

## 2021 FIRST CONSULTATION

1 July – 30 September 2021

### Compiled comments for 2021 First Consultation: Draft ISPM: Revision of ISPM 18 (2014-007)

#### Summary

Name	Summary
EPPO Σ	Comments from the EPPO countries
European Union	The comments on this draft standard have been entered into the OCS by the European Commission on behalf of the EU and its member States.
Nepal	No comments
Singapore	Singapore is supportive of this draft.
South Africa	The National Plant Protection Organization of South Africa is in agreement with this standard.
Venezuela	Venezuela no tiene opinión técnica.

T (Type) - B = Bullet, C = Comment, P = Proposed Change, R = Rating

FAO sequential number	Para	Text	T	Comment
1	G	(General Comment)	C	<b>Argentina</b> We support the comments submitted by COSAVE <i>Category : SUBSTANTIVE</i>
2	G	(General Comment)	C	<b>Nepal</b> Nepal has no comments on: Requirements for the use of irradiation as a phytosanitary measure <i>Category : EDITORIAL</i>
3	G	(General Comment)	C	<b>Mexico</b> Mexico supports OIRSA's comments <i>Category : SUBSTANTIVE</i>
4	G	(General Comment)	C	<b>Russian Federation</b> The Russian Federation would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System <i>Category : SUBSTANTIVE</i>
5	G	(General Comment)	C	<b>Canada</b> Canada supports revision to ISPM 18. A few comments are submitted for consideration. <i>Category : SUBSTANTIVE</i>
6	G	(General Comment)	C	<b>PPPO</b> it is suggested to check where compound modifier is required and keep consistency throughout the document (e.g. change 'pest free status' to 'pest-free status') <i>Category : EDITORIAL</i>
7	G	(General Comment)	C	<b>PPPO</b> It is suggested that roles and responsibilities for each activities be clarified and included in the appropriate sections. e.g. who is responsible for performing dosimetry. <i>Category : SUBSTANTIVE</i>

8	G	(General Comment)	C	<b>PPPO</b> NZ is supportive of the changes to ISPM 18. The draft ISPM ties into the Good Practice Manual (IAEA 2015) making it easier to read and understand the irradiation concepts and principles <i>Category : SUBSTANTIVE</i>
9	G	(General Comment)	C	<b>PPPO</b> Numbering system has inconsistent formatting throughout document. Some sections utilise spacing and others do not. It is recommended that this is edited for consistency purposes. <i>Category : EDITORIAL</i>
10	G	(General Comment)	C	<b>Korea, Republic of</b> It is not clearly stated who is responsible for what throughout the document. <i>Category : EDITORIAL</i>
11	G	(General Comment)	C	<b>Barbados</b> This is a good guide for those countries seeking to put these structures in place, however the cost still remains an inhibiting factor. <i>Category : SUBSTANTIVE</i>
12	G	(General Comment)	C	<b>Switzerland</b> Switzerland would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System <i>Category : TECHNICAL</i>
13	G	(General Comment)	C	<b>Jamaica</b> Jamaica supports the comments from the IPPC Caribbean Regional Workshop. <i>Category : SUBSTANTIVE</i>
14	G	(General Comment)	C	<b>IPPC Regional Workshop Africa</b> Malawi supports the draft with comments made in the name as Regional workshop <i>Category : SUBSTANTIVE</i>
15	G	(General Comment)	C	<b>Colombia</b> En caso de que se encuentren plagas vivas, la ONPF tendría que considerar tomar un tratamiento de emergencia e iniciar la evaluación de la viabilidad de las plagas encontradas vivas. <i>Category : SUBSTANTIVE</i>
16	G	(General Comment)	C	<b>Colombia</b> Se debería incluir dentro del perfil de los requisitos la información de Productos no objetivo de la irradiación, como plantas para plantar y semillas para plantar, dado que el tratamiento podría desvitalizarlas, y una situación similar ocurriría con los insumos biológicos como, entomopatógenos y organismos genéticamente modificados. <i>Category : SUBSTANTIVE</i>
17	G	(General Comment)	C	<b>Colombia</b> Se sugiere indicar las fuentes bibliográficas en las cuales se puede consultar el manejo de residuos del proceso de irradiación, teniendo en cuenta lo establecido en el párrafo 49. <i>Category : SUBSTANTIVE</i>
18	G	(General Comment)	C	<b>COSAVE</b> We highlight the importance of having better traslation into Spanish in order to be consistent with the English version. Se destaca la importancia de contar con traducciones al español que reflejen mejor el contenido de la versión en inglés <i>Category : TRANSLATION</i>
19	G	(General Comment)	C	<b>Uruguay</b> We highlight the importance of having better translation into Spanish in order to be consistent with the English version <i>Category : TRANSLATION</i>
20	G	(General Comment)	C	<b>Malawi</b> We support the draft revision of ISPM 18: Requirements for the use of irradiation as phytosanitary measure <i>Category : SUBSTANTIVE</i>

21	G	(General Comment)	C	<b>United States of America</b> Using word "requirements" versus "guidelines"/ "recommendations" in some ISPMs causes confusion in WTO disputes. It is suggest that all titles be revised to eliminate these words because all ISPMs have both requirements and recommendations, as well as technical information. This standard would thus be titled simply "The use of irradiation as a phytosanitary measure" or "Irradiation as a phytosanitary measure". The important thing is then to clearly distinguish within the standard (and all standards) what are actual requirements and what are simply recommendations or useful information. This will greatly simplify the interpretation of standards in disputes. <i>Category : SUBSTANTIVE</i>
22	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> T&T endorses the revision of this ISPM. <i>Category : SUBSTANTIVE</i>
23	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> We support the document and we have no issues with the adoption of the standard. <i>Category : SUBSTANTIVE</i>
24	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Guyana has no objection with the proposed draft ISPM at this time. <i>Category : SUBSTANTIVE</i>
25	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> This is highly technical. It would apply to countries that operate these facilities and those requiring the service. <i>Category : TECHNICAL</i>
26	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> A relevant and important standard . <i>Category : EDITORIAL</i>
27	G	(General Comment)	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> This is a good guide for those countries seeking to put these structures in place, however the cost still remains an inhibiting factor. <i>Category : SUBSTANTIVE</i>
28	G	(General Comment)	C	<b>Saint Vincent and The Grenadines</b> The information is highly technical. It is applicable to countries that operate irradiation facilities and those needing to access the service. <i>Category : TECHNICAL</i>
29	G	(General Comment)	C	<b>Myanmar</b> Agree <i>Category : TECHNICAL</i>
30	G	(General Comment)	C	<b>Bahrain</b> Bahrain has no comments <i>Category : SUBSTANTIVE</i>
31	G	(General Comment)	C	<b>Costa Rica</b> Inconsistencias con la traducciones de algunos términos por ejemplo: "ensuring" se traduce como "garantizar" cuando se considera que el mejor término es "asegurar". "trace-back": como rasteo cuando se considera como mejor término en español "rastreadibilidad" "pallet", en español se entiende como "paleta" "packing" o "unpacking": se traduce como "envasado" cuando se considera que el mejor término es "embalado"  Se destaca la importancia de contar con traducciones al español que reflejen mejor el contenido de la versión en inglés <i>Category : TRANSLATION</i>
32	G	(General Comment)	C	<b>Mexico</b> México apoya los comentarios de OIRSA

				<i>Category : SUBSTANTIVE</i>
33	G	(General Comment)	C	<b>Panama</b> Cambiar en el cuerpo de la norma los términos envasado por embalado; envase por embalaje; garantizar por asegurar y rastreo por rastreabilidad <i>Category : EDITORIAL</i>
34	G	(General Comment)	C	<b>OIRSA</b> cambiar en el cuerpo de la norma el termino "envasado" por "embalado" y también "envase" por "embalaje" <i>Category : EDITORIAL</i>
35	G	(General Comment)	C	<b>OIRSA</b> cambiar los términos: Garantizar por Asegurar Rastreo por Rastreabilidad <i>Category : EDITORIAL</i>
36	G	(General Comment)	C	<b>Myanmar</b> Agree <i>Category : TECHNICAL</i>
37	G	(General Comment)	C	<b>Congo</b> i agree with this ISPM and i have no comments to add <i>Category : TECHNICAL</i>
38	G	(General Comment)	C	<b>Myanmar</b> Agree <i>Category : TECHNICAL</i>
39	1	<b>DRAFT Revision of ISPM 18:</b> <b>Requirements for the use of irradiation as a phytosanitary measure (2014-007)</b>	C	<b>Viet Nam</b> Vietnam requests to add more content about the case that the treatment does not meet the phytosanitary requirements of the importing country in this draft ISPM. <i>Category : SUBSTANTIVE</i>
Scope				
40	28	This standard provides <del>technical guidance</del> <b>requirements</b> on the application of ionizing radiation as a phytosanitary measure. This standard does not provide details on specific irradiation treatments, such as specific schedules for specific regulated pests on specific commodities,	P	<b>United States of America</b> For consistency with the title of this draft. <i>Category : TECHNICAL</i>

		or treatments used for the production of sterile organisms for pest control.		
41	28	This standard provides technical guidance on the application of ionizing radiation as a phytosanitary measure. This standard does not provide details on specific irradiation treatments, such as specific schedules for specific regulated pests on specific commodities, or treatments used for the production of sterile organisms for pest control.	C	<b>United States of America</b> May it be worthwhile to include in parentheses “gamma radiation, X rays, accelerated electrons”? <i>Category : TECHNICAL</i>
References				
42	31	<del>APPPC (Asia and Pacific Plant Protection Commission). 2014. <i>Approval of irradiation facilities. Regional Standard for Phytosanitary Measures (RSPM) 9</i>. Bangkok, APPPC, FAO Regional Office for Asia and the Pacific. 20 pp.</del>	P	<b>COSAVE</b> Consequential deletion as per comment in paragraph 105 <i>Category : TECHNICAL</i>
43	31	APPPC (Asia and Pacific Plant Protection Commission). 2014. <i>Approval of irradiation facilities. Regional Standard for Phytosanitary Measures</i>	P	<b>Kenya</b> <i>Category : TECHNICAL</i>

		(RSPM) 9. Bangkok, APPPC, FAO Regional Office for Asia and the Pacific. 20 pp. <a href="#">Codex Alimentarius (1983) General Standards food for irradiation food - rev. 1 2003</a>		
44	31	<del>APPPC (Asia and Pacific Plant Protection Commission). 2014. Approval of irradiation facilities. Regional Standard for Phytosanitary Measures (RSPM) 9. Bangkok, APPPC, FAO Regional Office for Asia and the Pacific. 20 pp.</del>	P	<b>Uruguay</b> Consequential deletion as per comment in paragraph 105 Category : <i>TECHNICAL</i>
45	34	<b>ISO/ASTM 51261:2013. Practice for calibration of routine dosimetry systems for radiation processing, 2nd edn.</b> United States of America, International Organization for Standardization and ASTM International.	C	<b>United States of America</b> There is a new version/citation of ISO / ASTM51261 - 13(2020) Standard Practice for Calibration of Routine Dosimetry Systems for Radiation Processing. <a href="https://www.astm.org/Standards/ISOASTM51261.htm">https://www.astm.org/Standards/ISOASTM51261.htm</a> Category : <i>TECHNICAL</i>
<b>Definitions</b>				
46	36	Las definiciones de los términos fitosanitarios utilizados en la presente norma figuran en la NIMF 5 ( <i>Glosario de términos</i> )	P	<b>Costa Rica</b> Se considera necesario incluir este término, esto permitiría tener una mejor lectura de la norma al ser un tema muy específico. Adicionalmente, este término no está definido en el Glosario de términos (NIMF 5). Valorar si es conveniente incluirlo en el texto o incluirlo en la NIMF 5. Fuente de la definición: OIEA (Organismo Internacional de Energía Atómica) 2015. Manual de buenas prácticas para la irradiación de alimentos: aplicaciones sanitaria, fitosanitaria y de otro tipos (versión en español) Category : <i>SUBSTANTIVE</i>

		fitosanitarios). <a href="#"><u>Configuración de carga:</u></a> <a href="#"><u>Disposición definida del producto (alimento)</u></a> <a href="#"><u>colocado dentro del contenedor de irradiación o sobre este.</u></a> <a href="#"><u>Se realiza un mapeo de dosis con una configuración de carga en particular y esta configuración de carga se repite para garantizar la irradiación sistemática del producto (OIEA, 2015).</u></a>		
47	36	Las definiciones de los términos fitosanitarios utilizados en la presente norma figuran en la NIMF 5 ( <i>Glosario de términos fitosanitarios</i> ). <a href="#"><u>Configuración de carga:</u></a> <a href="#"><u>Disposición definida del producto (alimento)</u></a> <a href="#"><u>colocado dentro del contenedor de irradiación o sobre este.</u></a> <a href="#"><u>Se realiza un mapeo de dosis con una configuración de carga en particular y esta configuración de carga se repite para garantizar la irradiación sistemática del producto.</u></a>	P	<b>Panama</b> Se considera necesario incluir este término (configuración de carga) en las definiciones de la NIMF 18 o su inclusión en la NIMF 5, para mejor comprensión de esta NIMF 18 <i>Category : SUBSTANTIVE</i>

48	36	Las definiciones de los términos fitosanitarios utilizados en la presente norma figuran en la NIMF 5 ( <i>Glosario de términos fitosanitarios</i> ). <u>Carga del proceso: Material con una configuración de carga especificada que es irradiado como una sola entidad</u> <u>Configuración de carga: Disposición definida del producto (alimento) colocado dentro del contenedor de irradiación o sobre este.</u> <u>Se realiza un mapeo de dosis con una configuración de carga en particular y esta configuración de carga se repite para garantizar la irradiación sistemática del producto.</u>	P	<b>OIRSA</b> Se considera necesario incluir estas 2 definiciones en virtud de que son muy específicas y podrían aclarar el contenido de la norma y además no están incluidas en la NIMF 5 <i>Category : SUBSTANTIVE</i>
Outline of requirements				
49	37	<b>Outline of requirements</b>	C	<b>PPPO</b> This section is an odd mix of detail and does not align with how other recent ISPMs on treatments are written. suggest using similar wording in the recent treatment ISPMs. Paragraphs [40][41][42][43] should be deleted. see comment below. <i>Category : EDITORIAL</i>
50	38	This standard provides guidance on how irradiation treatments may be used for pest management to comply with phytosanitary import requirements.	C	<b>Barbados</b> This standard provides guidance on how irradiation treatments may be used to comply with phytosanitary import requirements. <i>Category : SUBSTANTIVE</i>



