 885/2009 to take part in the consortium.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> <u>Regulation (EC) No. 1831/2003</u>, Annex; Commission Regulation (EC) No 378/2005.

Start Date: 2004 Members: 35

Coordinator: JRC-IRMM

Website: https://ec.europa.eu/jrc/en/eurl/feed-additives

Contact at the JRC: Ursula Vincent

<u>JRC Role</u>: The JRC hosts the EURL-FAA laboratory and the coordinator of the consortium. It is in permanent interaction with DG SANCO, the applicants and EFSA. <u>Deliverables</u>: Submission of full evaluation reports to EFSA and DG SANCO within three months after reception of valid dossier; Meetings with network partners (NRLs) once per year.

2.8.2 Control activity

<u>Description</u>: Since 2011 the EURL-FA conducts in addition to the authorisation related work also tasks as EURL as specified by Regulation (EC) No 882/2004, which also designates the EURL-FA for this task. The objectives are defined by article 32 of this Regulation. One of the major tasks is to organise interlaboraty studies to evaluate the proficiency (PTs) of NRLs to correctly analyse samples for specific feed additives. The EURL-FA have been organising PTs for the determination of coccidiostats, which is a group of important feed additives, in feed. The EURL-FA is running a separate network of NRL's for this specific task.

Formal/informal: formal

The terms of cooperation are defined: Regulation (EC) No 882/2004

Start Date: 2011 Members: 15

Coordinator: JRC-IRMM

Website: https://ec.europa.eu/jrc/en/eurl/feed-additives

2.9 TrainMic

Involved JRC-Institutes: IRMM

Status: active

<u>Description</u>: TrainMiC's purpose is to facilitate the training of today's practitioners of chemical measurements in metrology in chemistry, in close collaboration with major stakeholders (i.e. metrology organisations, educators, accreditors) in order to strengthen the measurement infrastructure, so that trustworthy results are produced, which avoids economic or societal waste.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> JRC User Licence Agreements (Commission Decision of 17th Dec 2008).

Start Date: 2001 Members: 103

Coordinator: JRC-IRMM

Website: http://irmm.jrc.ec.europa.eu/training/trainmic/Pages/index.aspx

Contact at the JRC: Philip Taylor, JRC-IRMM

JRC Role: TrainMiC is run in a distributed way, with national metrology institutes and national accreditation bodies (and both their regional organisations EUROMET/EURACHEM and European co-operation for Accreditation (EA)). A management board, under the chairmanship of IRMM, sets the TrainMiC policies, creates and controls the processes (e.g. the type of training courses) and the products (e.g. the course content).

<u>Deliverables:</u> Trained chemists in the EU Member States and Candidate Countries, publications

2.10 European Directorate for the Quality of Medicines (EDQM)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> The EDQM is a leading organisation that protects public health by:

- enabling the development,
- supporting the implementation, and
- monitoring the application

of quality standards for safe medicines and their safe use. Our standards are recognised as a scientific benchmark world-wide. The <u>European Pharmacopoeia</u> is legally binding in member states.

Similarly, the EDQM develops guidance and standards in the areas of <u>blood transfusion</u>, <u>organ</u> transplantations and consumer health issues.

Formal/informal: formal

Members: 65

Secretariat: Mrs Caroline Larsen LeTarnec (EDQM)

Coordinator: S. Keitel (Council of Europe)
Website: http://www.edqm.eu

Contact at the JRC: G.Auclair, U. Vincent-JRC-IRMM

JRC Role: Activities in the Influence Group on Reference Substances and in the Official

Cosmetics Control laboratories.

2.11 Joint Committee for Traceability in Laboratory Medicine (JCTLM)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: The JCTLM aims to establish reference systems of higher metrological order for in vitro diagnostics, not only for the EU but also on a global basis. It comprises national and international partners - regulators, laboratories, external quality assurance systems operators, academia and diagnostic industry.

<u>Background:</u> In 1996, IRMM started certifying clinical reference materials (RMs) in collaboration with the International Federation for Clinical Chemistry and Laboratory Medicine (IFCC). This represented a real initiative to cater for the traceability of clinical samples. The advent of the European Directive for in vitro diagnostic and medical devices (IVD-Directive 98/79/EC)" increased the impetus on clinical reference materials even more. This directive states that all in-vitro diagnostic results must be "traceable to reference systems (i.e. reference materials and/or reference methods) of a higher order".

Formal/informal: formal

The terms of cooperation are defined in: <u>JCTLM Executive Committee Procedures</u>, <u>JCTLM Secretariat Procedures</u>.

Start Date: 01.04.2001

Members: 11

Secretariat: Bureau International des Poids et Mesures

Coordinator: Prof. Mathias M. Müller (Austrian Society of Quality Assurance and

Standardisation)

Website: http://www.bipm.org/en/committees/jc/jctlm/

Contact at the JRC: H.Schimmel, JRC-IRMM

<u>JRC Role</u>: Co-chair of Working Group 1 (Reference materials and methods), Participation in review teams for assessment of suitability and conformity of reference materials and methods, Development of suitable reference materials and methods

<u>Deliverables:</u> Scientifically based recommendation of suitable reference materials and methods to industry, competent authorities and regulators, Coordination of clinical reference materials and reference methods development

2.12 European Safeguards Research and Development Association (ESARDA)

Involved institutes: ITU, IRMM

Status: active See section 4.1.

2.13 Association of Analytical Communities (AOAC)

Involved JRC- Institutes: IRMM

Status: active Description:

AOAC INTERNATIONAL is a non-profit scientific association with headquarters in Gaithersburg, Maryland, USA. It publishes standardised, chemical analysis methods designed to increase confidence in results of chemical and microbiologic analyses.

Formal/informal: formal

<u>Members:</u> >3000

- Membership association with over 3,000 members worldwide
- Maintains sixteen active international sections representing four continents and over ninety countries

Secretariat: AOAC

Coordinator: James M. Harnly (USDA ARS BHNRC)

Website: http://www.aoac.org

Contact at the JRC: E. Anklam/F. Ulberth/H.Emons – JRC-IRMM

JRC Role: activities in

- Technical division on reference materials
- Mycotoxins
- Laboratory management

<u>Deliverables:</u> validated analytical methods, reference materials

2.14 Versailles Project on Advanced Materials and Standards (VAMAS)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> VAMAS supports world trade in products dependent on advanced materials technologies, through International collaborative projects aimed at providing the technical basis for harmonized measurements, testing, specifications, and standards.

Formal/informal: formal

Members: 40 Secretariat: NPL

Website: http://www.vamas.org/

<u>Contact at the JRC:</u> H.Emons, JRC-IRMM <u>JRC Role</u>: Steering committee activities

Deliverables: Guidelines

2.15 European Chemistry Thematic Network (ECTN)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> The European Chemistry Thematic Network Association is a non-profit making association registered in Belgium and is an outcome of six years of network activity. Higher education institutions, national chemical societies and chemical and software companies comprise our members. There are currently over 120 members of the network coming from 30 different European countries and with associate members world-wide. Expert European groups work on a range of topics and produce reports with a real European dimension. These reports and recommendations are available on our website.

A multi-lingual series of tests that can be used for certification/validation of competence in chemistry at various levels is now available on Internet. Associated E-learning facilities have been produced. The purpose of the tests is to validate the competence of all citizens, irrespective of their learning path.

Formal/informal: formal

ECTN is a non-profit association (Belgian)

Members: 187

<u>Secretariat:</u> Professor Francesco De Angelis, President of the ECTN Association University

del'Aquila

Coordinator: Ing. Jiri Sobola – Eurolab CZ

Website: http://ectn-assoc.cpe.fr/

Contact at the JRC: P.Taylor-JRC-IRMM

JRC Role: Advisory board

2.16 Codex Alimentarius Committee on Methods of Analysis and Sampling (CCMAS)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> The Codex Alimentarius Commission, established by FAO and WHO in 1963 develops harmonised international food standards, guidelines and codes of practice to protect the health of the consumers and ensure fair practices in the food trade. The Commission also promotes coordination of all food standards work undertaken by international governmental and non-governmental organizations.

The Codex Committee on Methods of Analysis and Sampling shall (a) define the criteria appropriate to Codex Methods of Analysis and Sampling; (b) serve as a coordinating body for Codex with other international groups working in methods of analysis and sampling and quality assurance systems for laboratories; (c) specify, on the basis of final recommendations submitted to it by the other bodies referred to in (b) above, Reference Methods of Analysis and Sampling appropriate to Codex Standards which are generally applicable to a number of foods; (d) consider, amend, if necessary, and endorse, as appropriate, methods of analysis and sampling proposed by Codex (Commodity) Committees, except that methods of analysis and sampling for residues of pesticides or veterinary drugs in food, the assessment of micro biological quality and safety in food, and the assessment of specifications for food additives, do not fall within the terms of reference of this Committee; (e) elaborate sampling plans and procedures, as may be required; (f) consider specific sampling and analysis problems submitted to it by the Commission or any of its Committees; and, (g) define procedures, protocols, guidelines or related texts for the assessment of food laboratory proficiency, as well as quality assurance systems for laboratories.

Formal/informal: formal

<u>Members:</u> 186 Codex Members (185 Member Countries and 1 Member Organization (EU)), 224 Codex Observers (52 IGOs, 157 NGOs, 15 UN)

<u>Secretariat:</u> Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme

FAO, 00153 Rome, Italy

Website: http://www.codexalimentarius.org/

Contact at the JRC: F.Ulberth– JRC-IRMM

<u>JRC Role</u>: Part of the EU delegation to CCMAS and provision of expert advice to DG SANCO, who heads the delegation, related to methods of analysis and sampling, as well as organising coordinated common positions of EUMS.

Deliverables: Drafting and input to EU Positions to agenda points of the meetings.

2.17 International Atomic Energy Agency (IAEA)

Involved JRC- Institutes: ITU, IRMM, IET

Status: active

<u>Description:</u> The IAEA is the world's center of cooperation in the nuclear field. It was set up in 1957 as the world's "Atoms for Peace" organization within the United Nations family. The Agency works with its Member States and multiple partners worldwide to promote safe, secure and peaceful nuclear technologies.

Formal/informal: formal

<u>Legal Basis:</u> The Statute of the IAEA; The IAEA is the depositary of key international conventions and legal agreements. Additionally, the Agency is entrusted with responsibilities under other treaties and agreements that States have adopted.

<u>Legal basis of the JRC involvement</u>: COUNCIL REGULATION (EURATOM) No 1314/2013 of 16 December 2013 on the Research and Training Programme of the

European Atomic Energy Community (2014-2018) complementing the Horizon 2020 Framework Programme for Research and Innovation

Start Date: 29 July 1957

Members: The IAEA has 162 Member States, as of February 2014.

Secretariat: The IAEA Secretariat - the international body of staff tasked with running the Agency - is made up of a team in Vienna (Austria) of some 2500 multi-disciplinary professional and support staff from more than 125 countries. They come from scientific,

technical, managerial, and professional disciplines.

Website: www.iaea.org

Contact at the JRC: W.Mondelaers/A. Fessler, JRC-IRMM (presence in different committees); J. Goncalves, Evelyn Zuleger (presence in different committees), JRC-ITU; Programme Office, IET;

JRC Role: The JRC participates in different committees and working groups

- JRC-IRMM Role: The SN3S unit participates in the activities of the IAEA Nuclear Data Section(NDS) and is member of the International Nuclear Data Committee (INDC) of the NDS. NDS organizes Coordinated Research Projects, Consultants Meetings, Technical Meetings and Training courses to which members of the Joint Research Centre (SN3S unit) contribute. Participation is governed by invitation letters and for CRPs by Research Agreements. The participants include IAEA member state countries with activities involving ionising radiation. NDS activities are evaluated and advised upon by the INDC which meets every two years.
- JRC-ITU Role: see sections 4.6 and 4.7
- JRC-IET Role: several IET-units participate in IAEA working groups

Deliverables: Contributions to reports disseminated to IAEA member countries (NDS, SN3S unit)

2.18 European Nuclear Education Network (ENEN)

Involved JRC- Institutes: ITU

Status: active

Description: ENEN is a non-profit international organisation, established on 22 September 2003 under the French Law of 1901. Its mission is the preservation and further development of expertise in the nuclear fields by higher education and training.

Formal/informal: formal

The terms of cooperation are defined in: ENEN Statutes (available at the website)

Start Date: 2003 Members: 64

Coordinator: ENEN-Board and -Assembly

Website: http://www.enen-assoc.org/

Contact at the JRC: JRC-ITU JRC Role: associated member

2.19 Nuclear Energy Agency of the Organization for Economic Co-operation and Development (OECD-NEA)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: The Nuclear Energy Agency (NEA) is a specialised agency within the Organisation for Economic Co-operation and Development (OECD), an intergovernmental organisation of industrialised countries based in Paris, France. The NEA assists its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes. To provide authoritative assessments and to forge common understandings on key issues as input to government decisions on nuclear energy policy and to broader OECD policy analyses in areas such as energy and sustainable development.

JRC contributes to the following organisations within NEA:

- Nuclear Science Committee (NSC). NSC governs the scientific activities of the Nuclear Energy Agency. It meets once per year and oversees through reports and mandates technical activities carried out by NSC Working Parties.
- Nuclear Energy Agency Databank. The NEA Nuclear Databank is the international centre
 of reference for its member countries with respect to basic nuclear tools, such as
 computer codes and nuclear data, used for the analysis and prediction of phenomena in
 the nuclear field. It provides a direct service to its users by developing, improving and
 validating these tools and making them available as requested.
- The Joint Evaluated Fission and Fusion library project (JEFF) which is a collaborative project between the countries participating in the NEA Data Bank. The JEFF-3.1 library released in May 2005 comprises sets of evaluated nuclear data, including neutron and proton interaction data, thermal scattering law data, radioactive decay data and fission yield data.
- The Working Party on Evaluation Cooperation (WPEC) promotes the exchange of information on nuclear data evaluations, measurements, nuclear model calculations, validation, and related topics, and provides a framework for co-operative activities between the participating projects.

<u>Legal Basis:</u> The Statute of the OECD Nuclear Energy Agency (NEA) takes the form of a Decision originally adopted by the Council of the Organisation for European Economic Co-operation on 20 December 1957 and subsequently approved by the OECD Council on 30 September 1961.

- At that time, the Agency's Members included European countries only, and it was called the European Nuclear Energy Agency.
- In step with the Agency's growing membership, the Statute was amended by successive decisions of the Council, and the name of the Agency was changed accordingly. Finally, the Statute was modernised by several decisions of the Council, dated respectively 5 April 1978, 10 December 1992 and 13 July 1995.

Formal/informal: formal

The terms of cooperation are defined in the Statute of the OECD Nuclear Energy Agency (NEA) and Council decisions dated 5 April 1978, 10 December 1992 and 13 July 1995.

Start Date: 20 December 1957

Members: The NEA's current membership consists of 31 countries in Europe, North

America and the Asia-Pacific region

<u>Secretariat</u>: The NEA Secretariat serves seven specialised standing technical committees under the leadership of the Steering Committee for Nuclear Energy – the governing body of the NEA – which reports directly to the OECD Council.

Website: www.oecd-nea.org

<u>Contact at the JRC:</u> W. Mondelaers, JRC-IRMM (for NSC and Executive Committee of databank); A.Plompen, JRC-IRMM (for JEFF, WPEC and different WGs) <u>JRC Role:</u>

- Nuclear Science Committee: the SN3S unit head is a member of the NSC.
- Databank: The SN3S unit head is a member of the Databank Expert Group.
- JEFF: Member of the Scientific Coordination Group, Coordinator of the Experimental Working Group, Representative of JEFF at WPEC
- WPEC: Member representing JEFF.
- Coordinator of the Expert Group in charge of maintenance and development of the High Priority Request List for Nuclear Data.
- Participant in Subgroups of WPEC
- SG-31 Meeting Nuclear Data Needs for Advanced Reactor Systems
- SG-36 Evaluation of experimental data in the resolved resonance region.
- SG-37 Improved fission product yield evaluation methodologies.
- SG-40 CIELO Collaborative International Evaluated Library Organisation Pilot Project.

