2022 SECOND CONSULTATION

1 July – 30 September 2022

Compiled comments for 2022 Second Consultation: Draft Annex Draft Rev ISPM18 (2014-007)

Summary

Name	Summary
Bahrain	Bahrain has no comments
Cameroon	In paragraph 150, it is stated that: "Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate". It should be noted that NPPOs In developing countries, stryuggle to impose to the public opinion, the necessity of inspections. It will be a bad message to the phytosanitary to try to explain to peoples and the public opinion, that a product full of live insects is fit for certification. An acceptable number of insect should be set, within which the certification may be done, otherwise, a further treatment should be applied. opinion plays a major role
Cuba	Se aceptan los comentarios adoptados en el Taller Regional para América Latina. No hay intención de presentar otro comentario.
European Union	The comments are submitted by the European Commission on behalf of the European Union (EU) and its 27 Member States.
Ireland	No comment
Malawi	Completed
Singapore	Singapore supports this revision and has no further comment.
United Kingdom	please ignore

T (Type) - B = Bullet, C = Comment, P = Proposed Change, R = Rating
S (Status) - A = Accepted, C = Closed, O = Open, W = Withdrawn, M = Merged

Para	Text	Comment
G	(General Comment)	*Category : SUBSTANTIVE* **(197) Argentina (1 Oct 2022 12:45 AM)** We fully support comments from COSAVE
G	(General Comment)	*Category : SUBSTANTIVE* **(196) Peru (30 Sep 2022 11:18 PM)** PERU supports the comments and proposals agreed by the COSAVE working group

G	(General Comment)	*Category : TECHNICAL* **(184) Paraguay (30 Sep 2022 2:12 PM)** Paraguay apoya comentarios de COSAVE.
G	(General Comment)	*Category : SUBSTANTIVE* **(175) APPPC (30 Sep 2022 10:04 AM)** ISPM 45 and 47 should be referred in the text.
G	(General Comment)	*Category : SUBSTANTIVE* **(174) APPPC (30 Sep 2022 10:04 AM)** Thailand agreed with the proposed Draft Revision of ISPM◦18: Requirements for the use of irradiation as a phytosanitary measure
G	(General Comment)	*Category : EDITORIAL* **(173) APPPC (30 Sep 2022 10:04 AM)** India supports the proposed revision
G	(General Comment)	*Category : EDITORIAL* **(172) APPPC (30 Sep 2022 10:04 AM)** Singapore supports this revision and do not have further comment.
G	(General Comment)	*Category : EDITORIAL* **(158) Nepal (30 Sep 2022 6:57 AM)** Nepal has no comments on the DRAFT Revision of ISPM◦18: Requirements for the use of irradiation as a phytosanitary measure (2014-007).
G	(General Comment)	*Category : SUBSTANTIVE* **(154) Barbados (29 Sep 2022 10:34 PM)** Barbados regards this ISPM as essential in combatting the introduction of regulated pests. However, it must be accompanied by a public awareness and education campaign in order to allay any fears about this technology.
G	(General Comment)	*Category : TECHNICAL* **(151) Mali (29 Sep 2022 3:56 PM)** Pas d'objection !
G	(General Comment)	*Category : TECHNICAL* **(147) Mozambique (29 Sep 2022 1:27 PM)** Although Mozambique is still not using irradiation as a phytosanitary measure we agree with the revision of this standard
G	(General Comment)	*Category : EDITORIAL* **(133) Korea, Republic of (28 Sep 2022 4:16 AM)** Republic of Korea support the comments made during APPPC Regional Workshop.
G	(General Comment)	*Category : SUBSTANTIVE* **(132) Belarus (27 Sep 2022 3:45 PM)** Republic of Belarus would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System
G	(General Comment)	*Category : EDITORIAL* **(131) United Kingdom (27 Sep 2022 2:45 PM)** The United Kingdom of Great Britain and Norther Ireland would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System
G	(General Comment)	*Category : SUBSTANTIVE* **(119) Australia (27 Sep 2022 1:22 AM)** Australia agrees with the comments as submitted by the PPPO for ISPM 18.

G	(General Comment)	*Category : SUBSTANTIVE* **(118) Guyana (26 Sep 2022 9:37 PM)** Guyana has no objection at this time.
G	(General Comment)	*Category : SUBSTANTIVE* **(117) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** The standard is a comprehensive, extremely technical document. It would be a useful tool for NPPOs with the capacity to use irradiation as a phytosanitary measure. General concerns faced during review of the document pertained mainly to the non-specific nature of the dosimetry, placement of the dosimeter for greatest effectiveness, and other related actions which it appears would have to be determined for the irradiation facility being used.
G	(General Comment)	*Category : SUBSTANTIVE* **(116) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** Standards and guides on irradiation as a phytosanitary treatment are welcomed. Consumers should also be given information on the benefits and drawbacks of irradiate commodities
G	(General Comment)	*Category : EDITORIAL* **(115) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** Barbados regards this ISPM as essential combatting the introduction of regulated pests. However, it must be accompanied by a public awareness and education campaign in order to allay any fears about this technology.
G	(General Comment)	*Category : SUBSTANTIVE* **(99) Costa Rica (22 Sep 2022 12:56 AM)** The consensus comments of the IPPC Workshop for Latin America are supported
G	(General Comment)	*Category : SUBSTANTIVE* **(86) Congo (15 Sep 2022 4:35 PM)** Congo agrees with the revision and has nothing to add
G	(General Comment)	*Category : SUBSTANTIVE* **(85) United States of America (15 Sep 2022 1:32 PM)** We don't have any comments on this draft.
G	(General Comment)	*Category : SUBSTANTIVE* **(84) Cameroon (15 Sep 2022 6:59 AM)** We do not support the adoption of the standard. The public opinion may be reluctant to accept that inspectors certify a consignment containing live insect. a treshold should be defined to consider other treatments
G	(General Comment)	*Category : EDITORIAL* **(82) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** Ok for Burkina Faso
G	(General Comment)	*Category : SUBSTANTIVE* **(81) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** Congo agree with the draft ISPM and has nothing to add
G	(General Comment)	*Category : TECHNICAL* **(80) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** Pas de commentaire

