Compiled Comments and Resolutions
IAEA Draft Safety Guide: DS427 Radiological Environmental Impact Assessment for Facilities and Activities
(Draft Version 4, July 2013)

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer (country, organization, date)	Para/Line No.	Proposed new text/comments	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
Secretariat		Note by Secretariat: several general and specific comments on editorial, grammatical, about errors, about consistency, typographical, etc are listed at the end of this table.		X			The comments are highly appreciated and will be considered. A full editorial revision, including consistency and English expression will be done at a later stage in the secretariat.
ENISS, 23-09-2013	General	Note by Secretariat: due to the extent and format of the comments of general character submitted by ENISS those comments and the resolutions are presented at the end of the documents in a separated table. The rest of the comments are included in this table.					
Argentina, ARN, 23/9/13	General	•	The draft is technically well prepared and structured revealing its refinement through seven Consultants Meetings and one Technical Meeting, so after its discussion at the next Committee meeting the draft merits to be submitted to Member States for		Being considered		After worthy comments received the draft would be improved and submitted again to Committees before being send to Member States. Some issues would need discussion in the Committees.

			comments.				
Argentina, ARN, 23/9/13	General		In line with the Scope the draft provides guidance for the development of REIA in planned exposure situations and once published the Safety Guide will be useful and welcome by regulators and applicants / licensees possessing a limited experience.	X			
France / ASN - IRSN 17 sept 2013	General		Overall, this document needs additional work before being fit for MS consultation.	X			
France / ASN - IRSN 17 sept 2013	General	General review of the guidance	DS 427 systematically considers acceptance criteria for safety assessment without mentioning ALARA principle. This approach is not consistent with IAEA principles and requirements, notably: • IAEA SF-1 : Principle 5: Optimization of protection - Protection must be optimized to provide the highest level of safety that can reasonably be		Being considered		

			achieved GSR part 4 : the safety assessment has to include an assessment of the provision in place for radiation protection, to determine whether radiation risks are being controlled within specified limits and constraints, and whether they have been reduced to a level that is as low as reasonably achievable				
Sweden, SSM, 24/09/2013	General/ throughout	It is proposed that the name used for the assessment of radiological impacts for the public and the environment is discussed further due to the fact that REIA may imply some confusion and amalgam with the already established EIA process.	a) To call the assessment of the radiological impacts "REIA" may create an association with EIA that may not be apt in all circumstances. b) As mentioned in the safety guide, the EIA process is well established and regulated. At the same time it appears clearly in the safety guide that the scopes of REIA and EIA, even though there are some common points, are fairly different. For instance the frequency at which an REIA is recommended to be produced (according to figure 2) is significantly higher than that of an		a) This possible source of confusion was noted during the development of the Safety Guide, but drafters didn't find a solution. The term 'environmental impact assessment" is included in many IAEA Standards/Guidance and is part of the nuclear jargon and practice with a different meaning of EIA. Being considered. b) The idea of the Safety Guide is to describe completely but at a general level		

			EIA. The EIA process for projects of the same dignity as new nuclear facilities means several years of work. Another example is the usually extensive public participation that is a central part of the EIA process and may not be adapted to the numerous REIAs that are proposed to be produced during the lifetime of a nuclear facility. c) The assessment of potential impacts related to incidents and accidents is presented as a natural part of the REIA. d) This topic has been discussed extensively within the field of EIA but both national and international regulations have yet to clearly integrate risk assessment as part of the EIA process. At the same time those risk assessments are a given part of the safety		all the elements of REIA in two major frameworks 1st that of a nuclear regulatory licensing process (e.g part of the Safety Assessments necessary to apply for/obtain an authorization) and 2nd that of a EIA. These frameworks exist, more or less well defined, but terminology and procedures used are very diverse from Member States to Member States and is difficult to identify an "international approach" or "a clear example" useful for embarking countries. The intention is to make a Safety Guide to assist embarking MS and, at the same time, permit the more experienced MS match/compare their own defined		

			assessments that are required for nuclear facilities. In that sense the REIA may be blurring the boundary between safety assessment and EIA. This may not be negative per se but needs to be further analysed.		procedures with the aim to foster common understanding in a topic (the impact to the environment) which has been used with different meanings and clearly has international implications. The IAEA has the mandate to set standards for nuclear regulation, while for EIA, the IAEA is not "ruling", at least, not the full process. It is believed, however, that as EIA framework already exist (at national level and also at inter-governmental level (e.g ESPOO convention), it is better that IAEA defines in a safety guide the part of the radiological impact assessment which EIA procedures could incorporate.		

					Having said that, there are commonalities and differences (for instance, time framework, public consultations) and this should be clearly indicated in the Safety Guide. Stressing this will be considered during the review and a change in the structure could be necessary (separating REIA from EIA more clearly). d) While for a nuclear regulatory licensing process the inclusion of risk (potential exposures) is unquestionable, for the case of EIA it is a matter of discussion (this was noted during drafting). One of the issues is the public perception. An option would be that, beyond design basis		

					accidents are only considered/approved in the nuclear regulatory process and, in the EIA framework, the results of this regulatory risk assessment and constraint is explained, in a conceptual way (e.g, presenting in the EIA report that the risk is controlled by a series of detailed technical studies, explanations of the methods used and the criteria adopted, discussing the global result, but without presenting consequences/risk assessments details of severe accidents). Advice will be asked to the Committees.		
France / ASN - IRSN 17 sept 2013	General		This document mixes evaluation of discharges from normal operation and of release of abnormal events/accidents. The purposes and methodologies			X	This document covers prospective assessment of radiological impact related to planned exposure situations. Planned exposure

			used in both cases differ (even if there are commonalities) and it would be better to address those in two separate documents.				situations include exposures due to normal/routine releases and potential exposures due to abnormal/accidental releases.
Finland, STUK, 24 Sept. 2013	General	Please check the minimum requirements and content of REIA.	A minimum level of a REIA cannot be formed based on this draft. Requirements are given and then the text starts backpedalling, giving options to actually do less in an assessment.		Being considered a more clear indication of what is a minimum level of REIA.		The Safety Gide intends to be complete (all the aspects included in the Requirements) and at the same time very general and flexible to consider the different valid approaches existing in different member states. It also covers a range of installations with different needs.
Argentina, ARN 24/9/2013	General		It should be clear that final disposal of radioactive waste is out of the scope of this document. This specific stage should be treated separated, due to its particularities as a different document. The licensing process for final disposal facilities will be different to other relevant nuclear facilities.		Inclusion/Exclusion of disposal in the scope is being considered		Differences exist and have been commented between planned in-the-near-future exposures and exposures that may occur many years after disposal.
Japan, 1/10/2013	General/ Esse	<u>Comment</u> It should be defined whether post-closure period at	It seems that this guide covers aspect of post-closure period at geological disposal. (See the		Inclusion/Exclusion of disposal in the scope is being		Differences exist and have been commented between planned in-

	ntial	geological disposal is covered or not in this guide.	comment No. 2.1.) If so, the following items for the radiological impacts to the environment, represented by flora and fauna, should be included in this guide. - To select representative biota as indicator; to be considered biosphere and geosphere for the long-time scale. To increase the uncertainly of these probabilities at long time scales; refer to the below comment No2.2.		considered		the-near-future exposures and exposures that may occur many years after disposal.
Ukraine, SSTC NRS, 23/09/2013	To document as a whole	Recommendations should be given on peculiarities of REIA in case of radioactive waste disposal. The reference on ISAM should be added as well.	Does not reflect disposal aspects.		Inclusion/Exclusion of disposal in the scope is being considered		
Japan, 1/10/2013	General	<u>Comment</u> It should be defined whether the assessment relating to release of sites from regulatory control is covered or not in this guide.	In accordance with WS-G-5.1"Release of sites from regulatory control on termination of practices", the dose assessment to provide an estimate of the effective doses to members after the release of the site will be needed to discuss in this guide.		Being considered		When a site/installation is released from regulatory control there should not be more discharges and risk of accidents. Some of the elements in a REIA could be similar but probably would need different approach. Optionally, a section with "Considerations on Release of sites from regulatory control" could be though.
Germany, BMU, w/ commen	Contents	In Section 5, the chapter "Considerations on the impacts of potential exposures on the environment" (Paras 5.98 – 5.100, Page 38)	Editorial.	X			

ts of GRS - 2013-09-23		is missing in the table of contents.					
Japan, 1/10/2013	General	Comment Relevant terms such as environment, fauna and flora are should be mentioned regarding their implications in Section 2.	Such description is useful for readers.	X			
USA/ US NRC/ 9/24/2013	1.2; 1.5; 1.10	The document stated "The present Safety Guide interprets and elaborates on the requirement in the BSS for performing REIAs." In other words, DS427 is essentially based on the BSS which is currently under review and development (e.g.; DS462); particularly for updating emergency requirements to protect the public and the environment. It was also stated under Para 1.10 "This Safety Guide provides guidance for the development of REIA in planned exposure situations, as described in the BSS. Planned exposure situations include expected exposures as a result of normal authorized discharges and also exposures that are not expected to occur with certainty, but might occur as a result of an event (that might be an incident or accident) or a sequence of events (i.e. potential exposures). Therefore, DS427 appears to be out of alignment with the ongoing review and development of the BSS. Therefore, we recommend that schedule for DS427 final review be linked with completion of BSS review under DS462.	Harmonization, alignment, and consistency with the BSS review and development.			X	DS462 aims mainly to incorporate lessons learned from Fukushima Nuclear Accident. It is not foresee major changes to the actual Requirements, particularly to BSS. Emergency preparedness and response is out of the scope of this safety guide and must not be confused with the prospective consideration of potential exposures.
Sweden, SSM, 24/09/2013	General/ through out	Please consider comment.	a) The assessment of radiological impacts on the public and the environment – through dose calculation or	a) X	b) The idea of using the same methodology to existing nuclear facilities (which is a		