Deliverables:

- Advice on Nuclear Science Committee and NSC Working party activities.
- Advice on Nuclear Databank activities.
- IRMM contributes experimental nuclear data to the databank for world-wide distribution through the EXFOR database.
- JEFF: JRC experimental data for improved evaluations, JRC evaluations for JEFF, organisation of collaborative project meetings and JEFF-EU nuclear data projects.
- WPEC: For each of the SGs a report is delivered on specific technical issues.
- Such reports will be included in the final subgroup reports and published as WPEC reports.

2.20 International Committee for Radionuclide Metrology (ICRM)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: ICRM is an international association of radionuclide metrology laboratories whose membership comprises delegates of such laboratories together with other scientists engaged in the study and applications of radioactivity. The objectives of ICRM is to promote, through the active participation of all its members, the advancement of radionuclide metrology in the world-wide applications of radioactivity and to disseminate information relating to, for example, new metrological methods or recent nuclear data.

Formal/informal: formal

The terms of cooperation are defined in: Constitution and bylaws of the ICRM

(http://physics.nist.gov/ICRM/ICRM_ByLaws.pdf)

Start Date: 21 August, 1972.

Members: 42

Secretariat: U.Waetjen

Website: www.physics.nist.gov/ICRM/index.html

Contact at the JRC: M. Hult, JRC-IRMM

JRC Role:

- 1) Member of ICRM
- 2) Coordinator low-level working group
- 3) Coordinator alpha-particle spectrometry working group
- 4) Uwe Wätjen (retired from ICRM) is ICRMM secretary (took up duties while still working for IRMM)

Deliverables:

- Running as coordinator the low-level working group by e.g. arranging for the next conference to be organised (by finding a host)
- Running as coordinator the alpha-particle spectrometry working group and organising working group meetings
- Membership in the Scientific Committee of the next ICRM 2015 conference
- Referee work during ICRM conference (every 2 years), Session chair during conference.

2.21 International Federation for Clinical Chemistry and Laboratory Medicine (IFCC)

Involved JRC- Institutes: IRMM

Status: active

Description: In 1996, IRMM started the collaboration with the IFCC with the aim to combine the biochemical analytical expertise available within IFCC and its working groups with the ability of IRMM to produce and certify high quality certified reference materials. The collaboration was beneficial for IRMM's insight into concepts to standardise Life Science related biomarkers. The collaboration is not only focussing on the standardisation of biomarkers related to the diagnosis of diseases at a clinical stage but via standardisation of biomarker measurements the reference ranges, i.e. the levels of biomarkers in healthy patients are expected to fall into, can be properly validated and possibly narrowed down, thereby increasing the potential use of biomarkers to detect weak sub-clinical, e.g. toxic effects. Hence the standardisation of biomarkers used for clinical diagnostic purposes is extending beyond the purely clinical context.

Formal/informal: formal

The terms of cooperation are defined in: IFCC Status and Rules.

Start Date: 1996

Members: 78 national federations from 78 States + several corporate and affiliate

members

Secretariat: IFCC Office in Milano

Coordinator: Dr. Graham Beastall (UK Government Department of Health)

Website: http://www.ifcc.org/

Contact at the JRC: H.Schimmel, JRC-IRMM

<u>JRC Role</u>: Prioritise and execute projects for the production of certified reference materials with the input and expertise of corresponding IFCC working groups; Giving advice to the Scientific Division with regard to standardisation concepts and reference material issues

<u>Deliverables:</u> Development of appropriate reference materials; Support of the development of reference measurement procedures

2.22 International Committee for Weights and Measures - Consultative Committee for Amount of Substance - Bioanalysis Working Group (CIPM-CCQM-BAWG)

Involved JRC- Institutes: IRMM

Status: active

Description: Due to the complexity of the analytes investigated, the Bioanalysis Working Group of the Consultative Committee for Weights and Measurement is following a stepwise approach in order to identify critical factors influencing the quality and reliability of measurement data in the Life Science area. The measurements are related to the assessment of properties and quality of biotechnological products as well as genetic and protein testing in various fields of application. The group is organising pilot studies and is aiming at international Key Comparison studies for a number of analytes in order to give interested NMIs an opportunity to compare their measurement capabilities. Such demonstrated measurement capabilities are of paramount interest to producers of certified reference materials (CRMs) as a means to get international recognition of their materials and to integrate them into the global network formed by the world's NMIs.

Formal/informal: formal

The terms of cooperation are defined in: BIPM Rules of Procedure for the CCs and their WGs, CIPM-D-01.

Start Date: 2002

<u>Members:</u> 5 from FR, IE, CA, US (the CCQM has 28 members) <u>Secretariat:</u> International Committee for Weights and Measures

Coordinator: Dr B. Inglis (Australia)

Website: http://www.bipm.org/en/committees/cc/ccqm/working_groups.html

Contact at the JRC: H.Emons, (presence in different committees), JRC-IRMM

JRC Role: Member

<u>Deliverables</u>: Internationally recognised claims for measurement capacities in organic analysis; Demonstrated equivalence of measurements; Certification measurements for internationally accepted reference materials

2.23 International Committee for Weights and Measures, Consultative Committee for Amount of Substance – Organic Analysis Working Group (CIPM-CCQM-OAWG)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> The Organic Analysis Working Group of the Consultative Committee for Amount of Substances organises international Key Comparison studies for a number of organic analytes in order to give interested NMIs an opportunity to compare their measurement capabilities. Such demonstrated measurement capabilities are of paramount interest to producers of certified reference materials as a means to get international

recognition of their materials and to integrate them into the global network formed by the world's NMIs.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> <u>BIPM Rules of Procedure for the CCs and their WGs, CIPM-D-01</u>

Start Date: 01.01.2002

Members: 11 (the CCQM has 28 members)

Secretariat: International Committee for Weights and Measures

Coordinator: Dr B. Inglis (Australia)

Website: http://www.bipm.org/en/committees/cc/ccqm/working_groups.html

Contact at the JRC: H. Emons, JRC-IRMM

<u>JRC</u> <u>Role</u>: Member of the CIPM-OAWG, Convenor of the OAWG of EUROMET/METCHEM (European Collaboration in Measurement Standards, a network of European NMIs with participation of the European Commission)

<u>Deliverables:</u> Internationally recognised claims for measurement capacities in organic analysis, Demonstrated equivalence of measurements, Certification measurements for internationally accepted reference materials

2.24 International Bureau of Weights and Measures (BIPM), Consultative Committee for Ionizing Radiation (BIPM-CCRI)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: The principal activities of the BIPM in the field of ionizing radiation are to maintain the international reference standards for dosimetry and activity measurements. These standards are used in the BIPM key comparisons and their development and improvement is a major part of the research and development programme. Present activities of BIPM-CCRI concern matters related to the definitions of quantities and units, standards for x-ray, -ray, charged particle and neutron dosimetry, radioactivity measurement and the international reference system for radionuclides (SIR), and advice to the CIPM on matters related to ionizing radiation standards.

Formal/informal: formal

<u>Legal Basis</u>: The Convention of the Metre (Convention du Mètre) is a treaty that created the International Bureau of Weights and Measures (BIPM), an intergovernmental organization under the authority of the General Conference on Weights and Measures (CGPM) and the supervision of the International Committee for Weights and Measures (CIPM). The BIPM acts in matters of world metrology, particularly concerning the demand for measurement standards of ever increasing accuracy, range and diversity, and the need to demonstrate equivalence between national measurement standards. The Consultative Committee for Standards of Ionizing Radiations (Comité consultatif pour les étalons de mesure des rayonnements ionisants, CCEMRI) was set up in 1958. Its name was changed to Consultative Committee for Ionizing Radiation by the CIPM in 1997.

<u>The terms of cooperation are defined in:</u> IRMM has signed the CIPM MRA (Comité International des Poids et Mesures; Mutual Recognition Arrangement) at a meeting held in Paris on 14 October 1999.

<u>Members</u>: The CIPM MRA has now been signed by the representatives of 94 institutes – from 53 Member States, 37 Associates of the CGPM, and 4 international organizations – and covers a further 150 institutes designated by the signatory bodies.

Secretariat: International Committee for Weights and Measures

Coordinator: Dr Martin Milton (BIPM)

Website: http://www.bipm.org/

Contact at the JRC: M. Hult, JRC-IRMM

<u>JRC Role</u>: Member of the BIPM-CCRI, of Consultative Committee II within CCRI and of working groups (Key Comparisons, Extension of SIR, Transfer Instrument, Becquerel Chamber, High Efficiency Detectors

<u>Deliverables:</u> Active participation in the organisation of key comparisons, establishing reference values for primary standards of activity, realisation of the becquerel, writing of standard documents on metrology and uncertainties, development of methodology, support to international cooperation.

2.25 Cooperation on International Traceability in Analytical Chemistry (CITAC)

Involved JRC- Institutes: IRMM

Status: active

<u>Description:</u> CITAC - Cooperation on International Traceability in Analytical Chemistry - arose out of an international workshop held in association with the Pittsburgh Conference in Atlanta in March 1993. The aim of this workshop was to discuss how analytical activities could be developed to meet the needs of the 21st century, and it identified a wide variety of issues to be addressed to ensure that analytical measurements made in different countries or at different times are comparable. These range from the development of traceable reference materials and methods to the harmonisation of analytical quality practices.

The CITAC Initiative aims to foster collaboration between existing organisations to improve the international comparability of chemical measurement. A Working Group takes matters forward and its initial activities have centred on a few specific high priority activities. The first tasks included the compilation of a directory of certified reference materials under development; preparation of quality system guidelines for the production of reference materials; preparation of a directory of international chemical metrology activities; defining criteria for establishing traceability to the mole; and the preparation of an international guide to quality in analytical chemistry.

Many of these activities are of a strategic nature, laying the ground for the improvement of international analytical measurement. This reflects the added geographical complexities associated with a world-wide organisation, such as greater diversity in culture and in technical approach, and frequently long timescales associated with its activities. Nevertheless, if the full benefits of improved analytical measurement are to be realised internationally, a truly global approach is needed, and there is a clear role for CITAC to play in this respect.

Formal/informal: formal

<u>The terms of cooperation are defined in</u>: CITAC terms of references available at the CITAC website

Members: 36

Secretariat: ETH (Switzerland)

Coordinator: Dr Laly Samuel (Measurement Standards Laboratory of New Zealand)

Website: http://www.citac.cc/

Contact at the JRC: H.Emons, JRC-IRMM

JRC Role: Elected Member

2.26 European organisations of Analytical Chemistry (EURACHEM)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: EURACHEM is a network of organisations in Europe having the objective of establishing a system for the international traceability of chemical measurements and the promotion of good quality practices. It provides a forum for the discussion of common problems and for developing an informed and considered approach to both technical and policy issues. It provides a focus for analytical chemistry and quality related issues in Europe.

Formal/informal: formal

Members: 147 (sum all committees)
Website: http://www.eurachem.org/
Coordinator: Montanuniversität Leoben

Contact at the JRC: H.Emons-JRC-IRMM

JRC Role:

- IRMM/EC representative
- Measurement Uncertainty and Traceability working group
- Qualitative Analysis working group
- Education and Training working group
- Proficiency Testing (EURACHEM and joint with EA and Eurolab) working

Deliverables: Guidelines

2.27 European Association for Chemical and Molecular Sciences (EuCheMS)

Involved JRC- Institutes: IRMM

Status: active

<u>Description</u>: EuCheMS is a not-for-profit organisation founded in 1970. Its object is to promote co-operation in Europe between non-profit-making scientific and technical societies in the field of chemistry and molecular sciences. EuCheMS has 41 member societies which together represent more than 150,000 chemists in academia, industry, government and professional organisations in 31 countries across Europe. EuCheMS has several Divisions and Working Groups which cover all areas of chemistry and bring together world class expertise in the underpinning science and development needed for innovation.

Formal/informal: formal

Members: 41

Secretariat: Nineta Majcen, PhD (EUCheMS)

Coordinator: Professor Ulrich Schubert 5Gesellschaft Österreichischer Chemiker)

Website: http://www.euchems.eu

Contact at the JRC: E. Anklam/H.Emons/P.Taylor-JRC-IRMM

JRC Role: Networking in specific areas Deliverables: Support to events, networking

2.28 European Federation of National Associations of Measurement, Testing and Analytical Laboratories (EUROLAB)

Involved JRC- Institutes: IRMM

Status: active

Description: The activities of EURLAB are

- Representation by formulating and voicing the opinion of European laboratories regarding political and technical issues having a direct impact on their activity, both on the European scene and worldwide.
- Coordination by interfacing with all European organisations having activities of interest to the laboratory community, and striving to avoid duplication of efforts and activities.
- Action by providing adequate means for exchange of information and experience, such as the publication of our Position Papers, Technical Reports, Newsletter, Seminars, and Working Groups etc.
- Promoting cost-effective testing, calibration and measurement services, for which the accuracy and quality assurance requirements should be adjusted to actual needs

Formal/informal: formal

<u>Legal Basis:</u> EUROLAB is since October 1998 a legal entity in the form of an international association under Belgian law (A.I.S.B.L. - Association Internationale Scientifique sans But Lucratif) setting it as the European Federation of National Associations of Measurement, Testing and Analytical Laboratories.

<u>The terms of cooperation are defined in:</u> memorandum of understanding, signed by delegations representing the private and public laboratories of 17 out of the 19 countries of the EEC and EFTA

Members: 83

<u>Coordinator:</u> Eurolab Brussels Website: http://www.eurolab.org

Contact at the JRC: P.Taylor- JRC-IRMM

JRC Role: Participation in the Quality assurance committee

3 ITU – Institute for Transuranium Elements

3.1 European Safeguards Research and Development Association (ESARDA)

Involved JRC- Institutes: ITU, IRMM

Status: active

<u>Description</u>: ESARDA is an association of European organisations formed to advance and harmonise research and development in the area of safeguards. It also provides a forum for the exchange of information and ideas between nuclear facility operators, safeguards authorities and persons engaged in research and development.

Formal/informal: formal

The terms of cooperation are defined in: ESARDA Contract (available at the website) ESARDA is an association established by an Agreement, which has legal force according to the Belgian law. In 2007 there were 25 Parties to this agreement plus 7 individual members. The Association is ruled by a Steering Committee, and has a Secretary, who is in charge of the daily management. The Association is managed by an Executive Board, whose members are appointed by the Steering Committee for four years, in

representation of 5 Parties. The Euratom Safeguards Office has a permanent observer in

the Executive Board.

Start Date: 01.01.1969

Members: 25 organisations + 7 individuals

Coordinator: JRC-ITU

Website: https://esarda.jrc.ec.europa.eu/

Contact at the JRC: Filippo Sevini, JRC-ITU; Yetunde Aregbe, JRC-IRMM

JRC Role: JRC represents Euratom for this agreement. JRC (IPSC) is in charge of the Secretariat of the association; the secretariat is the focal point of the association, promotes it externally and is in charge of the symposium scientific secretariat, website follow up and publications and distribution. DG TREN-I is observer in ESARDA.

<u>Deliverables:</u> Working groups activities; Symposium/annual meeting (+ proceedings); Bulletin and website

3.2 International Technical Working Group on Combating Nuclear Smuggling (ITWG)

<u>Involved JRC- Institutes:</u> ITU

Status: active

<u>Description:</u> ITWG aims at fostering the fight against illicit trafficking of nuclear material, at the analysis of seized material and developing technical and organisational measures for detection, prevention, handling and post-processing of cases of seizures of nuclear or radioactive material.

Membership and Organisation:

The ITWG is open to all states interested in nuclear forensics. The G8 has encouraged the ITWG to increase its international membership to states directly affected by the illicit trafficking and proliferation of nuclear and radiological materials.