G	(General Comment)	*Category : EDITORIAL* **(79) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** Malawi supports the revision ISPM 18.
G	(General Comment)	*Category : EDITORIAL* **(78) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** this review are accepted
G	(General Comment)	*Category : SUBSTANTIVE* **(42) Brazil (30 Aug 2022 9:20 PM)** Brazil supports comments provided by COSAVE in this draft
G	(General Comment)	*Category : SUBSTANTIVE* **(37) Thailand (25 Aug 2022 11:46 AM)** Thailand agreed with the proposed Draft Revision of ISPM◦18: Requirements for the use of irradiation as a phytosanitary measure
G	(General Comment)	*Category : EDITORIAL* **(30) India (19 Aug 2022 9:27 AM)** India supports the proposed revision
G	(General Comment)	*Category : EDITORIAL* **(29) Trinidad and Tobago (16 Aug 2022 8:39 PM)** The procedure for carrying out the phytosanitary treatment (including ease of use, risks to operators, technical complexity, training required, equipment required, facilities needed) ☐ cost of the typical treatment facility and operational running costs if appropriate ☐ commercial relevance, including affordability ☐ availability of expertise required to apply the phytosanitary treatment ☐ the degree to which other phytosanitary measures can be used as part of a systems approach ☐ Alternative treatments should be explored which are more cost-effective for developing countries
G	(General Comment)	*Category : SUBSTANTIVE* **(27) Antigua and Barbuda (16 Aug 2022 5:40 PM)** The standard is a comprehensive, extremely technical document. It would be a useful tool for NPPOs with the capacity to use irradiation as a phytosanitary measure. General concerns faced during review of the document pertained mainly to the non-specific nature of the dosimetry, placement of the dosimeter for greatest effectiveness, and other related actions which it appears would have to be determined for the irradiation facility being used.
G	(General Comment)	*Category : TECHNICAL* **(20) Grenada (14 Aug 2022 9:49 PM)** NPPO Grenada supports the adoption of this draft standard
G	(General Comment)	*Category : SUBSTANTIVE* **(18) NEPPO (3 Aug 2022 5:36 PM)** Inspection should come after Monitroing and auditing for more consistency
G	(General Comment)	*Category : SUBSTANTIVE* **(17) NEPPO (3 Aug 2022 5:36 PM)** In general, in addition to the NPPOs, other national agencies intervene in the field of irradiation. For this purpose, the implication of these agencies is

		important to assist the NPPOs in order to accomplish their missions. The specific comments in this document refer only to this issue.
G	(General Comment)	*Category : TECHNICAL* **(9) Morocco (1 Aug 2022 12:11 AM)** In general, in addition to the NPPOs, other national agencies intervene in the field of irradiation. For this purpose, the implication of these agencies is important to assist the NPPOs in order to accomplish their missions. The specific comments in this document refer only to this issue.
G	(General Comment)	*Category : EDITORIAL* **(1) Egypt (25 Jul 2022 11:29 AM)** Up to present, our NPPO is not utilizing irradiation treatment as a phytosanitary measure in which the experience to validate this document may not be provided for the present time.
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : SUBSTANTIVE* **(183) Viet Nam (30 Sep 2022 10:24 AM)** VN supports this revision of ISPM 18
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : SUBSTANTIVE* **(152) Russian Federation (29 Sep 2022 4:45 PM)** General Comment: The Russian Federation would like to formally endorse the EPPO comments submitted via the IPPC Online Comment System.
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : TECHNICAL* **(76) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** No comment on the draft
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : TECHNICAL* **(75) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** We support draft Revision of ISPM◦18
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : SUBSTANTIVE* **(74) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** The draft standard is reading well and Zambia has no objection
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : TECHNICAL* **(72) Kenya (6 Sep 2022 2:04 PM)** No comments on the draft.
1	**DRAFT Revision of ISPM 18: Requirements for the use of irradiation as a phytosanitary measure (2014-007)**	*Category : TECHNICAL* **(43) Malawi (31 Aug 2022 5:03 PM)** We support draft Revision of ISPM◦18:
31	This standard provides technical guidance on the application of ionizing radiation as a phytosanitary ~~measure~~measure whether applied in the exporting or importing country. 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.	*Category : SUBSTANTIVE* **(139) Mexico (29 Sep 2022 12:39 AM)** Better wording and to be more general about where this treatment could be applied
31	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 treatment schedules for specific regulated	*Category : TECHNICAL* **(87) Uruguay (19 Sep 2022 3:32 PM)** Glossary terms should be used when applicable

	pests on specific commodities, or treatments used for the production of sterile organisms for pest control.	
31	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 treatment schedules for specific regulated pests on specific commodities, or treatments used for the production of sterile organisms for pest control.	*Category : TECHNICAL* **(58) COSAVE (5 Sep 2022 10:21 PM)** Glossary terms should be used when applicable
31	This standard provides technical guidance on the application of ionizing radiation as a phytosanitary measure, whether applied in the country of origin or destination. 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.	*Category : TECHNICAL* **(33) CA (24 Aug 2022 10:34 PM)** Include: "whether applied in the country of origin or destination", because some countries dont make this aplication at origin, but at destination.
33	~~The present standard refers to ISPMs. ISPMs are available on the International Phytosanitary Portal (IPP) at~~ La présente norme fait référence aux NIMP. Les NIMP sont disponibles sur le Portail phytosanitaire international (IPP) à l'adresse ~~www.ippc.int/core-activities/standards-setting/ispms~~www.ippc.int/core-activities/standards-setting/ispms~~.~~ .	*Category : TECHNICAL* **(150) Mali (29 Sep 2022 3:54 PM)** Pas d'objections !
41	This standard provides guidance on irradiation and its application as a phytosanitary measure to comply with phytosanitary import requirements, whether applied in the exporting or importing country.	*Category : TECHNICAL* **(88) Uruguay (19 Sep 2022 3:34 PM)** For clarification and consistency with the draft content.
41	This standard provides guidance on irradiation and its application as a phytosanitary measure to comply with phytosanitary import requirements, whether applied in the exporting or importing country.	*Category : TECHNICAL* **(59) COSAVE (5 Sep 2022 10:27 PM)** For clarification and consistency with the draft content
42	The roles and responsibilities of parties involved in the use of irradiation as a phytosanitary measure are described. Guidance is provided to national plant protection organizations (NPPOs) on ~~responsibilities~~ supervising or auditing for approving treatment facilities, and for ~~monitoring and auditing treatment facilities and providers~~monitoring.	*Category : SUBSTANTIVE* **(140) Mexico (29 Sep 2022 12:46 AM)** According to the content of the standard.
42	The standard describes roles and responsibilities of parties involved in the use of irradiation as a phytosanitary ~~measure are described~~measure. ~~Guidance is provided to~~ it contains guidance for national plant protection organizations (NPPOs) on responsibilities for approving treatment facilities, and for monitoring and auditing treatment facilities and providers.	*Category : EDITORIAL* **(134) New Zealand (28 Sep 2022 8:33 AM)** Active sentences are used in adopted standards. This standard needs to be consistent with adopted standards.
42	The roles and responsibilities of parties involved in the use of irradiation as a phytosanitary measure are described. Guidance is provided to national plant	*Category : EDITORIAL* **(35) CA (24 Aug 2022 10:43 PM)** For further understanding.