51	38	This standard provides guidance on how irradiation <del>treatments</del> may be used for pest <del>risk</del> management to comply with phytosanitary import requirements.	P	<b>COSAVE</b> Irradiation is defined in ISPM 5 as a treatment, thus irradiation treatment is redundance. Irradiation as a phytosanitary measure is used for pest risk management <i>Category : TECHNICAL</i>
52	38	This standard provides <del>guidance requirements</del> on how irradiation treatments may be used for pest management to comply with phytosanitary import requirements.	P	<b>United States of America</b> For consistency with the title of this draft. <i>Category : TECHNICAL</i>
53	38	This standard provides guidance on how irradiation treatments may be used for pest management to comply with phytosanitary import requirements.	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Suggest rewording: This standard provides guidance on how irradiation treatments may be used to comply with phytosanitary import requirements. <i>Category : SUBSTANTIVE</i>
54	38	This standard provides guidance on how irradiation treatments may be used for <del>pest management</del> to comply with phytosanitary import requirements.	C	<b>United States of America</b> We aren't managing the pest, we are managing the RISK associated with pests. <i>Category : TECHNICAL</i>
55	38	This standard provides guidance on how irradiation <del>treatments</del> may be used for pest <del>risk</del> management to comply with phytosanitary import requirements.	P	<b>Uruguay</b> Irradiation is defined in ISPM 5 as a treatment, thus irradiation treatment is redundant. Irradiation as a phytosanitary measure is used for pest risk management <i>Category : TECHNICAL</i>
56	38	La presente norma proporciona orientación sobre cómo <del>podrán</del>	P	<b>Costa Rica</b> Por definición la irradiación es un tratamiento por lo que se considera que no es necesario repetirlo. Consistencia con la versión en inglés "management" como "manejo"

		<del>podrá</del> usarse <del>los</del> <del>tratamientos de la</del> irradiación para el <del>control</del> <del>manejo</del> de plagas a efectos de cumplir con los requisitos fitosanitarios de importación.		<i>Category : SUBSTANTIVE</i>
57	38	La presente norma proporciona orientación <u>técnica</u> sobre cómo podrán usarse los tratamientos de irradiación para el control de plagas a efectos de cumplir con los requisitos fitosanitarios de importación.	P	<b>Costa Rica</b> Consistencia con el ambito de la Norma <i>Category : EDITORIAL</i>
58	39	The roles and responsibilities of parties involved in <u>phytosanitary the use of</u> irradiation <u>as a</u> <u>phytosanitary measure</u> are described. Guidance is provided to national plant protection organizations (NPPOs) on responsibilities for approving treatment facilities, and for monitoring and auditing treatment facilities and providers.	P	<b>COSAVE</b> Better wording and consistency with the scope <i>Category : TECHNICAL</i>
59	39	The roles and responsibilities of parties involved in	P	<b>United States of America</b> For consistency with the title of the draft. <i>Category : TECHNICAL</i>

		phytosanitary irradiation are described. <u>Guidance is Requirements are</u> provided to national plant protection organizations (NPPOs) on responsibilities for approving treatment facilities, and for monitoring and auditing treatment facilities and providers.		
60	39	The roles and responsibilities of parties involved in <u>phytosanitary the use of</u> irradiation <u>as a phytosanitary measure</u> are described. Guidance is provided to national plant protection organizations (NPPOs) on responsibilities for approving treatment facilities, and for monitoring and auditing treatment facilities and providers.	P	<b>Uruguay</b> Better wording and consistency with the scope <i>Category : TECHNICAL</i>
61	39	Se describen las funciones y responsabilidades de las partes que intervienen en la irradiación <u>como una medida</u> fitosanitaria. Se proporciona orientación a las organizaciones nacionales de protección fitosanitaria (ONPF) sobre las	P	<b>Costa Rica</b> Consistencia con el ámbito <i>Category : SUBSTANTIVE</i>

		responsabilidades en materia de aprobación de instalaciones de tratamiento y de supervisión y auditoría de las instalaciones y los proveedores del tratamiento.		
62	40	<del>The NPPO is responsible for ensuring that the minimum absorbed dose has reached the required level to achieve the stated efficacy.</del>	P	<b>Korea, Republic of</b> Paragraphs [40] [41] [42] [43] are not relevant for outline of requirements <i>Category : SUBSTANTIVE</i>
63	40	<del>The NPPO is responsible for ensuring that the minimum absorbed dose has reached the required level to achieve the stated efficacy.</del>	P	<b>PPPO</b> Paragraphs [40] [41] [42] [43] describe what is involved in approving a treatment provider which is covered by the previous paragraph [39]. these paras can be incorporated into the appropriate sections. If these paragraphs are not deleted then it needs to be clear who is required to do these activities e.g. record keeping and documentation is the responsibility of the treatment provider. <i>Category : SUBSTANTIVE</i>
64	40	The NPPO <u>of the country of irradiation treatment</u> is responsible for ensuring that the minimum absorbed dose has reached the required level to achieve the stated efficacy.	P	<b>Australia</b> Additional text to clarify that it is the NPPO of the country of treatment that is responsible. <i>Category : EDITORIAL</i>
65	40	Las ONPF serán las encargadas de <b>garantizar</b> que la dosis mínima absorbida ( $D_{min}$ ) alcanza el nivel requerido para lograr la eficacia establecida.	C	<b>Costa Rica</b> Mejor traducción del término "ensuring". Consistencia con el comentario general <i>Category : TRANSLATION</i>
66	41	<del>Application of the treatment requires dosimetry and dose</del>	P	<b>PPPO</b> see above <i>Category : SUBSTANTIVE</i>

		mapping to ensure that the treatment is effective with specific commodity configurations.		
67	41	<del>_Application of the treatment requires dosimetry and dose mapping to ensure that the treatment is effective with specific commodity configurations.</del>	P	<b>Korea, Republic of</b> <i>Category : SUBSTANTIVE</i>
68	42	<del>The NPPO is responsible for ensuring that treatment facilities are appropriately designed for phytosanitary treatments. Procedures should be in place to ensure that the treatment can be conducted properly and consistently. Systems should be implemented to prevent the infestation or contamination of the irradiated commodity, including accidental mixing with untreated commodities.</del>	P	<b>PPPO</b> see above <i>Category : SUBSTANTIVE</i>
69	42	<del>The NPPO is responsible for ensuring that treatment facilities are appropriately designed for phytosanitary treatments. Procedures should be in place to ensure that the treatment can be conducted properly and</del>	P	<b>Korea, Republic of</b> <i>Category : SUBSTANTIVE</i>

		<del>consistently. Systems should be implemented to prevent the infestation or contamination of the irradiated commodity, including accidental mixing with untreated commodities.</del>		
70	42	The NPPO is responsible for ensuring that treatment facilities are appropriately designed for <a href="#">relevant</a> phytosanitary treatments. Procedures should be in place to ensure that the treatment can be conducted properly and consistently. Systems should be implemented to prevent the infestation or contamination of the irradiated commodity, including accidental mixing with untreated commodities.	P	<b>United States of America</b> Insertion "relevant" is to indicate that facilities usually differ by their design, according to the type of treatments. The last phrase is common to all treatments. While we are trying to keep the consistent language for all treatment application ISPMs, making specific designation where appropriate is a reasonable expectation. <i>Category : TECHNICAL</i>
71	42	The NPPO is responsible for ensuring that treatment facilities are appropriately designed for phytosanitary treatments. Procedures should be in place to ensure that the treatment can be conducted properly and consistently. Systems	P	<b>Uruguay</b> To consider the intended use of the commodity is also a requirement <i>Category : TECHNICAL</i>

		should be implemented to prevent the infestation or contamination of the irradiated commodity, including accidental mixing with untreated commodities. <a href="#">The intended use of the commodity should be considered</a>		
72	43	<del>Record keeping and documentation requirements should be met to enable auditing and trace back.</del>	P	<b>PPPO</b> see above comment <i>Category : SUBSTANTIVE</i>
73	43	<del>Record keeping and documentation requirements should be met to enable auditing and trace back.</del>	P	<b>Korea, Republic of</b> <i>Category : SUBSTANTIVE</i>
74	43	<a href="#">The intended use of the commodity should be considered.</a> Record keeping and documentation requirements should be met to enable auditing and trace-back.	P	<b>COSAVE</b> To consider the intended use of the commodity is also a requirement <i>Category : TECHNICAL</i>
75	43	Asimismo, deberían satisfacerse los requisitos de mantenimiento de registros y documentación para permitir la auditoría y <del>el</del> <a href="#">rastreo</a> <del>la</del> <a href="#">rastreadabilidad</a> .	P	<b>Costa Rica</b> Mejor traducción del término "Trace-back". Consistencia con el comentario general <i>Category : TRANSLATION</i>
<b>BACKGROUND</b>				
76	46	ISPM 28 was adopted to harmonize effective	P	<b>PPPO</b> <i>Category : EDITORIAL</i>

		phytosanitary treatments over a wide range of circumstances and to enhance the mutual recognition of treatment efficacy by NPPOs, which may facilitate trade. ISPM 28 provides requirements for submission and evaluation of efficacy data and other relevant information on phytosanitary treatments, <del>and</del> . <del>The ISPM 28 annexes with</del> <u>contain</u> specific irradiation treatments that have been evaluated and adopted by the Commission on Phytosanitary Measures.		
77	46	ISPM 28 was adopted to harmonize effective phytosanitary treatments over a wide range of circumstances and to enhance the mutual recognition of treatment efficacy by NPPOs, which may facilitate <u>safe</u> trade. ISPM 28 provides requirements for submission and evaluation of efficacy data and other relevant information on phytosanitary	P	<b>IPPC Regional Workshop Africa</b>  <i>Category : SUBSTANTIVE</i>



		treatments, and annexes with specific irradiation treatments that have been evaluated and adopted by the Commission on Phytosanitary Measures.		
78	47	Irradiation is considered to be effective when the phytosanitary treatment dose of ionizing radiation (hereafter referred to as the <del>“phytosanitary treatment dose”</del> “dose”) required by the treatment schedule is absorbed at the location in the process load ( <del>as defined in ISPM 5</del> ) that receives the lowest dose of radiation. Therefore, process control relies on identifying the minimum dose location for a specific commodity configuration and routinely delivering to this location a dose of ionizing radiation (a minimum dose) that is equal to or greater than the required <del>phytosanitary treatment</del> dose. The effectiveness of the treatment process as a whole also includes measures applied to prevent infestation or	P	<b>COSAVE</b> 1) Refer to dose for simplification 2) All Glossary terms used in ISPMs should be used as defined in ISPM 5, and this is explicitly said in the definition section <i>Category : TECHNICAL</i>

		contamination after irradiation.		
79	47	<p>Irradiation is considered to be effective when the phytosanitary treatment dose of ionizing radiation (hereafter referred to as the “phytosanitary treatment dose”) required by the treatment schedule is absorbed at the location in the process load (as defined in ISPM 5) <del>that receives the lowest dose of radiation.</del> Therefore<sup>5</sup>, process control relies on identifying the minimum dose (<u>Dmin</u>) location for a specific commodity configuration and routinely delivering to this location <del>a dose of ionizing radiation (a (the minimum dose) dose (Dmin))</del> that is <del>equal to or greater than the</del> required <del>for</del> phytosanitary treatment <del>dose</del>. The effectiveness of the treatment process <del>as a whole</del> also includes measures applied to prevent infestation or contamination after irradiation.</p>	P	<p><b>United States of America</b>  it is important to introduce the concept of the minimum dose (Dmin) required for a phytosanitary irradiation treatment.  Category : <i>TECHNICAL</i></p>

80	47	Irradiation is considered to be effective when the phytosanitary treatment dose of ionizing radiation (hereafter referred to as the “phytosanitary treatment dose”) required by the treatment schedule is absorbed at the location in the process load (as defined in ISPM 5) that receives the lowest dose of radiation. Therefore, process control relies on identifying the minimum dose location for a specific commodity configuration and routinely delivering to this location a dose of ionizing radiation (a minimum dose) that is equal to or greater than the required phytosanitary treatment dose. The effectiveness of the treatment process as a whole also includes measures applied to prevent infestation or contamination after irradiation.	C	<b>United States of America</b> ISPM-5 does not define “commodity configuration” and only refers to “process load”, defined as a volume of material with a specific loading configuration and treated as a single entity.” Therefore, should this be clarified here: commodity configuration, i.e., the defined arrangement of product (food/commodity) placed in or on the irradiation container)? <i>Category : TECHNICAL</i>
81	47	Irradiation is considered to be effective when the phytosanitary treatment dose of ionizing radiation (hereafter referred to as the	P	<b>Uruguay</b> 1) Refer to dose for simplification. 2) All Glossary terms used in ISPMs should be used as defined in ISPM 5, and this is explicitly said in the definition section <i>Category : TECHNICAL</i>

		<p><del>“phytosanitary treatment dose”</del>–“dose”) required by the treatment schedule is absorbed at the location in the process load <del>(as defined in ISPM 5)</del> that receives the lowest dose of radiation. Therefore, process control relies on identifying the minimum dose location for a specific commodity configuration and routinely delivering to this location a dose of ionizing radiation (a minimum dose) that is equal to or greater than the required <del>phytosanitary treatment</del> dose. The effectiveness of the treatment process as a whole also includes measures applied to prevent infestation or contamination after irradiation.</p>		
IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT				
82	49	<p>The use of irradiation as a phytosanitary measure has a beneficial impact on biodiversity and the environment by preventing the introduction and spread of regulated pests with</p>	C	<p><b>Guyana</b>  Proposes that the negative impacts of irradiation need to be highlighted as well.  In the standard for fumigation, both the positive and negative impacts on biodiversity and the environment were stated.  Category : <i>SUBSTANTIVE</i></p>

		the trade of plants and plant products.		
83	49	The use of irradiation as a phytosanitary measure <u>has a beneficial impact</u> <u>has</u> <u>Has no detrimental effect</u> on biodiversity <u>and nor on</u> the <u>environment</u> <u>environment, provided</u> <u>no radioactive materials remain in the treated product</u> by preventing the introduction and spread of regulated pests with the trade of plants and plant products.	P	<b>Barbados</b> The negative impacts of irradiation need to be highlighted as well. In the standard for fumigation, both the positive and negative impacts on biodiversity and the environment were stated. <i>Category : SUBSTANTIVE</i>
84	49	The use of <u>ionizing</u> irradiation as a phytosanitary measure has a beneficial impact on biodiversity and the environment by preventing the introduction and spread of regulated pests with the trade of plants and plant products.	P	<b>IPPC Regional Workshop Africa</b> <i>Category : SUBSTANTIVE</i>
85	49	The use of irradiation as a phytosanitary measure has a beneficial impact on biodiversity and the environment by preventing the introduction and spread of regulated pests with the trade of plants and plant products.	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Jamaica proposes that the negative impacts of irradiation need to be highlighted as well. In the standard for fumigation, both the positive and negative impacts on biodiversity and the environment were stated. <i>Category : SUBSTANTIVE</i>