- Countries and organizations can apply to the Executive Committee for ITWG membership. Criteria for membership include an interest or capability in technical nuclear forensics.
- Individuals may be approved for attendance at ITWG meetings if they are affiliated with a competent national or international authority recognized by the ITWG.

An Executive Committee oversees work of the ITWG and is supported by expert task groups that conduct technical studies and outreach to advance international nuclear forensic best practice. Executive Committee Executive Committee functions include (but are not limited to) planning of annual meetings, preparation of annual meeting announcements and announcements of other events involving the ITWG, forming task groups to study technical topics, identifying task group chairs, responding for requests for information about the ITWG.

The Executive is responsible for attracting new membership at annual meetings and for administering membership requests. The Executive Committee represents the ITWG to the G8. To allow more detailed consideration of ITWG technical priorities, standing task groups may be established to stimulate technical progress between annual meetings. Experts are drawn from the membership to staff the task groups. Task groups report at each annual meeting. Task groups can be created and disbanded to reflect current ITWG technical and organizational priorities.

Formal/informal: formal

Members: more than 30

Coordinator: Nuclear Safety and security group (NSSG)

Website: http://www.nf-itwg.org/home

Contact at the JRC: Klaus Mayer, JRC-ITU

JRC Role: Co-chairman of ITWG

Deliverables: Reports, publications, recommendations

3.3 Border Monitoring Working Group (BMWG)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> The BMWG was established in 2005 by IAEA, European Union (EU, EC-JRC) and United States (US, DoE-SLD) to promote co-operation between its members and serve as a forum for discussion and exchange of information on plans and programs to be implemented by the members in cooperation with the recipient countries to combat the illicit trafficking of nuclear and other radioactive material that is out of regulatory control. The specific areas of co-operation include radiation detection equipment deployment, training, and sustainability.

Formal/informal: formal

The terms of cooperation are defined in: Terms of Reference

Members: 3 core members, more than 10 additional organisations

Coordinator: JRC

Contact at the JRC: S. Abousahl (A.4), V. Berthou, K. Mayer, JRC-ITU

JRC Role: current chairmanship

3.4 Global Initiative to Combat Nuclear Terrorism (GICNT)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> The Global Initiative to Combat Nuclear Terrorism (GICNT) is an international partnership of 85 nations and four official observers who are committed to working individually and collectively to implement a set of shared nuclear security principles.

The United States and Russia serve as Co-Chairs of the GICNT. The European Union is an official observer.

Formal/informal: formal

The terms of cooperation are defined in: GICNT Statement of Principles (see website)

Members: 89 (international partnership of 85 nations and four official observers)

Coordinator: the United States and Russia serve as Co-Chairs

Website: http://www.state.gov/t/isn/c18406.htm

Contact at the JRC: Klaus Mayer, JRC-ITU

JRC Role: observer

3.5 Nuclear Suppliers Group (NSG)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> The Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of Guidelines for nuclear exports and nuclear-related exports.

The Nuclear Suppliers Group (NSG) works on the basis of consensus. Overall responsibility for activities lies within NSG Plenary meetings that are held once a year. A rotating Chair has the overall responsibility for coordination of work and outreach activities.

The European Commission (JRC, TRADE, ENER) participates as observer. The JRC programmed and updated the NSG website, together with BAFA.

Formal/informal: formal

The terms of cooperation are defined in: guidelines (see website)

Members: more than 45 countries

Coordinator: rotating chair and NSG Plenary

Website: http://www.nuclearsuppliersgroup.org/en/

Contact at the JRC: Filippo Sevini, JRC-ITU

<u>JRC Role</u>: THE European Commission 5JRC, TRADE, ENER) participates as observer. The JRC programmed and updated the NSG website, together with BAFA.

3.6 IAEA- Member State Support Programmes (MSSP)

Involved JRC- Institutes: ITU

Status: active

<u>Description</u>: The IAEA bases its technical and scientific Programme on contributions from the Member State Support Programmes (MSSP). The IAEA does not have the financial resources to develop the instruments and techniques that inspectors use on its own, it draws upon its Member States to provide equipment, material and know-how facilitated by MSSPs to meet its safeguards responsibilities.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> Cooperation Agreement between the European Atomic Energy Community and the International Atomic Energy Agency (Official Journal of the European Communities, 23.12.1975, No. L 329/28); Exchange of letters between W. Haferkamp, Vice-President of the Commission, and S. Eklund, DG IAEA, 07.05.1981)

Start Date: 1977

Members: more than 20 Coordinator: JRC-ITU

Contact at the JRC: Joao Goncalves, JRC-ITU

JRC Role: Operator

3.7 IAEA- Network of Analytical Laboratories (NWAL)

<u>Involved JRC- Institutes:</u> ITU

Status: active

<u>Description:</u> The 20 laboratories of the NWAL analyse nuclear material, heavy water and environmental swipe samples, thereby increasing the IAEA's capacity and capability in this area. The JRC-ITU is one of these labs, providing analyses of nuclear material and environmental swipe samples.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> Cooperation Agreement between the European Atomic Energy Community and the International Atomic Energy Agency (Official Journal of the European Communities, 23.12.1975, No. L 329/28); Exchange of letters between W. Haferkamp, Vice-President of the Commission, and S. Eklund, DG IAEA, 07.05.1981)

Members: more than 30

Coordinator: IAEA Department of Safeguards

Website: http://www.iaea.org/safeguards/analytical-services.html

Contact at the JRC: Evelyn Zuleger, JRC-ITU

JRC Role: JRC-ITU is a member of the IAEA-NWAL, it provides laboratory analyses

and samples

Deliverables: analyses, samples

3.8 Nuclear Generation II&III Association (NUGENIA)

Involved JRC- Institutes: IET, ITU

Status: active See section 5. 3.

3.9 Sustainable Nuclear Industrial Initiative (ESNII)

Involved JRC- Institutes: ITU, IET

Status: active

<u>Description:</u> SNETP has set up a Task Force comprising research organisations and interested industrial partners to set the basis of the European Sustainable Nuclear Industrial Initiative (ESNII) in support of the SET-Plan. ESNII will address the need for demonstration of Gen-IV Fast Neutron Reactor technologies, together with the supporting research infrastructures, fuel facilities and R&D work.

Formal/informal: formal

<u>Legal basis</u>: On November 22, 2007, the EC published its Strategic Energy Technology (SET) Plan, "Towards a Low Carbon Future". This document recognises the role of nuclear fission in today's energy mix and identifies the development of Generation IV systems as one of the paths to Europe's future low carbon energy mix. It also calls for European Industrial Initiatives in six areas, including nuclear fission. The Commission

documents as well as an MEP declaration and MEPs vote on the SET Plan are available on the website.

Further documents defining the terms of cooperation: ESNII concept paper (Oct 2010)

Members: more than 100

Coordinator: ESNII Executive Committee

Website: http://www.esnii.eu/

Contact at the JRC: Rudy Konings, JRC-ITU

JRC Role: member

3.10 GIF Generation IV International Forum

<u>Involved JRC- Institutes:</u> ITU

Status: active

<u>Description</u>: The Generation IV International Forum (GIF) is a co-operative international endeavour organised to carry out the research and development (R&D) needed to establish the feasibility and performance capabilities of the next generation nuclear energy systems. The goals adopted by GIF provided the basis for identifying and selecting six nuclear energy systems for further development. The six selected systems employ a variety of reactors, energy conversion and fuel cycle technologies. Their designs feature thermal and fast neutron spectra, closed and open fuel cycles and a wide range of reactor sizes from very small to very large. Depending on their respective degrees of technical maturity, the Generation IV systems are expected to become available for commercial introduction around 2030-2040.

Formal/informal: formal

The terms of cooperation are defined in: GIF Charter, Framework Agreement

Members: more than 30 Coordinator: rotates

Website: https://www.gen-4.org/gif/jcms/c_9260/public

Contact at the JRC: JRC-ITU

JRC Role: implementing agent for EURATOM within GIF

3.11 EFTTRA – Experimental Feasibility of Targets for Transformation of Actinides

Involved JRC- Institutes: ITU, IET

Status: active

<u>Description</u>: The European network EFFTRA (Experimental Feasibility of Targets for Transmutation) in which JRC-IE, JRC-ITU, CEA, EdF, FZK and NRG participate, has launched experiments for transmutation of americium, technetium and iodine. Within the European framework programme experiments regarding Pu-burning are presently performed and new experiments on Am transmutation are being prepared. Innovative designs for Pu-burning were performed in cooperation with European and Japanese partners.

Formal/informal: formal

The terms of cooperation are defined in: contract

Members: 5

Coordinator: shared

Contact at the JRC: J. Somers, JRC-ITU; E. D'Agata, JRC-IET

JRC Role: member

3.12 EERA JPNM European Energy Research Alliance Joint Programme on Nuclear Materials

Involved JRC- Institutes: IET, ITU

Status: active See section 5.6.

3.13 JHR (Jules Horowitz Reactor) Working Group on Fuel R&D

Involved JRC- Institutes: ITU

Status: active

<u>Description</u>: JHR – the Jules Horowitz Reactor – is an international project to develop and build a new high-power nuclear reactor for material and nuclear fuel research. The Jules Horowitz Reactor is being built and operated in the framework of an international cooperation between several research institutes and industrial partners from France, Belgium, Finland, Spain, Sweden, Japan, India, Israel, and the Czech Republic. The working group on fuel R&D is one of several research groups using the JHR.

Formal/informal: formal

There is no common agreement between the members, but bilateral agreements exist (collaboration agreement with CEA, JRC paid to be user of the JHR).

Members: 5

Coordinator: Atomic Energy Commission (CEA) for France

Contact at the JRC: J. Somers, JRC-ITU

JRC Role: member

3.14 Advancements in Nuclear Instrumentation Measurement Methods (ANIMMA)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> Nuclear instrumentation and measurement methods in nuclear environments are key aspects that contribute to the quality of scientific programmes in the fields of physics, energy, the fuel cycle and waste management. Furthermore, measurements relying on nuclear physics now play an important role in various fields of application such as biology, medicine and the environment. The ANIMMA network assembles researchers and experts from industry, research institutes, academic dealing with nuclear instrumentation and measurement methodology activities (R&D, Innovation and applications). Regular ANIMMA conferences facilitate the exchange between these experts.

Formal/informal: informal

Members: more than 30 Coordinator: shared

Contact at the JRC: Mathias Laurie, JRC-ITU

JRC Role: participates in the Scientific Committee of ANIMMA

3.15 EMAS – European Microbeam Analysis Society

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> EMAS was founded in 1987 as a scientific society focusing on microbeam analysis methodology. Its primary purposes are education, communication and innovation. The Society was founded to meet the growing demands of microbeam analysis users and scientists for further education, communication and professional advice EMAS is a founding member of IUMAS, the International Union of Microbeam Analysis Societies. The Society is a nonprofit making organisation registered in Germany. Membership is open to all scientists and technicians active in the development and application of microbeam analysis techniques and equipment.

The activities of the Society promote this branch of science and stimulate technical and scientific developments on a European scale. In order to achieve its goals, the Society is active in the development and operation of technical and scientific education programmes. Furthermore, the Society encourages communication and co-operation among scientists and offers support to its members whenever there is a general interest to promote. The Society also strives to enhance awareness of the possibilities and limitations of microanalytical methods and thus increase the quality and significance of the analysis results. Every two years the Society holds a European Workshop, using a format based on tutorial keynote lectures and

Formal/informal: formal

The terms of cooperation are defined in: EMAS statute

Members: more than 30 Coordinator: EMAS Board

Contact at the JRC: P. Pöml, JRC-ITU

JRC Role: P. Pöml is a co-opted Board member of the society

3.16 Working Group on Hot Laboratories and Remote Handling (Hotlab)

Involved JRC- Institutes: ITU

Status: active

Description: Over the years, the Working Group on "Hot Laboratories and Remote Handling" is firmly established as the major contact forum for the nuclear R&D facilities. Next to the yearly conference, the HOTLAB website should serve not only as a resource for information on laboratories, manufacturers or transporters worldwide but it should also be a platform to share and exchange experiences. HOTLAB is a non-formalised cooperation with equal sharing of costs. HOTLAB has developed a Post-Irradiation Examination (or Hot Cells) database; this has been merged with and is to be found on a IAEA web-site at https://infcis.iaea.org/ managed. of details jointly List participants and available http://hotlab.sckcen.be/en/Links/Hotlabs

Formal/informal: informal

Members: more than 30 Coordinator: JRC-ITU

Website: http://hotlab.sckcen.be/en

<u>Contact at the JRC:</u> Vincenzo Rondinella, David Bottomley, Dimitros Papaioannou, JRC-ITU

<u>JRC Role</u>: JRC-ITU has been a member of HOTLAB since it started in 1996. D. Bottomley is member of the Steering Committee of HOTLAB.

3.17 Radioactivity Environmental Monitoring (REM – ECURIE)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> The ECURIE (European Community Urgent Radiological Information Exchange) system is a communication network between the European Commission and the Member States Contact points. It is used for the early notification of a nuclear accident and the subsequent rapid exchange of urgent information messages. The ECURIE network is the practical implementation of the 87/600 Council Decision. The creation, encoding, decoding and transmission of the messages is done by means of the CoDecS software, developed by the REM group. REM is responsible for the user assistance, training and further development of the software.

Formal/informal: formal

The terms of cooperation are defined in: Council Decision 87/600

Members: 32 National contact points and Competent Authorities of EU28, CH, BA; Intl

organisations: EC (DG ENER D.3, DG ECHO.ERCC) and IAEA

Coordinator: JRC-ITU

Contact at the JRC: M. de Cort, K. Bogucarskis, JRC-ITU

JRC Role: Coordinator, Partner

<u>Deliverables:</u> Training courses; Software and technical documentation; Continuous technical assistance to DG ENER and MS contact points. There are 6 monthly ECURIE-EURDEP working group meetings, 2 yearly EU plenary of Competent Authorities meetings, 2-3 yearly workshops.

3.18 Radioactivity Environmental Monitoring (REM – REMdb)

Involved JRC- Institutes: ITU

Status: active

<u>Description</u>: The REM data bank supports the Community policy, in particular art. 36 of the Euratom Treaty. This states that the EU Member States are obliged to inform the Commission on the levels of radioactive contamination of the various compartments of the environment (air, water, soil). These data are from 1984 onwards stored in the REM data base. The bank can be accessed on-line without any charge. From these data the annual monitoring reports are produced.

Formal/informal: formal

The terms of cooperation are defined in: Euratom Treaty, Chapter III Health and Safety, art. 36 and 39. It is an official obligation of the Member States to inform the EC on the levels of radioactivity in their environment (art. 35-36) and of the JRC to collect and validate this information (art. 39). Recommendation EURATOM/2000/473 provides more details to the MSs on the type of information that needs to be reported.

Start Date: 01.01.1987

Members: 43 (at least 1 partner per EU MS)

Coordinator: JRC-ITU

Contact at the JRC: M. de Cort, T. Tollefsen, JRC-ITU

JRC Role: Coordinator

<u>Deliverables:</u> Continuous real time data access; Annual reports on environmental radioactivity; Special publications (eg, natural radiation atlas); Training courses; Software and technical documentation; Continuous technical assistance to MS contact points. There are 6 monthly Euratom art. 35-36 working group meetings, annual training courses for MSs, 2 yearly EU plenary technical representatives' meetings.

