### Authent-Net Member State (MS) National Status Report

### **Country: United Nations FAO/IAEA Joint Division**

*Please note that the information provided here below will be put on the Food Authenticity Research Network Hub (FARNH) which will be publically accessible. So please do not include any confidential information.* 

# List of organisations that fund food anti- fraud/food authenticity research and the type of research they fund

*Please provide a list of organisations (Government + NGO whatever the nationality) that are funding projects on food authenticity in your MS* 

1. Name (Categorise into government/NGO, public/public-private)

Address Web site link Short description of the funder **Type of research funded: APPLIED RESEARCH/DEVELOPMENT** Click here to privately contact the persons responsible for Food Authenticity funding.

(This would take you to a secure location [eg. LinkedIn private chat] to contact relevant funder, <u>only</u> <u>once you're able to prove that you are from another funding organisation</u>).

# **1.** Joint FAO/IAEA Division of Nuclear Applications in Food and Agriculture, Department of Nuclear Sciences and Applications, International Atomic Energy Agency, Vienna International Centre

PO Box 100, 1400 Vienna, Austria

http://www-naweb.iaea.org/nafa/fep/index.html

#### Type of research funded: APPLIED AND ADAPTIVE RESEARCH

The Food and Environmental Protection Section of the Joint Programme and its associated Food and Environmental Protection Laboratory of the FAO/IAEA Agricultural and Biotechnology Laboratory in Seibersdorf provide assistance and support to countries in their efforts to ensure the safety and quality of food and agricultural commodities and food security while at the same time facilitating international trade. Our activities primarily focus on strengthening Member State capacities for the application of international standards on irradiation as well as on the use of nuclear and related analytical technologies and capacity building in the control of food and environmental hazards as well as food traceability and authenticity. These efforts are based on a coordinated and comprehensive "farm to fork" approach to food production systems that ensure the application of good agricultural practices throughout the food chain.

Contacts: Mr Andrew Cannavan / Mr Simon Kelly

#### Plan/Strategy in terms of Authenticity Research Funding

*Please provide a web link to a plan/strategy on food authenticity for each specific funding organisation (see 1<sup>st</sup> box), provided there is one, or anything the funding organisations are able to* 

provide (general plan/strategy on food). That should include policy documents, research/surveillance documents where possible.

1. Funding organisation name + web link to plan + Key decision making committees

Plan/Strategy by institution numbered according to the previous list of funding bodies.

**1.** Joint FAO/IAEA Division of Nuclear Applications in Food and Agriculture, Department of Nuclear Sciences and Applications, International Atomic Energy Agency, Vienna International Centre

#### http://www-naweb.iaea.org/nafa/fep/crp/coordinated-research-fep.html

The FEP Subprogramme develops, formulates and coordinates Coordinated Research Projects (CRPs). CRPs bring together laboratories in both developing and developed Member States to collaborate on research topics of common interests. Each CRP is implemented through the Agency's Research Contracts Administration and consists of a network of 10-15 national research institutes from developing (contract holders) and developed Member States as agreement holders. Each CRP commonly lasts for five to six years, during which normally four Research Coordination Meetings (RCMs) are held to evaluate the progress, to coordinate and develop technical documents.

#### Capabilities/Infrastructure of Authenticity research providers/relevant NRLs

*Please provide details of national capabilities (public and private) in terms of food authenticity analysis (relevant National Reference Laboratories, certified laboratories etc.) and in terms of Food Authenticity Research.* 

**1.** *Name* (*Categorise into academic/research, general proficiency, expertise in a specific technique and/or commodity*)

Address

Web site:

Contact available through: (Any web sites where contact details of key personnel are available) Telephone:

#### 1. Food and Environmental Protection Laboratory

FAO/IAEA Agriculture and Biotechnology Laboratories

1 Frieden Strasse, Seibersdorf, 2400, Austria

http://www-naweb.iaea.org/nafa/fep/fep-laboratory.html

The Food and Environmental Protection Laboratory (FEPL) is located at the FAO/IAEA Agriculture and Biotechnology Laboratories, Seibersdorf. The laboratory assists Member States to improve laboratory and regulatory practices and methodologies in the areas of food traceability and authenticity, food safety and food quality in order to safeguard the health of consumers, help to facilitate international trade and enhance food security. This is achieved through applied research and method development, technology transfer and the provision of data and expertise to support the development of international standards and guidelines. Since food safety is a very dynamic field, FEPL maintains the capability to respond to emerging and emergency food safety issues affecting Member States.