	protection organizations (NPPOs) on responsibilities on supervising and auditing for approving treatment facilities~~, and for monitoring and auditing treatment facilities and providers~~.	
46	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 that receives the lowest dose of radiation. Therefore, process control relies on identifying the minimum dose location for a specific loading configuration of a commodity 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 also includes phytosanitary measures applied to prevent infestation or contamination after irradiation.	*Category : EDITORIAL* **(45) PPPO (1 Sep 2022 3:22 AM)** For consistency with term used throughout the document and ISPMs
46	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 that receives the lowest dose of radiation. Therefore, process control relies on identifying the minimum dose location for a specific loading configuration of a commodity 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 also includes measures applied to prevent infestation or contamination after irradiation.	*Category : SUBSTANTIVE* **(44) PPPO (1 Sep 2022 3:22 AM)** Suggest defining 'process load' as this is a technical term that is used frequently throughout the ISPM.
47	**IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT**	*Category : TECHNICAL* **(112) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** This paragraph addresses only the positive impacts on biodiversity and the environment. Does this imply that there are no known negative effects of use of the technology?
47	**IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT**	*Category : SUBSTANTIVE* **(111) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** Jamaica thinks that the benefits were outlined for this irradiation standard. However, the negative impacts should be given similar to that which exist in the fumigation standard.
47	**IMPACTS ON BIODIVERSITY AND THE ENVIRONMENT**	*Category : SUBSTANTIVE* **(19) Jamaica (12 Aug 2022 10:50 PM)** Jamaica thinks that the benefits were outlined for this irradiation standard. However, the negative impacts should be given similar to that which exist in the fumigation standard.
48	~~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.~~Irradiation may be used to prevent the introduction and spread of regulated pests and hence may be beneficial to	*Category : SUBSTANTIVE* **(185) European Union (30 Sep 2022 3:15 PM)** For consistency with the wording used for ISM 44 (Requirements for the use of modified atmosphere treatments as phytosanitary measures). Please check if

	biodiversity. The use of irradiation as an alternative to methyl bromide fumigation provides an additional benefit to the environment by reducing methyl bromide emissions, which deplete the ozone layer. While irradiation may be harmful, in this application there are negligible environmental impacts.	the second sentence is true for irradiation and if specific details on irradiation can be given in the last sentence.
48	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.	*Category : EDITORIAL* **(164) APPPC (30 Sep 2022 10:04 AM)** Korea propose to included the content that irradiation as a phytosanitary measure contributes to the protection of the ozone layer
48	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.	*Category : SUBSTANTIVE* **(155) Barbados (29 Sep 2022 10:38 PM)** Barbados agrees with the comments made at the regional CAHFSA meeting; that just as the benefits are outlined for this irradiation standard, any negative impacts should also be highlighted , similar to that which exist in the fumigation standard.
48	Irradiation may be used to prevent the introduction and spread of regulated pests and hence may be beneficial to biodiversity. The use of irradiation as an alternative to methyl bromide fumigation provides an additional benefit to the environment by reducing methyl bromide emissions, which deplete the ozone layer. While irradiation may be harmful, in this application there are negligible environmental impacts. ~~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.~~	*Category : SUBSTANTIVE* **(100) EPPO (26 Sep 2022 3:10 PM)** For consistency with the wording used for ISPM 44 (Requirements for the use of modified atmosphere treatments as phytosanitary measures). Please check if the second sentence is true for irradiation and if specific details on irradiation can be given in the last sentence.
48	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.	*Category : SUBSTANTIVE* **(32) Korea, Republic of (24 Aug 2022 1:42 PM)** Korea propose to included the content that irradiation as a phytosanitary measure contributes to the protection of the ozone layer
48	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.	*Category : TECHNICAL* **(28) Antigua and Barbuda (16 Aug 2022 5:42 PM)** This paragraph addresses only the positive impacts on biodiversity and the environment. Does this imply that there are no known negative effects of use of the technology?
51	The objective of using irradiation as a phytosanitary measure is to achieve, at a specified efficacy, certain pest and pest vector responses such as:	*Category : SUBSTANTIVE* **(165) APPPC (30 Sep 2022 10:04 AM)** Mortality may be a required response for pest vectors.Some vectors are not pests as it is.
51	The objective of using irradiation as a phytosanitary measure is to achieve, at a specified efficacy, certain pest and pest vector responses such as:	*Category : SUBSTANTIVE* **(120) Australia (27 Sep 2022 1:23 AM)** This revision of ISPM 18 is not inclusive of vectors of pests such as pathogens. This is particularly an issue when the vector itself is not considered harmful but can carry harmful pathogens. e.g. Asian citrus psyllid, which can transmit Huanglongbing.
51	The objective of using irradiation as a phytosanitary measure is to achieve, at a specified efficacy, certain pest and pest vector responses such as:	*Category : SUBSTANTIVE* **(46) PPPO (1 Sep 2022 3:22 AM)**

		This revision of ISPM 18 is not inclusive of vectors of pests such as pathogenic agents (fungi, bacteria, etc.). This is particularly an issue when the vector itself is not considered harmful but can carry harmful pathogens e.g. Asian citrus psyllid which can transmit Huanglongbing disease.
52	~~mortality;~~	*Category : EDITORIAL* **(186) European Union (30 Sep 2022 3:23 PM)** We propose moving 'mortality' after paragraph 54 as this is not the first objective of irradiation. It would avoid putting the focus on this aspect.
52	~~mortality~~mortality (e.g. vectors of a pathogen);	*Category : SUBSTANTIVE* **(166) APPPC (30 Sep 2022 10:04 AM)**
52	~~mortality~~mortality (e.g. vectors of a pathogen);	*Category : SUBSTANTIVE* **(121) Australia (27 Sep 2022 1:24 AM)** When vectors can transmit harmful pathogens, vector death may be the required response to the treatment to prevent pathogen transmission.
52	~~mortality;~~	*Category : EDITORIAL* **(101) EPPO (26 Sep 2022 3:10 PM)** We propose moving mortality after paragraph 54 as this is not the first objective of irradiation. It would avoid putting the focus on this aspect.
52	~~mortality~~mortality (e.g. vectors of a pathogen);	*Category : SUBSTANTIVE* **(47) PPPO (1 Sep 2022 3:22 AM)** To align with above comment.
54	inability to reproduce (e.g. sterility); - mortality;	*Category : EDITORIAL* **(187) European Union (30 Sep 2022 3:23 PM)** We propose moving 'mortality' after paragraph 54 as this is not the first objective of irradiation. It would avoid putting the focus on this aspect.
54	inability to reproduce (e.g. sterility); - mortality;	*Category : EDITORIAL* **(102) EPPO (26 Sep 2022 3:10 PM)** We propose moving mortality after paragraph 54 as this is not the first objective of irradiation. It would avoid putting the focus on this aspect.
56	devitalization of plants ~~as pests~~ (e.g. seeds may germinate but seedlings do not grow; or tubers or bulbs do not sprout).	*Category : SUBSTANTIVE* **(167) APPPC (30 Sep 2022 10:04 AM)**
56	devitalization of plants ~~as pests~~ (e.g. seeds may germinate but seedlings do not grow; or tubers or bulbs do not sprout).	*Category : SUBSTANTIVE* **(122) Australia (27 Sep 2022 1:25 AM)** Plants may require devitalization for reasons other than being a pest, for example to prevent transmission of diseases or to prevent propagation if the end use is for consumption/research rather than planting.
56	devitalization of plants ~~as pests~~ (e.g. seeds may germinate but seedlings do not grow; or tubers or bulbs do not sprout).	*Category : SUBSTANTIVE* **(48) PPPO (1 Sep 2022 3:22 AM)** Plants are not always pests, but devitalization can remove the ability for a plant to transmit a disease
57	A range of ~~specific~~ options may be ~~specified~~ determined where the required response is the inability of the pest to reproduce. These may include:	*Category : SUBSTANTIVE* **(141) Mexico (29 Sep 2022 12:49 AM)** Better wording