3.19 Radioactivity Environmental Monitoring (REM – EURDEP)

Involved JRC- Institutes: ITU

Status: active

<u>Description</u>: EURDEP was designed to facilitate transmission of large datasets from environmental monitoring networks, thereby taking away the burden from national crisis centers to manually report and transmit such data. Currently the EURDEP network continuously (i.e. during routine and emergency) makes data available from 37 organisations in 35 European countries. Most data originates from some 4400 automatic gamma dose-rate stations and is refreshed every hour. In addition air concentration data from some 100 monitoring stations is exchanged on a daily basis during an emergency and at a lower frequency under normal conditions. The collected data can be analysed and accessed by means of a simple GIS interface that is available via the EURDEP web site.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> Euratom Treaty, Chapter III, art. 36 and 39, Council Decision 87/600, Memorandum of Understanding

Start Date: 01.01.1994

Members: 40

Coordinator: JRC-ITU

Contact at the JRC: M. de Cort, K. Bogucarskis, JRC-ITU

JRC Role: Leader

<u>Deliverables:</u> Continuous data-exchange and real time data access; Continuous technical assistance to contact points; Software and technical documentation; Implementation of an improved data-exchange system. There are 6 monthly ECURIE-EURDEP working group meetings, 2 yearly EU plenary of Competent Authorities meetings, 2-3 yearly workshops.

3.20 Targeted Alpha Therapy (TAT)

Involved JRC- Institutes: ITU

Status: active

<u>Description</u>: Conventional radiotherapy has been used for cancer treatment for many years. From the early 1980s, a new form of treatment based on aiming radioactive isotopes at cancer cells began to attract increasing interest. This new form of therapy is based on the connection of radioisotopes to specific carrier molecules that can selectively find and target cancer cells in the body. Isotopes emitting alpha particles have been

recognised as very effective and selective against certain types of cancer. The main advantage of using alpha-emitting isotopes lies in their short range in human tissue, allowing to target their radiation selectively to cancer cells without damaging surrounding healthy tissue. The JRC-ITU is involved in all stages of targeted alpha therapy (TAT) for the treatment of cancer and infectious diseases, from bench to bedside, including the development of methods for production of alpha emitters and for radiolabeling, preclinical testing and clinical studies.

Formal/informal: formal

The terms of cooperation are defined in: (bilateral) collaboration arrangements

Members: 14 (+3 in preparation)

Contact at the JRC: Alfred Morgenstern, JRC-ITU

<u>JRC</u> Role: JRC has strong and unique competence in production and handling of radionuclides, in particular of alpha-emitters, which show great potential in the treatment of certain types of cancer. By developing targeted alpha therapy, a new type of anticancer treatment, JRC has well established collaborations with hospitals and research institutes to support their fight against cancer.

<u>Deliverables:</u> development of methods for production of alpha emitters and for radiolabeling, preclinical testing and clinical studies – scientific publications, reports, meetings, training of clinical staff.

3.21 European Nuclear Education Network (ENEN)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> ENEN is a non-profit international organisation, established on 22 September 2003 under the French Law of 1901. Its mission is the preservation and further development of expertise in the nuclear fields by higher education and training.

Formal/informal: formal

The terms of cooperation are defined in: ENEN Statutes (available at the website)

Start Date: 2003 Members: 64

<u>Coordinator:</u> ENEN-Board and -Assembly Website: http://www.enen-assoc.org/

<u>Contact at the JRC:</u> JRC-ITU <u>JRC Role</u>: associated member

3.22 Actinide User Laboratory (USERLAB)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> The number of Laboratories equipped to handle actinide materials is steadily decreasing, and few exist outside the classified Laboratories in various countries. JRC is today among the few research institutes in the EU having a strong expertise and the facilities to actually maintain a high level of research on these so-called "5f elements". The JRC has a key role to play to increase the awareness and expertise in basic actinide physics and chemistry in offering access to its facilities and organising knowledge exchanges.

Within this context, our objectives in this programme are:

- Providing a top-class actinide research facility for internal and external users integrating
 training programmes to attract bright young professionals needed to maintain the EU
 high level of scientific and technical competence in nuclear field,
- Underpinning scientific collaboration with European and worldwide laboratories and universities in actinide research and increasing JRC visibility and recognition in academic environment through the organisation of conferences, thematic workshops and schools, and information letters

Formal/informal: informal

The terms of cooperation are not formalised, but access to actinide facilities is structured according to a consolidated procedure involving an external expert panel.

Members: rd. 20 Coordinator: JRC-ITU

Website: http://itu.jrc.ec.europa.eu/index.php?id=31

Contact at the JRC: E. Colineau, R. Caciufffo, JRC-ITU

JRC Role: coordinator

3.23 TRANSURANUS user network (TUnet)

Involved JRC-Institutes: ITU

Status: active

<u>Description</u>: TUnet deals with safety codes for the thermal and mechanical analysis of fuel rods in nuclear reactors. Its objective is to contribute to nuclear safety improvements by studying in detail phenomena that occur in light water reactor fuel rods at extended times of operation and which may endanger the integrity of fuel rods. A detailed investigation of fuel behaviour under reactor accident conditions is also included. The fuel performance code TRANSURANUS, using the results of these investigations in the validation, will be further developed to different fuel types (LWR, CANDU, RBMK) in use across the European Union. The codes are used by licensing and regulatory authorities to benchmark nuclear safety.

Formal/informal: formal

The terms of cooperation are defined in: Software licensing agreements (bilateral)

Members: more than 30 organisations

Coordinator: JRC-ITU

Contact at the JRC: Paul van Uffelen, JRC-ITU

JRC Role: Coordination, organisation and management. JRC-ITU is the main developer

of the code.

<u>Deliverables</u>: Meetings of the members, training and updated version of the software

3.24 Sustainable Nuclear Energy Technology Platform (SNE-TP)

Involved JRC- Institutes: ITU

Status: active

<u>Description:</u> To maintain its role as a worldwide player in the context of an increase in energy demand at global level, Europe needs an energy-mix which deals with the following challenges: increase of security of supply, cost competitiveness, and reduction of greenhous-gas emissions to combat climate change. SNETP aims to:

- Preserve and strengthen the European technological leadership and nuclear industry through a strong and long-term Research and Development prgramme, involving fuel cycles and reactor systems of Generation II, III and IV types;
- Enhance Europe's technological leadership in nuclear science and engineering by the production of scientific and technical skills to keep pace with corresponding industrial and R&D demand; and
- Contribute to the production of synthetic fuels and hydrogen needs on the basis of non-greenhouse gas emitting production sources in an environmentally benign and sustainable economy.

Formal/informal: formal

Start Date: 2007

Members: > 100 European stakeholders from industry, research, academia, technical

safety organisations, non-governmental organisations and national representatives

Coordinator: SNE-TP Executive Committee

Website: http://www.snetp.eu/

Contact at the JRC: JRC-ITU

JRC Role: member

3.25 Implementing Geological Disposal of Radioactive Waste Technology Platform (IGD-TP)

Involved JRC- Institutes: ITU, IET

Status: active

<u>Description</u>: The waste management organisations of several European countries launched in November 2009, with the support of the European Commission, the Implementing Geological Disposal of Radioactive Waste technology platform IGD-TP.

Formal/informal: formal

The terms of cooperation are defined in: key documents available on the website

<u>Members:</u> >100 stakeholders from industry, research, academia, technical safety organisations, non-governmental organisations and national representatives

<u>Coordinator:</u> IGD-TP Secretariat <u>Website: http://www.igdtp.eu/</u>

Contact at the JRC: JRC-ITU

4 IET – Institute for Energy and Transport

4.1 Network on Neutron Techniques (NeT)

Involved JRC- Institutes: IET

Status: active

<u>Description</u>: The NET supports progress towards improved performance and safety of European Energy and Power (Aerospace & Automotive) production systems through the standardisation and harmonisation of NDT methods within the enlarged EU. In addition, the network aims at providing a forum for training of young scientists and sound advice to the EC policy makers. NET brings together neutron facilities, universities, research institutes and industrial partners.

Formal/Informal: informal

Start Date: 01.06.2001 Members: rd. 35 Coordinator: JRC-IET

<u>Contact at the JRC:</u> Carsten Ohms, JRC-IET <u>JRC Role</u>: operating agent & reference laboratory

<u>Deliverables:</u> drafting of a European Standard on "residual stress analysis based on neutron diffraction", drafting of testing protocols for impurities, defects, texture and grain size analyses in structural components – primarily representative of welded nuclear power structures, based on neutron diffraction, SANS, and neutron radiography; drafting of testing protocols for element tracing in food samples and works of art & particulate matter characterisation in catalysts based on neutron activation analysis; training of young CEEC scientists in neutron techniques

4.2 European Clearinghouse for Operating Experience (OE) of Nuclear Power Plants (NPP) (CLEARINGHOUSE)

Involved JRC Institutes: IET

Status: active

<u>Description:</u> The Clearinghouse is a network which has been established in 2008 to enhance nuclear safety through improvement of the use of lessons learned from Operating Experience. The Clearinghouse is mainly composed of nuclear safety regulatory authorities and their Technical Support Organizations in Europe.

The objectives of the EU Clearinghouse are to allow effective and efficient implementation of operational experience (OE) feedback for improvement of safety of NPPs through:

- Strengthening co-operation between EU Safety Authorities, Technical Support
 Organisations and the international OE community to collect, evaluate and share NPP
 operational events data and apply lessons learned in a consistent manner throughout
 European countries participating to the project.
- Establishment of European best-practice for assessment of operational events in Nuclear Power Plants (NPPs).
- Strengthening EU resources in OE.
- Support to the long-term EU research and policy needs on NPP Operating Experience Feedback.

The Clearinghouse is operated by a centralised office located at IET.

Forma/informal: formal

<u>Legal basis:</u> The Euratom Framework Programme provides the legal basis for the Clearinghouse's activities.

<u>The terms of cooperation are defined in:</u> Multi-partner collaboration agreement, Terms of Reference of the Steering Committee and Terms of Reference of the Technical Board.

Start date: 2008 Members: 17

Currently, 17 European nuclear safety regulatory authorities are represented (Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Hungary, Lithuania, The Netherlands, Poland, Romania, Slovenia, Switzerland, Slovak Republic, Sweden, Spain and the UK) and three European Technical Support Organisations (GRS, IRSN and BelV). IAEA and OECD/NEA are also taking part in this network.

Coordinator: JRC-IET

Website: https://clearinghouse-oef.jrc.ec.europa.eu/

Contact at JRC: Benoit ZERGER (JRC F5)

<u>JRC role:</u> JRC operates the network and implements the work programme which is decided by the Steering Committee of the Clearinghouse.

Deliverables:

- Trend analysis of Operational Experience (OE) databases in order to identify priority areas.
- Topical Studies providing in-depth assessment of preselected subjects (event families).
- Contribution to improve the quality of event reports submitted by the participating countries to the IAEA
- Quarterly Operational Experience report, disseminating timely information on worldwide recent significant events in Nuclear Power Plants (NPPs).
- Database: a European central OE repository is developed in order to ensure long term storage of OE and facilitate information retrieval through advanced user friendly searching capabilities and analytical tools.
- A web site has been developed to enhance the communication and the sharing of
 experience between the Clearinghouse members. It comprises a public part gathering
 general information about the project and documents open to external publication, and
 a working area restricted to the Clearinghouse members.
- Further to these activities, the Clearinghouse is participating to several international cooperation projects on OE, mainly through the IAEA and the OECD-NEA working groups.

4.3 Nuclear Generation II&III Association (NUGENIA)

Involved JRC Institutes: IET, ITU

Status: active

<u>Description:</u> NUGENIA is an international non-profit making association, established in 2011 under Belgian law to promote research & development of nuclear power reactors of the 2nd and 3rd generation. NUGENIA has its headquarter in Brussels and has **92 member organisations** (status June 2014). NUGENIA's scope of activities are covered by the following **8 Technical Areas**:

1. Plant safety and risk assessment

- 2. Severe accidents
- 3. Improved reactor operation
- 4. Integrity assessment & ageing of systems, structures & components
- 5. Fuel development, waste and spent fuel management and decommissioning
- 6. Innovative LWR design & technology
- 7. Harmonisation
- 8. European Network for Inspection & Qualification (ENIQ)

The creation of NUGENIA is the positive result of the integration process of groups active in the field of Generation II & III:

- The first of the three SNETP pillars: Technology Working Group Gen II & III
- The NULIFE Network of Excellence on nuclear plant life management
- The SARNET Network of Excellence on severe accidents
- The European Network for Inspection & Qualification (ENIQ)

NUGENIA is regrouping most of the Utilities, NPP designers, Technical Safety Organisations (TSOs) and Research Organisations in Europe working in the field of Generation II & III Nuclear Power Plants.

Forma/informal: formal

<u>Legal basis:</u> The Euratom Framework Programme provides the legal basis for NUGENIA activities.

The terms of cooperation are defined in: NUGENIA statues, internal rules & procedures.

Start date: November 2011

Members: 92 (status: June 2014)

Coordinator: NUGENIA Secretariat

Website: www.nugenia.org

Contacts at JRC:

- Executive Committee: Michel Bieth (IET, F5)
- NUGENIA Secretariat: Oliver Martin (IET, F4)
- TA1: Plant safety and risk assessment: K. Simola (IET, F5)
- TA2: Severe accidents: G. Pascal (IET, F5); D. Bottomley (ITU)
- TA 3: Improved Reactor Operation: M. Laurie (ITU)
- TA4: Integrity assessment & ageing of systems, structures & components: K. Nilsson (IET, F4)
- TA5: Fuel development, waste and spent fuel management and decommissioning: J.
 Somers (ITU, E4)
- TA6: Innovative LWR design & technology: G. Pascal (IET, F5)
- TA7: Harmonisation: L. Ammirabile (IET, F5)
- TA8: European Network for Inspection & Qualification (ENIQ): O. Martin

<u>JRC role:</u> Support to the NUGENIA Secretariat, observer in the Executive Committee, one JRC representative with active contribution in each Technical Areas with the exception of TA3

<u>Deliverables:</u> technical reports & results of scientific projects, roadmaps, position papers on dedicated topics, framework documents, recommended practices, best practice documents, conference papers, articles in peer-reviewed journals.

4.4 European Network for Inspection Qualification (ENIQ)

Involved JRC- Institutes: IET

Status: active

<u>Description</u>: The European Network for Inspection Qualification was set up in 1992 recognising the need that the issue of qualification of Non Destructive Examination (NDE) inspection procedures, used in in-service inspection programmes for nuclear power plants, required important resources. Therefore it seemed appropriate to set up a network, driven by the EU utilities, in which the available resources and expertise could be managed at European level. It was also recognised that a harmonisation in the field of codes and standards for inspection qualification would represent important advantages for all parties involved. An effective management of available resources (expertise, technical know-how, hardware and infrastructure from different specialised national institutions) through ENIQ stimulates the harmonisation of the national approaches on inspection qualification.

Since March 2012 ENIQ is Technical Area 8 of NUGENIA.

<u>Legal basis:</u> The Euratom Framework Programme provides the legal basis for NUGENIA activities.

Formal/Informal: formal

The terms of cooperation are defined in the following documents: NUGENIA statutes, internal rules and procedures, new ENIQ terms of reference.

Start Date: 01.01.1992

Members: 35

Coordinator: NUGENIA Secretariat

Contact at the JRC: Oliver Martin, JRC-IET

JRC Role: operating agent & reference laboratory

<u>Deliverables:</u> elaboration and approval of European methodology for qualification of non-destructive inspections, development of general guidelines to support the production of detailed qualification procedures by individual countries

4.5 Expert panel on Transport

Involved JRC- Institutes: IET

Status: active

<u>Description</u>: The Expert Panel on Transport is part of the Task Force on Emission Inventories and Projections (TFEIP), which operates under the Convention on Longrange Transboundary Air Pollution (CLRTAP).

Formal/informal: formal

<u>Legal basis:</u> The group operates under the Convention on Long-Range Transboundary Air Pollution (www.unece.org/env/lrtap).

Its Work Programmes are available on the website (see link below).