#### Recent key Cases/Reports/Reviews (after 2010)

*Please provide a list of web links to public outputs, documents, papers, reports, databases on incidents, detection methods, ... in relation to food authenticity your MS is involved (see T1.1)* 

1. Title + web link

**1. Newsletters and annual reports:** <u>http://www-naweb.iaea.org/nafa/fep/public/newsletters-fep.html</u>

**2. Books and proceedings:** <u>http://www-naweb.iaea.org/nafa/fep/public/proceedings-fep.html</u>

**3. Scientific papers:** <u>http://www-naweb.iaea.org/nafa/fep/public/scientific-papers-fep.html</u>

**4. Manuals and protocols:** <u>http://www-naweb.iaea.org/nafa/fep/public/manuals-fep.html</u>

*Key information to be registered/extracted on/ from the Authent-Net Documents database (FARNHub)* 

Ongoing Projects (after 2010) including national-international/public-private funded projects)

Please provide a list of ongoing projects on food authenticity your MS is involved in (see T1.1)

1. Name, funding, start/end date + Web site link

#### 1. Implementation of Nuclear Techniques to Improve Food Traceability

This coordinated research project (CRP) will address some of the challenges that developing countries are facing in ensuring food traceability. In particular, it will help laboratories in member states to establish robust analytical techniques to determine provenance of food through the assessment of the isotopic and elemental composition of foodstuffs using an integrated and multidisciplinary approach. The immediate benefit to laboratories will be the implementation and

application of state-of-the-art nuclear measurement techniques to determine the provenance of foodstuffs. These will complement screening methods to detect residues and contaminants in food to provide holistic food safety systems.

http://www-naweb.iaea.org/nafa/fep/crp/fep-improve-traceability.html

## **2.** Accessible Technologies for the Verification of Origin of Dairy Products as an Example Control System to Enhance Global Trade and Food Safety

This coordinated research project (CRP) will address some of the challenges that developing countries are facing in ensuring food traceability. It will develop a complete end-to-end system, using dairy milk, which has been recently involved in fraud issues endangering the public health (cases of melamine in milk), as an example commodity. Dairy is a priority commodity due to its simple processing procedures, high level of trade, and use as an ingredient in sensitive products such as infant formula. This system will then be available as a template that can be transferred to other commodities as required.

http://www-naweb.iaea.org/nafa/fep/crp/fep-global-trade-food-safety.html

#### 3. Field-deployable Analytical Methods to Assess the Authenticity, Safety and Quality of Food

The aim of this CRP is to close the gap between capabilities confined to sophisticated research labs, and technologies that can be utilised by various national gate-keepers in developing countries, namely national customs authorities & food regulators. The opportunity to accomplish this ambitious goal stems from a rapid and on-going reduction in the cost of analytical equipment and a rapid increase in its portability. Throughout the last decade the analytical instrument industry has delivered new families of handheld, portable and transportable tools. This project will consider applications based on hand-held and portable devices including (but not limited to) ion mobility spectrometry (IMS), near infra-red (NIR) and X-ray fluorescence (XRF) spectrometers and some bench-top laboratory instruments that have become 'field' transportable including laser induced breakdown spectrometry (LIBS), laser ablation molecular isotopic spectrometry (LAMIS), nuclear magnetic resonance (NMR) spectroscopy, mass spectrometry (MS) and multi-spectral imaging (MSI). This CRP is conducted jointly with the Nuclear Sciences Instrumentation Laboratory inside IAEA under CRP G42007.

http://cra.iaea.org/cra/explore-crps/all-opened-for-proposals.html

*Key information to be registered/extracted on/from the Authent-Net Documents database (FARNHub)* 

#### Legal framework for food authenticity (in application at a national level)

Please provide a list of standards/regulations on food authenticity applied in your MS (see T1.2)

NOT APPLICABLE – Our Member States will need to comply with relevant National regulations.

#### **Existing indicators used: intelligence sources**

*Please provide a list of intelligence tools used to detect/counter food fraud issues in your member state (e.g. Horizon Scanning, Interpol, Europol, National Crime agencies)* 

1.

NOT APPLICABLE

#### Commodities/products of interest and type of research of interest

#### 1. Commodities/products of interest

*Please provide a list of the commodities/food products in priority order most important for each MS in terms of value to that country.* 

1) Livestock (Poultry meat, Beef and veal, pork, lamb and mutton)

2) Cereals (Wheat, Barley,

3) Vegetable oil (oil seed rape)

4) Milk (including milk products)

#### 2. Type of research of interest

1) Analytical methods

2) Economic

Please provide a list of type of research (e.g. criminology, critical points, historical points, analytical methods, consumer behaviour, economic aspects) in priority order most important for each MS in terms of value to that country).