86	49	The use of irradiation as a phytosanitary measure has a beneficial impact on biodiversity and the environment by preventing the introduction and spread of regulated pests with the trade of plants and plant products.	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Alternatively: Has no detrimental effect on biodiversity nor on the environment, provided no radioactive materials remain in the treated product. <i>Category : EDITORIAL</i>
87	49	El uso de la irradiación como medida fitosanitaria tiene un efecto beneficioso para la biodiversidad y el medio ambiente, ya que previene la introducción y la dispersión de plagas reglamentadas con el comercio de plantas y productos vegetales. <u>siempre y cuando los residuos del proceso de irradiación sean manejados o dispuestos de forma adecuada.</u>	P	<b>Colombia</b> No se debe desconocer que la contaminación radiactiva ocurre cuando se deposita material radiactivo sobre un objeto o una persona o en su interior. Los materiales radiactivos liberados al ambiente pueden causar la contaminación del aire, el agua, las superficies, los suelos, las plantas, las edificaciones, las personas o los animales. Por tanto, se debe tener especial cuidado en el manejo de material o residuos originados de procesos de irradiación. <i>Category : SUBSTANTIVE</i>
1. Irradiation objective				
88	51	<b>1. <u>Ionizing</u> Irradiation objective</b>	P	<b>IPPC Regional Workshop Africa</b> <i>Category : SUBSTANTIVE</i>
89	52	The objective of using irradiation as a phytosanitary measure is to achieve <u>certain pest responses</u> at a specified <u>efficacy</u> <del>certain pest responses</del> <u>efficacy</u> , such as:	P	<b>European Union</b> To improve readability. <i>Category : EDITORIAL</i>

90	52	The objective of using irradiation as a phytosanitary measure is to <del>achieve-achieve</del> , at a specified <del>efficacy</del> <u>efficacy</u> , certain pest responses, such as:	P	<b>PPPO</b> this editorial amendment aims to emphasise that the key message here is around using irradiation at a specified efficacy to achieve the outcome. <i>Category : EDITORIAL</i>
91	52	The objective of using <u>ionizing</u> irradiation as a phytosanitary measure is to achieve at a specified efficacy certain pest responses, such as:	P	<b>IPPC Regional Workshop Africa</b> <i>Category : SUBSTANTIVE</i>
92	52	The objective of using irradiation as a phytosanitary measure is to achieve <del>at a specified efficacy</del> certain pest responses, <u>at a specified efficacy</u> , such as:	P	<b>COSAVE</b> Better reading <i>Category : EDITORIAL</i>
93	52	The objective of using irradiation as a phytosanitary measure is to achieve <u>certain pest responses</u> at a specified <del>efficacy-certain pest responses</del> <u>efficacy</u> , such as:	P	<b>EPPO</b> To improve readability <i>Category : EDITORIAL</i>
94	52	The objective of using irradiation as a phytosanitary measure is to achieve at a specified efficacy <del>certain pest</del> <u>any of the following required</u> responses, <del>such as:</del>	P	<b>United States of America</b> Better language <i>Category : EDITORIAL</i>
95	52	The objective of using irradiation as a phytosanitary measure is to achieve <del>at a specified</del>	P	<b>Uruguay</b> Better reading <i>Category : EDITORIAL</i>

		<del>efficacy</del> certain pest responses, <u>at a specified efficacy</u> , such as:		
96	52	El objetivo de utilizar la irradiación como medida fitosanitaria es conseguir <del>ciertas respuestas una determinada respuesta</del> de la plaga con un nivel de eficacia <del>determinado</del> <u>especificado</u> , por ejemplo:	P	<b>Costa Rica</b> el objetivo de la irradiación es conseguir una respuesta de la plaga, que ya ha sido estudiada por lo que al aplicarlo ya se espera que la plaga se comporte de acuerdo al resultado obtenido. Aclara la redacción del texto <i>Category : SUBSTANTIVE</i>
97	52	El objetivo de utilizar la irradiación como medida fitosanitaria es conseguir ciertas respuestas de la plaga <u>cuarentenaria</u> con un nivel de eficacia determinado, por ejemplo:	P	<b>Colombia</b> Dar mayor claridad sobre la identificación específica del riesgo a mitigar y sobre la cual se genera el tratamiento. <i>Category : SUBSTANTIVE</i>
98	53	<del>mortality</del> <u>mortality with time limit</u> ;	P	<b>Korea, Republic of</b> improve clarity <i>Category : SUBSTANTIVE</i>
99	56	<del>inactivation</del> <u>inactivation of microorganisms</u> ; or	P	<b>United States of America</b> clarity <i>Category : TECHNICAL</i>
100	56	inactivation; or	C	<b>United States of America</b> Should this term be removed, because inactivation can mean death, live status but immobile or diapausing life stages, or immobility due to environmental stress (e.g., low temperature)? <i>Category : TECHNICAL</i>
101	57	devitalization of plants as pests (e.g. seeds may germinate but seedlings do not grow; or <del>tubers, bulbs-tubers</del> or <del>cuttings bulbs</del> do not sprout).	P	<b>European Union</b> Even if "cuttings" probably refers to commodities such as cut flowers or cut foliage and this example is given in the current version of ISPM 18, it is rather ambiguous because a cutting is often understood as a "part of a plant separated from it and induced to form roots to become an individual plant on its own". Therefore it seems preferable not to keep this confusing example. <i>Category : TECHNICAL</i>
102	57	devitalization of plants as pests (e.g. seeds may germinate but seedlings do not grow; or <del>tubers,</del>	P	<b>EPPO</b> Even if "cuttings" probably refers to commodities such as cut flowers or cut foliage and this example is given in the current version of ISPM 18, it is rather ambiguous because a cutting is often understood as a "part of a plant separated from it and induced to form roots to become an individual plant on its own". Therefore it seems preferable not to keep this confusing example.



		<del>bulbs-tubers</del> or <del>cuttings</del> <del>bulbs</del> do not sprout).		<i>Category : TECHNICAL</i>
103	58	<u>Where the required response is the inability of the pest to reproduce, the following options may be specified:</u> <del>A range of specific options may be specified where the required response is the inability of the pest to reproduce. These may include:</del>	P	<b>COSAVE</b> For simplification and better reading <i>Category : EDITORIAL</i>
104	58	<del>A range of specific options may be specified where</del> <u>Where</u> the required response is the inability of the pest to reproduce. <del>These, the following options may include</del> <u>be specified:</u>	P	<b>Uruguay</b> For simplification and better reading <i>Category : EDITORIAL</i>
105	59	<u>complete sterility;</u>	C	<b>United States of America</b> Combine these two statements into "Complete sterility in one or both sexes" <i>Category : TECHNICAL</i>
106	60	<u>limited fertility of only one sex;</u>	C	<b>United States of America</b> See comment above <i>Category : TECHNICAL</i>
107	60	la fertilidad limitada de <u>solo</u> uno de los sexos;	P	<b>Panama</b> En consistencia con la versión en inglés <i>Category : SUBSTANTIVE</i>
108	60	la fertilidad limitada de <u>solo</u> uno de los sexos;	P	<b>OIRSA</b> en consistencia con la versión en ingles <i>Category : TRANSLATION</i>
109	61	la <del>puesta-oviposición</del> o eclosión de huevos que no se llegan a desarrollar;	P	<b>Costa Rica</b> Término más correcto <i>Category : SUBSTANTIVE</i>
110	61	<del>la puesta-oviposición</del> o eclosión de huevos que no se llegan a desarrollar;	P	<b>Panama</b> Uso correcto de los términos técnicos <i>Category : TECHNICAL</i>

111	61	la <del>puesta o</del> oviposición y eclosión de huevos que no se llegan a desarrollar;	P	<b>Colombia</b> Cambiar la palabra "puesta o" por oviposición. El termino oviposición es más usados en términos biológicos <i>Category : EDITORIAL</i>
112	61	la <del>puesta-oviposición</del> o eclosión de huevos que no se llegan a desarrollar;	P	<b>OIRSA</b> termino correcto <i>Category : EDITORIAL</i>
<b>2. Irradiation application</b>				
113	63	<b>2. <u>Ionizing</u> Irradiation application</b>	P	<b>IPPC Regional Workshop Africa</b> <i>Category : SUBSTANTIVE</i>
114	64	Ionizing radiation may be provided by radioactive isotopes (gamma rays from cobalt-60 or caesium-137), electrons (up to 10 MeV) or X-rays (up to 7.5 MeV) generated from machine sources. The unit of measurement for absorbed dose is the gray <del>(Gy)</del> (Gy) which is equivalent to the <a href="#">absorption of 1J/kg</a> .	P	<b>United States of America</b> to clarify <i>Category : TECHNICAL</i>
115	65	The phytosanitary treatment dose is the minimum dose required to achieve pest management at a specified efficacy. The treatment is entirely dependent upon the understanding of dose distribution within the commodity	P	<b>PPPO</b> more suitable English word <i>Category : EDITORIAL</i>

		configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment <del>may</del> include <del>erratic</del> <u>inconsistent</u> commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).		
116	65	The phytosanitary treatment dose is the minimum dose required to achieve pest management at a specified efficacy. The treatment <del>is entirely</del> <u>is</u> dependent upon the understanding of dose distribution within the commodity configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).	P	<b>Barbados</b> "entirely" be removed as this is not the only factor that may alter the effectiveness of the application. <i>Category : SUBSTANTIVE</i>
117	65	The <del>phytosanitary treatment</del> dose is the minimum dose required	P	<b>COSAVE</b> See comment in paragraph 47. Consistency with the irradiation objective described in paragraph 52 <i>Category : TECHNICAL</i>

		to achieve <a href="#">the pest management response</a> at a specified efficacy. The treatment is entirely dependent upon the understanding of dose distribution within the commodity configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).		
118	65	The phytosanitary treatment dose is the <a href="#">minimum dose (Dmin)</a> , required to achieve pest management at a specified efficacy. The treatment is entirely dependent upon the understanding of dose distribution within the commodity configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include	P	<b>United States of America</b> simplify <i>Category : EDITORIAL</i>

		erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).		
119	65	The phytosanitary treatment dose is the minimum dose required to achieve pest management at a specified efficacy. The treatment is <del>entirely</del> dependent upon the understanding of dose distribution within the commodity configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).	P	<b>Caribbean Agricultural Health and Food Safety Agency</b> Jamaica proposes that the word "entirely" be removed as this is not the only factor that may alter the effectiveness of the application. <i>Category : SUBSTANTIVE</i>
120	65	The phytosanitary treatment dose is the minimum dose required to achieve pest management at a specified efficacy. The treatment is entirely dependent upon the understanding of dose distribution within the commodity	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Jamaica proposes that the word "entirely" be removed as this is not the only factor that may alter the effectiveness of the application. <i>Category : SUBSTANTIVE</i>

		configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).		
121	65	The <del>phytosanitary treatment</del> dose is the minimum dose required to achieve <del>the pest management response</del> at a specified efficacy. The treatment is entirely dependent upon the understanding of dose distribution within the commodity configuration and consistent presentation of the process load to the ionizing radiation. Factors that may alter the effectiveness of the treatment may include erratic commodity configurations in the process load and variable levels of oxygen (O <sub>2</sub> ).	P	<b>Uruguay</b> See comment in paragraph 47. Consistency with the irradiation objective described in paragraph 52 <i>Category : TECHNICAL</i>
122	65	La dosis del tratamiento fitosanitario es la dosis mínima necesaria para	P	<b>Costa Rica</b> Consistencia con el párrafo 52, el objetivo de la aplicación de la irradiación es lograr la respuesta de la plaga <i>Category : SUBSTANTIVE</i>

		<p><del>lograr el control</del> <del>lograr la respuesta</del> de la plaga con un nivel de eficacia especificado. El tratamiento depende completamente de que se comprenda la distribución de la dosis en la configuración de los productos y de que la carga del proceso se someta sistemáticamente a la radiación ionizante. Entre los factores que pueden alterar la eficacia del tratamiento cabe mencionar la configuración variable de los productos en la carga del proceso y las variaciones en la concentración de oxígeno (O<sub>2</sub>).</p>		
123	66	<p>To ensure that the <del>phytosanitary treatment</del> dose has been attained throughout the process load, treatment procedures should ensure that the minimum absorbed dose (<math>D_{min}</math>) is at least equal to the required phytosanitary treatment dose. The intended use of the commodity should be considered. For example, although appropriate for foods</p>	P	<p><b>COSAVE</b> See comment in paragraph 47 Category : <i>TECHNICAL</i></p>

		and agricultural products for processing or consumption, irradiation may not be appropriate for plants for planting as it may devitalize them.		
124	66	To ensure that the phytosanitary treatment dose has been attained throughout the process load, treatment procedures should ensure that the minimum absorbed dose ( $D_{min}$ ) is <del>at least equal to</del> the required <u>dose for</u> phytosanitary <del>treatment dose</del> <u>treatment</u> . The intended use of the commodity should be considered. For example, <del>although</del> <u>irradiation dose</u> appropriate for foods and agricultural products for processing or consumption, <del>irradiation</del> may not be appropriate for plants for planting as it may devitalize them.	P	<b>United States of America</b> better language <i>Category : EDITORIAL</i>
125	66	To ensure that the phytosanitary treatment dose has been attained throughout the process load, treatment procedures should ensure that the minimum absorbed dose ( $D_{min}$ ) is at	C	<b>United States of America</b> devitalize or mutate them <i>Category : TECHNICAL</i>



		least equal to the required phytosanitary treatment dose. The intended use of the commodity should be considered. For example, although appropriate for foods and agricultural products for processing or consumption, irradiation may not be appropriate for plants for planting as it may devitalize them.		
126	66	To ensure that the <del>phytosanitary treatment</del> dose has been attained throughout the process load, treatment procedures should ensure that the minimum absorbed dose ( $D_{min}$ ) is at least equal to the required phytosanitary treatment dose. The intended use of the commodity should be considered. For example, although appropriate for foods and agricultural products for processing or consumption, irradiation may not be appropriate for plants for planting as it may devitalize them.	P	<b>Uruguay</b> See comment in paragraph 47. <i>Category : TECHNICAL</i>
127	67	In irradiation treatments, it is rare that mortality is technically justified as	P	<b>European Union</b> To improve readability. <i>Category : EDITORIAL</i>

		the required response. It is therefore possible that live, <del>though non-viable</del> <u>but non-viable</u> , target pests may be found in correctly treated commodities. This does not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.		
128	67	In irradiation treatments, it is rare that mortality is technically justified as the required response. It is therefore possible <del>that</del> <u>for</u> live, <del>though non-viable</del> target pests <del>may</del> <u>to</u> be found in correctly treated commodities. This does not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied	P	<b>PPPO</b> improve clarity Category : <i>EDITORIAL</i>

		correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.		
129	67	<p>In irradiation treatments, it is rare that mortality is technically justified as the required response. It is therefore possible that live, though non-viable target pests may be found in correctly treated commodities. This <del>does not imply a failure of means that the treatment</del><u>treatment has been not be applied correctly</u>. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished</p>	P	<p><b>IPPC Regional Workshop Africa</b></p> <p><i>Category : SUBSTANTIVE</i></p>

		from non-irradiated pests.		
130	67	<p><u>It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible that live, though non-viable target pests may be found in correctly treated commodities. This does not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.</u></p> <p><del>In irradiation treatments, it is rare that mortality is technically justified as the required response. It is therefore possible that live, though non-viable target pests may be found in correctly treated commodities. This does not imply a failure of the</del></p>	P	<p><b>COSAVE</b> For clarity Category : EDITORIAL</p>