Members: rd. 40

Coordinator: Task Force on Emission Inventories and Projections (tfeip) Secretariat

Website: http://www.tfeip-secretariat.org/expert-panels-transport/

Contact at the JRC: Biagio Ciuffo, JRC-IET

JRC Role: co-chair of the panel

EERA Joint Programme on Nuclear Materials (JPNM) 4.6

Involved JRC- Institutes: IET, ITU

Status: active

<u>Description:</u> The objective of this EERA JP - Nuclear Materials is to identify key priority topics and funding opportunities with the purpose of supporting in an efficient way the development and optimisation of a sustainable nuclear energy.

The goals and the timescale of the EERA JPNM have been defined in order to support the development of innovative fast neutron and nuclear waste transmutation systems. This allows the fuel cycle to be closed and the energy output from the fuel to be substantially increased, while improving the management of high level radioactive waste through transmutation processes. They are therefore potentially able to provide energy for the next centuries using in an optimal manner the already known uranium resources. However, the operating conditions envisaged for these new systems are demanding and will impact the performance of the structural and clad materials, the safety and the feasibility of most of these nuclear reactor concepts and their optimization will depend crucially on the capability of the chosen materials to withstand the expected operating conditions.

Formal/informal: formal

The terms of cooperation are defined in the following documents: Letter of Intent relating to the participation of the Institute for Energy of the Joint Research Centre in the EERA Joint programme on Material for Nuclear

Members: 19 (plus associates)

Coordinator: Belgian Nuclear Research Centre

Website: http://www.eera-set.eu/index.php?index=25

Contact at the JRC: K.F. Nilsson, P. Hähner, JRC-IET; J. Somers (ITU)

JRC Role: coordination of the sub-programme support to ESNII

4.7 **European Research on Mobile Emission Sources (ERMES)**

Involved JRC- Institutes: IET

Status: active

Description: The European Research for Mobile Emission Sources (ERMES) is a group of research institutions, competent authorities, industry associations, whose mission includes the support of cooperative research in the field of transport emission modelling. ERMES partners contribute to the development of the most up-to-date emission estimation tools for policy making and policy implementation purposes.

Formal/informal: formal

The terms of cooperation are defined in: Letter of Intent, Non-disclosure Agreement, Terms of Refereces published on ERMES website.

Members: 54

Coordinator: JRC-IET

Website: http://www.ermes-group.eu/web/

Contact at the JRC: M. Cristina Galassi, JRC-IET

JRC Role: coordinator

4.8 European Safety Reliability and Data Association (ESReDA)

Involved JRC- Institutes: IET

Status: active

<u>Description:</u> ESReDA is a European Association provides a forum for the exchange of information, data and current research in Safety and Reliability and a focus for specialist expertise. The Safety and Reliability of processes and products are topics which are the focus of increasing interest Europe wide. Safety and Reliability Engineering is viewed as being an important component in the design of a system. However the discipline and its tools and methods are still evolving and expertise and knowledge dispersed throughout Europe. There is a need to pool the resources and knowledge within Europe and ESReDA provides the means to achieve this.

Formal/informal: formal

Start Date: 1992 Members: 40

Coordinator: ESReDA Board of Directors

Website: http://www.esreda.org/

Contact at the JRC: Michaelis Christou, JRC-IET

JRC Role: Member and Member of the Board of Directors

<u>Deliverables</u>: Meetings, seminars, conferences and publications of Seminar Proceedings,

Technical reports, books, articles and guides

4.9 European Renewable Energy Centres Agency (EUREC)

Involved JRC- Institutes: IET

Status: active

<u>Description</u>: EUREC is the leading association representing research centres and university departments active in the area of renewable energy. The purpose of the association is to promote and support the development of innovative technologies and human resources to enable a prompt transition to a sustainable energy system. EUREC is the voice of renewable energy research in Europe, representing European Research Centres active in renewable energy.

Formal/informal: formal

The terms of cooperation are defined in: EUREC Terms of References

Start Date: 1991 Members: 42

Secretariat: Renewable Energy House in Brussels

Website: http://www.eurec.be/en/

Contact at the JRC: Arnulf Jaeger-Waldau, JRC-IES

JRC Role: Partner

4.10 Unconventional Oil and Gas Network

Involved JRC- Institutes: IET

Status: active

<u>Description</u>: The network aims to deepen the knowledge on extraction technologies and practices of unconventional gas and oil and minimise potential health and environment risks. The network will be established and managed by the JRC, on the basis of the guidance provided by the Steering group composed of the Directorates-General (DGs) for energy and for environment, as well as for climate action, for research & innovation and for enterprise and industry. The DGs for environment and energy will co-chair the Steering group. The network brings together practitioners from industry, research, academia and civil society, so as to ensure a fair and balanced exchange of ideas. It will collect, analyse and review results from exploration projects and assess the development of technologies used to extract unconventional gas and oil.

Formal/informal: formal

Start date: 08 Jul 2014

Members: NA

Coordinator: JRC-IET

Contact at the JRC: M. Masera, JRC-IET

JRC Role: coordinator

4.11 EFTTRA – Experimental Feasibility of Targets for Transformation of Actinides

Involved JRC- Institutes: ITU, IET

Status: active
See section 4.11.

4.12 International Atomic Energy Agency (IAEA)

Involved JRC- Institutes: ITU, IRMM, IET

Status: active See section 3.17.

5 IPSC – Institute for the Protection and Security of the Citizen

5.1 European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS)

Involved JRC-Institutes: IPSC

Status: active

<u>Description</u>: ECCAIRS is the heart of a network which objective it is to collect, integrate and disseminate information from similar national systems run by the authorities of the Member States. <u>Background</u>: ECCAIRS was set up as the result of a feasibility study carried out in 1993 at the request of DG Transport. The objective of the study was the pilot implementation of an automated incident reporting system able to collect information from various existing, incompatible sources. A secondary objective was to offer a solution to those Member States that do not have an automated system at present.

Formal/informal: formal

The terms of cooperation are defined in: Reference of the ECCAIRS Steering Committee

Start Date: 1993

Members: 61 organisations in the ECCAS steering committee (33 points of contact, 113 authorised users of the Central Europe Repository, 1224 ECCAIRS Community

members worldwide)
<u>Coordinator:</u> JRC-IPSC

Website: http://eccairsportal.jrc.ec.europa.eu/

Contact at the JRC: Wietse Post, JRC-IPSC

<u>JRC Role</u>: The role of central office of ECCAIRS (at IPSC) is to collect, integrate and disseminate occurrence information originating from satellite offices. The central office implements a database which contains the integrated data.

<u>Deliverables</u>: ECCAIRS approach was demonstrated by integrating on an experimental basis more than 40.000 occurrences originating from Scandinavia, the UK and Germany. Currently ECCAIRS software can be used as an occurrence reporting system and an integrated database

5.2 European Reference Network for Critical Infrastructure Protection (ERNCIP)

Involved JRC-Institutes: IPSC

Status: active

<u>Description</u>: ERNCIP aims at providing a framework within which experimental facilities and laboratories will share knowledge and expertise in order to harmonise test protocols throughout Europe, leading to better protection of critical infrastructures against all types of threats and hazards. Our mission is to foster the emergence of innovative, qualified, efficient and competitive security solutions, through the networking of European experimental capabilities.

ERNCIP is a direct response to the lack of harmonised EU-wide testing or certification for CIP products and services, which is a barrier to future development and market acceptance of security solutions.

IPSC, under the mandate of the DG Home, in the context of the European Programme for Critical Infrastructure Protection (EPCIP), and with the agreement of Member States, set up the ERNCIP project in 2009. The preparatory phase was successfully completed in November 2010 and the project started its implementation phase in 2011.

Formal/informal: formal

Start Date: 2009

Members: rd. 200 individuals Coordinator: JRC-IPSC

Website: http://ipsc.jrc.ec.europa.eu/index.php/ERNCIP/688/0/

Contact at the JRC: Wietse Post, JRC-IPSC

<u>JRC Role</u>: The role of central office of ECCAIRS (at IPSC) is to collect, integrate and disseminate occurrence information originating from satellite offices. The central office implements a database which contains the integrated data.

<u>Deliverables</u>: ECCAIRS approach was demonstrated by integrating on an experimental basis more than 40.000 occurrences originating from Scandinavia, the UK and Germany.

Currently ECCAIRS software can be used as an occurrence reporting system and an integrated database

5.3 European SCADA and Control System Information Exchange

Involved JRC-Institutes: IPSC

Status: dormant (Has been dormant since 2012, however discussions about reviving)

Involved JRC- Institutes: IPSC

<u>Description:</u> This working group aims at setting the basis for a pan–European system for the exchange of security–related information concerning SCADA (supervisory control and data acquisition) and control systems, and mainly those used in critical infrastructures.

Start Date: 01.06.2005

<u>Contact at the JRC:</u> JRC-IPSC <u>JRC Role</u>: Partner of the network

5.4 **Developers of DYNARE software**

Involved JRC-Institutes: IPSC

Status: active

<u>Description:</u> A network of developers of routines that aim at solving non-linear models with forward looking variables using bayesian estimation.

Formal/informal: informal

<u>The terms of cooperation are defined in</u>: Report describing maintenance and development of algorithms under DYNARE environment, JRC87547.

Start Date: 01.01.2002

Members: 16

Coordinator: DYNARE team lead by CEPREMAP Parigi Mr. Sebastien Villemot

Website: http://www.dynare.org/

<u>Contact at the JRC:</u> Marco Ratto, JRC-IPSC JRC Role: Member of the advisory board

Deliverables: Matlab and Scilab scripts, Joint papers, Summer school

5.5 C-Sigma (Collaboration in Space for International Global Maritime Awareness)

Involved JRC-Institutes: IPSC

Status: active

<u>Description:</u> C-SIGMA is an international initiative intended to foster wider cooperation and exchange in the use of and access to satellite based maritime surveillance information at global level. C-SIGMA stands for Collaboration in Space for International Global Maritime Awareness. It encompasses the current use of presently available satellite resources together with the development of new space based capabilities and the issues associated with their integration into enhanced maritime surveillance systems at national and international level.

Formal/informal: informal

Members: 9

Website: http://c-sigma.org/

<u>Contact at the JRC:</u> Harm Greidanus, JRC-IPSC JRC Role: Member of the Advisory Committee

5.6 Contraffic-ENS (Entry Summary Declarations) pilot: Real time analysis for security and safety risk assessment

Involved JRC-Institutes: IPSC

Status: active

<u>Description:</u> Contraffic is a JRC technology for the systematic gathering of Container Status Messages (CSM) and risk analysis based on container routes. Contraffic-ENS exploits Entry Summary Declarations (ENS, advanced cargo information) for the real-time targeting of high risk containers posing security and safety threats

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> Document on the terms of references authored by TAXUD (limited in terms of distribution)

Members: 7-10 member state customs that conduct the pilot with JRC and TAXUD

Coordinator: TAXUD

Website: http://ipsc.jrc.ec.europa.eu/index.php/Projects/318/0/

Contact at the JRC: Aris Tsois, JRC-IPSC

JRC Role: hub and principal animator (data collection and analysis)

5.7 Scientific, Technical and Economic Committee for Fisheries (STECF)

Involved JRC-Institutes: IPSC

Status: active

<u>Description</u>: The implementation of the CFP requires the assistance of highly qualified scientific personnel, particularly in the fields of marine biology, marine ecology, fisheries science, fishing gear technology and fishery economics. For that purpose the Scientific, Technical and Economic Committee for Fisheries (STECF) was established by Commission Decision 93/619/EC, renewed in 2005 by Commission Decision 2005/629/EC, amended by Commission Decision 2010/74/EU and Commission Decision 2012/C 72/06.

The Members of the STECF are nominated by the Commission from highly qualified scientific experts having competence in these fields. The term of a Member of the Committee is 3 years and is renewable.

Acting in co-operation with officials of the Commission the Committee may form internal working groups, whose meetings can also be attended by invited experts. The Commission provides the secretariat of the Committee and of the working groups.

The STECF may be consulted by the Commission on all problems connected with the provisions governing access to zones and resources of EU fisheries and the regulation of fisheries activities. The opinion of STECF is crucial in the process of setting annual Total Allowable Catches TACs and quotas.

The Committee produces an annual report on the situation as regards fisheries resources and on developments in fishing activities. It also reports on the economic implications of the fishery resources situation.

Formal/informal: formal

The terms of cooperation are defined in: Commission Decision of 27 October 2010 on the appointment of members of the Scientific, Technical and Economic Committee for Fisheries and the establishment of a reserve list (2010/C292/04) from EU national fisheries labs, universities; Experts are invited by JRC but paid on DG MARE budget (legal sub-delegation MARE-JRC)

Members: currently 34 members for a term of three years

Coordinator: JRC-IPSC

Website: http://stecf.jrc.ec.europa.eu/

Contact at the JRC: H. Doerner, JRC-IPSC

JRC Role: Coordinator

5.8 Data Collection Framework (for scientific data in the fishery sector Regulation EC199/2008)

Involved JRC-Institutes: IPSC

Status: active

<u>Description:</u> The Data Collection Framework (DCF) provides a common framework for the EU community to collect, manage, and share data within the fisheries sector. The Data Collection Framework is governed by specific EU legislation, (EC 199/2008), (EC 665/2008), and (2010/93/EU). The collected data forms the basis for scientific advice regarding the EU's Common Fisheries Policy whose objective is for commercial fishing to be conducted in a sustainable manner and based upon scientific assessments. EU member countries conduct annual surveys and stock assessments on a number of commercial fish stocks, data which then lends itself to international recommendations such as maximum fishing quotas.

Formal/informal: informal

Members: national correspondents in all member states

Coordinator: DG MARE

Contact at the JRC: F. Natale, JRC-IPSC

<u>JRC Role</u>: JRC provides technical services and manages the collection of scientific fishery data at EU level and its provision to scientific working groups of STECF.

5.9 International Council for the Exploration of the Sea (ICES) Working Group on Applied Genetics for Fisheries and Agriculture (WGAGFM)

Involved JRC-Institutes: IPSC

Status: active

<u>Description:</u> The Working Group on Application of Genetics in Fisheries and Mariculture (WGAGFM) provides advice on methods to describe, conserve, and manage intra-specific biodiversity, focusing on the application of genetic and genomic analyses.

Formal/informal: formal

The terms of cooperation are defined in: WAGFAM terms of references

Members: 20 member countries

Coordinator: ICES

Website: http://www.ices.dk/community/groups/Pages/WGAGFM.aspx

Contact at the JRC: J. Martinsohn, JRC-IPSC

JRC Role: invited member

6 IES – Institute for Environment and Sustainability

6.1 Air Quality Reference Laboratories (AQUILA)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: AQUILA is a network of the JRC and National Air Quality Reference Laboratories, which are legally responsible for the quality assurance of air pollutant measurements in their member States, which implies the organisation of national QA/QC programmes and the participation to European QA/QC programmes. The objectives of AQUILA are to provide expert judgement, to promote the harmonisation of air quality measurements among EU, EFTA and CCs, to co-ordinate QA/QC activities, method development and validation, to participate in standardisation activities, to develop common research projects and pilot studies and to offer a forum for information exchange in form of training courses, workshops and conferences.

Formal/informal: formal

<u>Legal Basis:</u> Air Quality Directive (AQD =) Directive 2008/50/EC

<u>The terms of cooperation are defined in:</u> AQD, Memorandum of Understanding, Chapter 1 of AQUILA document "National Air Quality Reference Laboratories and the European Network – AQUILA: Roles and Requirements for Measurement Traceability, Accreditation, Quality Assurance/Quality Control, and Measurement Comparisons, at National and European Levels"

(http://ec.europa.eu/environment/air/quality/legislation/pdf/aquila.pdf)

Start Date: 01.01.2001

Members: 37 organisations from 30 states (28 MS, CH, NO)

<u>Associated members:</u> 3 organisations Network coordination: rotates every 4 years

Website: http://ies.jrc.ec.europa.eu/aquila-project/aquila-homepage.html

Contact at the JRC: Annette Borowiak, JRC-IES

JRC Role: Co-chair and secretariat

<u>Deliverables:</u> Guidance documents for the implementation of the Air Quality Directive (AQD)

6.2 Infrastructure for Spatial Information in Europe (INSPIRE)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: The INSPIRE directive came into force on 15 May 2007 and will be implemented in various stages, with full implementation required by 2019. The INSPIRE directive aims to create a European Union (EU) spatial data infrastructure. It lays down general rules for the establishment of an infrastructure for spatial information in Europe for the purposes of environmental policies and policies or activities which may have a direct or indirect impact on the environment. This infrastructure shall be based on

infrastructures for spatial information established and operated by the Member States. The component elements of those infrastructures shall include: metadata, spatial data sets as described in Annexes I II III of INSPIRE and spatial data services; network services and technologies; agreements on sharing access and use; co-ordination and monitoring mechanisms; process and procedures.