57	Where the required response is the inability of the pest to reproduce, the options may include:~~A range of specific options may be specified where the required response is the inability of the pest to reproduce. These may include:~~	*Category : TECHNICAL* **(89) Uruguay (19 Sep 2022 3:36 PM)** To simplify the text
57	Where the required response is the inability of the pest to reproduce, the options may include:~~A range of specific options may be specified where the required response is the inability of the pest to reproduce. These may include:~~	*Category : TECHNICAL* **(60) COSAVE (5 Sep 2022 10:44 PM)** To simplify the text
61	**2. Irradiation application**	*Category : EDITORIAL* **(163) Viet Nam (30 Sep 2022 9:59 AM)** Suggest that Paragraphs 2,3 of "2. Irradiation application" and "3. Dosimetry" is integrated as there is some duplication between the two sentences
64	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 equal to or greater than 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~~them while maximum absorbed doses may need to be considered as prescribed by food safety authorities.	*Category : SUBSTANTIVE* **(123) Australia (27 Sep 2022 1:26 AM)** A reference regarding not exceeding max absorbed doses as prescribed by food safety authorities should be considered as this will affect irradiation treatment applications for plant products with consumption as the end use.
64	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 equal to or greater than 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.	*Category : TECHNICAL* **(49) PPPO (1 Sep 2022 3:22 AM)** Question: can reference to food safety aspects be included? May be valuable to include a note in the ISPM about not exceeding max absorbed doses prescribed by food safety authorities.
65	It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible for live, non-viable target pests to 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 target pests that are still alive 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.	*Category : SUBSTANTIVE* **(156) Barbados (29 Sep 2022 10:41 PM)** Barbados agrees with the comments raised at the regional CAHFSA meeting; How do we distinguish between pests that have been irradiated or do we assume that all pests are irradiated or are do live pests still pose a threat?
65	It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible for live, non-viable target pests to be found in correctly treated commodities. This does not imply a failure of the treatment. It does ~~mean,~~ mean however, that it is essential for the treatment to be applied correctly to ensure that any target pests that are still alive are unable to complete development or otherwise reproduce. In addition, it is preferable that such pests are	*Category : EDITORIAL* **(135) New Zealand (28 Sep 2022 8:33 AM)**

	unable to escape into the environment unless they can be distinguished from non-irradiated pests.	
65	It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible for live, non-viable target pests to 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 target pests that are still alive 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.	*Category : TECHNICAL* **(113) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** How do we distinguish between pests that have been irradiated or do we assume that all pests are irradiated or are do live pests still pose a threat?
65	It is rare that mortality is technically justified as the required response to irradiation. It is therefore possible for live, non-viable target pests to 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 target pests that are still alive 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.	*Category : TECHNICAL* **(22) Bahamas (16 Aug 2022 2:46 AM)** How do we distinguish? Is it assumed that all pests are irradiated or are live pests still a threat?
70	Irradiation may take place ~~where~~ at the ~~commodity originates~~country of origin. When it is operationally feasible to prevent the escape of any pests during transport of the untreated commodity, treatment may alternatively be conducted at:	*Category : EDITORIAL* **(124) Australia (27 Sep 2022 1:27 AM)** Simplification of text and aligning language as used by other ISPMs e.g.. ISPM 12.
80	A dosimetry system consists of dosimeters, instruments that read dosimeters, and associated procedures and standards. 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~~ process load has absorbed (expressed as absorbed dose).	*Category : EDITORIAL* **(168) APPPC (30 Sep 2022 10:04 AM)** For consistency of terminolog
80	A dosimetry system consists of dosimeters, instruments that read dosimeters, and associated procedures and standards. 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~~ process load has absorbed (expressed as absorbed dose).	*Category : EDITORIAL* **(125) Australia (27 Sep 2022 1:30 AM)** Alignment with language used throughout document
81	The selection and use of specific dosimetry systems should be appropriate for both the dose range and the type of radiation. It should 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	*Category : SUBSTANTIVE* **(188) European Union (30 Sep 2022 3:27 PM)** In the second sentence, is it really the "minimum" and not the "maximum" level of uncertainty deemed to be acceptable ? What is meant here ? We'd like to propose to delete the word 'minimum' as it can be understood in different ways.

	can be used for gamma ray, electron beam and X-ray facilities can be found in ISO/ASTM 51261:2013.	
81	The selection and use of specific dosimetry systems should be appropriate for both the dose range and the type of radiation. It should 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 51261:2013. Added requirements for calibration of metrology systems.	*Category : SUBSTANTIVE* **(169) APPPC (30 Sep 2022 10:04 AM)** All elements of the dosimetry system are calibrated according to the standard operating procedure of the procedure document. Dosimetry systems should be evaluated by an officially recognized independent oginzation
81	The selection and use of specific dosimetry systems should be appropriate for both the dose range and the type of radiation. It should 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 51261:2013.	*Category : SUBSTANTIVE* **(103) EPPO (26 Sep 2022 3:10 PM)** In the second sentence, is it really the "minimum" and not the "maximum" level of uncertainty deemed to be acceptable? What is meant here? We'd like to propose to delete the work 'minimum' as it can be understood in different ways.
81	The selection and use of specific dosimetry systems should be appropriate for both the dose range and the type of radiation. It should 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 51261:2013.	*Category : SUBSTANTIVE* **(38) China (28 Aug 2022 4:35 PM)** Added requirements for calibration of metrology systems. All elements of the dosimetry system are calibrated according to the standard operating procedure of the procedure document. Dosimetry systems should be evaluated by an officially recognized independent oginzation.
89	to establish how routine dose measurements will be made.	*Category : SUBSTANTIVE* **(39) China (28 Aug 2022 4:35 PM)** Dose distribution plotting for incomplete loading of commodity, the first and last loading should be recorded. Dose distribution mapping is required to determine whether the distribution of absorbed dose significant differences from conventional loading
90	The dose distribution in a process load is specific to the irradiator, the path that the commodity takes through the irradiator, the ~~process~~ load configuration and the characteristics of the commodity. If any of these factors change, dose mapping should be repeated, as such changes affect dose distribution.	*Category : SUBSTANTIVE* **(127) Australia (27 Sep 2022 1:31 AM)** The dose distribution in a process load being specific to the process load does not make sense. Suggest replacing with 'load configuration' which describes how the load is processed for example half vs full pallets of a product. Differences in load configuration may change the dose distribution in the product.
90	The dose distribution in a process load is specific to the irradiator, the path and speed that the commodity takes through the irradiator, the process load and the characteristics of the commodity. If any of these factors change, dose mapping should be repeated, as such changes affect dose distribution.	*Category : SUBSTANTIVE* **(126) Australia (27 Sep 2022 1:30 AM)** The speed of the product will also have an effect on the dose distribution.

