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**Reports from selected international organizations: International Atomic
Energy Agency (IAEA) statement**

Agenda item 14.3

**Prepared by the IAEA, Joint FAO/IAEA Division of Nuclear Techniques in
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English only

IAEA Statement

1. The International Atomic Energy Agency (IAEA), through its Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture, has been actively supporting the Secretariat of the International Plant Protection Convention (IPPC) for the last ten years to develop and review International Standards for Phytosanitary Measures (ISPMs) and to improve phytosanitary capacity of IPPC Contracting Parties.
2. The Joint FAO/IAEA Division has participated in the development of six adopted ISPMs, as follows: ISPM 3:2005, ISPM 18:2003, ISPM 26:2006 (including Appendix 1 of ISPM 26:2011 and Annex 2 of ISPM 26:2014), ISPM 28:2007 (including 15 annexes of ISPM 28), ISPM 30:2008, and ISPM 35:2012.
3. During recent years the Joint FAO/IAEA Division has also been contributing to the development of the following draft ISPMs:
 - a) *Determination of host status of fruit to fruit flies (Tephritidae)*
 - b) *Phytosanitary procedures for fruit fly (Tephritidae) management*
4. The Joint FAO/IAEA Division has organized and funded the last five annual meetings of the IPPC *Technical Panel on Pest Free Areas and Systems Approaches for Fruit Flies* (TPFF).
5. The Joint FAO/IAEA Division hosted the 2006 IPPC *Technical Panel on Phytosanitary Treatments* (TPPT), provided technical expertise, and contributed funding for travel. The TPPT relied on the report of the Joint FAO/IAEA Division 2004 Consultants Meeting “*Use of Ionising Irradiation as a Quarantine Treatment*” to determine how phytosanitary irradiation (PI) treatments are evaluated. Seventeen of the 33 treatments submitted in 2006 were for PI and only PI treatments survived this first round of the IPPC treatment approval process. The PI treatments approved then were developed with Joint FAO/IAEA Division funding and technical support.
6. In support of the TPPT, the Joint FAO/IAEA Division has provided technical expertise and helped review supporting data to facilitate the successful adoption of 14 irradiation and 1 vapour heat phytosanitary treatments for pests of quarantine importance as part of ISPM 28:2007, *Phytosanitary Treatments for Regulated Pests*.
7. The Joint FAO/IAEA Division supported a Coordinated Research Project (CRP) on the Development of Generic Irradiation Doses for Quarantine Treatments. This research network determined generic and specific treatment doses for pests and pest groups of quarantine importance and will come to a close in 2015. Thirty-eight different pest species were studied of which thirteen used very large numbers of insects in confirmatory tests to validate treatment efficacy at levels of phytosanitary security commonly used internationally. The 38 species include 14 families, 5 orders of insects, 3 families of mites, one family of snails. Research and collaboration generated technical information and data in support of the development of further PI treatments, not only generic treatments, but also species specific ones, that will help reduce technical barriers and facilitate international trade in agricultural produce. A Special Issue of the Florida Entomologist, with about 30 peer-reviewed scientific papers containing the results obtained during the CRP is in preparation.
8. Using PI on a commercial scale to ensure the phytosanitary security of fresh produce is expanding with at least 18 irradiation facilities treating produce from Australia, India, Mexico, Malaysia, New Zealand, Pakistan, South Africa, Thailand, USA and Vietnam. Quantities are steadily increasing with 21 000 tonnes of fresh produce irradiated for phytosanitary purposes traded internationally in 2013, indicating that

irradiation is proving to be technically and commercially viable as countries require alternative post-harvest pest control methods that avoid the use of harmful chemical treatments. Training and technical fellowships provided through the Joint Division are assisting in the further uptake of PI, for example such training has assisted the Chinese Academy of Inspection and Quarantine in their project to establish an electron beam facility to treat approximately 100 000 tons of commodities imported into China per year from 2015.

9. Guidelines for the Audit and Accreditation of Irradiation Facilities used for Sanitary and Phytosanitary Treatment of Food and Agricultural Products have been produced by the Joint FAO/IAEA Division through an FAO/IAEA Asia and Pacific Regional Technical Cooperation Project. These Guidelines were considered and approved by the Asia and Pacific Plant Protection Commission (APPPC) and in 2014 were published as regional standard RSPM 9; Approval of Irradiation Facilities. In addition the Joint Division has worked closely with 17 countries in the Asia Pacific region to produce a “Good Irradiation Practice” manual to support the application of these guidelines and it is intended to publish the manual as an IAEA document in 2015. An electronic learning course on post-harvest irradiation treatments is being developed for online access and training, it was tested, enhanced and refined by 23 NPPOs from the Asia-Pacific region at a one-week training course in Manila, Philippines (December 2014).
10. In terms of development of technical materials to support the implementation of the ISPMs, the Joint Division upon the request of Member States produced the “*FAO/IAEA Trapping Manual for Area-Wide Fruit Fly Progammes*” (<http://www-naweb.iaea.org/nafa/ipc/public/Trapping-Manual-Final-sept13.pdf>). These guidelines are aligned with the ISPM 26:2006. *Establishment of pest free areas for fruit flies (Tephritidae)*.
11. In terms of capacity building, the Joint FAO/IAEA Division has devoted part of its technical assistance delivery to regulatory aspects and the implementation of the ISPMs in developing countries through regional workshops and technical meetings:
 - a) In 2014, four FAO/IAEA regional training courses were held on “*Use of GIS for Area-Wide Fruit Fly Programmes in Indian Ocean*”, “*Taxonomy and Identification of Fruit Fly Pest Species Exotic to the Middle East*”, “*Fruit Fly Biocontrol in West Africa*”, and “*Taxonomy and Identification of Fruit Fly Pest Species Exotic to the Balkans and the Eastern Mediterranean*”
 - b) For 2015, an FAO/IAEA interregional course on “*Use of the Sterile Insect and Related Techniques for the Area-wide Integrated Pest Management of Native and Exotic Insect Pests*” is planned, as well as four FAO/IAEA regional training courses on “*Fruit Fly Biocontrol in West Africa*”, “*Free Open Source Software for GIS and Data Management Applied to Fruit Flies in the Balkans and the Eastern Mediterranean*”, “*Fruit Fly Monitoring and Suppression Including MAT and SIT for Indian Ocean*”, and “*Taxonomy and Identification of Fruit Fly Pest Species for Southeast Asia*”.
 - c) Additionally, the FAO/IAEA Joint Division supports every year regional fruit fly training courses in Latin America (Brazil and Mexico) which include lectures on the regulatory aspects of international fruit commercialization and implementation of area-wide insect pest control programmes.
12. Technical and financial support for 2 participants at the Expert Consultation on “*Phytosanitary treatments for fruit flies of economic importance of the Bactrocera dorsalis complex*“ in December 2014 in Japan.

13. Technical and financial support to the 1st Meeting of the “Phytosanitary Temperature Treatment Expert Group” scheduled for August 2015 in South Africa.