6.2.1 Maintenance Implementation Group (MIP)

<u>Description</u>: In the INSPIRE Committee meeting on 8 April 2013, it was agreed to set up a Commission expert group called INSPIRE Maintenance and Implementation Group (MIG) with representatives of the INSPIRE national contact points. The tasks of the INSPIRE MIG shall be:

- to bring about an exchange of experience and good practice related to the implementation of the INSPIRE Directive and the Implementing Rules
- to identify and give advice about the priority issues to be addressed in the maintenance of the INSPIRE Directive, Implementing Rules and/or Technical Guidance documents
- to identify issues related to INSPIRE implementation (including, but not limited to, technologies, standards, methods, coherence across INSPIRE chapters and communication measures to be adopted) and advise the Commission on how to address them
- to prepare and regularly update the rolling work programme for INSPIRE maintenance and implementation to be agreed by the INSPIRE Committee and the Commission

The basis of the work of the MIG and its sub-groups will be a common work programme that will be based on issues and change requests submitted by INSPIRE stakeholders. The MIG was formally established and started its work in October 2013.

Members: 64 Secretariat: EEA Coordinator: JRC

Website: http://inspire.ec.europa.eu/

Formal/informal: formal

<u>Legal Basis:</u> <u>Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)</u>

<u>The terms of cooperation are defined in:</u> several <u>Commission Regulations</u>, <u>MIG Terms of References</u>

Contact at the JRC: Michael Lutz, JRC-IES

JRC Role: Coordinator

6.2.2 INSPIRE Committee

<u>Description</u>: The regulatory nature of the Implementing Rules requires the Commission to present them to a Regulatory Committee of Member State representatives, referred to as the INSPIRE Committee. The INSPIRE Committee has the general task to assist the Commission and to deliver its opinion on the draft Implementing Rules proposed by the Commission. This opinion shall be delivered in the form of a vote.

Formal/informal: formal

<u>Legal Basis:</u> <u>Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)</u>

The terms of cooperation are defined in: several Commission Regulations

Members: 64 Secretariat: EEA Coordinator: JRC

Website: http://inspire.ec.europa.eu/

Contact at the JRC: Michael Lutz, JRC-IES

JRC Role: Coordinator

Deliverables: INSPIRE work programme, Implementing rules required for the future

implementation of INSPIRE, Coordination of INSPIRE implementation

6.3 EurAqua

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: EurAqua is the European Network of Freshwater Research Organisations. The aim of EurAqua is to contribute substantially to the development of European freshwater science and technology and its dissemination on a European scale, thus having a significant input on the development of the scientific and economic basis of European water management.

Formal/informal: formal

Legal Basis: Water Framework Directive (2000/60/EC) and related documents

Members: 24

Coordinator: Deltares

Website: http://www.euraqua.org/

Contact at the JRC: Giovanni Bidoglio, JRC-IES

JRC Role: Observer

6.4 International Ocean Colour Coordinating Group (IOCCG)

Involved JRC-Institutes: IES

Status: active

Description: the IOCCG was established under the auspices of the Intergovernmental Oceanographic Commission (IOC), following a resolution endorsed by the Committee on Earth Observation Satellites (CEOS), to act as a liaison and communication channel between users, managers and agencies in the Ocean Colour arena. The IOCCG was set up (1) to serve as a communication and coordination channel between data providers and the global, user community of satellite-ocean-colour data, and so to maximize the benefits that accumulate from international investments in ocean-colour science and technology; (2) to construct a partnership, at the international level, between the space agencies and the users of satellite-ocean-colour data to develop and coordinate data utilization; (3) to work closely with the appropriate international bodies, international scientific programmes, satellite-ocean-colour-mission offices and other agencies to harmonize the international effort and advance ocean-colour science and its applications; (4) to develop a collective voice for the community of users of ocean-colour data and to

articulate this voice to the appropriate international bodies, international scientific programs and space agencies; and (5) to promote the long-term continuity of satellite ocean-colour data sets; the development of operational, ocean-colour data services and new generations of ocean-colour sensors; and the integration of data from complementary ocean sensors.

Formal/informal: formal

Legal documents: Copernicus Regulation

The terms of cooperation are defined in: Terms of Reference

Start Date: 01.01.1996

Members: 26

Coordinator: rotating

Website: http://www.ioccg.org/about_ioccg.html

Contact at the JRC: Giuseppe Zibordi and Mark Dowell, JRC-IES

JRC Role: Network Partner, Member of Committee and Executive Committee

Deliverables: Scientific reports, training courses, workshops and symposia (especially for

developing countries), software tools and data access networks

6.5 Partnership for European Environmental Research (PEER)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: PEER is a partnership of eight of the largest European environmental centres founded in 2001 with the aim of combining forces to follow a joint strategy in environmental sciences and to enhance research on ecological sustainability. The PEER mission is to build a strategic partnership of major European public environmental research centres; to lead a European Research Area that strengthens the knowledge base for the sustainable development of a changing world; and to foster innovative interdisciplinary research and cross-cutting approaches in support of national and European policy-makers, industry and society.

Formal/informal: formal

The terms of cooperation are defined in: CA signed Oct 2012

Start Date: 2001

Partners: 8

Coordinator: rotating

Website: http://www.peer.eu/

Contact at the JRC: Ole Ostermann (Marios Avraamides), JRC-IES

JRC Role: member

<u>Deliverables:</u> Joint reports, workshops, staff exchange.

6.6 Radiation Transfer Model Intercomparison (RAMI)

Involved JRC-Institutes: IES

Status: active

<u>Description:</u> The RAMI network is an international effort to evaluate the quality of radiative transfer models used to exploit satellite observations in the solar spectral domain. The main outcomes include demonstrated improvements in the quality,

reliability and performance of the participating models, reference datasets and the publication of standardised benchmarking protocols as well as the intercomparison results in the refereed scientific literature and on the WWW. Different phases of RAMI are characterised by an increased realism of the mimicked plant environments and the simulated measuring devices.

Formal/informal: formal

<u>Legal Basis:</u> RAMI is a recognised activity of the International Radiation Commission (http://www.irc-iamas.org/groups/); RAMI is also a focus theme of the IVOS subgroup of the CEOS working group on calibration and validation (http://www.ceos.org/images/WGCV/WGCV35/WGCV_work_plan_v5.4.pdf);

Copernicus Programme COM 377/2014

Start Date: 01.01.1999

Members: variable (from 8 for RAMI-1 in 1999, to 18 for RAMI-3 in 2007; RAMI-IV

part A had 11)

Website: http://rami-benchmark.jrc.ec.europa.eu/

Contact at the JRC: Jean-Luc Widlowski, JRC-IES

JRC Role: Leader

Deliverables: Definitions of standard experiments; Definitions of evaluation criteria;

Definition of reference datasets; Benchmark results; Publications and workshops.

6.7 **ENSEMBLE**

Involved JRC-Institutes: IES

Status: active

<u>Description:</u> Ensemble is a system for the real time exchange of atmospheric dispersion model predictions. The system collects the results of 24 models used operationally in 19 meteorological offices and environmental protection agencies (mainly in Europe but also US and Canada). The models can predict the dispersion of a radio nuclide emitted in the atmosphere as a consequence of an accidental release from a nuclear power plant or any other source. Through the ENSEMBLE web interface every remote user can consult all model results and compare them. In this way all countries can rely on the results of 24 models rather than the in-house system.

Formal/informal: formal

The terms of cooperation are defined in: Euratom treaty III, art 36+39

Start Date: 01.09.2000

Members: 19

Coordinator: JRC-IES

Website: http://ensemble2.jrc.ec.europa.eu/public/

Contact at the JRC: Stefano Galmarini, JRC-IES

JRC Role: Leader

<u>Deliverables:</u> Periodic exercises, system upgrading, research

6.8 Landscape Europe

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: It is the mission of LANDSCAPE EUROPE to develop, expand and disseminate knowledge on European landscapes by actively involving and drawing upon the wide range of relevant disciplines with the goal to support landscape values as a central and cross-cutting environmental issue in policy, science, education and human living. Based on agreed-upon objectives and definitions, LANDSCAPE EUROPE will actively approach national and international governmental as well as non-governmental institutions in order to make its knowledge widely available, understood and put into action.

Formal/informal: formal

The terms of cooperation are defined in:

Members: 5 full member organisations from 5 countries, 15 associated member

organisations

<u>Coordinator:</u> Landscape Europe Office, ILE SAS

Website: http://www.landscape-europe.net/

Contact at the JRC: Maria-Luisa Paracchini, JRC-IES

JRC Role: Full member

<u>Deliverables:</u> competitive projects, books, conferences

6.9 European Monitoring and Evaluation Programme

Involved JRC-Institutes: IES

Status: active

Description: The Co-operative programme for monitoring and evaluation of the long-range transmission of air pollutants in Europe (EMEP) is a scientifically based and policy driven programme under the Convention on Long-range Transboundary Air Pollution (CLRTAP) for international co-operation to solve transboundary air pollution problems. The JRC runs one of only two stations in Italy that measure air pollution within the framework of the European Monitoring and Evaluation Programme. The JRC EMEP station monitors rainwater chemistry, gaseous pollutant concentrations, and several physical and chemical parameters characterizing particulate matter. The JRC is in charge of the annual inter-laboratory comparison of particulate organic and elemental carbon measurements within EMEP. It is also steering some modelling work, co-leading the Task Force on Hemispheric Transport of Air pollutants (TFHTAP), and responsible for model intercomparison project (Eurodelta 3) within the Task Force on Measurement and Modelling.

Formal/informal: formal

The terms of cooperation are defined in: A proposal of the DG Environment, in agreement with the JRC, following the council resolution N°81/462/EEC, article 9, to support the implementation of the EMEP programme.

Members: 44

Coordinator: EMEP steering body, currently chaired by Sonja Vidic, Environment

Department. Meteorological and Hydrological Service of Croatia

Website: http://www.emep.int/

Contact at the JRC: Jean-Philippe Putaud, JRC-IES

JRC Role: Full member

<u>Deliverables</u>: air pollution measurement data, inter-laboratory comparison exercises, model outputs

6.10 European Soil Bureau Network

Involved JRC-Institutes: IES

Status: active

<u>Description:</u> The European Soil Bureau Network (ESBN) was created in the late nineties as a network of national soil science institutes. The network brings together national institutes from over 40 countries in order to collect, harmonise, organise and distribute soil information for Europe and beyond. The demand for information is constantly increasing. The work addresses a range of issues including the leaching of agrochemicals, disposal of waste, degradation of soil structure, estimation of erosion and soil stability, assessing the suitability (and sustainability) for traditional and alternative crops and supply of water at catchment level.

Formal/informal: formal

The terms of cooperation are defined in:

Members: rd. 70 Coordinator: JRC-IES

Website: http://eusoils.jrc.ec.europa.eu/esbn/Esbn_overview.html

Contact at the JRC: Luca Montanarella, Marc Van Liedekerke, Panos Panagos

JRC Role: Coordinator

<u>Deliverables</u>: Cartographic output from the EUSIS (soil erosion risk maps, organic carbon content, background concentration of heavy metals, soil suitability for the major crops, soil degradation, desertification, groundwater vulnerability to agrochemicals etc.); Technical and scientific support to the UNCCD Annex IV

6.11 Forum for Air Quality Modelling in Europe (FAIRMODE)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: The Forum for Air quality Modelling (FAIRMODE) is a joint response action of the European Environment Agency (EEA) and the European Commission Joint Research Centre (JRC). Its aim is to bring together air quality modellers and users in order to promote and support the harmonised use of models by EU member countries, with emphasis on their application to the European Air Quality Directive. FAIRMODE focuses on:

- Coordinating and gathering information from modellers and users within Europe.
- Developing guidance and recommendations on air quality modelling for modelers, users and the European Commission.
- Providing harmonised tools and methodologies for model benchmarking and assessment.
- Providing recommendations for scientific research in air quality modelling.

Formal/informal: formal

The terms of cooperation are defined in: Terms of References

Members: 24 MS have officially nominated national representatives; in total, the network

involves ca. 150-200 experts

Coordinator: JRC-IES

Website: http://fairmode.jrc.ec.europa.eu/

Contact at the JRC: Philippe Thunis, Claudio Belis

JRC Role: Coordinator

6.12 European Platform on Life Cycle Assessment (EPLCA)

Involved JRC-Institutes: IES

Status: active

Description: The Integrated Product Policy (COM (2003)302) identified Life Cycle Assessment (LCA) as the "best framework for assessing the potential environmental impacts of products". It highlighted the necessity for a Platform and to increase the availability of quality-assured life-cycle data and studies. The European Platform on Life Cycle Assessment is implemented by the Joint Research Centre (JRC), Institute for Environment and Sustainability (IES), in close coordination with DG Environment, Directorate Green Economy. This Platform facilitates the quality and availability of life cycle methods, data, and studies. These are essential to decision support in business and policy, at both macro and micro scale, for identifying improvement options related to goods and services, communication, impact assessment, monitoring, target setting, and various other applications. Key stakeholders including EU-level business associations, member states, third countries and the United Nations Environment Programme, contribute to the Platform and participate in its Advisory Groups.

Formal/informal: Formal

<u>The terms of cooperation are defined in:</u> Memorandum of Understanding between JRC and the members of the Advisory Groups

Members: 15 Coordinator: JRC

Website: http://eplca.jrc.ec.europa.eu

Contact at the JRC: David Pennington

<u>JRC Role</u>: Developing and maintaining the Platform to meet EC policy support needs,

Creating consensus through intense stakeholder interaction

6.13 Life Cycle Data Network (LCDN)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: The Life Cycle Data Network is a web-based infrastructure giving access to quality assured data for Life Cycle Assessment (LCA) considering supply chains, use and end of life along with all associated health, environment and resource considerations. Emissions and resource consumption data are provided by different actors, such as industry, national LCA projects, research groups and consultants. It supports Policy development and application, Environmental Footprint activities and European Commission Life-Cycle based projects. Data can be consulted via searches, filtering, and sorting. JRC is contributing to the LCDN also publishing through it the European Life Cycle Database (ELCD).

Formal/informal: Informal

The terms of cooperation are defined in: N/A

Members: 8, more partners are foreseen

Coordinator: JRC

Website: http://eplca.jrc.ec.europa.eu/ILCDRegistry/

Contact at the JRC: Marco Recchioni

JRC Role: Provision of Life Cycle Inventory (LCI) data; Partners involvement and

capacity building; Management partners' data registration

6.14 European Alien Species Information Network

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: Recognising the increasingly serious problem of Invasive alien species (IAS) in Europe, the European Commission in September 2013 proposed a dedicated Regulation on Invasive Alien Species. The European Alien Species Information Network (EASIN) is an initiative of the Joint Research Centre of the European Commission, and aims to enable easy access to data and information on Alien Species (AS) in Europe from existing on-line databases to assist policy makers and scientists in their efforts to tackle AS invasions. EASIN facilitates the exploration of existing alien species information from a variety of distributed information sources by developing and making freely available tools and interoperable web services compliant with internationally recognized standards. The EASIN web tools and services can be utilized freely and independently by any website, while ownership of the data remains with its source, which is properly cited and linked.