		<p>treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.</p>		
131	67	<p>In irradiation treatments, it is rare that mortality is technically justified as the required response. It is therefore possible that live, <del>though-but</del> non-viable target pests may be found in correctly treated commodities. This does not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they</p>	P	<p><b>EPPO</b> To improve readability Category : <i>EDITORIAL</i></p>

		can be distinguished from non-irradiated pests.		
132	67	<p><u>It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible that live, though non-viable target pests may be found in correctly treated commodities. This does not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target-pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.</u></p> <p><del>In irradiation treatments, it is rare that mortality is technically justified as the required response. It is therefore possible that live, though non-viable target pests may be found in correctly treated commodities. This does</del></p>	P	<p><b>Uruguay</b> For clarity Category : EDITORIAL</p>

		<del>not imply a failure of the treatment. It does mean, however, that it is essential for the treatment to be applied correctly to ensure that any live target pests are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are unable to escape into the environment unless they can be distinguished from non-irradiated pests.</del>		
133	69	as an integral part of packing operations;	C	<b>Guyana</b> More clarification needed <i>Category : SUBSTANTIVE</i>
134	70	a productos a granel no <del>envasados</del> <u>embalados</u> ;	P	<b>Costa Rica</b> Mejor traducción del término <i>Category : TRANSLATION</i>
135	71	to packaged <del>or palletized</del> commodities.	P	<b>European Union</b> "Packaged commodities" includes "palletized commodities" (please see the definition of "packaging" in ISPM 5: "Material used in supporting, protecting or carrying a commodity"). <i>Category : TECHNICAL</i>
136	71	to packaged <del>or palletized</del> commodities.	P	<b>EPPO</b> "Packaged commodities" includes "palletized commodities" (please see the definition of "packaging" in ISPM 5: "Material used in supporting, protecting or carrying a commodity"). <i>Category : TECHNICAL</i>
137	71	a productos <del>envasados</del> <u>embalados</u> o paletizados.	P	<b>Costa Rica</b> Mejor traducción del término <i>Category : TRANSLATION</i>
138	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{min}$ was equal to, or above, the required phytosanitary treatment dose and	P	<b>European Union</b> These changes are suggested because: 1) the use of irradiation as a phytosanitary measure is for regulated pests (please see paragraph 28); 2) the schedule treatment selected should be efficient against the target pests (e.g. see paragraphs 102 and 141), which means that if a pest species requires a higher dose it was not originally a target species for the treatment conducted. <i>Category : TECHNICAL</i>

		therefore that the dose requirement has been met throughout the process load. Where a <u>regulated</u> pest species requiring a higher dose is found upon inspection <u>and that for which the phytosanitary treatment</u> dose requirement has not been met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{\max}$ ) total from all treatments is within the limits allowed by the importing country.		
139	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. <del>Where a pest species requiring a higher dose is found upon inspection and that dose requirement has not been met, If</del> consignments <del>may be</del> <u>are</u> re-treated, <del>provided</del> the maximum absorbed	P	<b>Japan</b> When carrying out the treatment, it is necessary to clarify the pests and pest groups to be treated and to carry out the treatment with the required dose. Therefore, there is a doubt as to whether only the re-treatment is appropriate as a measure in case where a pest known to require a higher dose than the target pest is found by the inspection. In addition, since the content of this paragraph is a requirement for implementing retreatment, it is not necessary to limit it to a specific reason for retreatment. <i>Category : SUBSTANTIVE</i>



		dose ( $D_{\max}$ ) total from all treatments <del>is</del> <u>should be</u> within the limits allowed by the importing country.		
140	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement <del>has been</del> <u>was</u> met throughout the process load. Where a pest species requiring a higher dose is found upon inspection and <del>that</del> <u>the</u> dose requirement <del>has</del> <u>for the pest was</u> not <del>been</del> met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{\max}$ ) total from all treatments is within the limits allowed by the importing country.	P	<b>PPPO</b> improve sentence flow <i>Category : EDITORIAL</i>
141	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been	P	<b>EPPO</b> These changes are suggested because:  1) the use of irradiation as a phytosanitary measure is for regulated pests (please see paragraph 28);  2) the schedule treatment selected should be efficient against the target pests (e.g. see paragraphs 102 and 141), which means that if a pest species requires a higher dose it was not originally a target species for the treatment conducted. <i>Category : TECHNICAL</i>

		met throughout the process load. Where a <u>regulated</u> pest species requiring a higher dose is found upon inspection <del>and that for which the</del> <u>phytosanitary treatment</u> dose requirement has not been met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{\max}$ ) total from all treatments is within the limits allowed by the importing country.		
142	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Where a pest species requiring a higher dose is found upon inspection and that dose requirement has not been met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{\max}$ ) total from all treatments is within the limits	C	<b>United States of America</b> Double irradiation (or re- irradiation) of some products is generally not recommended, especially for fresh commodities; to avoid problems, the Dmin application from the beginning should be according to the target pest. <i>Category : TECHNICAL</i>

		allowed by the importing country.		
143	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Where a pest species requiring a higher dose is found upon inspection and that dose requirement has not been met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{\max}$ ) total from all treatments is within the limits allowed by the importing country.	C	<b>United States of America</b> "Re-treated" is confusing here. PI is additive so you would just need to supply the missing dose in a second treatment. So technically not retreatment Category : <i>TECHNICAL</i>
144	76	Treated commodities should be certified and released only after dosimetry measurements confirm that $D_{\min}$ was equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Where a pest species requiring a	C	<b>United States of America</b> In many cases, you cannot confirm, only calculate. This carelessly tosses around Dmax/Dmin when they mean Calculated Dmax/Dmin Category : <i>TECHNICAL</i>

		higher dose is found upon inspection and that dose requirement has not been met, consignments may be re-treated, provided the maximum absorbed dose ( $D_{max}$ ) total from all treatments is within the limits allowed by the importing country.		
145	77	Depending on the pest risk to be addressed, the tolerance of the commodity to treatment, and the availability of other pest risk management options, irradiation may be used either as a single <del>treatment measure</del> or combined with other measures as part of a systems approach to meet the efficacy required (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> )).	P	<b>Canada</b> Measure is more appropriate than treatment. <i>Category : TECHNICAL</i>
146	77	Depending on the pest risk to be addressed, the tolerance of the commodity to treatment, and the availability of other pest risk management options, irradiation may be used	P	<b>Viet Nam</b> It is recommended to add references at ISPM No. 28 <i>Category : SUBSTANTIVE</i>

		either as a single treatment or combined with other measures as part of a systems approach to meet the efficacy required (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> , <a href="#">ISPM No. 28 (2)</a> ).		
147	77	Depending on the pest risk to be addressed, the tolerance of the commodity to treatment, and the availability of other pest risk management options, irradiation may be used either as a single <del>treatment measure</del> or combined with other measures as part of a systems approach to meet the efficacy required (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> )).	P	<b>PPPO</b> Clarifies that phytosanitary irradiation is one available measure out of a range of measures. As described in the paragraph above, multiple individual phytosanitary irradiation treatments may be applied but this is different to the application of phytosanitary irradiation as the single measure <i>Category : SUBSTANTIVE</i>
148	77	Depending on the pest risk to be addressed, the tolerance of the commodity to treatment, and the availability of other pest risk management options, irradiation may be used either as a single	P	<b>Australia</b> Clarifies that phytosanitary irradiation is one available measure out of a range of measures. As described in the paragraph above, multiple individual phytosanitary irradiation treatments may be applied but this is different to the application of phytosanitary irradiation as the single measure <i>Category : SUBSTANTIVE</i>

		<del>treatment-measure</del> or combined with other measures as part of a systems approach to meet the efficacy required (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> )).		
149	77	Depending on the pest risk to be <del>addressed</del> <u>managed</u> , the tolerance of the commodity to treatment, and the availability of other pest risk management options, irradiation may be used either as a single <del>treatment</del> <u>phytosanitary measure</u> or combined with other measures as part of a systems approach <del>to meet the efficacy required</del> (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> )).	P	<b>COSAVE</b> The integration of measures in a systems approach is not aimed to meet the efficacy of the treatment. The treatment achieve the pest reponse at a given efficacy- If the efficacy is not enough to meet phytosanitary import requirements it may be integrated with other measures to meet these requirements <i>Category : SUBSTANTIVE</i>
150	77	Depending on the pest risk to be <del>addressed</del> <u>managed</u> , the tolerance of the commodity to treatment, and the availability of other pest risk management options,	P	<b>Uruguay</b> The integration of measures in a systems approach is not aimed to meet the efficacy of the treatment. The treatment achieve the pest reponse at a given efficacy- If the efficacy is not enough to meet phytosanitary import requirements it may be integrated with other measures to meet these requirements <i>Category : SUBSTANTIVE</i>

		irradiation may be used either as a single <del>treatment-phytosanitary measure</del> or combined with other measures as part of a systems approach <del>to meet the efficacy required</del> (see ISPM 14 ( <i>The use of integrated measures in a systems approach for pest risk management</i> )).		
151	77	Dependiendo del riesgo de plagas que haya que abordar, de la tolerancia del producto al tratamiento y de que existan otras opciones para el manejo del riesgo de plagas, la irradiación se podrá utilizar, sola o combinada con otras medidas, como parte de un enfoque de sistemas a fin de alcanzar <del>la eficacia requerida</del> <u>“el nivel adecuado de protección requerido”</u> (véase la NIMF 14, <i>Aplicación de medidas integradas en un enfoque de sistemas para el manejo del riesgo de plagas</i> ).	P	<b>Colombia</b> Cambiar la eficacia requerida por "el nivel adecuado de protección requerido". Cuando hacemos referencia a la eficacia nos estamos refiriendo al tratamiento: Efecto definido, mensurable y reproducible mediante un tratamiento prescrito [NIMF 18, 2003]. Y cuando la irradiación está siendo parte de un enfoque de sistemas nos estamos refiriendo a integrar diferentes medidas, de las cuales al menos dos actúan independientemente, con efecto acumulativo [NIMF 14, 2002; revisado CIMF, 2005; CMF, 2015] <i>Category : SUBSTANTIVE</i>
<b>3. Dosimetry</b>				
152	79	Irradiation does not deliver a uniform dose throughout a process load but a continuum of	P	<b>United States of America</b> clarification <i>Category : TECHNICAL</i>

		<p><del>doses</del> <u>doses known as a dose distribution, ranging from <math>D_{min}</math> to a <math>D_{max}</math>.</u> The dose range may increase as the size or density of the treated material increases. Therefore, it is important that an accurate measurement of the absorbed dose in a process load can be readily determined to ensure that <math>D_{min}</math> <u>is greater than or equal to required</u> for the phytosanitary treatment <del>dose required</del> <u>has been reached in any point of the load.</u></p>		
153	79	<p>La irradiación no emite una dosis uniforme en toda la carga del proceso, sino un continuo de dosis. El intervalo de dosis podrá aumentar a medida que <del>lo hagan aumenta</del> el tamaño o la densidad del material tratado. En consecuencia, es importante poder medir la dosis absorbida en una carga del proceso con exactitud y rapidez para garantizar que la <math>D_{min}</math> sea igual o superior a la</p>	P	<p><b>Costa Rica</b> Clarifica <i>Category : EDITORIAL</i></p>



		dosis requerida del tratamiento fitosanitario.		
154	80	<p>Dosimetry provides assurance that <math>D_{\min}</math> is equal to, or above, the required phytosanitary treatment dose and therefore <del>that</del> the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly specialized.</p> <p><del>National plant protection organizations</del> <b>NPPO</b> unfamiliar with phytosanitary irradiation should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for phytosanitary irradiation.</p>	P	<p><b>PPPO</b> clearer wording Category : <i>EDITORIAL</i></p>
155	80	<p>Dosimetry provides assurance that <math>D_{\min}</math> is equal to, or above, the required phytosanitary treatment dose and</p>	P	<p><b>Barbados</b> the paragraph is complete with the addition of therefore ..makes it less disjointed. Category : <i>EDITORIAL</i></p>

		therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly specialized <sup>2</sup> , <u>therefore</u> , National plant protection organizations unfamiliar with phytosanitary irradiation should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for phytosanitary irradiation.		
156	80	Dosimetry provides assurance that $D_{min}$ is equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and	P	<b>COSAVE</b> There is no need to qualify irradiation with "phytosanitary" and to clarify the issue of not being familiar with irradiation when used as a phytosanitary measure <i>Category : TECHNICAL</i>