90	The dose distribution in a process load is specific to the irradiator, the path that the commodity takes through the irradiator, the ~~process~~ speed of the conveyor, the load configuration, for e.g. half pallets vs full pallets and the characteristics of the ~~commodity~~commodity e.g. density. If any of these factors change, dose mapping should be repeated, as such changes affect dose distribution.	*Category : SUBSTANTIVE* **(50) PPPO (1 Sep 2022 3:22 AM)** Further description would be beneficial. Providing the additional examples helps to demonstrate that there are quite a few factors to consider here.
96	Installation qualification and operational qualification validate the irradiator and may be performed by the treatment provider with the technology suppliers. National plant protection organizations are typically not involved with installation- or operational-qualification activities, but the 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).	*Category : EDITORIAL* **(73) South Africa (6 Sep 2022 3:47 PM)** Suggest deletion of "National Plant Protection Organisations" and replace it with NPPOs
96	Installation qualification and operational qualification validate the irradiator and may be performed by the treatment provider with the technology suppliers. National plant protection organizations are typically not involved with installation- or operational-qualification activities, but the treatment provider should inform the NPPO and other related national agencies 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).	*Category : SUBSTANTIVE* **(10) NEPPO (3 Aug 2022 5:36 PM)**
96	Installation qualification and operational qualification validate the irradiator and may be performed by the treatment provider with the technology suppliers. National plant protection organizations are typically not involved with installation- or operational-qualification activities, but the treatment provider should inform the NPPO and other national regulatory agencies 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).	*Category : TECHNICAL* **(2) Morocco (31 Jul 2022 11:44 PM)**
100	The NPPO of the country in which the treatment facility is ~~located~~ located, with the cooperation of other relevant national agencies, is responsible for ensuring that the facility system requirements are met.	*Category : SUBSTANTIVE* **(11) NEPPO (3 Aug 2022 5:36 PM)**
100	The NPPO of the country in which the treatment facility is ~~located~~ located, with the cooperation of other national regulatory agencies, is responsible for ensuring that the facility system requirements are met.	*Category : TECHNICAL* **(3) Morocco (31 Jul 2022 11:48 PM)**
101	**5.1 Approval of treatment facilities and authorization of treatment providers**	*Category : SUBSTANTIVE* **(157) Barbados (29 Sep 2022 10:45 PM)** Although the standard is generic in nature, there is a high level of subjectivity. The appropriate interval should be stated (approvals may be once and indefinitely). Additionally we need to lobby for more technical expertise on irradiation at both the regional and international levels.

101	**5.1 Approval of treatment facilities and authorization of treatment providers**	*Category : SUBSTANTIVE* **(51) PPPO (1 Sep 2022 3:22 AM)** This overlaps with ISPM 45. Consider how this new ISPM applies and whether it should be referenced here or if this section is required.
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. 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). Guidance on authorizing entities to perform phytosanitary actions is found in ISPM 45 (Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions).	*Category : SUBSTANTIVE* **(148) Canada (29 Sep 2022 3:28 PM)**
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. 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).	*Category : SUBSTANTIVE* **(137) Canada (28 Sep 2022 10:05 PM)** May be there is value in adding a reference to ISPM 45:Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed ~~procedures~~procedures in line with ISPM 45. 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).	*Category : SUBSTANTIVE* **(128) Australia (27 Sep 2022 1:35 AM)** This section has some overlap with ISPM 45 (Requirements for national plant protection organizations if authorizing entities to perform phytosanitary actions). It is considered that a reference to ISPM 45 will assist with understanding and ensure alignment with relevant ISPMs.
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located (in consultation with the International Atomic Energy Agency (IAEA) guidelines) before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. This approval should be subsequent to authorization from competent authorities for safety	*Category : SUBSTANTIVE* **(52) PPPO (1 Sep 2022 3:22 AM)** The International Atomic Energy Agency (IAEA) should be referenced in this paragraph given its specific procedures/guidance in relation to phytosanitary irradiation.

	(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).~~Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. 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).~~	
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. 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).	*Category : SUBSTANTIVE* **(31) Zambia (22 Aug 2022 10:14 AM)** Zambia has no objection to the draft standard
102	Treatment facilities should be approved by the NPPO of the country assisted by relevant agencies in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. 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).	*Category : SUBSTANTIVE* **(12) NEPPO (3 Aug 2022 5:36 PM)**
102	Treatment facilities should be approved by the NPPO of the country in which the facility is located before phytosanitary treatments are applied there, with such approval thereby providing authorization to the treatment provider responsible for the facility to conduct treatments according to agreed procedures. This approval should be subsequent to assistance and 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).	*Category : TECHNICAL* **(4) Morocco (31 Jul 2022 11:53 PM)**

103	Evaluation of ~~phytosanitary treatment~~ irradiation facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals.	*Category : EDITORIAL* **(189) European Union (30 Sep 2022 3:29 PM)** For consistency with the last sentence of the previous paragraph. Or at least, for consistency with the rest of the standard, delete "phytosanitary" to read "treatment facilities".
103	Evaluation of phytosanitary treatment facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals.	*Category : TECHNICAL* **(114) Caribbean Agricultural Health and Food Safety Agency (26 Sep 2022 7:39 PM)** Although the standard is generic in nature, there is a high level of subjectivity. The appropriate interval should be stated (approvals may be once and indefinitely). Additionally we need to lobby for more technical expertise on irradiation at both the regional and international levels.
103	Evaluation of ~~phytosanitary treatment~~ irradiation facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals.	*Category : EDITORIAL* **(104) EPPO (26 Sep 2022 3:10 PM)** For consistency with the last sentence of the previous paragraph. Or at least, for consistency with the rest of the standard, delete "phytosanitary" to read "treatment facilities".
103	Evaluation of phytosanitary treatment facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals.	*Category : TECHNICAL* **(23) Bahamas (16 Aug 2022 2:48 AM)** Although the standard is generic, "appropriate intervals" should be stated when it comes to irradiation approval and safety.
103	Evaluation of phytosanitary treatment facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals.	*Category : TECHNICAL* **(21) Grenada (14 Aug 2022 9:52 PM)** An average period for re-approval should be considered
103	Evaluation of phytosanitary treatment facilities for re-approval should be carried out by the NPPO assisted by relevant national agencies if needed on a regular basis at appropriate intervals~~.~~.	*Category : SUBSTANTIVE* **(13) NEPPO (3 Aug 2022 5:36 PM)**
103	Evaluation of phytosanitary treatment facilities for re-approval should be carried out by the NPPO on a regular basis at appropriate intervals. The NPPO may request assistance from other national regulatory agencies.	*Category : TECHNICAL* **(5) Morocco (31 Jul 2022 11:56 PM)**
107	packing the commodity immediately after irradiation;	*Category : SUBSTANTIVE* **(176) Viet Nam (30 Sep 2022 10:09 AM)** Vietnam case: packing the commodity before irradiation, therefore, should be considered in this case.
108	segregating and identifying ~~treated~~ irradiated commodities; and	*Category : EDITORIAL* **(90) Uruguay (19 Sep 2022 3:37 PM)**
108	segregating and identifying ~~treated~~ irradiated commodities; and	*Category : EDITORIAL* **(61) COSAVE (5 Sep 2022 10:52 PM)**
109	dispatching the commodity as soon as possible after irradiation.	*Category : SUBSTANTIVE* **(177) Viet Nam (30 Sep 2022 10:10 AM)** The NPPO needs to monitor and seal the commodities after irradiation treatment