Formal/informal: formal

Members: 6 operational partners

Coordinator: JRC-IES

Website: http://easin.jrc.ec.europa.eu/

Contact at the JRC: Ana Cristina Cardoso

JRC Role: Coordination, software development, research on AS

6.15 Global Soil Partnership (GSP)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: In 1982 FAO adopted a World Soil Charter spelling out the basic principles and guidelines for sustainable soil management and soil protection to be followed by governments and international organizations. Besides helping implement the provisions of the World Soil Charter, the Global Soil Partnership is intended to raise awareness and motivate action by decision-makers on the importance of soils for food security and climate change adaptation and mitigation.

The partnership is also aimed at providing favourable policy environment and technical solutions for soil protection and management and at helping mobilize resources and expertise for joint activities and programmes.

The Global Soil Partnership will complements the Global Water Partnership initiated by the United Nations Development Programme and the World Bank in 1996 to coordinate the development and management of water, land, and related resources in order to maximise economic and social welfare without compromising the sustainability of vital environmental systems.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> GSP Terms of Reference (accessible via the website)

Members: rd 120

Coordinator: GSP Secretariat, hosted by FAO

Website: http://www.fao.org/globalsoilpartnership/en/ Contact at the JRC: Luca Montanarella, JRC-IES

JRC Role: partner, expert on the Intergovernmental Panel on Soils

6.16 Latin American Network of Knowledge Centres in the Water Sector

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: The specific objective of RALCEA is to foster information-based policy and to promote south-south cooperation on capacity development in the water sector by supporting the development of a network of knowledge centres in Latin America.

The RALCEA project relies first on the improvement and reinforcement of scientific/technical collaborations between research institutions and academia at regional level. RALCEA also offers a regional platform for the direct dialogue and collaboration between scientists and policy makers to strengthen the LA water sector using regional expertise and capacities. Therefore, RALCEA network includes 15 national focal points (representatives of governments in the water sector) and 30 LA knowledge centre/research consortium from 18 Latin American countries (including Cuba). The work of RALCEA is organized around three thematic working axes of interest for the region: Regional Water balance (RWB), Stakeholder Mapping and Capacity Building (SMCB) and Water Quality and Sanitation (WQS). RALCEA is a 4-year EC project (2010-2014) that has supported the setup of a network of knowledge centres in the water sector in Latin America, and the implementation of activities of the RALCEA thematic axes driven by policy needs of the water sector.

Formal/informal: formal

The terms of cooperation are defined in: Administrative Arrangement N°2010-241-167 and Operative Guide (http://www.aquaknow.net/en/ralcea-centros-de-excelencia-en-america-latina/document/guia-operativa-ralcea)

<u>Members:</u> 45 institutions (30 research/academia institutions + 15 representatives of the Latin America governments)

Coordinator: DG DEVCO

Website: http://www.aquaknow.net/en/ralcea-centros-de-excelencia-en-america-latina

Contact at the JRC: Cesar Carmona Moreno

JRC Role: Leader coordinator.

6.17 AERONET-OC (Ocean Color component of the Aerosol Robotic Network)

Involved JRC-Institutes: IES

Status: active

<u>Description</u>: AERONET-OC is the Ocean Colour component of the Aerosol Robotic Network (AERONET) developed to sustain atmospheric studies at various scales with measurements from worldwide distributed autonomous sun-photometers. AERONET-OC, with respect to AERONET, provides the additional capability of measuring the radiance emerging from the sea (i.e., water-leaving radiance) with modified sun-photometers installed on offshore platforms like lighthouses, oceanographic and oil towers. AERONET-OC is instrumental in satellite ocean colour validation activities through standardized measurements a) performed at different sites with a single measuring system and protocol, b) calibrated with an identical reference source and method, and c) processed with the same code.

Formal/informal: formal

Legal Basis: Copernicus Regulation

<u>The terms of cooperation are defined in:</u> Eos, Transactions American Geophysical Union, volume 87, issue 30, pages 293–297, 25 July 2006 DOI: 10.1029/2006EO300001

Start Date: 01.04.2002

Members: 17

<u>Network coordination</u>: National Aeronautics and Space Administration (NASA) <u>Website</u>: http://aeronet.gsfc.nasa.gov/new_web/ocean_levels_versions.html

Contact at the JRC: Giuseppe Zibordi, JRC-IES

JRC Role: Network Member, Scientific Responsible for Processing Algorithms and

Quality Control of Data

Deliverables: Time-Series d of atmospheric and marine optical data

7 IHCP – Institute for Health and Consumer Protection

7.1 European Network of GMO Laboratories (ENGL)

Involved JRC- Institutes: IHCP (leading), IRMM

Status: active

Description: ENGL was formed by the European Union and the National Reference Laboratories (NRLs) that in the context of the enforcement of the EU regulations of Genetically Modified Organisms (GMOs) are responsible for the correct detection, identification and quantification of GMOs by the enforcement authorities in the Member States. ENGL plays an eminent role in the development, harmonisation and standardisation of means and methods for sampling, detection, identification and quantification of GMOs in a wide variety of products, ranging from seeds, grains, to food and feed stuff. The primary purpose of ENGL is to help solve the large number of challenges that enforcement laboratories face in the field of detection, identification and quantification of GMOs.

Formal/informal: formal

Legal Basis: Regulation (EC) No 1981/2006

The terms of cooperation are defined in: ENGL Consortium Agreement N. CA31364

Start Date: 1 Feb 2000 (inauguration 4 Dec 2002)

Members: 97 organisations from 31 states (28 member states, CH, NO, TR)

<u>Coordinator:</u> European Union Reference Laboratory for GM Food and Feed (EU-RL GMFF)

Website: http://gmo-crl.jrc.ec.europa.eu/engl/ENGL.html

Contact at the JRC: Joachim Kreysa (chair), Marco Mazzara (scientific secretary) IHCP-MBG, Hendrik Emons, JRC-IRMM

<u>JRC Role</u>: Further to the knowledge base on GMO testing with a view to further harmonisation and standardisation of GMO testing within the EU. The ENGL meets regularly and comprises a Steering Committee with a number of specific technical WG, subdivided into task groups, and other experts groupings.

Deliverables:

Specific workgroups are set up to deal with:

- Appropriate protocols for validation studies and for proficiency testing
- Appropriate reference materials
- Design, content and functionalities of a molecular register
- Compatibility between methods and the eventual requirements for further research to understand the appropriateness of DNA and protein based methodologies for the detection and identification of GMOs

Deliverables of IRMM:

- Increase the number of events for which GMO CRMs are available
- Deliver advice concerning the use of GMO CRMs
- Carry-out research concerning production techniques for GMO CRMs for new species
- Investigate the suitability of alternative GMO CRMs

7.2 ECA "Urban Air, Indoor Environment & Human Exposure"

Involved JRC- Institutes: IHCP

Status: active

<u>Description</u>: ECA implements a multidisciplinary collaboration of European scientists. The ultimate goal of which is the provision of healthy and environmentally sustainable buildings. To accomplish this task ECA has been dealing with all relevant aspects of the built environment including thermal comfort, pollution sources, the quality and quantity of physical, chemical and biological stressors and processes, energy use, and ventilation in buildings. ECA focuses on human exposure assessment, seen as part of environmental health risk assessment while considering the needs of urban air and indoor air related quality management aspects of buildings.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> ECA mandate established by the ECA Steering Committee

<u>Start Date:</u> 1988. Till 1999 running as European Collaborative Action (ECA) "Indoor Air Quality & its Impact on Man", since 1999, running as European Collaborative Action (ECA) "Urban Air, Indoor Environment & Human Exposure"

<u>Members:</u> Approximately 400 international experts of which 40 are ECA Steering Committee members.

Coordinator: JRC-IHCP/I.1

Website: http://ihcp.jrc.ec.europa.eu/our_activities/public-

 $\frac{health/indoor_air_quality/eca/eca-european-collaborative-action-on-urban-air-indoor-environment-and-human-exposure$

Contact at the JRC: Stylianos Kephalopoulos, JRC-IHCP/I.1

JRC Role: Co-ordinator

Deliverables:

- Reports summarising available state-of-the-art knowledge about key issues in the fields of urban air, indoor environment and human exposure.
- Development and/or validation of guidelines, reference methods and harmonisation frameworks related to human exposure and associated health effects in relation to building related air quality.
- Provision of a forum to help exchanging centrally of information and facilitating collaboration between national and international organizations active in the aforementioned fields of competence (e.g. EU, WHO, NATO/CCMS, U.S. EPA, EEA).
- Organizing workshops, symposia, seminars and training courses and other activities aimed at helping the transfer of knowledge in EU Member States and Accession Counties.

7.3 Task Force on testing migration for materials, articles, kitchenware and equipment in contact with foodstuffs

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: A network of behalf of DG SANCO E6 in support of the technical implementation of Regulation (EU) 10/2011 and the framework Regulation 1935/2004 in the form of a number of technical guidelines for testing migration of chemicals from materials, articles, kitchenware and food processing equipment in contact with foostuffs.

Formal/informal: formal

Legal Basis: Regulation (EU) 10/2011

The terms of cooperation are defined in: guidance documents

Start date: 01.01.2004

Members: 10

Network coordination: JRC-IHCP (Secretariat: JRC-IHCP-EURL-

FCM@jrc.ec.europa.eu)

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl_food_c_m/guidance-documents

Contact at the JRC: Catherine Simoneau and Eddo Hoekstra, IHCP

JRC Role: Expertise and Strategies

<u>Deliverables:</u> Technical guidelines accompanying a number of regulation for FCM such as Regulation (EU) 10/2011; Regulation (EU) 284/2011, Regulation (EC) 1935/2004.

7.4 Mathematical Modelling Task Force Food Contact Materials (TF MATHMOD)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: A network of behalf of DG SANCO E6 for the update of migration data toward the extension of validation of diffusion models to predict migration of chemicals from food contact materials.

Formal/informal: formal

Legal Basis: Regulation (EU) 10/2011

The terms of cooperation are defined in: guidance documents

Start date: 01.01.2004

Members: 10

Network coordination: JRC-IHCP (Secretariat: JRC-IHCP-EURL-

FCM@jrc.ec.europa.eu)

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl_food_c_m/guidance-documents

Contact at the JRC: Eddo Hoekstra, Aguar, Simoneau, JRC-IHCP

JRC Role: Expertise and Strategies

<u>Deliverables</u>: Recommendations for practical guide or Note for Guidance; recommendations for update of Regulation (EU) 10/2011; technical guidance document

7.5 European Network of Government Laboratories for Tobacco and Tobacco Products (GoToLab)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: A Network of experts for tobacco control from authorities of the Member States. Most members like the JRC, of the GoToLab are also active members of the TobLabNet of the WHO.

Formal/informal: formal

<u>Legal Basis</u>: The Network was established on the basis of EU Directive 2001/37/EC on Tobacco and Tobacco Products, and in consideration of the substantial differences between Member States laws and the EU Directive. Moreover, there was a lack of harmonised information for consumers on health risks; analytical methods for tobacco products and constituents were missing; ingredients and additives were not harmonised; toxicological data were missing and there were no Community-wide measurement methodologies.

The terms of cooperation are defined in: guidance documents

<u>Start date:</u> 2002 (The first meeting took place in Stuttgart on January 15th 2002. It was attended by participants from 5 Member States, namely, France, Germany, Great Britain, The Netherlands and Sweden.)

Members: 24 MSs + Switzerland as observer

<u>Network coordination</u>: Chemisches und Veterinaeruntersuchungsamt, Sigmaringen, Germany

Website: http://web.jrc.ec.europa.eu/project/gotolab/index.html

Contact at the JRC: Pilar Aguar, Diana Rembges, JRC-IHCP

<u>JRC Role</u>: expertise in the areas of tobacco ingredients and environmental tobacco smoke (Tobacco Directive)

<u>Deliverables:</u> Harmonised and validated of analytical methods for tobacco control.

7.6 European Network of National Reference Laboratories for Official Controls for Food Contact Materials of the EURL-FCM

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: The official network of national reference laboratories nominated by their competent authorities (as per Regulation on official of feed and food controls (OFFC) EC/882/2004) in support of the European Reference Laboratory for food contact materials.

Formal/informal: formal

Legal Basis: Regulation on Official Feed and Food Controls (EC/882/2004)

The terms of cooperation are defined in: guidance documents

Start date: 2004 Members: 39

Network coordination: JRC-IHCP (Secretariat: JRC-IHCP-EURL-

FCM@jrc.ec.europa.eu)

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl_food_c_m

Contact at the JRC: Catherine Simoneau, JRC IHCP

JRC Role: Expertise and Strategies in the area of food Contact Materials. Improve and expand the knowledge base on food contact materials testing with a view to further harmonisation and standardisation on food contact /food safety policies within the EU. The Network of NRLs for official controls and EURL FCM meets regularly and can include specific ad-hoc task force and /or the development of clusters of competence to tackle the different aspect of different areas of testing.

<u>Deliverables:</u> As per 882/2004 exchange of information, expertise, analytical methods for enforcement of compliance, mutual training of staff, exchange of alerts of noncompliance from campaign results.

Specific work examples:

- Appropriate protocols for validation studies and for proficiency testing
- Appropriate reference materials
- Design, content and functionalities on the development of database for substances/chemicals in food contact
- Development of new methods for the anticipation of policies (e.g. ceramics)

Deliverables of IRMM:

- Increase the number of substances calibrants available to official controls
- Deliver advice concerning the safety and testing for compliance of food contact materials and articles for the EU consumer market.
- Carry-out research concerning the development of new approaches for testing other materials and multitarget multiinstrumental multianalytes methods.

7.7 EU National Coordinators for Testing Methods (EU NCTM)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: In order to ensure a harmonisation of test methods in as a wide international context as possible, according to the principle of Mutual Acceptance of Data, the Commission participates in the OECD Test Guidelines Programme. The ECB

coordinated the introduction of projects for new test guidelines through the network of National Coordinators for Testing Methods.

Formal/informal: formal

Members: 35

Network coordination: JRC-IHCP

Contact at the JRC: Juan Riego Sintes, IHCP NBS

<u>JRC Role</u>: To coordinate the network and promote the harmonisation of testing guidelines in the EU and to promote the Mutual Acceptance of Test Data at the OECD.

<u>Deliverables:</u> Testing methods guidelines harmonised at the EU level and introduced at the OECD level.

7.8 Group of Coordination of European Custom Laboratories

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: A Network of experts for tobacco control from authorities of the Member States. Most members like the JRC, of the GoToLab are also active members of the TobLabNet of the WHO.

Formal/informal: formal

<u>Legal Basis:</u> The Group of European Customs Laboratories (GCL) was founded in 1999 with the objective of coordinating and promoting the activities of the European Customs Laboratories. In July 2013 the GCL officially changes its name to become the Customs Laboratories European Network (CLEN) and its actions are decided through its plenary annual meeting in the frame of Customs 2020 programme. The CLEN acts as an advisory body of DG TAXUD on all questions involving Customs Laboratories and chemical or other scientific matters. It also serves as forum for the exchange of views by the Customs Laboratories of the Member States and Candidate Countries.