		<p>protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly specialized. National plant protection organizations unfamiliar with <a href="#">phytosanitary irradiation</a> should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for <a href="#">irradiating commodities for phytosanitary irradiation purposes</a>.</p>		
157	80	<p>Dosimetry provides assurance that <math>D_{\min}</math> is equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring</p>	P	<p><b>United States of America</b> better language. <i>Category : EDITORIAL</i></p>

		of those systems, provide assurance that treatments are properly conducted. Dosimetry is <a href="#">a highly specialized specialized technique</a> . National plant protection organizations unfamiliar with phytosanitary irradiation should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for phytosanitary irradiation.		
158	80	Dosimetry provides assurance that $D_{\min}$ is equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly <del>specialized</del> .	P	<b>Caribbean Agricultural Health and Food Safety Agency</b>  <i>Category : EDITORIAL</i>

		<p><u>specialized therefore</u></p> <p>National plant protection organizations unfamiliar with phytosanitary irradiation should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for phytosanitary irradiation.</p>		
159	80	<p>Dosimetry provides assurance that <math>D_{\min}</math> is equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly specialized. National plant protection organizations unfamiliar with phytosanitary irradiation should collaborate with technical experts from</p>	C	<p><b>Caribbean Agricultural Health and Food Safety Agency</b></p> <p>Jamaica proposes that “therefore” is inserted after specialized to read “Dosimetry is highly specialized, therefore National .....”</p> <p><i>Category : SUBSTANTIVE</i></p>

		their national nuclear agencies when approving facilities to be used for phytosanitary irradiation.		
160	80	Dosimetry provides assurance that $D_{\min}$ is equal to, or above, the required phytosanitary treatment dose and therefore that the dose requirement has been met throughout the process load. Properly designed systems for treatment delivery and protection against infestation and contamination, together with continual checking and regular monitoring of those systems, provide assurance that treatments are properly conducted. Dosimetry is highly specialized. National plant protection organizations unfamiliar with phytosanitary irradiation should collaborate with technical experts from their national nuclear agencies when approving facilities to be used for <a href="#">irradiating commodities for</a>	P	<b>Uruguay</b> There is no need to qualify irradiation with "phytosanitary" and to clarify the issue of not being familiar with irradiation when used as a phytosanitary measure <i>Category : TECHNICAL</i>

		phytosanitary <del>irradiation</del> purposes.		
161	80	La dosimetría permite asegurar que la $D_{min}$ es igual o superior a la dosis requerida del tratamiento fitosanitario y, por consiguiente, que se ha cumplido el requisito relativo a la dosis requerida en toda la carga del proceso. Los sistemas debidamente diseñados de aplicación del tratamiento y protección del producto contra la infestación y la contaminación, junto con el control constante y la supervisión periódica de dichos sistemas, garantizan que los tratamientos se lleven a cabo correctamente. La dosimetría es sumamente especializada. Las ONPF que no estén familiarizadas con la <del>irradiación fitosanitaria</del> <del>irradiación</del> deberían colaborar con los expertos técnicos de sus organismos nacionales de energía nuclear a la hora de aprobar las instalaciones que se	P	<b>Costa Rica</b> No es necesario calificar la irradiación con "fitosanitaria" Revisar la versión en ingles y ajustarlas <i>Category : SUBSTANTIVE</i>

		utilizarán para este tratamiento.		
162	81	Dosimetry should be performed on a routine basis to ensure <del>that that</del> , for each batch of process loads <del>treated treated</del> , the doses delivered equal or exceed the required $D_{min}$ .	P	<b>European Union</b> Commas suggested to be added for ease of reading. Category : <i>EDITORIAL</i>
163	81	Dosimetry should be performed on a routine basis to ensure that for each batch of process loads treated the doses delivered equal or exceed the required $D_{min}$ .	C	<b>PPPO</b> This section should include a description of who is responsible for performing dosimetry to align with the checklist in the Annex. Category : <i>SUBSTANTIVE</i>
164	81	Dosimetry should be performed on a routine basis to ensure that for each batch of process loads <del>treated treated</del> , the doses delivered equal or exceed the required $D_{min}$ .	P	<b>EPPO</b> A comma suggested to be added for ease of reading. Category : <i>EDITORIAL</i>
165	81	Dosimetry should be performed on a routine basis to ensure that for each batch of process loads treated the doses delivered equal or exceed the required $D_{min}$ .	C	<b>United States of America</b> Overall, this is a rather weak language; we need to strengthen it by explaining WHY we need it and how we use it. Category : <i>TECHNICAL</i>
166	81	Dosimetry should be performed on a routine basis to ensure that for each batch of process loads treated the doses delivered equal <del>or</del> <del>exceed the required to</del> $D_{min}$ .	P	<b>United States of America</b> clarity Category : <i>TECHNICAL</i>



167	81	<del>Dosimetry should be performed on a routine basis to ensure that for each batch of process loads treated the doses delivered equal or exceed the required <math>D_{min}</math>.</del>	P	<b>Thailand</b> We would like to propose to delete this sentence because it duplicates the detail as shown in para 80 above. <i>Category : SUBSTANTIVE</i>
<b>3.1 Dosimetry systems</b>				
168	83	A dosimetry system consists of dosimeters, instruments that read dosimeters and <u>technically agreed upon</u> procedures. A dosimeter is a device with a reproducible response to irradiation that can be used to measure the absorbed dose. The dosimeter responds to the radiation and the response is measured by instruments to calculate the amount of ionizing radiation that the product has absorbed (expressed as absorbed dose).	P	<b>Australia</b> Clarifies that the parameters around the procedures to be used are to be agreed upon on technical grounds. <i>Category : TECHNICAL</i>
169	83	A dosimetry system consists of <u>1)</u> dosimeters, <u>2)</u> instruments that read dosimeters and <del>procedures</del> <u>3) procedures and standards</u> . A dosimeter is a device with a reproducible response to irradiation that can be used to measure the absorbed	P	<b>United States of America</b> clarity <i>Category : EDITORIAL</i>

		dose. The dosimeter responds to the radiation and the response is measured by instruments to calculate the amount of ionizing radiation that the product has absorbed (expressed as absorbed dose).		
170	83	Un sistema de dosimetría está formado por dosímetros; instrumentos que leen dosímetros, y procedimientos. Un dosímetro es un dispositivo que emite una respuesta reproducible a la irradiación y que se puede emplear para medir la dosis absorbida. El dosímetro responde a la radiación, y la respuesta que da se mide con instrumentos que permiten calcular la cantidad de radiación ionizante que ha absorbido el producto (expresada como dosis absorbida).	P	<b>Cuba</b> <i>Category : EDITORIAL</i>
171	84	The selection and use of specific dosimetry systems should be appropriate for both the dose range and the type of radiation. It should	P	<b>Thailand</b> We would like to propose to delete the year indicated in the standard code. If the year is not indicated, it will be understood to be referred to the most updated version. <i>Category : EDITORIAL</i>

		take into account the influence of factors such as dose rates, the minimum level of uncertainty deemed to be acceptable and the required spatial resolution. Examples of dosimetry systems that can be used for gamma ray, electron beam and X-ray facilities can be found in ISO/ASTM 51261: <del>2013</del> .		
<b>3.2 Dose mapping</b>				
172	86	Dose mapping is performed by placing dosimeters throughout the process load, irradiating the process load and reading the dosimeter values. Further information on the practices used for electron beams and X-rays are described in ISO <del>14470:2011</del> <a href="#">14470</a> and ISO/ASTM 51261: <del>2013</del> .	P	<b>Thailand</b> We would like to propose to delete the year indicated in the standard code. If the year is not indicated, it will be understood to be referred to the most updated version. <i>Category : EDITORIAL</i>
173	89	to demonstrate that the required <del>dose range</del> <a href="#">Dmin</a> can be attained for the process load;	P	<b>United States of America</b> <i>Category : TECHNICAL</i>
174	93	The dose distribution in a process load is specific to the irradiator, the product path (the path that the commodity takes through the irradiator),	P	<b>Australia</b> Improves readability of the sentence <i>Category : EDITORIAL</i>

		the process load and the characteristics of the commodity. If any of these <u>factors</u> change, dose mapping should be repeated, as such changes affect dose distribution.		
175	93	The dose distribution in a process load is specific to the irradiator, the product path (the <u>path type and time of the conveyor</u> that <u>carries the commodity takes load</u> through the irradiator), the process load and the characteristics of the commodity. If any of these change, dose mapping should be repeated, as such changes affect dose distribution.	P	<b>United States of America</b> technical detail <i>Category : TECHNICAL</i>
<b>3.3 Routine dosimetry</b>				
176	95	Accurate measurements of absorbed dose in a process load are critical for determining the effectiveness of the treatment and <u>they</u> are part of the <u>quality control of the irradiation treatment and the validation process</u> . The required number, location and frequency of these measurements	P	<b>United States of America</b> quality control is important here <i>Category : TECHNICAL</i>

		should be prescribed based on the specific equipment, processes, commodities, relevant standards and phytosanitary requirements.		
4. Validation				
177	97	<b>4.</b> <u>ValidationVal idation of the Irradiation facility and certification of the irradiation treatment</u>	P	<b>United States of America</b> There are potential problems with terminology here. If validation is designed to verify, then why not call it verification? How about qualification? is that that NPPOs only approve or accredit? The facility owners do the verification/validation/qualification for operation. <i>Category : TECHNICAL</i>
178	99	Installation qualification and operational qualification validate the irradiator and may be performed by the treatment provider with the technology suppliers. <del>National plant protection organizations are typically not involved with installation or operational qualification activities, but the</del> <u>The</u> treatment provider should inform the NPPO if major changes have been made to the facility that would require dose mapping to be repeated (e.g. replenishment of gamma sources or major changes to conveyor-belt systems or speeds).	P	<b>United States of America</b> unnecessary language <i>Category : TECHNICAL</i>

179	100	<p>The <del>way in which the commodity is loaded and irradiated is based on the results of the performance qualification. Therefore, the</del> NPPO should review the performance-qualification activities that are undertaken with the actual commodity and commercial-product configuration (e.g. full pallet or half <del>pallet</del> <u>pallet; or full container or half container</u>). The objective of performance qualification is to demonstrate that the equipment, as installed and properly operated, consistently performs as expected and that the treatment schedule can be met. Dose mapping of the actual commodity to define the configuration of the process load is a key activity to ensure that <math>D_{min}</math> is achieved.</p>	P	<p><b>United States of America</b> technical details <i>Category : TECHNICAL</i></p>
180	100	<p>La manera en que se carga y se irradia el producto se basa en los resultados de la cualificación del rendimiento. Por consiguiente, la ONPF</p>	P	<p><b>Costa Rica</b> Termino usado en español. Consistencia con la NIMF 15 <i>Category : TRANSLATION</i></p>

		debería examinar las actividades relativas a la cualificación del rendimiento que se llevan a cabo con el producto real y la configuración del producto comercial (por ejemplo, un <del>palé</del> <u>paleta</u> entero o medio <del>palé</del> <u>paleta</u> ). El objetivo de la cualificación del rendimiento es demostrar que el equipo, instalado y utilizado correctamente, funciona siempre según lo previsto y que se puede cumplir el protocolo de tratamiento. A fin de garantizar que se alcanza la $D_{min}$ , es fundamental elaborar el mapeo de dosis del producto real para definir la configuración de la carga del proceso.		
181	100	La manera en que se carga y se irradia el producto se basa en los resultados de la cualificación del rendimiento. Por consiguiente, la ONPF debería examinar las actividades relativas a la cualificación del rendimiento que se llevan a cabo con el	P	<b>Panama</b> Uso correcto de términos <i>Category : EDITORIAL</i>

		<p>producto real y la configuración del producto comercial (por ejemplo, <del>un palé entero</del> <a href="#">una paleta entera</a> o <del>medio palé</del> <a href="#">media paleta</a>). El objetivo de la cualificación del rendimiento es demostrar que el equipo, instalado y utilizado correctamente, funciona siempre según lo previsto y que se puede cumplir el protocolo de tratamiento. A fin de garantizar que se alcanza la <math>D_{min}</math>, es fundamental elaborar el mapeo de dosis del producto real para definir la configuración de la carga del proceso.</p>		
182	100	<p>La manera en que se carga y se irradia el producto se basa en los resultados de la cualificación del rendimiento. Por consiguiente, la ONPF debería examinar las actividades relativas a la cualificación del rendimiento que se llevan a cabo con el producto real y la configuración del producto comercial (por</p>	P	<p><b>Guatemala</b></p> <p><i>Category : EDITORIAL</i></p>



		<p>ejemplo, <del>un palé entero</del> <del>o medio palé</del> <u>una tarima</u>). El objetivo de la cualificación del rendimiento es demostrar que el equipo, instalado y utilizado correctamente, funciona siempre según lo previsto y que se puede cumplir el protocolo de tratamiento. A fin de garantizar que se alcanza la <math>D_{min}</math>, es fundamental elaborar el mapeo de dosis del producto real para definir la configuración de la carga del proceso.</p>		
183	100	<p>La manera en que se carga y se irradia el producto se basa en los resultados de la cualificación del rendimiento. Por consiguiente, la ONPF debería examinar las actividades relativas a la cualificación del rendimiento que se llevan a cabo con el producto real y la configuración del producto comercial (por ejemplo, un <del>palé-paleta</del> entero o medio <del>palé</del> <u>paleta</u>). El objetivo de la cualificación del rendimiento es</p>	P	<p><b>OIRSA</b> Uso correcto de términos Category : EDITORIAL</p>

		demostrar que el equipo, instalado y utilizado correctamente, funciona siempre según lo previsto y que se puede cumplir el protocolo de tratamiento. A fin de garantizar que se alcanza la $D_{min}$ , es fundamental elaborar el mapeo de dosis del producto real para definir la configuración de la carga del proceso.		
5. Adequate systems for treatment facilities				
184	102	Confidence in the adequacy of an irradiation treatment as a phytosanitary measure is primarily based on assurance that the treatment <a href="#">schedule</a> is effective against the target pests under specific conditions and the treatment has been properly applied. Systems for treatment delivery <a href="#">in the facilities</a> should be designed, used and monitored to ensure that treatments are properly conducted and commodities are protected from infestation and contamination after treatment.	P	<b>European Union</b> More precise wording suggested. 1) A "treatment schedule" is defined in ISPM 5 as "The critical parameters of a treatment which need to be met to achieve the intended outcome (i.e. the killing, inactivation or removal of pests, or rendering pests infertile, or devitalization) at a stated efficacy". 2) Please see title of section 5 (paragraph 101). <i>Category : TECHNICAL</i>