			estimation is a topic that has been devoted an increased focus through the years, not the least through ICRP's work. The proposed safety guide includes a detailed methodology for dose calculation for planned facilities. b) However, the basis and methodology for dose calculations and estimations should be the same for both **existing** and planned nuclear facilities. c) It would be advantageous to streamline the scope of the safety guide to methodology of dose calculations. d) Hence, it could be relevant considering the advantage of publishing a safety guide specifically dealing with the methodology for radiological environmental impact assessment rather than limiting its scope to		planned exposure situation) is kept in the safety guide. That is why, it is indicated that REIA, as described, should be also used for periodical safety reviews and any time a change in the installation is planned (as far as this change could change the impact to people and environment). Despite this assessment would be for an existing installation, it is a a planned exposure situation and prospective assessment and all the elements of the REIA are basically the same than that for a new installation. This will be remarked more clearly in the document. c) The intention is to		

			planned facilities.		provide more a framework than a methodology. Other guidance on methods for dose assessment exist (IAEA SRS-19) and are being updated. d) See explanation in b) above. .		
Sweden, SSM, 24/09/2013	1-4	Please consider comment.	The first four chapters are generally inconsistent and unclear whether REIA is a part of SAR or EIA and the guide does not mention the source of data to be used for the REIA. See also comments below.		Clarification being considered		
ENISS, 23-09-2013	1.5	~~This Safety Guide presents and discusses approaches and methods to assess the level of radiological impact for planned exposure situations to members of the public and the environment, which are based on and consistent with the recommendations of the ICRP [3, 4, 5]. It is important to bear in mind that differently to the 'system of radiological protection of humans' adopted in the BSS, 'the system of radiological protection of the environment' and its practical implementation is still being developed by ICRP and the IAEA, respectively. Notwithstanding this consideration, the approaches given in this Safety Guide are to be considered adequate to carry out~~	The whole para needs to be deleted or rewritten without any reference to ICRP. The reference to the ICRP concept is not correct. The BSS does not contain any reference to the ICRP concept and it is still not published. The methodology of ICRP does not correspond to the needs for REIA.			X	The need to consider protection of people (in this case public) and the environment is clearly stated in the IAEA Safety Standards, starting from the Safety Fundamentals, BSS and many other requirements. The way to assess and control the protection of the environment is subject to national requirements or other international instruments. Some

		~~prospective assessment of the level of public and environmental radiological protection, as required in the BSS for planned exposure situation.~~					Member States can demonstrated explicitly protection of humans and assume implicit protection to other elements in the environment, for example, flora and fauna. Others may be interested to demonstrate more explicitly the protection of flora and fauna. Applicable concepts, methods and criteria exist, like that of the ICRP. There are other examples of these approaches being used in Member States and at the international level. The IAEA is providing guidance based on ICRP proposal, in a practical and widely applicable manner. There is no contradiction with the safety objectives in the Fundamentals and the considerations and requirements in the BSS.
USA/ US NRC/ 9/24/2013	1.10 & Others	The text in Para 1.10 is confusing regarding overlap of planned exposure and emergency exposure situations. It is unclear how a <u>planned</u> exposure can be implemented or addressed before an <u>accident</u>, unless a credible scenario is established for such an accident. It would	The text is unclear from a logical standpoint regarding planned exposure and potential exposure due to accidents.			X	The consideration of the impact of <u>planned exposures</u> include, exposures which will certainly occur (normal discharges) and the

		appear that using the word "planned" is correct adjective; rather use of the word "potential" could be more appropriate.					potential exposures which might occur (credible accident scenarios).
Sweden, SSM, 24/09/2013	1.10	Add a part in sentence: "…exposures), **in addition to discharges certain to happen but uncertain when**.	What about discharges that are certain to happen, but it is not certain when? Not following a distinct event per se, but following a long-term process... (i.e. corrosion of canister).		Being considered		
Ukraine, SSTC NRS, 23/09/2013	Para 1.11, page 3, line 4; Para 2/3	Closure and release from the regulatory control should be added	To take into account closure and institutional control process for disposal facilities		Inclusion/Exclusion of disposal in the scope is being considered		
ENISS, 23-09-2013	1.11	REIA as described within this Safety Guide is intended to be prospective in nature, for example, at the decision-making and authorization stages. ~~prior to siting, during construction and prior to operation, during operation (in the framework of periodic safety reviews) or prior to a decommissioning process. REIA should be also applied for those activities and facilities requesting changes in their operational processes, before the implementation of any change.~~	The examples given are to sophisticated and do not reflect the reality.			X	Examples are considered practical guidance and useful for a Safety Guide.
USA/ US NRC/	1.13	DS427 uses the term "low probabilities" without defining range or criteria for such low probabilities. At a minimum, we suggest	The guidance is vague without additional explanation of low-	X			

9/24/2013		referencing Appendix I. In addition, the concept of using defense-in-depth to account for low probabilities is missing.	probabilities.				
Germany, BMU, w/ comments of GRS - 2013-09-23	1.14	last sentence: "… the regulatory requirement of the consideration and assessment of the potential exposures that accidents could have."	Missing word.	X	(just in case, a professional English editor will take care of language details)		
USA/ US NRC/ 9/24/2013	1.16	Break the first sentence after "sense". After "components" in the second sentence add "as long as humans and flora and fauna are generally present for comparable timeframes."	The stated text needs to be modified to enhance accuracy.		Being considered		
Japan, 30/09/2013	1.16/ L1 p3	Some Member States may consider that the assessments of either doses to public or doses to public together with doses to flora and fauna are sufficient to demonstrate radiological protection of the environment in a broader sense.	Editorial	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	1.16	1st sentence: "Some Member States may consider that the assessments of either doses to public or doses to public together with doses to flora and fauna are sufficient to demonstrate radiological protection of the environment …"	Missing word.	X			
USA/ US NRC/ 9/24/2013	1.17	The text in this section indicates that REIAs should not be compared with operational data because they may differ. There is always value in comparing estimated information with actual data, as long as it is appropriately caveated.	The text needs to focus on recommending good practices for prospective environmental modelers.	X			

		Please revise or soften the language such as "In principle, the input data or the results of REIAs can be compared to operational data but there may not be good agreement because of the conservative nature of the REIAs."					
Sweden, SSM, 24/09/2013	1.17	Add to sentence: "….compliance objectives), **or after closure (i.e. with regard to repositories).** Nevertheless, …."	Only relates to sites with an operational phase.		The inclusion/exclusion in the scope of disposal is being considered.		
ENISS, 23-09-2013	1.17	This Safety Guide ~~does not~~ covers the use of data from radiological environmental monitoring programs, which are normally undertaken at preoperational stages (for instance, to establish environmental activity concentration baselines) or during the operation of the facility and activity (with compliance objectives). ~~Nevertheless,~~ T~~t~~he development of REIA implies that, during the operational stage, monitoring programs should be in place, in accordance with the requirements of the BSS, to ensure that the conditions assumed during the prospective assessments of the radiological impacts remain valid. In principle, the input data or the results of REIAs ~~should not~~ could be straightforwardly compared with the operational data. ~~This is because~~ Nevertheless the actual discharges of an installation once in full operation, and consequently the resulting activity concentration in the environment may differ from those initially estimated in a conservative manner to make the prospective assessments. The IAEA provides guidance for source and environmental monitoring under the Safety Standards Series	Monitoring programs give valuable information and it is not adequate to exclude them from the REIA considerations and assessments.		Being considered		Considerations on monitoring will be expanded.

		publications No. RS-G-1.8 [11]					
Japan, 1/10/2013	2.3/L5	The authorization, in the form of a registration or license [1], could be granted for design, siting, construction, operation, and—decommissioning activities[4]. This Safety Guide covers the stages where prospective assessments of the radiological impacts to the environment are needed, such as during design, siting (including site survey and site evaluation), construction, pre-operation and pre-decommissioning[4]. To add the below sentence in footnote. 4 This guide covers aspect of post-closure period at geological disposal.	It seems that this guide covers aspect of post-closure period at geological disposal.		Inclusion/Exclusion of disposal in the scope is being considered		Differences exist and have been commented between planned in-the-near-future exposures and exposures that may occur many years after disposal.
Germany, BMU, w/ comments of GRS - 2013-09-23	2.3	last sentence: "It also covers prospective assessments which may be conducted when an existing facility plans to change significantly its operational conditions, …"	Grammar.	X			
Sweden, SSM, 24/09/2013	2.4	Please consider comment.	Can the description of environment not be more detailed? Description of abiotic/biotic components. "Conditions" is perhaps not a good enough descriptor.	X			
Sweden, SSM, 24/09/2013	2.5	Please consider comment.	"Adverse consequences of populations of a species" needs to be more precise what is the criteria of consequences to be considered and how	X			

			these are defined in populations. Need to be consistent with paragraph 2.10.				
Sweden, SSM, 24/09/2013	2.6	Please consider comment.	The way this passage is written it implies that all species need protection. It also appears that specific protection of agricultural organisms is needed. Clarification needed. Also non-radiological impacts are present here. Seems to be a mixture of REIA and EIA.		Clarification/amendment being considered		ICRP discusses the issue of animals and plants in the human food chain. Differences amongst REIA in a Licensing Process and in an EIA will be remarked.
ENISS, 23-09-2013	2.6	~~BSS specifies that the protection of the environment should include the protection 2.6.and conservation of non-human species, both animal and plant, and their biodiversity; environmental goods and services such as the production of food and feed; resources used in agriculture, forestry, fisheries and tourism; amenities used in spiritual, cultural and recreational activities; media such as soil, sediments, water and air; and natural processes, e.g. carbon, nitrogen and water cycles.~~	To be deleted as the quotation gives the false impression that this text is a requirement. The quoted part is from BSS chapter 1 which has an introductory character only. The way this passage is written it implies that all species need protection. It also appears that specific protection of agricultural organisms is needed. Clarification needed. Also non-radiological impacts are present here. Seems to be a mixture of REIA and EIA.			X	It could be reworded. See resolution below
ENISS, 23-09-	2.7	~~The system of protection and safety described in the BSS [1] defines a framework to 2.7.assess,~~	To be deleted as the quotation gives the false impression that			X	Protection of the Environment is a