The CLEN aims to rationalise, coordinate and optimise the use of human and technical resources among the European Customs Laboratories and to share good practice and scientific knowledge. One of its missions is to anticipate changes in the customs environment and to ensure that the customs laboratories are sufficiently prepared to meet both current and future challenges. The European customs laboratories, play an essential role in the fight against illegal trafficking and fraud by providing the scientific expertise needed to enforce European regulations in all matters relating to customs tariff, classification and nomenclature. The customs laboratories help to protect society, whether it is through establishing the correct classification of goods for revenue purposes or through protecting European citizens against unsafe or dangerous products or emerging public health & safety risks. Detection of counterfeited or fake products (eg. in pharmaceutical and medicine products), detecting illegal imports like narcotics and drug precursors, protecting consumers against dangerous goods, safeguarding the environment and helping to combat terrorism are all challenges that European customs, and customs laboratories, are increasingly called on to face in the modern era. The CLEN addresses these issues through various activities organised under the six following actions:

Action 1 - ILIADe - Inter Laboratory Inventory of Analytical Determination

Action 2 - Inter-comparisons and method validations

Action 3 - Networking on quality

Action 4 - Communication and Strategy (including Conferences and seminars)

Action 5 - Scientific expertise

Action 6 - European Customs Inventory of Chemical Substances

Formal/informal: formal

<u>Legal Basis:</u> Article 12, paragraph 3, of Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff provides that: "In order to ensure the uniform application of the Common Customs Tariff and the Taric, the Commission shall promote coordination and harmonisation of practices in Member States' customs laboratories, using wherever possible, computerised means". Article 10 'Project groups and steering groups' of the Decision No 624/2007/EC of the European Parliament and of the Council of 23 May 2007 establishing an action programme for customs in the Community (Customs 2013) provides that: "The Commission, in cooperation with the participating countries, may establish project groups with responsibility for carrying out specific tasks to be completed within a specified time-scale, and steering groups which shall perform activities of a coordinating nature."

Moreover in their resolution of 19 June 2008 on the fortieth anniversary of the Customs Union, Members of the European Parliament welcomed the initiative to establish a European customs laboratories' network, with a view to uniform interpretation of EU technical standards.

<u>The terms of cooperation are defined in:</u> Programme Customs 2020; AA CLEN2SAND (at signature)

Note: The MoU between JRC and DG TAXUD could be updated to better account and integrate officially the scientific contribution and support that the JRC has been providing to DG TAXUD and CLEN (ex GCL) for more than a decade.

Start date: 1999

Members: about 80 Customs laboratories from the 28 Member States

Network coordination: DG TAXUD A4

Website:

http://ec.europa.eu/taxation_customs/customs_controls/customs_laboratories/group_ecl/index_en.htm

Contact at the JRC: Pilar Aguar, Guillou, JRC-IHCP

JRC Role: The JRC has been actively collaborating with GCL and now CLEN for more than ten years. The JRC provides general scientific advices for the 6 activities undertaken by the CLEN and more particularly through contribution and sometimes coorganisation of the scientific program of Conferences organised by Action 4 and for more specific issues that requires new scientific methods that addressed by action 5 Scientific expertise. The JRC also contributes to some ad-hoc research projects to develop or assess new analytical methods required by Customs laboratories. In the recent past years, the rapid emerging of numerous New Psychoactive Substances has overwhelmed the analytical capacity of Customs laboratories. The JRC is now closely collaborating with the CLEN to develop methods and approaches that will enable the rapid identification of unknown chemicals among which these designer drugs. The JRC projects SAND and CLEN2SAND will provide a scientific support to the CLEN and a repository of analytical and spectrometric data of these new substances and a set of the corresponding analytical methods. These data and analytical standards will be eventually recorded in the ECICS and ILIADe database respectively.

<u>Deliverables</u>: CLEN2SAND deliverables (analytical methods and repository of analytical and spectroscopic data of NPS)

7.9 European Network of National Experts on Textile Labelling (ENNETL)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: The ENNETL network collaborates with the JRC in the evaluation of the dossiers for the new textile fibres for which the establishment of a new generic names has been requested to DG ENTR, following the procedure established in the EU Regulation 1007/2011. The JRC carries out the experimental evaluation of the new fibres and present and discuss the results with the network. The aim is to get to a consensus, at technical level, on what should be proposed as name, definition, characteristic parameters and test methods for the novel fibres, so that the update of the textile Regulation can be prepared by the Commission services. The members of the network take part in the validation of new test methods for the quantification of novel fibres organised by the JRC.

Formal/informal: formal

<u>Legal Basis:</u> JRC Institutional based and supported network, in support of the implementation of the EU Regulation 1007/2011 on textile fibre names and related labelling and marking of the fibre composition of textile products

Start date: July 2003

Members: 28 (one expert from each Member State)

Network coordination: JRC-IHCP

Contact at the JRC: P. Aguar/P. Piccinini, JRC-IHCP/I.1

JRC Role: Co-ordinator and chair

Deliverables:

- Technical evaluation of the applications presented to request the establishment of new generic names for new fibres.
- Establishment and validation of characteristic parameters for new fibres, such as agreed allowance, correction factors for mass loss due to pre-treatment and to the application of several quantitative test methods.
- Development and/or validation of new test methods for the identification and quantification of new fibres in mixtures with others.
- Agreement on the names, definitions, characteristic parameters and test methods to be proposed for new fibres.

7.10 European Network of Cancer Registries (ENCR)

Involved JRC-Institutes: IHCP, IES

Status: active

<u>Description</u>: The European Network of Cancer Registries (ENCR), established within the framework of the Europe Against Cancer Programme of the European Commission, has been in operation since 1990. The ENCR promotes collaboration between cancer registries, defines data collection standards, provides training for cancer registry personnel and regularly disseminates information on incidence and mortality from cancer in the European Union and Europe.

Since Autumn 2012, the ENCR is hosted by the JRC. The ENCR is governed by its Steering Committee and is affiliated to the International Association of Cancer Registries (IACR).

Formal/informal: formal

Legal Basis: European Parliament Resolution of 10 April 2008 & Council Conclusions

from 10 June 2008

Members: more than 100

Network coordination: JRC-IHCP (Secretariat: JRC-ENCR@ec.europa.eu)

Website: http://www.encr.eu/index.php/who-we-are/about-us

Contact at the JRC: C. Nicholl, M. Bettio, JRC-IHCP

JRC Role: Secretariat

Deliverables: training courses, conferences, recommendations to harmonise cancer

registries, publications

7.11 Preliminary Assessment of Regulatory Relevance (PARERE)

Involved JRC-Institutes: IHCP, IES

Status: active

<u>Description</u>: Directive 2010/63 on the protection of animals used for scientific purposes outlines that the Commission needs to cooperate with Member States for setting priorities of validation studies (recital 47 reg. EURL ECVAM) and that Member States shall nominate a single point of contact_to provide advice on the regulatory relevance and suitability of alternative approaches proposed for validation (Article 47). Moreover, according to Annex VII of the Directive (laying out the roles of the Reference Laboratory), dialogue with regulators (i.e. from Member States) and other stakeholders in view of the development, validation, regulatory acceptance, international recognition and application of alternative approaches is one of the duties of the Commission's Reference Laboratory (EURL ECVAM).

In agreement with the legal background, PARERE's roles are: (1) Upstream input on potential regulatory relevance and suitability of proposed alternative approaches and identifying approaches that deserve attention; (2) Highlighting priority areas and providing feedback on EURL ECVAM reports summarising the state of play in specific areas and possible strategies for progress; (3) Commenting on draft EURL ECVAM Recommendations following ESAC Peer Review of Validation Studies; (4) Identification of regulatory experts that could participate in specific ECVAM project groups (e.g. validation management groups; design of integrated testing strategies); (5) supporting and facilitating the operation of EU-NETVAL laboratories within Member States; (6) contributing to the promotion, dissemination and communication of alternative approaches, including monitoring both their utility to and uptake by end users.

Formal/informal: formal

Legal Basis: Directive 2010/63, in particular Article 47, Annex VII

Start Date: 2011

Members: 29 member state contact points plus inter-service network COM

Network coordination: STU/EURL ECVAM

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl-ecvam/scientific-advice-stakeholders-

networks/parere

Contact at the JRC: V. Zuang, JRC-IHCP

JRC Role: Co-ordinator

<u>Deliverables:</u> Written comments on (1) test methods suggested for prioritisation; (2) EURL ECVAM Recommendations; (3) EURL summary reports on the state of play in specific areas and possible strategies for progress.

7.12 ECVAM Stakeholder Forum (ESTAF)

Involved JRC-Institutes: IHCP

Status: active

Description: Annex VII of Directive 2010/63 lays out the duties and roles of the Union Reference Laboratory (EURL ECVAM). According to this annex, one of the duties of EURL ECVAM is to promote "dialogue between legislators, regulators, and all relevant stakeholders, in particular industry, biomedical scientists, consumer organisations and animal welfare groups, with a view to the development, validation, regulatory acceptance, international recognition, and application of alternative approaches." While dialogue with legislators and regulators is maintained via PARERE, the ESTAF gathers relevant stakeholders from industry, academia and research as well as civil society (e.g. animal welfare groups). ESTAF's roles are (1) advocacy (voicing of specific stakeholder interests e.g., economical, societal; (2) Serving as a collaborative platform in view of supporting ESTAF's and EURL ECVAM's activities; providing advice where necessary and from a stakeholder's perspective on (3) the relevance and suitability of test methods proposed for validation from, (4) on EURL ECVAM reports summarising the state of play in specific areas and possible strategies for progress and (5) on EURL ECVAM Recommendations.

Formal/informal: formal

<u>Legal Basis:</u> Annex VII to Directive 2010/63 outlines the tasks of EURL ECVAM, which includes maintaining close dialogue with stakeholders

Start date: 2011 Members: 20

Network coordination: STU/EURL ECVAM

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl-ecvam/scientific-advice-stakeholders-

networks/estaf-ecvam-stakeholder-forum

Contact at the JRC: V. Zuang, JRC-IHCP

JRC Role: Coordinator

<u>Deliverables:</u> Written comments on (1) test methods suggested for prioritisation; (2) EURL ECVAM Recommendations; (3) EURL summary reports on the state of play in specific areas and possible strategies for progress.

7.13 International Cooperation on Alternative Test Methods (ICATM)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: ICATM seeks to strengthen collaboration and communication among validation organisations from various global areas. Cooperation focused on three main areas (1) Validation studies: share information and develop consensus when feasible on critical aspects prior conducting studies; (2) Independent scientific peer review meetings and reports: organize and conduct independent scientific peer review meetings and develop reports meeting the needs of all ICATM parnters; set-up peer review panels with international composition, including nominations put forward by ICATM partners; (3) Development of test method recommendations for regulatory consideration: develop when feasible harmonized test method recommendations by each of the ICATM Validation Organizations which can be forwarded to other national and international organizations for consideration of regulatory acceptance of validated methods.

Formal/informal: formal

The terms of cooperation are defined in: Memorandum of Cooperation (MoA) between Validation Organisations, including EURL (see: http://ntp.niehs.nih.gov/iccvam/docs/about_docs/icatm-moc.pdf and

http://ntp.niehs.nih.gov/iccvam/docs/about_docs/icatm-moc-mar11.pdf)

Start date: 2009

<u>Members:</u> 5 organisations from EU (EURL EVCAM), USA (NICEATM/ICCVAM), Japan (JaCVAM), Canada (Health Canada), South Korea (KoCVAM); BraCVAM (Brazil) has observer status at present

Network coordination: Coordination is shared between participating organisations

<u>Website:</u> <u>http://ihcp.jrc.ec.europa.eu/glossary/icatm-international-cooperation-on-alternative-test-methods/?searchterm=icatm</u>

Contact at the JRC: V. Zuang, JRC-IHCP

JRC Role: participating organisation

<u>Deliverables</u>: Harmonised Recommendations on validated test methods, in case of EURL ECVAM these are EURL ECVAM Recommendations based on ESAC peer review

7.14 European Partnership for Alternative Approaches to Animal Testing (EPAA)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: EPAA is a partnership between several industry sectors and the European Commission. Its strives for the support of the development, validation and acceptance of alternative approaches with the aim to replace, reduce and refine animal use and apply advanced methodology from biosciences and medicine. The partnership facilitates wider dialogue with key stakeholders, thereby promoting use of available knowledge, greater transparency and understanding.

Formal/informal: formal

<u>The terms of cooperation are defined in:</u> "3 Rs Declaration" (https://circabc.europa.eu/sd/d/3a0533fa-cfbf-4536-a7ca-f9c7c10f3eae/3rs-declaration.pdf)

Start date: 2006

Members: 48 (5 Commission DGs (ENV, SANCO, ENTR, RTD, JRC); 7 industry

associations and 36 companies from various business sectors)

Network coordination: DG ENTR

Website: http://ec.europa.eu/enterprise/epaa/index_en.htm

Contact at the JRC: S. Belz, JRC-IHCP, I.5

JRC Role: Partner (participating DG)

<u>Deliverables</u>: Reports, scientific publications, presentations; communication & dissemination actions (conferences, workshops, website, newsletter); funding of research and/or dissemination (Science Award, Technician Award).

7.15 European Union Network of Laboratories for the Validation of Alternative Methods (EU NETVAL)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: EU NETVAL was set up by the European Union Reference Laboratory for the Validation of Alternative Methods (EURL ECVAM) in response to the provisions of Directive 2010/63/EU (article 47 point 1). (The Commission and the Member States shall contribute to the development and

validation of alternative approaches, and point 2. Member States shall assist the Commission in identifying and nominating suitable specialised and qualified laboratories to carry out such validation studies.)

EU-NETVAL's mission is to provide support for EURL ECVAM validation studies that serve to assess the reliability and relevance of alternative methods that have a potential to replace, reduce or refine the use of animals for scientific purposes. Terms of References detail the tasks of the network and of EURL ECVAM ((http://ihcp.jrc.ec.europa.eu/our_labs/eurl-ecvam/eu-netval/EU-NETVAL-tor-november-2013.pdf).

Formal/informal: formal

Legal Basis: Directive 2010/63/EU

The terms of cooperation are defined in: terms of references

Start date: 2014

Members: 26 (25 test facilities (from 9 member states) plus the JRC-EURL ECVAM

Test facility)

Network coordination: EURL ECVAM

Website: http://ihcp.jrc.ec.europa.eu/our_labs/eurl-ecvam/eu-netval

Contact at the JRC: S. Coecke JRC-IHCP, I.5

JRC Role: Coordination of the network

<u>Deliverables:</u> Multi-study validation trials and reports thereof, including Minimum Performance Standards, exchange of information and expertise, training sessions on specific methods; recommendations for update of Regulation (EU) 10/2011; technical guidance document

7.16 OECD Working Party on Nanotechnology (WPMN)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: The OECD Working Party on Nanotechnology (WPN) was established in March 2007 to advise upon emerging policy issues of science, technology and innovation related to the responsible development of nanotechnology. It is a subsidiary group of, and receives its mandate from, the Committee for Scientific and Technological Policy (CSTP).

The WPN works co-operatively with other OECD groups, including the Working Party on Manufactured Nanomaterials (WPMN, subsidiary to the Chemicals Committee); the Working Party on Biotechnology (WPB); the group of National Experts for Scientific and Technological Indicators (NESTI) and their parent committees.

Formal/informal: formal

Start date: 2007

Network coordination: OECD

Website:

 $\underline{\text{http://www.oecd.org/sti/nano/oecdworkingpartyonnanotechnologywpnvisionstatement.ht}}$

Contact at the JRC: JRC-IHCP

JRC Role: Participant

7.17 OECD National Coordinators of the Test Guidelines Programme (WNT)

Involved JRC-Institutes: IHCP

Status: active

<u>Description</u>: The OECD Guidelines for the testing of chemicals are a collection of the most relevant internationally agreed testing methods used by governments, industry and independent laboratories to assess the safety of chemical products. They are primarily used in regulatory safety testing and subsequent chemical notification and registration. The set of Test Guidelines is updated on a regular basis to keep pace with progress in science and countries' regulatory needs. OECD-wide networks of national coordinators and national experts provide input from scientists in government, academia, and industry. OECD Test Guidelines should not be confused with data requirements, which are the prerogative of national authorities.

<u>Formal/informal:</u> formal Network coordination: OECD

Website:

 $\underline{http://www.oecd.org/sti/nano/oecdworkingpartyonnanotechnologywpnvisionstatement.ht}$ m

Contact at the JRC: Juan M. RIEGO SINTES, JRC-IHCP

JRC Role: Participant

8 IPTS – Institute for Prospective Technological Studies

Currently, IPTS is not involved in scientific networks.