185	102	Confidence in the adequacy <del>of an of</del> irradiation <del>treatment</del> as a phytosanitary measure is primarily based on assurance that the treatment is effective against the target pests under specific conditions and the treatment has been properly applied. Systems for treatment delivery should be designed, used and monitored to ensure that treatments are properly <del>conducted and commodities are protected from infestation and contamination after treatment conducted.</del>	P	<b>COSAVE</b> 1) Irradiation is defined in ISPM 5 as treatment with any type of ionizing radiation, thus irradiation treatment is redundant 2) The prevention of infestation is more related to the facility than to the system. Furthermore it has been already considered in section 5.2 below. <i>Category : TECHNICAL</i>
186	102	Confidence in the adequacy of an irradiation treatment as a phytosanitary measure is primarily based on assurance that the treatment <del>shedule</del> is effective against the target pests under specific conditions and the treatment has been properly applied. Systems for treatment delivery <del>in the facilities</del> should be designed, used and monitored to ensure that treatments are	P	<b>EPPO</b> More precise wording suggested.  1) A "treatment schedule" is defined in ISPM 5 as "The critical parameters of a treatment which need to be met to achieve the intended outcome (i.e. the killing, inactivation or removal of pests, or rendering pests infertile, or devitalization) at a stated efficacy".  2) Please see title of section 5 (paragraph 101). <i>Category : TECHNICAL</i>

		properly conducted and commodities are protected from infestation and contamination after treatment.		
187	102	Confidence in the adequacy of <del>an</del> irradiation <del>treatment</del> as a phytosanitary measure is primarily based on assurance that the treatment is effective against the target pests under specific conditions and the treatment has been properly applied. Systems for treatment delivery should be designed, used and monitored to ensure that treatments are properly <del>conducted and commodities are protected from infestation and contamination after treatment</del> <u>conducted</u> .	P	<b>Uruguay</b> 1) Irradiation is defined in ISPM 5 as treatment with any type of ionizing radiation, thus irradiation treatment is redundant. 2) The prevention of infestation is more related to the facility than to the system. Furthermore it has been already considered in section 5.2 below. <i>Category : TECHNICAL</i>
188	102	La confianza en la idoneidad de un tratamiento de irradiación como medida fitosanitaria se basa principalmente en <del>la garantía de asegurar</del> que el tratamiento es eficaz contra las plagas objetivo en condiciones	P	<b>Costa Rica</b> Utilización del término más apropiada "asegurar" la reinfestación del producto posterior a la irradiación están más orientados a las condiciones de las instalaciones donde se mantiene el producto luego del tratamiento y no propiamente a las condiciones en las cuales se está aplicando el tratamientos. <i>Category : SUBSTANTIVE</i>

		específicas y de que el tratamiento se ha aplicado correctamente. Los sistemas de aplicación del tratamiento deberían diseñarse, utilizarse y supervisarse para <del>garantizar-asegurar</del> que el tratamiento se lleva a cabo <del>correctamente-y</del> <del>que los productos están protegidos contra la infestación y la contaminación después de haber sido tratados</del> correctamente.		
<b>5.1 Approval of facilities and authorization of treatment providers</b>				
189	104	<b>5.1 Approval of <u>treatment</u> facilities and authorization of treatment providers</b>	P	<b>European Union</b> For consistency within the standard (please see paragraphs 29 and 105 i.e. following paragraph). <i>Category : EDITORIAL</i>
190	104	<b>5.1 Approval of <u>treatment</u> facilities and authorization of treatment providers</b>	P	<b>EPPO</b> For consistency within the standard (please see paragraphs 29 and 105 i.e. following paragraph). <i>Category : EDITORIAL</i>
191	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, <u>with</u> such approval thereby <del>authorizing-providing authorization to</del> the treatment provider responsible for the	P	<b>European Union</b> To improve readability. <i>Category : EDITORIAL</i>

		facility (APPPC, 2014). This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and those that are specific to the site and commodity (see Annex 1).		
192	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, such approval thereby authorizing the treatment provider responsible for the facility (APPPC, 2014). This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all	C	<b>Viet Nam</b> Need to add the name of this information for reference <i>Category : SUBSTANTIVE</i>

		irradiation facilities and those that are specific to the site and commodity (see Annex 1).		
193	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, such approval thereby authorizing the treatment provider responsible for the facility <u>to conduct treatments according to agreed procedures</u> (APPPC, 2014). This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and those that are specific to the site and commodity (see Annex 1).	P	<b>Australia</b> Improves readability of the sentence by clarifying what the treatment provider will be authorized to do. <i>Category : EDITORIAL</i>
194	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments	P	<b>COSAVE</b> Although this regional standard was used as a reference in this revision, NPPOs should follow the guidelines of ISPM 18 and not those of a regional standard consistent with ISPM 18 <i>Category : TECHNICAL</i>

		are applied there, such approval thereby authorizing the treatment provider responsible for the <del>facility (APPPC, 2014)</del> facility. This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and those that are specific to the site and commodity (see Annex 1).		
195	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, <del>with</del> such approval thereby <del>authorizing providing authorization to</del> the treatment provider responsible for the facility (APPPC, 2014). This approval should be subsequent to authorization from competent authorities for	P	<b>EPPO</b> To improve readability <i>Category : EDITORIAL</i>



		safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and those that are specific to the site and commodity (see Annex 1).		
196	105	Treatment facilities should be <a href="#">checked and</a> approved by the NPPO of the country in which the facility is <del>located</del> <a href="#">before phytosanitary treatments are applied there</a> <a href="#">located, if the facility has the conditions to provide the phytosanitary irradiation treatments,</a> such approval thereby authorizing the treatment provider responsible for the facility (APPPC, 2014). This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and	P	<b>United States of America</b> better clarity of the requirements <i>Category : TECHNICAL</i>

		those that are specific to the site and commodity (see Annex 1).		
197	105	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, such approval thereby authorizing the treatment provider responsible for the <del>facility (APPPC, 2014)</del> facility. This approval should be subsequent to authorization from competent authorities for safety (e.g. radiation safety authority, nuclear regulatory authority) where appropriate and be based on a set of criteria that include both criteria common to all irradiation facilities and those that are specific to the site and commodity (see Annex 1).	P	<b>Uruguay</b> Although this regional standard was used as a reference in this revision, NPPOs should follow the guidelines of ISPM 18 and not those of a regional standard consistent with ISPM 18 <i>Category : TECHNICAL</i>
198	105	Las instalaciones de tratamiento deberían contar con la aprobación de la ONPF del país en el que se encuentra la instalación antes de que se apliquen en ellas tratamientos	P	<b>Costa Rica</b> La Autoridad que apruebe las instalaciones de tratamiento debe tener conocimiento en medidas de seguridad, para evitar que el tratamiento se realice en condiciones no optimas que pueda afectar a las personas y los alrededores. La inocuidad está más relacionada con las condiciones del producto, más que con las condiciones de instalaciones. <i>Category : SUBSTANTIVE</i>

		fitosanitarios; por lo tanto, dicha aprobación autoriza al proveedor del tratamiento encargado de la instalación (APPPC, 2014). Esta aprobación debería ser posterior a la autorización emitida por las autoridades competentes en <u>la</u> materia de <del>inocuidad</del> <u>seguridad</u> (por ejemplo, la autoridad competente en materia de <del>inocuidad</del> <u>de</u> la radiación o la autoridad de reglamentación de la energía nuclear), cuando proceda, y basarse en un conjunto de criterios que engloben los criterios comunes a todas las instalaciones de irradiación y los que son específicos del lugar y el producto (véase el Anexo 1).		
199	105	Las instalaciones de tratamiento deberían contar con la aprobación de la ONPF del país en el que se encuentra la instalación antes de que se apliquen en ellas tratamientos fitosanitarios; por lo tanto, dicha aprobación autoriza al proveedor del	P	<b>OIRSA</b> Mejor comprensión del parrafo. <i>Category : TECHNICAL</i>

		tratamiento encargado de la instalación (APPPC, 2014). Esta aprobación debería ser posterior a la autorización emitida por las autoridades competentes en <u>la</u> materia <del>de inocuidad</del> (por ejemplo, la autoridad competente en materia de <del>inocuidad de</del> la radiación o la autoridad de reglamentación de la energía nuclear), cuando proceda, y basarse en un conjunto de criterios que engloben los criterios comunes a todas las instalaciones de irradiación y los que son específicos del lugar y el producto (véase el Anexo 1).		
200	106	Phytosanitary <u>treatment facilities</u> re-approval should be done by the NPPO on a regular basis at appropriate intervals.	P	<b>Canada</b> Adding clarity to an incomplete sentence. <i>Category : TECHNICAL</i>
201	106	Phytosanitary re-approval should <del>be</del> <u>be</u> done by the NPPO on a regular basis at appropriate intervals.	P	<b>Australia</b> Removal of double space <i>Category : EDITORIAL</i>
5.2 Prevention of infestation and contamination after treatment				
202	108	<u>The consignment owner is responsible for prevention</u>	P	<b>COSAVE</b> New paragraph added for consistency with other ISPMs on treatments, e. g. ISPM 43

		<a href="#">of infestation and contamination after irradiation and may cooperate with the treatment provider on how to achieve this.</a> At the treatment facility, the necessary measures should be implemented to prevent possible infestation or contamination of the commodity after treatment. The following measures may be required:		<i>Category : TECHNICAL</i>
203	108	<a href="#">The consignment owner is responsible for prevention of infestation and contamination after irradiation and may cooperate with the treatment provider on how to achieve this.</a> At the treatment facility, the necessary measures should be implemented to prevent possible infestation or contamination of the commodity after treatment. The following measures may be required:	P	<b>Uruguay</b> New paragraph added for consistency with other ISPMs on treatments, e. g. ISPM 43 <i>Category : TECHNICAL</i>
204	109	keeping the commodity in a <del>pest-free</del> <a href="#">pest-free</a> enclosure under conditions that protect it from infestation and contamination;	P	<b>PPPO</b> compound modifier <i>Category : EDITORIAL</i>

205	113	dispatching the commodity as soon as <del>possible-practical</del> after irradiation.	P	<b>PPPO</b> <i>Category : EDITORIAL</i>
206	114	<del>The use of pest proof packaging before irradiation may help to prevent possible infestation or contamination if irradiation is done before export, or to prevent the accidental escape of the target pest if the treatment is done at the destination. Pest-proof packaging may be used before irradiation to help prevent possible infestation or contamination if irradiation is done before export, or to prevent the accidental escape of the target pest if the treatment is done at the destination.</del>	P	<b>PPPO</b> improve sentence flow. <i>Category : EDITORIAL</i>
207	114	The use of pest-proof packaging before irradiation may help to prevent possible infestation or contamination if irradiation is <del>done</del> <u>undertaken</u> before export, or to prevent the accidental escape of the target pest if the treatment is <del>done</del> <u>undertaken</u> at the destination.	P	<b>Australia</b> Improves sentence readability <i>Category : EDITORIAL</i>

208	114	La utilización de <b>envases embalaje</b> a prueba de plagas antes de la irradiación puede ayudar a evitar la infestación y la contaminación, si la irradiación se hace antes de la exportación, o a prevenir la fuga accidental de la plaga objetivo si el tratamiento se hace en el lugar de destino.	P	<b>Costa Rica</b> consistencia con el comentario general <i>Category : TRANSLATION</i>
<b>5.3 Labelling</b>				
209	115	<b>5.3 Labelling</b>	C	<b>PPPO</b> This section should include who is responsible for labelling to align with the checklist in the Annex i.e. 'The treatment provider is responsible for labelling commodities with treatment lot numbers.....'. clearly stating roles and responsibilities on activities would also help NPPOs <i>Category : SUBSTANTIVE</i>
210	116	Commodities should be labelled with treatment lot numbers or other identifying features allowing trace-back for non-compliant consignments. The labels should be easily identifiable and placed <del>on</del> <b>-in</b> visible locations.	P	<b>Australia</b> Improves sentence readability <i>Category : EDITORIAL</i>
211	116	Los productos se deberían etiquetar con números de lote de tratamiento u otros medios de identificación que permitan <del>el rastreo</del> <b>la rastreabilidad</b> de los envíos no conformes. Las etiquetas deberían ser fácilmente identificables y	P	<b>Costa Rica</b> Consistencia con el comentario general <i>Category : TRANSLATION</i>

		colocarse en lugares visibles.		
212	116	Los productos se <del>deberían</del> <u>deben</u> etiquetar con números de lote de tratamiento u otros medios de identificación que permitan el rastreo de los envíos no conformes. Las etiquetas <del>deberían</del> <u>deben</u> ser fácilmente identificables y colocarse en lugares visibles. <u>Las etiquetas deben hacer uso del símbolo internacional indicativo de que el alimento ha sido irradiado y colocarse en lugar visible para su identificación.”</u>	P	<b>Colombia</b> Cambiar la palabra deberían por deben. Añadir un al etiquetado una frase visible informando que el producto ha sido sometido a proceso de irradiación. Permite identificar claramente el proceso de irradiación en el producto. <i>Category : SUBSTANTIVE</i>
<b>5.4 Monitoring and auditing</b>				
213	118	The NPPO of the country in which the irradiation is conducted is responsible for the monitoring and auditing of treatment facilities and providers. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision <u>by the NPPO</u> of irradiation should not be necessary,	P	<b>PPPO</b> to clarify responsibility <i>Category : TECHNICAL</i>



		provided treatment procedures are properly designed <u>by the treatment provider</u> and can be verified to ensure a high degree of system integrity for the facility, process and commodity in question. The monitoring and auditing should be sufficient to detect and correct deficiencies promptly.		
214	118	The NPPO of the country in which the irradiation is conducted is responsible for the monitoring and auditing of treatment facilities and providers. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision <u>by the NPPO</u> of irradiation should not be necessary, provided treatment procedures are properly designed and can be verified to ensure a high degree of system integrity for the facility, process and commodity in question. The monitoring and auditing should be sufficient to	P	<b>Korea, Republic of</b> Improve clarity <i>Category : SUBSTANTIVE</i>

		detect and correct deficiencies promptly.		
215	118	The NPPO of the country in which the irradiation is conducted <del>is responsible for the monitoring should monitor</del> and <del>auditing of audit</del> treatment facilities and providers. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation should not be necessary, provided treatment procedures are properly designed and can be verified to ensure a high degree of system integrity for the facility, process and commodity in question. The monitoring and auditing should be sufficient to detect and correct deficiencies promptly.	P	<b>COSAVE</b> Monitoring and auditing the facility and the provider are not listed as responsibilities of the NPPO (item 8) but they should perform both. <i>Category : SUBSTANTIVE</i>
216	118	The NPPO of the country in which the irradiation is conducted <del>is responsible for the monitoring should monitor</del> and <del>auditing of audit</del> treatment facilities and providers. The	P	<b>Uruguay</b> Monitoring and auditing the facility and the provider are not listed as responsibilities of the NPPO (item 8) but they should perform both. <i>Category : SUBSTANTIVE</i>

		NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation should not be necessary, provided treatment procedures are properly designed and can be verified to ensure a high degree of system integrity for the facility, process and commodity in question. The monitoring and auditing should be sufficient to detect and correct deficiencies promptly.		
217	118	La ONPF del país en el que se lleva a cabo la irradiación es la responsable de la supervisión y auditoría de las instalaciones y los proveedores del tratamiento. La ONPF debería mantener un programa de auditorías y asegurarse de que estas sean realizadas por profesionales debidamente formados. No debería ser necesaria la supervisión continua de la irradiación, siempre que los procedimientos de	P	<b>Costa Rica</b> Consistencia con el comentario general y mejora redacción <i>Category : EDITORIAL</i>

		tratamiento estén correctamente diseñados y puedan verificarse a fin de <del>garantizar</del> <u>asegurar</u> un <del>grado</del> <u>alto grado</u> de integridad del sistema para la instalación, el proceso y el producto de que se trate. La supervisión y la auditoría deberían ser suficientes para detectar las deficiencias y corregirlas con prontitud.		
6. Documentation				
218	125	<u>The NPPO of the country in which the irradiation is conducted is responsible for ensuring that treatment providers document all operational procedures and keep appropriate records, such as raw data on dosimetry readings recorded during treatments. Accurate record-keeping is essential to enable auditing and trace-back.</u> <del>The NPPO of the country in which the irradiation is conducted is responsible for ensuring that treatment providers keep appropriate records, such</del>	P	<b>PPPO</b> To link with 6.1 Category : <i>TECHNICAL</i>

		<del>as raw data on dosimetry readings recorded during treatments. Accurate record keeping is essential to enable auditing and trace-back.</del>		
219	125	The NPPO of the country in which the irradiation is conducted is responsible for ensuring that treatment providers <u>document all operational procedures</u> <u>and</u> keep appropriate records, such as raw data on dosimetry readings recorded during treatments. Accurate record keeping is essential to enable auditing and trace-back.	P	<b>Korea, Republic of</b> Improve clarity <i>Category : SUBSTANTIVE</i>
220	125	La ONPF del país en el que se lleva a cabo la irradiación tiene <del>el cometido-la</del> <u>responsabilidad</u> de <u>garantizar asegurar</u> que los proveedores del tratamiento mantengan registros adecuados, como los datos sin tratar sobre las lecturas de dosimetría obtenidas durante los tratamientos. El mantenimiento correcto de registros es fundamental para poder llevar a cabo auditorías y actividades de rastreo.	P	<b>Costa Rica</b> Mejora la redacción <i>Category : EDITORIAL</i>

6.1 Documentation of procedures				
221	127	Procedures should be documented to ensure that commodities are consistently treated as required. Process controls and operational parameters should be established to provide the details necessary for <a href="#">a-the</a> specific approval of a treatment facility. Calibration and quality control procedures should be documented by the treatment provider. The documented procedures should include the following:	P	<b>European Union</b> Better wording (please see ISPM 44). <i>Category : EDITORIAL</i>
222	127	Procedures should be documented <u>by treatment providers</u> to ensure that commodities are consistently treated as required. Process controls and operational parameters should be established to provide the details necessary for a specific approval of a treatment facility. Calibration and quality control procedures should be documented by the treatment provider. The documented procedures	P	<b>PPPO</b> clarify responsibility <i>Category : TECHNICAL</i>

		should include the following:		
223	127	Procedures should be documented to ensure that commodities are consistently treated as required. Process controls and operational parameters should be established to provide the details necessary for <del>a-the</del> specific approval of a treatment facility. Calibration and quality control procedures should be documented by the treatment provider. The documented procedures should include the following:	P	<b>EPPO</b> Better wording (please see ISPM 44). <i>Category : EDITORIAL</i>
224	134	labelling, <del>record-keeping</del> <del>record-keeping</del> and documentation requirements;	P	<b>PPPO</b> <i>Category : EDITORIAL</i>
6.2 Record keeping				
225	136	<b>6.2 Record keeping</b> <del>Record-keeping</del>	P	<b>PPPO</b> pound modifier needed <i>Category : EDITORIAL</i>
226	137	The treatment provider should keep appropriate records for each treatment <del>application</del> <del>application</del> <u>for at least one year</u> . These records should be made available to the NPPO of the country in	P	<b>COSAVE</b> Consequential change as per comment in paragraph 138 <i>Category : TECHNICAL</i>

		which the treatment facility is located for auditing and verification purposes or when a trace-back is necessary.		
227	137	The treatment provider should keep appropriate records for each treatment <del>application</del> <u>application for at least one year</u> . These records should be made available to the NPPO of the country in which the treatment facility is located for auditing and verification purposes or when a trace-back is necessary.	P	<b>Uruguay</b> Consequential change as per comment in paragraph 138 <i>Category : TECHNICAL</i>
228	138	Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider <del>for at least one year</del> to enable the trace-back of treated lots. Information that may be required to be recorded includes:	P	<b>Viet Nam</b> The year of record-keeping should not be specified because the actual inspection at the treatment facility cannot be continuous every year or depend on the bilateral agreement between both sides <i>Category : SUBSTANTIVE</i>
229	138	Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider for at least <del>one year</del> <u>two years</u> to enable the trace-back of treated lots. Information that may be	P	<b>PPPO</b> the products may be still available after one year, for the purpose of trace-back it is suggested the record be kept for at least two years. This is what we require in NZ. <i>Category : TECHNICAL</i>



		required to be recorded includes:		
230	138	<u>Information that may be required to be recorded includes:</u> <del>Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider for at least one year to enable the trace back of treated lots. Information that may be required to be recorded includes:</del>	P	<b>COSAVE</b> It repeats the previous paragraph. <i>Category : TECHNICAL</i>
231	138	Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider for at least <del>one</del> <u>three</u> year to enable the trace-back of treated lots. Information that may be required to be recorded includes:	P	<b>China</b> phytosanitary records, the retention time of one year is relatively short. <i>Category : SUBSTANTIVE</i>
232	138	<u>Information that may be required to be recorded includes:</u> <del>Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider for at least one year to enable the trace back of treated lots. Information that may be required to be recorded includes:</del>	P	<b>Uruguay</b> It repeats the previous paragraph. <i>Category : TECHNICAL</i>

233	141	target regulated <del>pest</del> pest(s);	P	<b>China</b> Maybe several species of pest in one plant and plant product which need irradiation. <i>Category : SUBSTANTIVE</i>
234	141	- target regulated pest;- <u>purpose of treatment;</u>	P	<b>Thailand</b> We would like to add a new indent "purpose of treatment" under section 6.2 Record keeping. This is because the efficacy of irradiation is varied depended on the host and target pest, so the purpose of the treatment for each batch should be recorded. Moreover, the current version of ISPM 18 also specified the purpose of treatment under section of Record keeping. <i>Category : SUBSTANTIVE</i>
235	141	la plaga <del>reglamentada</del> <del>objetivo</del> cuarentenaria a <u>tratar</u> ;	P	<b>Colombia</b> Se sugiere cambiar frase "la plaga reglamentada objetivo" "por plaga cuarentenaria a tratar". Plaga reglamentada hace referencia a Plaga cuarentenaria o plaga no cuarentenaria reglamentada [CIPF, 1997]. Las plagas no cuarentenarias hacen referencia exclusiva al material de propagación el cual esta excluido de esta propuesta de norma, por lo tanto debe quedar específicamente plagas cuarentenarias. <i>Category : SUBSTANTIVE</i>
236	143	el tamaño y el volumen del lote, incluido el número de artículos o <del>envases</del> embalajes;	P	<b>Costa Rica</b> Consistencia con el comentario general <i>Category : TRANSLATION</i>
237	145	absorbed doses (required doses and measured doses), dosimetry calibration <u>and dose</u> <u>mapping</u> records;	P	<b>United States of America</b> more complete <i>Category : TECHNICAL</i>
238	148	orientation and configuration of the commodity during irradiation ( <del>including</del> <u>and</u> dose <del>mapping</del> ) <u>mapping</u> .	P	<b>United States of America</b> More precise <i>Category : TECHNICAL</i>
<b>6.3 Documentation by the NPPO</b>				
239	150	All NPPO procedures should be appropriately <del>documented and records,</del> <u>documented. Records</u> <u>should be maintained for</u> <u>at least one year</u> including those of monitoring inspections made and phytosanitary certificates issued;	P	<b>PPPO</b> to improve sentence flow <i>Category : EDITORIAL</i>

		<del>should be maintained for at least one year.</del> In cases of non-compliance or new or unexpected phytosanitary situations, documentation should be made available upon request as described in ISPM 13 ( <i>Guidelines for the notification of non-compliance and emergency action</i> ).		
7. Inspection				
240	152	<del>Inspection should be carried out by the NPPO of the exporting country and inspection at import may be carried out by the NPPO of the importing country to determine compliance with phytosanitary import requirements.</del>	P	<b>COSAVE</b> To avoid redundancy. Category : <i>TECHNICAL</i>
241	152	<del>Inspection should be carried out by the NPPO of the exporting country and inspection at import may be carried out by the NPPO of the importing country to determine compliance with phytosanitary import requirements.</del>	P	<b>Uruguay</b> To avoid redundancy Category : <i>TECHNICAL</i>
242	153	Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the	P	<b>European Union</b> It is not clear what a normal validation program is and this word does not add any value. Category : <i>TECHNICAL</i>

		required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the <del>normal</del> validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.		
243	153	Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period	C	<b>Japan</b> The IR treatment schedules of annexes to ISPM28 do not require "mortality", but are there any specific treatment schedules that require "mortality" in IR treatment? If there are not such IR treatments, the description in the case of "Where mortality is the required response, live target-pests may be found" seems to be unnecessary. If there are such IR treatment schedules, it is necessary to include a concrete explanation of what kind of "audit checks" are needed as a response to when a living pest is found. <i>Category : SUBSTANTIVE</i>

		<p>immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.</p>		
244	153	<p>Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be</p>	C	<p><b>Viet Nam</b>  VN proposes to add the more following content: "In the case of detecting other harmful organisms alive during the inspection process (non-target pests), how should they be handled in the importing country?"  Category : EDITORIAL</p>

		based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.		
245	153	<u>Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for</u>	P	<p><b>PPPO</b></p> <p>In a consignment where mortality is not required, it will be difficult to determine if the appropriate 'response' to target pest is achieved e.g. sterility. Therefore, the way to ensure that the consignment has been treated properly is through observance of the minimum required dose. Thus, consider changing 'response' to 'minimum dose' is more appropriate.</p> <p>compound modifier not required here</p> <p>Category : <i>EDITORIAL</i></p>

		<p><u>the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required minimum dose is administered for the specific commodity and treatment conditions concerned.</u></p> <p><del>Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where</del></p>		
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		<del>mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.</del>		
246	153	Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live	P	<b>Australia</b> In a consignment where mortality is not required, it will be difficult to determine if the appropriate 'response' to target pest is achieved e.g. sterility. Therefore, the way to ensure that the consignment has been treated properly is through observance of the minimum required dose in addition to the required response. Category : <i>TECHNICAL</i>



		target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the <u>minimum dose is administered and the</u> required response is achieved for the specific commodity and treatment conditions concerned.		
247	153	Live target pests may be found <u>during inspection</u> after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist	P	<b>COSAVE</b> As consequence of the deletion of the previous paragraph <i>Category : TECHNICAL</i>

		in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.		
248	153	Live target pests may be found after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary	P	<p><b>EPPO</b></p> <p>It is not clear what a "normal validation program" is and this word does not add any value.</p> <p><i>Category : TECHNICAL</i></p>

		certification should be based on confirmation from the <b>normal</b> validation programme that the required response is achieved for the specific commodity and treatment conditions concerned.		
249	153	Live target pests may be found after <a href="#">irradiation</a> treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific <b>commodity</b> <del>and</del> -treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal	P	<b>United States of America</b> commodity usually is not important in these situations. <i>Category : TECHNICAL</i>

		validation programme that the required response is achieved for the specific <del>commodity</del> and-treatment conditions concerned.		
250	153	Live target pests may be found <u>during inspection</u> after treatment, but this should not result in the refusal to issue a phytosanitary certificate. Where mortality is the required response, live target-pests may be found during the period immediately following the irradiation; in such cases, phytosanitary certification should be based on confirmation from audit checks that mortality is attained for the specific commodity and treatment conditions concerned. Where mortality is not the required response, it is more likely that live target pests may persist in the treated consignment; in such cases, phytosanitary certification should be based on confirmation from the normal validation programme that the required	P	<b>Uruguay</b> As a consequence of the deletion of the previous paragraph Category : <i>TECHNICAL</i>

		response is achieved for the specific commodity and treatment conditions concerned.		
<b>8. Responsibilities</b>				
251	154	<b>8. Responsabilidades</b>	C	<b>Costa Rica</b> Se considera que esta sección requiere revisión, ya que en párrafos anteriores se mencionan otras obligaciones de la ONPF como el mantenimiento de registros, aprobación de instalaciones que no se incluyen. Así también se indica que como cooperación deberían especificarse las responsabilidades de las ONPF, pero ya en el texto se han especificado varias obligaciones de la ONPF <i>Category : SUBSTANTIVE</i>
252	155	The NPPO of the country in which the irradiation <del>treatment</del> is conducted is responsible for <del>the evaluation, approval</del> <u>approving</u> and auditing <del>of the application of irradiation treatment facilities and the providers</del> as a <u>phytosanitary measure</u> <u>well as maintaining documented procedures and records for at least one year.</u>	P	<b>COSAVE</b> To avoid redundancy <i>Category : TECHNICAL</i>
253	155	The NPPO of the country in which the irradiation treatment is conducted is responsible for <del>the evaluation, approval</del> <u>approving</u> and auditing <del>of the application of irradiation treatment facilities and the providers</del> as a <u>phytosanitary measure</u> <u>well as maintaining documented</u>	P	<b>Uruguay</b> To avoid redundancy <i>Category : TECHNICAL</i>