2013		~~manage and control exposure to radiation for humans which generally provides for appropriate protection of the environment from harmful effects of radiation. However, the BSS acknowledges that some national regulations may require the explicit demonstration (rather than the assumption) of the protection of the environment. The BSS also mentions that the assessment of impacts on the environment needs to be viewed in integrated manner with other features of the system of protection and safety and that the approach to the protection of people and the environment is not limited to the prevention of radiological effects on humans and on other species [1].~~	this text is a requirement. The quoted part is from BSS chapter 1 which has an introductory character only.				requirement based on the Safety Fundamentals and included explicitly in many Safety Requirements, including in the BSS . This cannot be challenged. The BSS provides considerations and definitions on protection of the environment. BSS assumes that the Requirements to protect humans provide also protection to the environment, but notes that some national regulations or other international instruments may request the explicit demonstration of the level of protection of, for example, flora and fauna. This safety guide elaborates on those methods and criteria which can be used to demonstrate explicitly protection to flora and fauna. BSS and this Safety Guide let to national authorities to decide whether these methods are necessary or not. Nevertheless, The text used in the safety guide under discussion

							says that BSS "acknowledges" or " mention" (and not " requires").
USA/ US NRC/ 9/24/2013	2.9	"or the interaction among these factors;" This is vague and undefined, please provide examples of what is intended.	The guidance is vague as to the intent.		This very general definition of REIA is based on the definition in the ESPOO convention. Modifications where necessary or clarifications will be added.		
ENISS, 23-09-2013	2.9	~~Environmental Impact Assessment (EIA) is not defined in the IAEA Safety 2.9.Standards although it is included in many international instruments and national legislations and regulations [15, 16, 17, 18, 19, 20, 21, 22]. In the context of this Safety Guide EIA means a national procedure for evaluating the likely impact of a proposed activity on the environment, while impact refers to any effect caused by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors~~	To be deleted. The guide is dedicated to REIA. EIA is not part of the IAEA-BSS and outside the scope of radiation protection and nuclear safety.			X	See comments in the resolution to General comments from ENISS in separated table at the end). This will be discussed within the Committees.
Argentina, ARN 24/9/20	2.10	*"dose that may be caused by releases from a proposed facility or activity on human health and other elements in the environment, represented by ~~for example~~ flora and fauna*	To remark that in this guide the environment is represented by flora and fauna exclusively and to be	X			

13			consistent with 1.15				
USA/ US NRC/ 9/24/2013	2.10	The non-radiological component of EIA identified as "the visual detriment caused to the landscape by the proposed facility" would appear to be very difficult to evaluate and regulate. How would one establish a limit or criteria for it? How could it be designed for or evaluated?	Suggest removing the example or providing a reference to guidance on how it is designed for and evaluated.		Being considered		Some EIA requirements ask for landscape impacts. Normally this is done in a qualitative manner. However is a controversial matter and could be removed from this Safety Guide because the intention is to focus on the radiological aspects within a EIA.
Sweden, SSM, 24/09/2013	2.11	Please consider comment.	The paragraph only refers to exposure of people, whereas paragraph 2.12 and figure 1 indicate that impact on flora and fauna, etc. are also included.	X			
Sweden, SSM, 24/09/2013	2.13	Please consider comment.	EIA is described here again. The purpose of the safety guide is Radiological Environmental Impact Assessment, but 2.11 – 2.14 is dealing with the Safety Assessment.		Clarification is being considered		

ENISS, 23-09-2013	2.11 - 2.14	Delete all	EIA is described here again. The purpose of the safety guide is Radiological Environmental Impact Assessment, but 2.11 – 2.14 is dealing with the Safety Assessment.				See resolution of comment 2.9 from ENISS.
Argentina,ARN, 23/9/13	New: Par. 2.15 on page 7	Graded Approach 2.15. Graded Approach means the adequacy of the assessment's approach according to the facility features, the radiation sources associated to the different practices, as well as the magnitude and likelihood of the estimated exposures, including those that could result from normal, incidental or accidental situations caused by events considered in the design basis, design for extension conditions or severe accidents.	Clarification		Being considered		Other MS suggested simplifying the denomination of the types of accidental situations. See comments to 5.62.
Sweden, SSM, 24/09/2013	3.1	Please consider comment.	• It is unclear from the text what level of organisation the target of protection should be: Ecosystem? Species? Population? Special consideration should be paid to the relevant scales for various assessments (small/large; short term/long term). For example releases from a hospital of		Clarification being considered		

			short-lived radiotracers will likely only impact the local region (i.e. a coastal bay) for a period of days or weeks, thus only the populations of organisms at the site may be affected. However, compare this to a nuclear meltdown scenario, where large amounts of long-lived radionuclides may be dispersed across a country or continent – impacts on entire species or ecosystems may occur.				
Ukraine, SSTC NRS, 23/09/2013	Para 3.2	Delete	Out of the scope of this chapter		Being considered		
Ukraine, SSTC NRS, 23/09/2013	Para 3,4 and 3.5 as a whol	It is proposed to merge para 3.4 and para 3.5 and give more explicit explanations of specific goal of this Safety Guide	For consistency.		Being considered		

	e						
Japan, 30/09/2013	3.5/ L1 P9	The consideration of the protection of the environment is contemplated in general in the 3.5.IAEA Safety Standards [1, 2].	Editorial	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	3.5	1st sentence: "The consideration of the protection of the environment is contemplated in general in the IAEA Safety Standards [1, 2]."	Missing word.	X			
ENISS, 23-09-2013	3.5	~~Where a specific link to the BSS cannot be made, this Safety Guide uses as a reference on environmental protection the IAEA Safety Guide DS432 [6], which is based on current recommendations, concepts and application framework for protection of biota made by the ICRP in publications [3, 5, 27, 28]. The use of the present guidance to consider explicitly protection of flora and fauna is subject to the national requirements.~~	To be deleted as DS 432 is not available and the ICRP concept is not adequate. The reference to national requirements is misleading as it suggests that those do exist. But they do not exist in most of the Member States. The objective of a guidance standard is to give guidance about a requirement				See resolution of comment 2.9 from ENISS.

			standard. Neither the ICRP concept nor national regulations are part of the Safety Fundamentals or the IAEA BSS.				
Germany, BMU, w/ comments of GRS - 2013-09-23	3.14	"… have to be commensurate with the magnitude of the possible radiation risks and their amenability to control" (para 3.24 in the SF). ~~GSR 4 [26],~~"	- Editorial.	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	3.15	"Requirement 1~~,~~ of GSR Part 4 [26] states that … (para 3.1 in GSR Part 4)."	Editorial.	X			
Ukraine, SSTC NRS, 23/09/2013	Para 3.15	After words "Requirement 1" reference should be given Abbreviation SF should be clarified	For clarity	X			

Germany, BMU, w/ comments of GRS - 2013-09-23	3.17	"Requirement 1 of GSR Part 4 [26] states that "other relevant factors … are also to be taken into account in a graded approach to safety assessment" (para 3.4). It also states that "… the level of resources to be applied is adjusted accordingly." (para 3.6)."	A consistent citation format should be used throughout Section 3. Compare with Paras 3.14 and 3.15.	X			
Sweden, SSM, 24/09/2013	3.14 - 3.17	Please consider comment.	Unclear what is the purpose of this whole chapter as the application of the graded approach with regard to REIA is described later in section 4.			X	The title "GRADED APPROACH", para 3.14-3.17, is in Section 3, SAFETY OBJECTIVES AND REQUIREMENTS RELEVANT TO RADIOLOGICAL ENVIRONMENTAL IMPACT ASSESSMENTS. This means that, 3.14-3.17 present the safety objectives and requirements where graded approach is mentioned in connection to REIA, in the IAEA Standards.
ENISS, 23-09-2013	3.14 - 3.17	Delete all	3.14-3.17: unclear what is the purpose of this whole chapter as the application of the graded approach with regard to REIA is described later in section 4.			X	This title (GRADED APROACH) is included here because this section discusses the safety objectives and requirements in the IAEA Standards which are relevant to REIA.