111	**5.3 Labelling**	*Category : SUBSTANTIVE* **(180) Viet Nam (30 Sep 2022 10:20 AM)** All treated consignments should be labeled such information, therefore, "The treatment provider is responsible for labeling commodities with treatment lot numbers or other identifying features allowing trace-back in case of non-compliant consignments. The labels should be easily identifiable and placed in visible locations"
112	The treatment provider is responsible for ~~labelling~~ labeling commodities with treatment lot numbers or other identifying features allowing trace-back ~~for~~ in case of non-compliant consignments. The labels should be easily identifiable and placed in visible locations.	*Category : SUBSTANTIVE* **(179) Viet Nam (30 Sep 2022 10:18 AM)**
112	The treatment provider is responsible for labelling commodities with treatment lot numbers or other identifying features allowing trace-back for non-compliant consignments. The labels should be easily identifiable and placed in visible locations. Label should be issued by NPPO.	*Category : SUBSTANTIVE* **(40) China (28 Aug 2022 4:36 PM)** The labels used in the quarantine treatment of goods can only be used after the authorization of NPPO.
114	The NPPO of the country in which the irradiation is conducted should monitor and audit treatment facilities and providers, in line with ISPM 47. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation by the NPPO should not be necessary, provided treatment procedures are properly designed by the treatment provider 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.	*Category : SUBSTANTIVE* **(129) Australia (27 Sep 2022 1:38 AM)** This section has some overlap with ISPM 47 (Audit in the phytosanitary context). It is considered that a reference to ISPM 47 will assist with understanding and ensure alignment with relevant ISPMs.
114	The NPPO of the country in which the irradiation is conducted should monitor and audit treatment facilities and providers in line with ISPM 47: Audit in the phytosanitary context. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation treatment by the NPPO should not be necessary (unless bilaterally agreed), provided treatment procedures are properly designed by the treatment provider 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.~~The NPPO of the country in which the irradiation is conducted should monitor and audit 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 by the NPPO should not be necessary, provided treatment procedures are properly designed by the treatment provider and can be verified to ensure a high degree of system integrity for the facility, process and commodity in~~	*Category : SUBSTANTIVE* **(53) PPPO (1 Sep 2022 3:22 AM)** Changes have been included to describe default of no continuous supervision required but allows for flexibility in adherence according to bilateral agreements. This paragraph links to ISPM 47 and should be made clear

	~~question. The monitoring and auditing should be sufficient to detect and correct deficiencies promptly.~~	
114	The NPPO of the country in which the irradiation is conducted should monitor and audit treatment facilities and ~~providers~~providers providers assisted by other relevant national agencies if necessary. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation by the NPPO should not be necessary, provided treatment procedures are properly designed by the treatment provider 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.	*Category : SUBSTANTIVE* **(14) NEPPO (3 Aug 2022 5:36 PM)**
114	The NPPO of the country in which the irradiation is conducted should monitor and audit treatment facilities and ~~providers~~providers with the assistance from other national regulatory agencies if its necessary. The NPPO should maintain an audit schedule and ensure that such audits are conducted by appropriately trained personnel. Continuous supervision of irradiation by the NPPO should not be necessary, provided treatment procedures are properly designed by the treatment provider 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.	*Category : TECHNICAL* **(6) Morocco (31 Jul 2022 11:59 PM)**
119	The NPPO of the importing country may establish approval and audit procedures with the NPPO of the exporting country to verify conformity with requirements. Guidance on conducting audits is found in ISPM 47 (Audit n the phytosanitary context).	*Category : SUBSTANTIVE* **(149) Canada (29 Sep 2022 3:29 PM)**
119	The NPPO of the importing country may establish approval and audit procedures with the NPPO of the exporting country to verify conformity with requirements.	*Category : SUBSTANTIVE* **(138) Canada (28 Sep 2022 10:07 PM)** may be there is value in adding a reference to ISPM 47: Audit in the phytosanitary context
133	The treatment provider should keep appropriate records for each treatment application. These records should be made available to the NPPO and other relevant national agencies of the country in which the treatment facility is located for auditing and verification purposes or when a trace-back is necessary.	*Category : SUBSTANTIVE* **(15) NEPPO (3 Aug 2022 5:36 PM)**
133	The treatment provider should keep appropriate records for each treatment application. These records should be made available to the NPPO and other national regulatory agencies of the country in which the treatment facility is located for auditing and verification purposes or when a trace-back is necessary.	*Category : TECHNICAL* **(7) Morocco (1 Aug 2022 12:02 AM)**

134	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:	*Category : SUBSTANTIVE* **(181) Viet Nam (30 Sep 2022 10:22 AM)** It should be placed for two years or more because the actual inspection at the treatment facility cannot be continuous every year or there is a bilateral agreement with the importing country.
134	Appropriate treatment records for irradiation as a phytosanitary measure should be retained by the treatment provider for at least ~~one~~ three year to enable the trace-back of treated lots. Information that may be required to be recorded includes:	*Category : SUBSTANTIVE* **(41) China (28 Aug 2022 4:37 PM)** The period of one year of records of irradiation treatment is too short.
146	**6.3 Documentation by the NPPO**	*Category : SUBSTANTIVE* **(24) Bahamas (16 Aug 2022 2:49 AM)** Should approval/re-approval intervals (including external agencies e.g. radiation safety authority, nuclear regulatory authority) be documented?
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions ~~concerned~~concerned (see section 2).	*Category : EDITORIAL* **(190) European Union (30 Sep 2022 3:40 PM)** Precision given for better clarity.
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : SUBSTANTIVE* **(145) Japan (29 Sep 2022 12:01 PM)** This sentence is not clear regarding whether exporting countries should confirm that the required response is achieved if mortality is not the required response (e. g. inability to develop successfully). In our understanding, exporting countries normally just confirm whether the required minimum dose is administered in such case, and it may be difficult to confirm whether the required response is achieved for each phytosanitary certification.
150	Live target pests may be found during inspection after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : SUBSTANTIVE* **(142) Mexico (29 Sep 2022 12:57 AM)** Better wording
150	Live ~~target~~ pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is	*Category : SUBSTANTIVE* **(130) Australia (27 Sep 2022 1:39 AM)** Not all pests that may be found on a consignment after irradiation will be target pests.