		<u>procedures and records for at least one year.</u>		
254	156	To the extent necessary, the NPPO should cooperate with other national regulatory agencies concerned with the development, approval and safety of irradiation treatments, including the training and certification of personnel conducting the treatment and the approval of treatment facilities. The respective responsibilities of the NPPO and the other regulatory agencies should be identified to avoid requirements that are overlapping, conflicting, inconsistent or unjustified.	C	<b>Viet Nam</b> VN proposes to add the following content 9. Recognition In case the NPPO of importing country has recognized and approved the irradiate treatment facility in the exporting country, the NPPO of the exporting country itself will carry out the inspection and report to the exporting country as well as meet compliance with the requirement of importing country. <i>Category : EDITORIAL</i>
255	156	<a href="#">The treatment provider is responsible for keeping the treatment records for at least one year and made them available for auditing and verification purposes.</a> To the extent necessary, the NPPO should cooperate with other national regulatory agencies concerned with the development, approval and safety of <del>treatments</del> <a href="#">irradiation</a> .	P	<b>COSAVE</b> The new paragraph is in line with responsibilities mentioned in the "Record keeping" section (item 6.2) <i>Category : SUBSTANTIVE</i>

		including the training and certification of personnel conducting the treatment and the approval of treatment facilities. The respective responsibilities of the NPPO and the other regulatory agencies should be identified to avoid requirements that are overlapping, conflicting, inconsistent or unjustified.		
256	156	<p><u>The treatment provider is responsible for keeping the treatment records for at least one year and made them available for auditing and verification purposes.</u> To the extent necessary, the NPPO should cooperate with other national regulatory agencies concerned with the development, approval and safety of <del>irradiation treatments</del><u>irradiation</u>, including the training and certification of personnel conducting the treatment and the approval of treatment facilities. The respective responsibilities of the NPPO and the other regulatory agencies</p>	P	<p><b>Uruguay</b>  The new paragraph is in line with responsibilities mentioned in the "Record keeping" section (item 6.2)  Category : <i>SUBSTANTIVE</i></p>

		should be identified to avoid requirements that are overlapping, conflicting, inconsistent or unjustified.		
257	157	<b>Potential implementation issues</b>	C	<b>European Union</b> We would like to raise an implementation issue regarding a difficulty in checking at the point of entry that irradiation treatments have been performed properly especially where live pests are encountered. Further guidance on how NPPOs can determine the effectiveness of the treatment would be useful. <i>Category : TECHNICAL</i>
258	157	<b>Potential implementation issues</b>	C	<b>EPPO</b> An implementation issue has been raised by some EPPO members that there is a difficulty in checking at the point of entry that irradiation treatments have been performed properly especially where live pests are encountered. Further guidance on how NPPOs can determine the effectiveness of the treatment would be useful. <i>Category : TECHNICAL</i>
259	158	This section is not part of the standard. The Standards Committee in May 2016 requested the Secretariat to gather information on any potential implementation issues related to this draft. Please provide details and proposals on how to address these potential implementation issues.	C	<b>Barbados</b> Training of officers in the NPPO at both the export and import ends is essential in ensuring that this treatment is of the highest standard. Therefore countries with established facilities should be encouraged to provide training (from application to monitoring and evaluation) of this method.  The Region does not benefit from this standard due to high implementation cost to implement , lack of resources and personnel.  Challenges include: lack of acceptance by the organic food industries; limited availability of the technology; verification of treatment efficacy because pests may be found alive during commodity inspection, although they will not complete development or reproduce; cost; lack of facilities <i>Category : SUBSTANTIVE</i>
260	158	This section is not part of the standard. The Standards Committee in May 2016 requested the Secretariat to gather information on any potential implementation issues related to this draft.	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> The Region does not benefit from this standard due to high implementation cost to implement , lack of resources and personnel. <i>Category : SUBSTANTIVE</i>



		Please provide details and proposals on how to address these potential implementation issues.		
261	158	This section is not part of the standard. The Standards Committee in May 2016 requested the Secretariat to gather information on any potential implementation issues related to this draft. Please provide details and proposals on how to address these potential implementation issues.	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Training of officers in the NPPO at both the export and import ends is essential in ensuring that this treatment is of the highest standard. Therefore countries with established facilities should be encouraged to provide training (from application to monitoring and evaluation) of this method. <i>Category : SUBSTANTIVE</i>
ANNEX 1: Checklist for facility approval				
262	161	<b>ANNEX 1: Checklist for facility approval</b> <b>Summary of irradiation requirements</b>	P	<b>PPPO</b> Change yes/no columns to 'comment' and 'evaluation'. Yes/no criteria is too simplistic for a technical area. It becomes a tick box exercise without an underlying understanding of the technical requirements. <i>Category : SUBSTANTIVE</i>
263	161	<b>ANEXO 1: Lista de comprobación verificación para la aprobación de la instalación</b>	P	<b>Costa Rica</b> Mejor término <i>Category : EDITORIAL</i>
264	162	<del>The following checklist is intended to assist persons inspecting or monitoring facilities for which the treatment provider is seeking to</del>	P	<b>PPPO</b> To simplify this description of the annex <i>Category : EDITORIAL</i>

		<del>establish or maintain facility approval and phytosanitary certification of irradiated commodities for international trade</del> <u>This checklist can be used when an NPPO is inspecting or monitoring an irradiation facility as part of an approval or auditing process.-</u>		
265	162	The following checklist is intended to assist persons inspecting or monitoring facilities for which the treatment provider is seeking to establish or maintain facility approval and phytosanitary certification of irradiated commodities for international trade.	C	<b>Australia</b> Consider a column for "comments" for collection of other information should be included. <i>Category : SUBSTANTIVE</i>
266	162	The following checklist is intended to assist persons inspecting or monitoring facilities for which the treatment provider is seeking to establish or maintain facility <del>approval and phytosanitary certification of irradiated commodities for international trade</del> <u>approval.-</u>	P	<b>COSAVE</b> This is only a check list to approve facilities <i>Category : TECHNICAL</i>
267	162	The following checklist is intended to assist	P	<b>Uruguay</b> This is only a check list to approve facilities

		persons inspecting or monitoring facilities for which the treatment provider is seeking to establish or maintain facility <del>approval and phytosanitary certification of irradiated commodities for international trade approval.</del>		<i>Category : TECHNICAL</i>
268	162	El propósito de la lista siguiente es ayudar a las personas que inspeccionan o supervisan instalaciones para las que el proveedor del tratamiento trata de establecer o mantener la aprobación de la <del>instalación y la certificación fitosanitaria de los productos irradiados destinados al comercio internacional</del> instalación.	P	<b>Colombia</b> Eliminar de este párrafo, la frase: "...y la certificación fitosanitaria de los productos irradiados destinados al comercio internacional". Ya que con el check list no se genera la certificación fitosanitaria, solo se especifican las condiciones de la instalación. <i>Category : SUBSTANTIVE</i>
269	164	<del>Yes</del> <b>Comment</b>	P	<b>PPPO</b> change yes/no column to comment/evaluation <i>Category : TECHNICAL</i>
270	164	<del>Yes</del> <b>Comments</b>	P	<b>Korea, Republic of</b> Change yes/no columns to 'comment' and 'evaluation'. Yes/no criteria is too simplistic. <i>Category : SUBSTANTIVE</i>
271	165	<del>No</del> <b>Evaluation</b>	P	<b>PPPO</b> change yes/no column to comment/evaluation <i>Category : TECHNICAL</i>
272	165	<del>No</del> <b>Evaluation</b>	P	<b>Korea, Republic of</b> Change yes/no columns to 'comment' and 'evaluation'. Yes/no criteria is too simplistic. <i>Category : SUBSTANTIVE</i>
273	169	The treatment facility meets the <del>approval of the national</del>	P	<b>European Union</b> 1) Simplification;

		plant protection organization (NPPO) as regards NPPOs phytosanitary requirements, and the NPPO has reasonable access to the facility and appropriate records as necessary to validate phytosanitary treatments		<p>2) The explanation of the acronym "NPPO" is given in paragraph 39;</p> <p>3) "reasonable" can be deleted because "as necessary" is sufficient. Category : EDITORIAL</p>
274	169	The <del>treatment facility meets the approval of the national plant protection organization (NPPO) as regards phytosanitary requirements, and the</del> NPPO has reasonable access to the <del>treatment</del> facility and appropriate records as necessary to validate phytosanitary treatments.	P	<p><b>PPPO</b></p> <p>If the intention of this checklist is to assist in the approval process then it does not make sense to already have approval. Category : TECHNICAL</p>
275	169	The treatment facility meets the approval of the national plant protection organization (NPPO) <del>as in</del> regards <del>to</del> phytosanitary requirements, and the NPPO has reasonable access to the facility and appropriate records as necessary to validate phytosanitary treatments	P	<p><b>Australia</b></p> <p>Improves sentence readability Category : EDITORIAL</p>
276	169	The treatment facility meets the approval of the <del>national plant protection organization (NPPO)</del> NPPO as regards phytosanitary requirements, and the NPPO has reasonable access to the facility and appropriate records as necessary to validate phytosanitary treatments	P	<p><b>COSAVE</b></p> <p>To avoid redundancy. Category : EDITORIAL</p>

277	169	The treatment facility meets the <del>approval of the national plant protection organization (NPPO) as regards NPPO's</del> phytosanitary requirements, and the NPPO has <del>reasonable</del> access to the facility and appropriate records as necessary to validate phytosanitary treatments	P	<b>EPPO</b> 1) Simplification; 2) The explanation of the acronym "NPPO" is given in paragraph 39; 3) "reasonable" can be deleted because "as necessary" is sufficient. <i>Category : EDITORIAL</i>
278	169	The treatment facility meets the approval of the <del>national plant protection organization (NPPO)</del> <u>NPPO</u> as regards phytosanitary requirements, and the NPPO has reasonable access to the facility and appropriate records as necessary to validate phytosanitary treatments	P	<b>Uruguay</b> Editorial <i>Category : EDITORIAL</i>
279	172	Facility buildings are designed and built to be suitable in size, materials and placement of equipment to facilitate proper maintenance and operations for the lots to be treated.	P	<b>PPPO</b> paragraphs [169 – 250] are all sentences and should therefore end in a fullstop <i>Category : EDITORIAL</i>
280	172	Facility buildings are designed and built to be suitable in size, <del>materials and placement of equipment to facilitate proper maintenance and operations for the lots to be treated</del>	C	<b>Caribbean Agricultural Health and Food Safety Agency</b> Jamaica proposes placing "materials and placement of equipment to facilitate proper maintenance and operations for the lots to be treated" as a separate point <i>Category : SUBSTANTIVE</i>
281	178	Buildings, equipment and other physical facilities are maintained in a sanitary condition and in repair sufficient to prevent <del>infestation or</del> contamination of the lots being treated	P	<b>European Union</b> For consistency within the standard (please see the following paragraph and the core text of the draft revised standard). <i>Category : TECHNICAL</i>

282	178	Buildings, equipment and other physical facilities are maintained in a sanitary condition and in repair sufficient to prevent <b>infestation or</b> contamination of the lots being treated	P	<b>EPPO</b> For consistency within the standard (please see the following paragraph and the core text of the draft revised standard). <i>Category : TECHNICAL</i>
283	214	Procedures and facilities <b>or structures</b> are in place to ensure the segregation of treated and untreated lots, including physical separation between incoming and outgoing holding areas	P	<b>PPPO</b> 'Facilities' implies there is another facility that these activities take place however one irradiation facility may have appropriate structure in place to do this onsite. <i>Category : EDITORIAL</i>
284	217	<b>4. Irradiation treatment</b>	P	<b>COSAVE</b> To avoid redundancy <i>Category : EDITORIAL</i>
285	217	<b>4. Irradiation treatment</b>	P	<b>Uruguay</b> To avoid redundancy <i>Category : TECHNICAL</i>
286	244	Each <b>irradiated</b> lot carries identification to distinguish it from all other lots	P	<b>COSAVE</b> For clarification <i>Category : TECHNICAL</i>
287	244	Each <b>irradiated</b> lot carries identification to distinguish it from all other lots	P	<b>Uruguay</b> For clarification <i>Category : TECHNICAL</i>

## APPENDIX 1: Example of a dosimeter in a reference location

288	258	The relationship between minimum ( $D_{min}$ ) and maximum ( $D_{max}$ ) absorbed doses and the dose in the reference location ( $D_{ref}$ ) in Figure 1 has been calculated as 0.8 and 1.4, respectively. For further examples, please refer to IAEA (2015).	C	<p><b>United States of America</b></p> <p>It is fine to include this example from the IAEA 2015 document. However, the way it is represented here in a strongly abbreviated form is rather confusing. It might be helpful to expand a little bit to better explain this relationship and to present this example in its entirety and how it applies in real life. The numbers 0.8 and 1.4, respectively, represent the ratio estimator for minimum and maximum dose zones:</p> $R_{max} = D_{max}/D_{ref}$ $R_{min} = D_{min}/D_{ref}$ <p>The example in the IAEA 2015 document states:</p> $D_{max} = 4.2 \text{ kGy}$ $D_{min} = 2.4 \text{ kGy}$ $D_{ref} = 3.0 \text{ kGy}$ <p>Therefore:</p> $R_{max} = D_{max}/D_{ref} = 4.2 \text{ kGy}/3.0 \text{ kGy} = 1.4$ $R_{min} = D_{min}/D_{ref} = 2.4 \text{ kGy}/3.0 \text{ kGy} = 0.8$ <p>Thus, if the target dose range is <math>D_{min} = 2.0 \text{ kGy}</math> and <math>D_{max} = 5.0 \text{ kGy}</math>, one can estimate the routine values for <math>D_{ref}</math> to be:</p>
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				$D_{ref} = D_{max}/R_{max} = 5.0 \text{ kGy}/1.4 = 3.57 \text{ kGy}$ at maximum $D_{ref} = D_{min}/R_{min} = 2.0 \text{ kGy}/0.8 = 2.5 \text{ kGy}$ at minimum. <i>Category : TECHNICAL</i>
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