							Later, in Section 4, there is guidance on how to apply a graded approach.
Germany, BMU, w/ comments of GRS - 2013-09-23	Foot note No. 8 to 3.18	2nd sentence: "However, the main objective of Requirement 31 is to establish authorized discharge limits."	Missing word.	X			
ENISS, 23-09-2013	Foot note 8, page 12	Footnote needs update	DS 442 will supersede WS-G-2.3 but it is not available		Discussed in the Resolution of General comments from ENISS		
Sweden, SSM, 24/09/2013	3.18	Please consider comment.	Confusing. State clearly which part of the BSS requirement 31 is related to REIA.		Being considered		
ENISS, 23-09-2013	3.18	More requirements related to REIA are contained under Requirement 31 --add here additional text- of the BSS Radioactive Waste and Discharges	Confusing. State clearly which part of the BSS requirement 31 is related to REIA.		Being considered for clarification		

Germany, BMU, w/ comments of GRS - 2013-09-23	3.19	"The BSS paragraph 3.132 *inter alia* states that "registrants and licensees, in cooperation with suppliers, in applying for an authorization for discharges, … (d) Shall consider … as required by the regulatory body ~~(para 3.132 in the BSS)~~"."	The relevant paragraph is already cited in the introductory statement. Avoid unnecessary repetition.	X			
Japan, 30/09/2013	3.22 p13	The assessment of the potential exposure that includes transboundary impacts is necessary to be consistent with the area mentioned in paragraph 5.52 (on the order of 100-400 km^2).	Clarification		Being considered		How far radiological consequences would need an evaluation and the same with trasnboundary impacts (for normal and accidental situations) is a matter that needs discussion and guidance.
Japan, 30/09/2013	3.22/ L3 p13	To add the following sentence: It requires that "when a source within a practice could cause public exposure, the government or the regulatory body: (a) Shall ensure~~s~~ that the assessment of the radiological impacts includes those impacts outside the territory or other area under the jurisdiction or control of the State. (b) Shall arrange~~s~~ with the affected State the means for exchange of information and consultations, as appropriate" (para 3.124 in the BSS).	It should quote the BSS correctly.	X			

USA/ US NRC/ 9/24/2013	4.1	The text "and the characteristics of the practice" is unclear, please provide a more detailed explanation or delete. The word "be" is missing between "should commensurate".	Clarity and grammatical error.	X			
USA/ US NRC/ 9/24/2013	4.2	Revise the first sentence to read "The approaches to REIA may vary to reflect differences in models and input data consistent with the complexity of the exposure situation."	Improve flow and understanding.	X			
Ukraine, SSTC NRS, 23/09/2013	Para 4.3, page 16, Table 1, row 5 (location of facility)	In column "Element" add: - characteristics of natural and man-made external initiating events other radiological sources in the vicinity of the facilities or activities in question	For completeness	X	The addition is accepted. Wording being considered		
USA/ US NRC/ 9/24/2013	4.3	The text indicates that the regulatory body should set the level of complexity of the assessments. This is not correct. The complexity of the assessment should be primarily determined by what is necessary based on the problem/risk. That can't be known a priori.	Revise inaccuracy.	X			It is correct to say that the applicant initially determines the level of complexity and the regulator concur (or not), in both cases based on different

		The applicant should be the primary group that determines the level of complexity for the assessment, and the regulatory body should review and concur with that level of complexity.					factors, as those presented in the Safety Guide.
Argentina, ARN, 23/9/13	Par. 4.3 on page 15	e2)…Other factors included in Table 1, which can be taken in consideration, are the number of characteristics of safety features, like engineering barriers (especially for potential exposures and considering, where appropriate, as in NPPs, severe accident scenarios).	To highlight severe accidents scenarios consideration as a lesson learnt from Fukushima	X			
Finland, STUK, 24 Sept. 2013	p. 15, 4.3, also Table 1 p. 16	Please reformulate/remove. "Other factors included in Table 1, which can be take in consideration, are…, ~~and the level of interest in the relevant interested parties~~."	Impact assessments should be based on estimated risk/impact regardless of interest of some relevant parties. The interests of relevant parties may even be against the good of the environment. The opposite also applies; relevant parties may use this as a tool to bog down legal processes.		Will be reformulated to capture better the idea		In some cases, impact assessments can be driven more by the interest of different stakeholders than by the actual level of estimated impact. However this should me handle carefully avoiding any possible source of misinterpretations, like those remarked in the comment.

Argentina, ARN, 23/9/13	Par. 4.6 on page 15	For facilities like hospitals or small laboratories it is likely that the authorization process will require only a one-phase safety assessment including REIA and grading should be applied on a case-by-case-basis.	For facilities like hospitals and small laboratories, even a one-phase safety assessment -including REIA based on simple models using generic data and cautious assumptions- might be excessive due to the non-significant associated source terms (for example, radio-immune assay and similar practices or activities like labeling). Therefore grading should be applied on a case-by-case basis.		The case of very small installations will be explained.		It is truth that some small installations do not need a REIA but it is important to guide on how to decide on it.
Argentina, ARN, 23/9/13	Table 1 on page 16 "element column factor "source term "	e3) : ... Potential for release source term varies between normal operation and potential exposure assessments (including, where appropriate, as in NPPs , severe accident scenarios) .	To highlight severe accidents scenarios consideration as a lesson learnt from Fukushima	X			
Argentina, ARN,	Par. 4.7 on	REIA at the early decision stage (e.g. in connection with an initial EIA) may be relatively descriptive in nature and based on	To highlight severe accidents scenarios consideration as a lesson	X			

23/9/13	page 16	generic data and conservative assumptions, considering, where appropriate, severe accident scenarios, whereas REIA included in the final Safety Assessment Report for the licensing process	learnt from Fukushima				
Germany, BMU, w/ comments of GRS - 2013-09-23	4.8	"… for example if significant changes in the source term, in the characteristics of the operation and safety features of the activity or facility, or in the meteorological or hydrological data, or in the use of the environment ~~has~~ have occurred~~)~~."	Grammar.	X			
USA/ US NRC/ 9/24/2013	4.9	Revise the second sentence to read "Within this process, it could be necessary to perform REIAs with models of different levels of detail. In some cases, a single type of model for REIA could be used, with the data resulting from different stages used as input."	Improve flow and clarity.	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	4.9	2nd and 3rd sentence: "Within this process, it could be necessary to perform REIAs with models of different levels of details but, in some cases, a single type of models for REIA could be ~~used~~ applied using as input the improved data resulting from the different stages. In each of the stages REIAs should constitute ~~a~~ hold points set by the regulatory body where the organizations responsible for the nuclear installation should ensure by means of an assessment that the safety of public and environment is adequately assessed."	Editorial.	X			
Sweden, SSM, 24/09/2	4.9	Please consider comment.	Guidance is given for a typical nuclear installation involving an operating period followed by		The inclusion/exclusion in the scope of disposal facilities		

013			decommissioning. But what of sites such as nuclear repository sites where the period of 'operation' may be used to describe the filling of such a site, and no decommissioning occurs, but where the functional 'life' of the site, when releases of radioactive contaminants can be expected, will extend far longer than this operational period?		(after closure) is being considered.		
ENISS, 23-09-2013	4.9	Figure 2 needs revision	The figure does not reflect the reality. It is too much sophisticated. The REIA will be a precondition for issuing a license but it will not be done at any intermediate phase of the licensing process. Normally for complex facilities there will be one REIA, sometimes reviewed (maybe after a couple of years) when significant changes need to be licensed. Guidance is given for a typical nuclear installation involving an operating		The more clear indication of inclusion/exclusion of disposal is being considered.		

			period followed by decommissioning. But what of sites such as nuclear repository sites where the period of 'operation' may be used to describe the filling of such a site, and no decommissioning occurs, but where the functional 'life' of the site, when releases of radioactive contaminants can be expected, will extend far longer than this operational period?				
Germany, BMU, w/ comments of GRS - 2013-09-23	4.11	"Where the results of REIA indicate that there could be ~~possible~~ (a) potential impacts across national boundaries, this information should be shared with the ~~interested~~ (b) affected States."	Clarification. Information about potential transboundary impacts to the environment should be shared with those States that may be affected by them. In most cases, this applies to neighbouring States. Our proposed wording is also consistent with the wording used in the Draft Safety Requirements DS457 (revision of GS-R-2). With respect to transnational nuclear or radiological emergencies, DS457 refers to 'affected States' instead of 'interested States'.	(b) X	(a) In principle the comment is correct. Being considered		Because the document deals with exposures due to normal discharges and "potential exposures" due to accidents, we are trying to be careful with the use of the word "potential". This is being revised all through the document.
USA/ US	5 thro	The term "valid" or "validate" is used throughout this section, and it should not be	Avoid incorrect intent of terminology usage.		Clarification and amendment where		"Validated" is used in the sense that models