	administered and the required response is achieved for the specific treatment conditions concerned.	
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions ~~concerned~~concerned (see section 2).	*Category : EDITORIAL* **(105) EPPO (26 Sep 2022 3:10 PM)** Precision given for better clarity.
150	Live target pests may be found during inspection after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : TECHNICAL* **(91) Uruguay (19 Sep 2022 3:39 PM)** For clarification
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : TECHNICAL* **(83) Cameroon (15 Sep 2022 6:57 AM)** accepting live insects in the consignment should be done coutiously. in some cases, the public opinion is reluctant to accept or eat a food with live insects, even though from a technical point of view, the insects are dead. If the density of live insect is acceptable (to be defined), the issuance of the certificate should be accepted, otherwise, other treatements shuld be recommended
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : EDITORIAL* **(63) COSAVE (5 Sep 2022 10:56 PM)**
150	Live target pests may be found during inspection after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : TECHNICAL* **(62) COSAVE (5 Sep 2022 10:56 PM)** For clarification under section Inspection

150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : SUBSTANTIVE* **(55) PPPO (1 Sep 2022 3:22 AM)** Implementation support for NPPO's inspectors will be needed to implement this standard as live pests are not normally associated with effective treatment application.
150	Live ~~target~~ pests (including target pests) may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : EDITORIAL* **(54) PPPO (1 Sep 2022 3:22 AM)** non-target pests may also be found
150	Live target pests may be found after irradiation, but this should not result in the refusal to issue a phytosanitary certificate. 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 validation programme that the required minimum dose is administered and the required response is achieved for the specific treatment conditions concerned.	*Category : SUBSTANTIVE* **(25) Bahamas (16 Aug 2022 2:50 AM)** This underscores the importance of documenting approval/re-approval.
152	The NPPO of the ~~country~~ country, assisted by relevant national agencies if needed, in which the irradiation is conducted is responsible for the evaluation, approval and auditing of the application of irradiation as a phytosanitary measure.	*Category : SUBSTANTIVE* **(16) NEPPO (3 Aug 2022 5:36 PM)**
152	The NPPO of the country in which the irradiation is conducted is responsible for the evaluation, approval and auditing of the application of irradiation as a phytosanitary measure. The NPPO may request assistance from other national regulatory agencies.	*Category : TECHNICAL* **(8) Morocco (1 Aug 2022 12:04 AM)**
154	The treatment provider is responsible for the documentation of procedures, and for keeping the treatment records for at least one year and making them available for auditing and verification purposes.	*Category : SUBSTANTIVE* **(191) European Union (30 Sep 2022 3:41 PM)** Please see section 6.1.
154	~~The treatment provider is responsible for keeping the treatment records for at least one year and making them available for auditing and verification purposes.~~	*Category : SUBSTANTIVE* **(170) APPPC (30 Sep 2022 10:04 AM)** Delete para 154 as it is already said in 6.2 Record-keeping. Also, it is unbalanced to only say "keeping the treatment records" as the responsibility of the treatment provider as there are other major responsiblities such as implementing the treatment in accordance with the requirements set

		by the NPPO. [132]6.2Record-keeping [134]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
154	~~The treatment provider is responsible for keeping the treatment records for at least one year and making them available for auditing and verification purposes.~~	*Category : SUBSTANTIVE* **(146) Japan (29 Sep 2022 12:02 PM)** Delete para 154 as it is already said in 6.2 Record-keeping. Also, it is unbalanced to only say "keeping the treatment records" as the responsibility of the treatment provider as there are other major responsiblities such as implementing the treatment in accordance with the requirements set by the NPPO.
154	The treatment provider is responsible for the documentation of procedures, and for keeping the treatment records for at least one year and making them available for auditing and verification purposes.	*Category : SUBSTANTIVE* **(106) EPPO (26 Sep 2022 3:10 PM)** Please see section 6.1.
155	**Potential implementation issues**	*Category : TECHNICAL* **(77) IPPC Regional Workshop Africa (8 Sep 2022 1:53 PM)** On supporte le projet mais on demande le renforcement des capacités pour l'implémentation.
156	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.	*Category : TECHNICAL* **(192) European Union (30 Sep 2022 3:43 PM)** We note that it cannot be confirmed that products meet the phytosanitary requirements of the importing country if the NPPO detects irradiated live pests. In addition, non-viable pests should be verified by laboratory testing and the issuance of an appropriate report, which would need to be indicated on the PC form. The importing country should verify that the declared effect of irradiation is achieved (attained). We are proposing that these questions can be addressed as a 'potential implementation issue' and guidance could be produced for NPPOs.
156	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.	*Category : TECHNICAL* **(107) EPPO (26 Sep 2022 3:10 PM)** We note that it cannot be confirmed that products meet the phytosanitary requirements of the importing country if the NPPO detects irradiated live pests. In addition, non-viable pests should be verified by laboratory testing and the issuance of an appropriate report, which would need to be indicated on the PC form. The importing country should verify that the declared effect of irradiation is achieved (attained). We are proposing that these questions can be addressed as a 'potential implementation issue' and guidance could be produced for NPPOs.
158	**ANNEX 1: Checklist for irradiation facility approval**	*Category : EDITORIAL* **(193) European Union (30 Sep 2022 3:44 PM)** For consistency with the following paragraph (159).
158	**ANNEX 1: Checklist for irradiation facility approval**	*Category : EDITORIAL* **(108) EPPO (26 Sep 2022 3:10 PM)** For consistency with the following paragraph (159).