NRC/ 9/24/2013	ughout	used. These types of prospective models can't be validated in the traditional sense. Suggest changing the terminology to "benchmarked" or "benchmark" to support" or "supported" as necessary.			needed.		have been contrasted to data and a satisfactory range of accuracy consistent with the intended application of the model was observed. Of course, models to be used in environmental impact are hardly fully validated in the academic meaning. Benchmarking (against data or against results of different models) is also an option.
Sweden, SSM, 24/09/2013	5	**Model tool or transfer model**: Mathematical tools to solve expressions describing transfer of radionuclides etc in a model describing the site and environment in focus for the REIA. Should be verified and validated. **Model or conceptual model**: A site specific reflection of the site and the environment, relevant for transfer and dispersion of radionuclides in an REIA.	The use of the term model should be specified in order to make a distinction between the modeling tools(or transfer models) i.e. the mathematical tools applied in order to calculate dispersion etc from source to environment and the model (conceptual model) which is a description of the site and environment relevant for the REIA.	X			
Germany, BMU, w/	5.2	2nd sentence: "… validated through comparison of their results with data for similar exposure scenarios or by	Editorial.	X			

comments of GRS - 2013-09-23		means of benchmarking procedures against other valid models."					
Ukraine, SSTC NRS, 23/09/2013	Para 5.2, page 19	Add the phrase: The monitoring program for post-closure period is also established to provide evidence for a certain period of time that the disposal facility is performing as predicted and prospective assessment will be valid in future.	To take into account the disposal facilities for which particular consideration should be given to the need to assure safety over long periods of time		Inclusion/Exclusion of disposal in the scope is being considered		
USA/ US NRC/ 9/24/2013	Paragraph 5.4	General The text indicates that the availability of data can determine the details required (complexity). This is not correct. The risk and complexity of the problem will determined the details required. The data necessary to support the evaluated may be available or may not be available and may need to be developed. Therefore, harmonization of information and data needs to be compatible with regulatory requirements is a serious issue. For example, for a geologic repository licensing, a national laboratory may develop a very sophisticated three-dimensional model/software that required massive amounts of data to produce very detailed results. However, the level of details needed for regulatory purposes could be much less. Therefore, use of sophisticated advanced models may result in significantly increased costs for data collection and in a substantial schedule delays for justification of input data,	Harmonization and compatibility of models, data needs, and regulatory requirements to demonstrate compliance with safety criteria.		Clarification will be added		The general idea is the same: that the availability of data has to be considered when defining the level of detail of the models (that is not the same than saying that availability can determine the details). Of course in first place, the level of details and the complexity of the assessment are a risk driven issue. However, not always data exist and it could be unnecessary expensive to obtain it Normally, less detailed models should be more

		without adding significantly to the main evaluation purpose of the safety case assessment.					conservative, and this can also represent a cost (e.g., unnecessary low authorized discharges) That is why we use the concept of "a trade off").
USA/ US NRC/ 9/24/2013.	5.5	Change "will" to "may". The level of detail may evolve but it can also be the case that the initial assessment was sufficient.	To afford flexibility in the guidance.	X			
Sweden, SSM, 24/09/2013	5.6	Please consider comment.	Who and how defines the representatives of flora and fauna in the REIA? Or are these some potential but non specified flora and fauna? Also natural and agricultural flora and fauna to be considered?		Clarification being considered.		
Sweden, SSM, 24/09/2013	5.7 and figure 3	"The first stage is to ……exposures; in the second stage the site and environment is characterized; in the third stage dispersion….."	In order to make a relevant radiological impact assessment the description of the site characteristics is a vital component and is proposed to be included in 5.7 and in figure 3.	X			
Germany, BMU, w/ comments of	5.8	3rd sentence: "… (for this reason the line to exposure pathways to flora and fauna in Figure ~~2~~ 3 is dashed)."	Wrong figure is cited. Text refers to Figure 3.	X			

GRS - 2013-09-23							
USA/ US NRC/ 9/24/2013	Paragraph 5.8	We believe that protection of the human environment should be sufficient to protect flora/fauna. Thus, one should follow the dashed pathway in Figure 2. In addition to direct radiation effects on fauna, an indirect effect might be a reduction of usable habitat due to contamination of a large area of land.	The approach to follow for establishing a dose criteria to flora/fauna may by tortuous and involves very large uncertainties in transfer factors as well as influences of non-radiological complex factors impacting survival of fauna and flora such as climate change, temperature, chemical factors (e.g.; Eh, pH, BOD, etc.) as well as influence of chemicals discharges, and thermal pollution.			X	Member States could decide to assess only explicitly the impact to humans and assume that this provide protection to the environment. Following the dashed pathway in figure 2 is an option, when deemed necessary. The Safety Guide does not provide guidance on when this option would be needed and clearly states that it is subject to national requirements (as interpreted from BSS). The proposal by ICRP to consider flora and fauna more explicitly than and assumption or a belief is conceptually simple (similar to that to protect humans, e.g a reference animal or plant and a radiological criteria to compare) and at the same time reliable, particularly for

							normal discharges.
ENISS, 23-09-2013	New 5.9a	In cases where already a superficial analysis shows that reference levels will be much higher than doses to non-human biota, a generic assessment for that type of facility or activity will be sufficient.	It makes no sense to perform a site specific dose assessment even in cases where detrimental effects of significance are far from the expected range of impacts due to the facility or activity. And this is what is to be expected even for NPPs and other big nuclear installations taking into account high RP standards and low release limits as they are in present use according to radiation protection standards for humans. It would be of real benefit when the IAEA would make such generic assessments and make these assessments or their results part of the Guide.		Clarification about very small installations will be added		Installations needing complex assessment (NPPs, etc) would require at some point detailed and site specific studies, no matter the level of impact (normally, very low).
France / ASN - IRSN 17 sept 2013	5.10 p20	The representative organisms are the group of animals and plants representing *the actual objects of protection for the situation under consideration*	It is false to say the RO represent those most likely to receive the highest exposures. Actually, for protecting non human species, it may not be the most exposed organisms that are relevant since the latter could be less			X	The Representative Organism (RO) is equivalent to the Representative Person, that is, a conceptual entity representative of those plants and animals most highly exposed. For animals and plants, you have different references (the different RAPs, which is the

			radiosensitive than others less exposed (but more radiosensitive)				equivalent to the reference person) and each RAP will need a RO (this is, for each of the species, you will identify a RO, for example, RO(fish), representative of those fish most highly exposed. A practical way to define RO(fish) is to locate it close to the source (where activity concentrations in water and sediments will be higher). The need of averaging over a certain area is explained in the Safety Guide. Then the DCRLs (the radiological criteria) are defined for each RAP and are different for each RAP, considering the information on observed effects. Of course the DCRLs include the different levels of effects produced in the animals and plants, for example, by the different radiosensitivity. The RO(RAP) is the representative of the most exposed amongst that RAP and all the RAPs for a particular ecosystem (e.g. marine) are considered.
Japan, 30/09/2013	5.10/ L11 p20	The representative organisms are the group of animals and plants representing those most likely to ~~receive the highest exposures~~ be most affected by radiation.	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with		Being considered		Representative organisms are defined with some consistency with respect to representative persons. Both definitions will be checked and compared. RO is defined also in the new

			"affected."				ICRP 124 close to publication.
Sweden, SSM, 24/09/2013	5.10	Please consider comment.	The approach proposed here seems to be a mixture of the assessment and environmental radiation monitoring report. In paragraph 1.17 it is stated that monitoring data is not to be confused with the assessment. Refer to ICRP publication 101 [33] in connection to the description of the representative person. Also, refer to section 5.58 when speaking of "reference levels"	X			
Japan, 1/10/2013	Essential 5.10/L13	The dose rates estimated can be compared with the derived consideration reference levels (DCRLs).	Consistency with 5.58	X			
Japan, 1/10/2013	Essential FIG. 3	Comparison of dose rates with Derived Consideration Reference Levels	See comment to 5.10/L13 by Japan .	X			
Germany, BMU, w/ comments of GRS - 2013-	5.13	last sentence: "… the source term should be more accurately characterized by means of an appropriate safety analysis."	Editorial.	X			

09-23							
USA/ US NRC/ 9/24/2013	Paragraph 5.15	This paragraph notes that countries use assessments of varying complexity to assess radionuclide dispersion. We believe there should be a continued effort to assure that assessment methodologies are sufficiently compatible and harmonized to assure reasonably accurate assessments of effects.	Harmonization and compatibility (benchmarking) of complex environmental models used by the international community	X	We will try to produce a paragraph in this line.		
USA/ US NRC/ 9/24/2013	5.8 (reference to 5.15 comments)	See above comments (from USA). Add a caveat about similar exposure times of the humans and other organisms.	Accuracy.	X			
Sweden, SSM, 24/09/2013	5.15	"A variety of model **tools (or transfer models)**…."	It is proposed to distinct between model and model tool generally in the Safety guide, see also above	X			
Sweden, SSM, 24/09/2013	5.15	"…,as relevant. **The required data depend on the conceptual model which should reflect the site charateristics**. Activity….."	Insert a sentence clarifying the importance of relevant conceptual model in order to make a meaningful radiological impact assessment (REIA).	X			
USA/ US NRC/ 9/24/2013	5.17	The word "predict" is way too strong of a word. Suggest something like "estimate" instead. Predict or predictions occurs in other places in the sections that follow (5.19, 5.20, 5.21, 5.22, 5.81)	Uses of environmental models are usually not predictions because they can't be properly validated.	X			

Germany, BMU, w/ comments of GRS - 2013-09-23	5.17	last sentence: "… should be defined by the regulatory body considering the factors discussed~~s~~ in Section 4."	Editorial.	X			
USA/ US NRC/ 9/24/2013	5.18	- Add "dilution" and "decay and ingrowth" as (e) and (f) to the list.	They are important processes for RN transfer modeling.	X			
France / ASN - IRSN 17 sept 2013	5.18 p22	C- dispersion of radionuclides in *surface waters* (*freshwater, brackish or marine)* and ground waters	Important to refer to inland and marine waters explicitly (rather than referring to surface waters)	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	5.19	1st sentence: "… considering the environmental media which ~~is~~ are relevant to estimate exposures to flora and fauna."	Grammar.	X			
USA/ US NRC/ 9/24/2013	5.20	Replace "the air, in the aquatic media and on the ground" with "environmental media". Overall the latter part of this section is poorly written and confusing, but a suggestion is not provided because we are not sure of the intent of the text material is. At a minimum we recommend breaking it up into a couple of sentences.	Improve sentence and clarity.	X			

France / ASN - IRSN 17 sept 2013	5.20 p22	Line 4	Do not understand the meaning of caudal here	X	Volume of flow		
Finland, STUK, 24 Sept. 2013	5.20	Please consider reformulating this paragraph; the lists are incomplete and may lead to over/underestimation of the effects.	Properties related to transport of radionuclides in e.g. geosphere are missing but may have great influence.		Being considered		
Germany, BMU, w/ comments of GRS - 2013-09-23	5.20	1st sentence: "For nuclear installations requiring complex assessments, the models used to predict activity concentrations in the air, in the aquatic media and on the ground should take account of …"	Wording.	X			
Sweden, SSM, 24/09/2013	5.21	Please consider comment.	Suggest consideration of applications where the meteorological and hydrological conditions may be expected to change over the course of 'operation'. Climate change and geomorphology may change from those present at a given site over the course of hundreds or thousands of years.		Being considered (in connection with the inclusion/exclusion of disposal from the scope)		
German	5.23	4th sentence:	1.) The term 'land treatment'	X			

y, BMU, w/ comments of GRS - 2013-09-23		"In addition, radionuclides may be associated with the sewage sludge which is ~~disposed of~~ managed in various ways, including its reuse as a soil conditioner and fertilizer on agricultural land, ~~treatment and~~ disposal by incineration or disposal to a municipal waste landfill site."	is too vague. Our proposal specifies the purpose of application more clearly. 2.) A clear distinction between reuse and disposal pathways is recommended. Depending on national regulations, disposal to a municipal waste landfill site may also be possible.				
USA/ US NRC/ 9/24/2013	5.24	Delete the "n" from "taken" and remove "that" from the last sentence.	Editorial.	X			
Finland, STUK, 24 Sept. 2013	p. 23, 5.24	Consider revising; for example delete first two sentences.	For long-lived nuclides equilibrium may never be met unless a (near) infinite source is assumed. If there is a clear "sink" for a nuclide with a long half-live, it keeps accumulating until the release has stopped. This cannot be considered equilibrium. This chapter might state that for sake of cautiousness, equilibrium concentrations can be assumed because they most likely overestimate consequences.		Will be revised to be more precise on the assumption of equilibrium conditions		
Germany, BMU, w/ comments of	5.24	last sentence: "The activity concentrations ~~of activity~~ in the environmental media used to estimate doses should be that which are representative of the conditions when accumulation reaches to equilibrium."	Wording.	X			

GRS - 2013-09-23							
USA/ US NRC/ 9/24/2013	5.25	Replace the text "A radionuclide may decay into a progeny that is also radioactive and this" with "Decay chains".	Improve clarity.		Being considered		Environmental issues have normally a broad audience and this is considered in the Objective of the document (See para 1.8 including footnote). Decay Chain is jargon that may confuse non-nuclear readers.
USA/ US NRC/ 9/24/2013	Paragraph 5.26.	This paragraph indicates that absent of sufficient data, conservative assumptions may be used. These references to conservative assumptions should be changed to refer to "*reasonably conservative assumptions*." Note the caveat in Paragraph 5.107 which states that "It should be avoided to compound many conservative assumptions on top of each other and arrive at a result for the impact that is grossly pessimistic." The problem with DS427 as written is that a reader may only read portions of the safety guide without reading this important caveat. Perhaps other paragraphs that address conservative assumptions should also cross reference Paragraph 5.107 in addition to changing the reference to reasonably conservative.	Proper use of terminology and completeness to avoid unintended misuse of terms.	X			
Sweden, SSM, 24/09/2	5.26	Please consider comment.	Last sentence: If there is a lack of site-specific data the generic transfer factors should be used.		Clarification in this line being considered		Different publications provide generic data in different ways

013			These values are most likely more conservative and hence there should be no need for additional conservatism in the habit data.				(recommended central values, range, conservative values)
ENISS, 23-09-2013	5.26	… ~~The uncertainties due to lack of site specific data on transfer parameters can be compensated with conservative assumptions, for example, in the habit data.~~	These values are most likely more conservative and hence there should be no need for additional conservatism in the habit data.		Being considered		
USA/ US NRC/ 9/24/2013	5.26	Delete ", like water, air, and soil,". Change the second sentence to read "Those publications provide transfer factors for food in ……". The range of variability in transfer parameters may far exceed the ability to compensate for the variability with habit data. Suggest deleting the last part of the sentence ", for example, in the habit data." and leaving it more general.	Improve clarity and provide flexibility.		Being considered		
Finland, STUK, 24 Sept. 2013	p.24, 5.26	Please remove. "…, ~~bearing in mind that it might be impracticable or overlay costly~~."	Trivial; such statements undermine the need for a proper REIA.	X			
USA/ US NRC/ 9/24/2013	5.29	Break (b) into two items, one for ingestion of crops and one for ingestion of animal food products.	These are separate calculated items in the assessment abd have different transfer factors.	X			
USA/	5.31	In the second sentence replace the last word	Editorial clarity.	X			

US NRC/ 9/24/2013		"these" with "are likely to be consumed." At the end of the last sentence add "as long as the site-specific values are representative."					
USA/ US NRC/ 9/24/2013	Pg 25 Para 5.32	Revise to delete as follows: "…for example consumption of particular seafood. ~~for a short period of time.~~	Correctness. It is the particular circumstance that is important, not whether the seafood is only consumed for a short period of time, or periodically.	X			
Argentina, ARN 24/9/2013	5.34	*Habit data of the representative person should be habits typical of the population 5.34.living in the region where the facility is located or of the country at large. Habit data used in a REIA can be obtained from statistics collected at national, regional or international level or, where possible, from surveys carried out at or near the location where the facility will operate. Habit data include consumption rates of food and drinking water, inhalation rates, ~~location (e.g. distance and direction from the point of release) where people live and obtain their food~~, fraction of the food consumed that is of local origin, occupancy times (time spent at different locations) and time spent outdoors and indoors.*	Because "location" (of the Representative Person-RP) seems not to be really an "habit" and could be treated separately and differently from habit such consumption of food and water, time spent outdoor etc. when defining the RP. For example, if statistical method are used to define the RP (see 5.105), could be convenient to define the location of the RP in a "deterministic" way and consider the statistical distribution of other parameters, such as food habit, hobbies, etc.	X			
Germany, BMU, w/ comments of GRS -	5.35	2nd sentence: "… for REIAs carried out for certain types of facilities or at lat~~t~~er stages in the authorization process."	Editorial.	X			

2013-09-23							
Sweden, SSM, 24/09/2013	5.36 and 5.37	Please consider comment.	Refer to ICRP publication 119 instead of [42]. Please, if possible, discuss dose coefficient values for the external irradiation as for internal irradiation in 5.37.	X			
Sweden, SSM, 24/09/2013	5.37	Please consider comment.	ICRP publication 101 recommends in general 3 age groups: infant (dose coefficient values for 1-year old), child (dose coefficient values for 5-years old) and adult.		Clarification being considered		The selection of age groups vary in different MS and in different publications. We tried to be as general as possible indicating that age groups should be considered and defined as necessary. Following this line, the clarity and consistency within the guide will be checked.
Japan, 30/09/2013	5.37/ L1 P26	To remove; ~~.~~Dose coefficients	Editorial	X			
France / ASN - IRSN 17 sept 2013	5.38	The regulatory body should define a dose limit and emission gaseous and liquid discharge limit in order to ensure that the effective dose is a fraction of the dose limit	Both approaches can be used : a dose limit or emission gaseous and liquid limit values can be fixed	X	A new paragraph will be added explaining that, for operational purposes, the limits can be expressed in term of gaseous/liquid discharge limits.		To add this operational possibility but maintain the main idea that what you limit/constraint is the dose which, using models, you can convert in an amount of radioactivity.

ENISS, 23-09-2013	5.38	The regulatory body should define a dose limit and, if appropriate, a constraint for members of the public taking into account the requirements in the BSS.	This would be the correct quotation of the intention of the BSS.			X	Requirement 11 in the BSS says: The government or regulatory shall establish or approve […] constraints on dose and on risk, **as appropriate**, or shall establish or approve a process for establishing such constraints […]. The use of "if appropriate" is not a quotation and could have a different interpretation.
France / ASN - IRSN 17 sept 2013	5.40	Effective dose assessment should take into account the characteristics of the site and of the facility or activity and the scenarios for exposure; The setting of the emission limit values needs be considered in conjunction with other safety provisions and the technology available. The effective dose of a single source should be a fraction….	Both approaches can be used : a dose limit or emission gaseous and liquid limit values can be fixed	X	Idem resolution of comment 5.38 form France.		
ENISS, 23-09-2013	5.40	The dose constraint applies for a single source and should be set at a fraction of the dose limit, ~~typically between 0.1 and 0.3 mSv in a year [32],~~ and it is the relevant criterion when assessing doses to the representative person from normal operations	The setting of dose constraints is case specific as the circumstances or what is ALARA are always case specific. The optimum can well be much higher than 0.3 mSv.		Explanation will be added		Typical range for constraints are 0.1-0.3. It could be higher on a case by case basis.
Argentina, ARN 24/9/2013	5.40	*The dose constraint ~~applies~~ for a single source ~~and~~ should be set at a fraction of the dose limit, typically between 0.1 and 0.3 mSv in a year [32], and it is the relevant criterion when assessing doses to the representative person from normal operations.*	Dose constraint is a source related quantity but not necessarily applies always for a single source. It could be defined additional dose constraint values associated to a set of sources over a		Being considered		