158	**ANNEX 1: Checklist for facility ~~approval~~approval or audit**	*Category : TECHNICAL* **(92) Uruguay (19 Sep 2022 3:40 PM)** For consistency with paragraph 159
158	**ANNEX 1: Checklist for facility ~~approval~~approval or audit**	*Category : TECHNICAL* **(71) COSAVE (5 Sep 2022 11:28 PM)** For consistency with paragraph 159
159	~~-~~This checklist may be used ~~when~~ by an ~~NPPO is inspecting or monitoring an irradiation facility~~ NPPO as part of an approval or auditing ~~process~~process of an irradiation facility.	*Category : SUBSTANTIVE* **(143) Mexico (29 Sep 2022 12:58 AM)** Simplifying the idea
159	~~-~~This checklist may be used ~~when~~ by an NPPO ~~is inspecting or monitoring an irradiation facility~~ as part of an approval or auditing ~~process~~process of an irraditation facility.	*Category : TECHNICAL* **(93) Uruguay (19 Sep 2022 3:42 PM)** Text simplified to better explain that this checklist includes the criteria for the approval process as mentioned in paragraph 102.
159	~~-~~This checklist may be used ~~when~~ by an NPPO ~~is inspecting or monitoring an irradiation facility~~ as part of an approval or auditing ~~process~~process of an irradiation facility~~.~~	*Category : TECHNICAL* **(64) COSAVE (5 Sep 2022 11:05 PM)** Text simplified to better explain that this checklist includes the criteria for the approval process as mentioned in paragraph 102.
168	The ~~treatment~~ facility meets the NPPO phytosanitary requirements, and the NPPO has access to the facility and appropriate records as necessary to validate phytosanitary treatments.	*Category : EDITORIAL* **(94) Uruguay (19 Sep 2022 3:43 PM)**
168	The ~~treatment~~ facility meets the NPPO phytosanitary requirements, and the NPPO has access to the facility and appropriate records as necessary to validate phytosanitary treatments.	*Category : EDITORIAL* **(65) COSAVE (5 Sep 2022 11:07 PM)** To avoid redundancy with the title of the table and consistency with wording of other criteria in the list
184	~~Effective measures~~ Measures are in place to protect against the infestation or contamination of consignments or lots being stored or processed.	*Category : EDITORIAL* **(159) New Zealand (30 Sep 2022 8:19 AM)** remove effective and adequate as these are subjective. Measures in place need to work to manage the issue.
188	~~Adequate measures~~ Measures are in place to handle breakages, spills or other damage to lots.	*Category : EDITORIAL* **(160) New Zealand (30 Sep 2022 8:19 AM)**
192	~~Adequate systems~~ Systems are in place to dispose of lots that are improperly treated or unsuitable for treatment.	*Category : EDITORIAL* **(161) New Zealand (30 Sep 2022 8:19 AM)**
196	Adequate systems are in place to control non-compliant ~~lots and when necessary to suspend facility approval~~lots.	*Category : TECHNICAL* **(171) APPPC (30 Sep 2022 10:04 AM)** This does not belong here because the NPPO is responsible for suspending a facility approval not the facility that they are monitoring or auditing
196	~~Adequate systems~~ Systems are in place to control non-compliant lots and when necessary to suspend facility approval.	*Category : EDITORIAL* **(162) New Zealand (30 Sep 2022 8:20 AM)**
196	Adequate systems are in place to control non-compliant ~~lots and when necessary to suspend facility approval~~lots.	*Category : SUBSTANTIVE* **(136) New Zealand (28 Sep 2022 8:37 AM)** 'suspending facility approval' does not belong here because the NPPO is responsible for suspending a facility approval not the facility that they are monitoring or auditing

196	Adequate systems are in place to control non-compliant ~~lots and when necessary to suspend facility approval~~lots.	*Category : EDITORIAL* **(57) PPPO (1 Sep 2022 3:22 AM)** It is suggested that "and when necessary to suspend facility approval' should be deleted. Currently, this statement is a mixture of checklist (of actions/processes that the facility should have undertaken) that NPPO will verify when monitoring or auditing and actions that an NPPO should take (suspension of the facility).
196	Adequate systems are in place to control non-compliant lots and when necessary to suspend facility approval.	*Category : TECHNICAL* **(56) PPPO (1 Sep 2022 3:22 AM)** It is suggested that "and when necessary to suspend facility approval' should e deleted. Currently, this statement is a mixture of checklist (of actions/processes that the facility should have undertaken) that NPPO will verify when monitoring or auditing and actions that an NPPO should take (suspension of the facility).
248	Written procedures have been submitted to the NPPO and are well known to appropriate ~~treatment~~ facility personnel.	*Category : EDITORIAL* **(95) Uruguay (19 Sep 2022 3:43 PM)**
248	Written procedures have been submitted to the NPPO and are well known to appropriate ~~treatment~~ facility personnel.	*Category : EDITORIAL* **(66) COSAVE (5 Sep 2022 11:08 PM)**
264	~~Treated~~ Irradiated lots are adequately identified or labelled and adequately documented.	*Category : TECHNICAL* **(96) Uruguay (19 Sep 2022 3:44 PM)** For consistency
264	~~Treated~~ Irradiated lots are adequately identified or labelled and adequately documented.	*Category : EDITORIAL* **(67) COSAVE (5 Sep 2022 11:09 PM)**
268	~~Each irradiated lot carries identification to distinguish it from all other lots.~~	*Category : SUBSTANTIVE* **(144) Mexico (29 Sep 2022 1:03 AM)** Delete to avoid redundancy with the previous sentence.
268	~~Each irradiated lot carries identification to distinguish it from all other lots.~~	*Category : TECHNICAL* **(97) Uruguay (19 Sep 2022 3:45 PM)** Deleted to avoid redundancy with paragraph 264
268	~~Each irradiated lot carries identification to distinguish it from all other lots.~~	*Category : EDITORIAL* **(68) COSAVE (5 Sep 2022 11:10 PM)** Deleted to avoid redundancy with paragraph 264
276	All records about each lot irradiated are retained at the facility for the period of time specified by relevant authorities (at least one year) and are available for inspection by the NPPO as needed.	*Category : SUBSTANTIVE* **(194) European Union (30 Sep 2022 3:45 PM)** For consistency with paragraph 134.
276	All records about each lot irradiated are retained at the facility for the period of time specified by relevant authorities and are made available ~~for inspection by~~ to the NPPO as needed.	*Category : TECHNICAL* **(153) Mexico (29 Sep 2022 6:40 PM)** For clarity
276	All records about each lot irradiated are retained at the facility for the period of time specified by relevant authorities (at least one year) and are available for inspection by the NPPO as needed.	*Category : SUBSTANTIVE* **(109) EPPO (26 Sep 2022 3:10 PM)** For consistency with paragraph 134.
276	All records about each ~~lot~~ irradiated lot are retained at the facility for the period ~~of time~~ specified by relevant authorities and are made available ~~for inspection by~~ to the NPPO as needed.	*Category : TECHNICAL* **(98) Uruguay (19 Sep 2022 3:47 PM)** To better express that records should be made available to the NPPO as needed

276	All records about each ~~lot~~ irradiated lot are retained at the facility for the period ~~of time~~ specified by relevant authorities and are made available ~~for inspection by~~ to the NPPO as needed.	*Category : EDITORIAL* **(69) COSAVE (5 Sep 2022 11:12 PM)** to better express that records should be made available to the NPPO as needed
289	**Figure 1.** Example of relationship between minimum and maximum absorbed doses and the dose absorbed in the reference position. Blue box, position of minimum absorbed dose (D_{min}); red box, position of maximum absorbed dose (D_{max}); yellow box, position of dosimeter in the reference location ~~(dose~~ (absorbed dose measured is D_{ref}).	*Category : EDITORIAL* **(195) European Union (30 Sep 2022 3:46 PM)** For consistency with paragraph 283 and the second line of this paragraph 289.
289	**Figure 1.** Example of relationship between minimum and maximum absorbed doses and the dose absorbed in the reference position. Blue box, position of minimum absorbed dose (D_{min}); red box, position of maximum absorbed dose (D_{max}); yellow box, position of dosimeter in the reference location ~~(dose~~ (absorbed dose measured is D_{ref}).	*Category : EDITORIAL* **(110) EPPO (26 Sep 2022 3:10 PM)** For consistency with paragraph 283 and the second line of this paragraph 289.