			given representative person (for example in the case of a site with multiple installations).				
France / ASN - IRSN 17 sept 2013	5.41	Because effective dose is assessed for a single source, the regulatory…	Both approaches can be used : a dose limit or emission gaseous and liquid limit values can be fixed		Idem resolution to 5.38		
Germany, BMU, w/ comments of GRS - 2013-09-23	5.41	"Because dose constraints refer~~s~~ to a single source, …"	Grammar.	X			
USA/ US NRC/ 9/24/2013	Pg 26 Para 5.41	Consider revision	The statement is confusing. A constraint applies to a source, and the possibility of individual doses should be considered in the setting of the appropriate constraint. However, the sentence seems to imply that a source on a site which also has other sources could use only the dose limit as the criteria, which does not seem to be correct.		Being considered		The use of constraints (source related) where multiple sources exist (e.g., sites with a number of NPPs) needs special consideration. However, in this safety guide the idea is just to mention this need. This will be covered in more details in DS422 in preparation (Regulatory Control of Discharges)
Argentina, ARN	5.41	~~*Because dose constraints refers to a single source,*~~ *the regulatory body and the Operator should take account of the possible contribution*	1st proposed correction: see comment 5.	2nd and 3rd:	1st Being considered.		The consideration of multiple sources will be mentioned but not

24/9/2013		*to the individual doses of other sources, for example an installation located close or in the same site and, in that case, the proper reference criteria could be a dose constraint (for instance 0,5 mSv/year for the case of multiple sources at the same site) or ~~is~~ the dose limit. In any case a dose margin should be considered for the contribution of other than "local" sources in order not to exceed the dose limit for the public.*	2nd comment: the Operator also has the responsibility to demonstrate the compliance with dose constraints values, taking into account the contribution of at least the "local" sources over the representative person. 3rd comment: other sources should be consider beside the local ones (global, regional etc.) in order not to exceed the dose limit for the public	X			discussed in details. Probably is an issue to cover in the Safety Guide on Regulatory Control of discharges being developed in parallel (DS 422).
France / ASN - IRSN 17 sept 2013	5.42	The national regulatory body may consider…	It should be considered in a case by case	X			
ENISS, 23-09-2013	5.42	a) The national regulatory body may establish a ~~reference~~ level below the dose limit above which it may be necessary to refine the assessment. b) For example if estimates of the doses to the representative person are above a few ~~tens~~ Hundreds of µSv per year, the assessment could be refined and, where appropriate more realistic assumptions made.	Delete the word "reference" as it could be mixed with the reference level for existing exposure situations. A level of a few tens of µSv is deemed to be the level of no concern and the basis for exemption or clearance.	a) X		b) X	b) In the BSS, exemption and clearance refers to doses "of the order of 10 µSv or less in a year" That is why, a few tens of µSv could be, let's say, around 50 µSv. A few hundreds of µSv would be not advisable as a trigger to require a more refined assessment. A few tens sounds more reasonable.
France / ASN -	5.43	The decision process, should consider the use of best available technology in order to set the		X	The concept and requirement on use		

IRSN 17 sept 2013		discharge limits.			of BAT is not included in the BSS. However is being used in some Member States and can be considered in some cases as an option for optimization. A separated paragraph or footnote will be added.		
ENISS, 23-09-2013	5.43	~~A generic dose constraint (for example dose constraints for all nuclear fuel cycle facilities), which is normally defined by the national regulatory body, should be used at the initial phase of the assessment in the decision process (for instance, within an EIA). In the preliminary safety assessment stage, a source related dose constraint can be defined and should be used as the acceptance criterion. Finally, in the final stages of the safety assessment when probably a process of optimization of the protection[13] has taken place, the acceptance criterion can be the dose corresponding to the authorized discharge limit. This is generally the dose corresponding to an optimized discharge level with a margin for flexibility of operations.~~	This guidance does not correspond with the current practice. It is too sophisticated. See also comment No. 9.		Simplification and clarification will be considered		
ENISS, 23-09-2013	5.44 a	Insert a chapter of generic assessments regarding typical facilities and activities.	The generic calculations will show that for perhaps all cases of practical importance the activity concentrations in the environment will lead to			X	This Safety Guide provides a complete but general framework for REIA. Assessments for particular facilities would be elaborated in separated documents

			dose rates far below the DCRLs, even taken into account the values chosen by ICRP, which seem to be too low in many cases.				(TECDOCs, etc.)
Germany, BMU, w/ comments of GRS - 2013-09-23	5.45	1st sentence: "The exposure~~s~~ pathways that should be considered when assessing the radiological impacts on flora and fauna are: …" 2nd sentence: "ICRP provides in publication [5] dosimetric factors for internal exposure and i~~n~~mmersion in water, soil planar and soil volume."	Editorial. Editorial.	X			
USA/ US NRC/ 9/24/2013	Pg 27 Para 5.48	The relationship between the ICRP set of reference animals and plants, and the representative types selected for a particular site is not explained. The paragraph, as written could be interpreted as ICRP supplying representative animals and plants, which is incorrect.	Expansion and more elaboration for completeness and accuracy		Clarification will be added.		ICRP supplies reference animals and plants (RAPs) applicable to major ecosystems (terrestrial, marine, freshwater). In a generic approach these RAPs can be used straightforwardly to define the representative organism (representative plants and animals). In a more specific approach, the differences amongst the ICRP RAPs and the actual species under consideration should be taken into account.

France / ASN - IRSN 17 sept 2013	5.51 to 5.52	Unclear paragraphs	This way of defining the location of interest for any RO is now well expressed. The calculation has to be done for the area leading to the highest dose rates for each reference organism. This must be run for all RAP since the highest exposed is not necessarily the highest at risk (see previous comment about 5.10). However, the last sentence of 5.51 and all 5.52 requesting to average the doses on a certain number of individuals or a certain area is not well justified and difficult to implement at a screening stage of any assessment. Actually, probabilistic methods would be more appropriate than any averaging method to deal properly with the statistical distribution of doses among individuals of a population or among a "certain area". This would allow the approach to remain conservative, deciding for example to select the 95th percentile of		Being considered		

			the distribution (vs the mean).				
Sweden, SSM, 24/09/2013	5.51	Please consider comment.	The sentence “In view of the aim of radiological environmental protection, which in the case of flora is at the level of populations and not individuals...” only refers to flora, is fauna missing? Or is there another aim for fauna?	X			
Japan, 30/09/2013	5.52/ L1 p28	the group of representative organisms to be most ~~highly exposed~~ affected should be assumed to be located in an area around the source.	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with "affected."		Being considered		(see explanation to 5.10)
Japan, 30/09/2013	5.53/ L1 p29	the location of the group of representative organisms should be related to the region occupied by the actual plants and animals of interest which are considered to be more affected by radiation ~~more highly exposed~~.	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with "affected."		Being considered		(see explanation to 5.10)
Argentina, ARN 24/9/2013	5.53	*In this case the activity concentration used to estimate exposures would be the **average** value ~~in that region averaged~~ in an area of a size similar to that mentioned in previous paragraph.*	To enhance comprehension	X			
USA/ US	5.54	The ability to calculate something does not mean that the something is in any way	Correctness as paragraph text is not correct conceptually.		Clarification being considered		ICRP (publications 108 and 124 close to

NRC/ 9/24/2013		representative or valid. The relevance of some generic species for which data is available is dubious at best for a site-specific assessment. The text "which may be used as indicators of the level of environmental protection," should be deleted.					publication) indicates the factors which have to be considered when analyzing possible differences between generic species (RAPs) and specific species. The use of RAPs is discussed in Annex I under the tittle **The use of ICRP RAPs under different ecological conditions**.
Germany, BMU, w/ comments of GRS - 2013-09-23	5.54	1st and 2nd sentence: "The present methodology to assess radiological impact to the environment described in this Safety Guide uses types of animals and plants to define representative organisms which are presented in Table 2. These types of animals and plants are based ~~in~~ on the ICRP reference animals and plants (RAP) [5]."	Grammar/Wording.	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	5.54	1st and 2nd sentence: "The present methodology to assess radiological impact to the environment described in this Safety Guide uses types of animals and plants to define representative organisms which are presented in Table 2. These types of animals and plants are based ~~in~~ on the ICRP reference animals and plants (RAP) [5]."	Grammar/Wording.	X			
ENISS, 23-09-2013	Table 3	a) Clarify the differences between the ICRP table which was presented during the consultation process.	a) There are differences between this table and the one presented by ICRP in the consultation process.				a) Table 3 was elaborated by IAEA as part of a methodology to apply the ICRP concepts of Representative Animals and Plants and

		Present the derivation of these values.	b) The derivation of these DCRLs is not transparent. Following the argumentation of ICRP the choice is overly conservative and does not reflect that not the individual has to be protected but the species at large.				Derived Consideration Reference Levels. It is based on ICRP but differs in the way of presentation, because in the Safety Guide what is presented is a practical application of ICRP concepts and criteria. The numeric criteria is the same, but used accordingly to the proposed methodology. b) DCRL derivation is explained in ICRP Publication 108 (2008) and is based on databases of radiation dose effects to flora and fauna. ICRP 108 discusses the effects at the level of populations. IAEA generic methodology considers the effects at the level of populations when adopting the lower end of the band of DCRL. The choice of the bands of DCRLs may be considered conservative, because in most cases there were very low or no effects observed. However, it is explained that there are some gaps in the information that advice a precautionary

							approach. Nevertheless, it is well known that, for normal discharges, the typical resulting activity concentrations in the environmental media produces doses well below DCRLs. In other words, the use of a precautionary approach in the derivation and use of DCRLs does not imply a burden to the normal operation of activities and facilities.
Germany, BMU, w/ comments of GRS - 2013-09-23	5.57	1st sentence: "Dose~~s~~ rates due to exposure via internal and external pathways should be calculated for the representative organisms." 3rd sentence: "For the estimation of dose~~s~~ rates to the representative organisms, dosimetric factors and times spent in different habitats presented in [5] should be used."	Editorial. Editorial.	X			
USA/ US NRC/ 9/24/2013	5.58	The table is "above" the section not "below".	Correctness/Editorial.	X			
Argentina, ARN 24/9/2013	5.58	*5.58."….. The reference levels for the types of plants and animals used to define representative organisms, based on ICRP DCRLs are presented in Table 3 ~~below~~* ***above****….."*	Editorial	X			

Germany, BMU, w/ comments of GRS - 2013-09-23	5.60	1st sentence: "If the dose rates to the representative organism are below the lower boundary of the relevant DCRL band, impact on population of flora and fauna could be considered negligible and no further actions are required." 3rd sentence: "If the resulting dose~~s~~ rates are above the upper boundary of the relevant DCRL band, it implies a stronger need to consider more control on the source or further protection efforts."	Missing word. Clarification. The DCRLs have been defined in terms of dose rate bands.	X			
ENISS, 23-09-2013	5.60	If the dose rates to the representative organism are below the ~~lower~~ upper boundary of the relevant DCRL impact on population of flora and fauna could be considered negligible and no further actions are required. In the case where the estimated dose rates are ~~in the middle in~~ above the bands the regulatory body could decide whether additional considerations or protection measures would be needed, bearing in mind that DRCLs are reference points, not limits. ~~If the resulting doses are above the upper boundary of the relevant DCRL band, it implies a stronger need to consider more control on the source or further protection efforts.~~	The corrections proposed are necessary because the choice of the bands are very conservative and do not reflect in any way the real protection objective but define a protection objective towards an individual.			X	The choice of the lower boundary of the relevant DCRL is indicated in a generic assessment, in order to be even more conservative. For a more specific assessment (if required) the resulting doses could be within the band and even above the band; but in these cases there could be necessary additional considerations by the regulator (e.g. additional site specific assessments, etc). This will be clarified in the text.
Japan, 30/09/2013	5.60/ L1 P30	If the dose rates to the ….relevant DCRL, impact on ….	Editorial	X			

France / ASN - IRSN 17 sept 2013	5.61 and following		The overall section on impact evaluation of accidental releases should be largely improved			X	A very broad comment. The section was developed based of the experience in some Member States.
ENISS, 23-09-2013	5.61 – 5.100	Delete all paras regarding potential exposures.	a) It makes no sense to calculate the environmental impact of a beyond design basis accident. We all know that it may be disastrous. b) It makes absolutely no sense to calculate doses for non-human biota. c) The philosophy of emergency preparedness and response is different: First there will be an assessment showing that all design basis accidents fulfill the dose criterion set by the regulation. Second: there are risk-minimizing measures to mitigate the consequences of beyond design basis accidents. Third: if an accident happens measures of emergency response will be taken depending on the situation. d) Additionally, a PSA level			X	a) To consider potential exposures is clearly established in Safety Fundamentals and BSS, and many other IAEA Requirements. Consequences of BDBA may be serious for certain types of installations. The assessments can be done in terms of risk or a measure of risk contrastable with a risk criterion. Some member states define an accident/accidents which can be considered as " characteristic" fior a certain type of installation and requires that the consequences are limited (e.g., no large evacuation is needed). b) Potential exposures to flora and fauna are presented separately based on ICRP 124 (approved and close to publication) and it is clearly stated in the

			3 is proposed for the REIA, i.e. a PSA which proceeds to a dose calculation. Such an analysis is far from being a standard procedure. Only a few such analyses have been performed so far. The uncertainties of a level 3 PSA are enormous, much larger than the, however, large uncertainties of a level 2 PSA. The present REIA Safety Guide should not propose a tool which is not yet developed or common accepted so far.				Safety Guide that this is for the design or siting stages. c) The prospective consideration of potential exposures is not the same to the assessments for emergency preparedness and response. Despite some elements could be common, the objectives are totally different and one does not preclude the need of the other. d) PSA Level 3 is a practice in some Members States and is appropriate to be included as guidance. The methodology is well known and the uncertainties can be handled and are considered when defining the methods and the risk acceptance criteria (INSAG and ICRP provide risk criteria). Other approaches can be used and are mentioned in the Safety Guide.
Germany, BMU, w/ commen	5.62	1st sentence: "In the process of assessing potential exposures associated with facilities necessitating complex assessments, safety analysis techniques should be	Clarification and simplification is recommended to avoid a cumbersome and misleading formulation with	X			

ts of GRS - 2013-09-23		applied that consider elements such as anticipated operational occurrences, design basis accidents~~,~~ and beyond design basis accidents ~~and other plant states, including severe accidents and design extension conditions~~ [26, 47].”	respect to possible plant states. According to the new definition introduced by the Safety Requirements SSR-2/1, the term ‘design extension conditions’ has superseded ‘beyond design basis accidents’ for NPPs. Design extension conditions could include severe accident conditions (see Section “Definitions” in SSR-2/1). However, in GSR Part 4 and all other IAEA Safety Standards except SSR-2/1, the term ‘beyond design basis accidents’ is still be used for facilities and activities.				
Argentina, ARN 24/9/2013	5.62	*For the purposes of this Safety Guide, the expression ‘potential accident scenarios’ is used to include all the hypothetical ~~abnormal~~ accidents, events or sequences of events that would arise in a detailed safety analysis made on the basis of the characteristics of the facilities or activities concerned.*	Avoid redundancy.	X			
Japan, NRA, 24/9/2013	5.62/ L3	…such as anticipated operational occurrences, design basis accidents, beyond design basis accidents ~~and other plant states, including severe accidents and design extension conditions~~ [26, ~~4647~~].	**Clarification.** Regarding to plant states, even though “beyond design basis accident” has been already superseded by “Design Extension Condition” in SSR-2/1 [46] for NPP only, there is still “beyond design basis accidents” in GSR Part 4 [26] for facilities and	X			

			activities. To cope with these deferent definitions in the same sentence, it is much simpler to delete it.				
USA/ US NRC/ 9/24/2013	5.64	Change "is a probabilistic matter." To "may be evaluated with probabilistic methods." It may or may not be probabilistic.	Provide flexibility.		Being considered		
Argentina, ARN 24/9/2013	5.68 2nd line	*5.68.For facilities necessitating complex assessments — such as nuclear power plants, large research reactors, radioisotope production facilities, waste management facilities, ~~near surface waste disposal facilities~~ and nuclear fuel reprocessing plants — a greater number of potential exposure scenarios may need to be considered. Since the source terms could be higher and the facilities have more complex technological features, the identification and analysis of potential exposure scenarios may need to be carried out in greater detail. For these assessments, complex safety assessment techniques, for example probabilistic safety analysis, should be used*[21].	Avoid confusion. As said in comment Nr. 1 Radioactive waste final disposal facilities should be treated in a different document	X			
ENISS, 23-09-2013	5.68	For facilities necessitating complex assessments — such as nuclear power plants, large research reactors, radioisotope production facilities, waste management facilities, near surface waste disposal facilities, deep geological waste disposal facilities and nuclear fuel reprocessing plants — a greater number of potential exposure scenarios may need to be considered.	Deep geological waste disposal facilities are also a complex facility and need to be added here.		The more clear indication of in-clusion/exclusion of disposal is be-ing considered		
Sweden,	5.68	Please consider comment.	What of deep geological		As mentioned		

SSM, 24/09/2013			waste disposal facilities?		before, we are considering including/excluding disposal in the scope and trough the safety guide.		
Germany, BMU, w/ comments of GRS - 2013-09-23	5.75	last sentence: "… the complete set of relevant accident source terms could be more accurately characterized by means of safety analysis techniques, …"	Editorial.	X			
USA/ US NRC/ 9/24/2013	5.94	Delete the following text from paragraph 5.94: Another option may be to express the criteria in terms of a level of consequences that would be unacceptable. For instance, a criterion could be that large evacuations of populations or long term restrictions on food consumption or on the use of land as a result of the possible accident scenarios specified for the facility or activity would not be acceptable. In general, this level of consequences can be derived from an estimation of a dose or a related quantity and comparison to criteria set to establish the need of countermeasures.	We believe the "economic consequences" alone should not be treated as equivalent in regulatory character to matters of adequate protection of public health and safety." Establishing criteria of the level of consequences that would be "unacceptable" would likely have to be based socio-economic impacts only as indicated in the examples given, which is unnecessary. Having said this, we believe stakeholders and public inputs as well as risk/cost benefit analysis may be used in the late phase of emergency after application of mitigation measures from high risk of radiological contamination. Additionally, this appears to be in conflict		Being considered		Some countries use as a kind of "criteria for controlling potential exposures" restrictions on possible evacuations or other types of countermeasures (food restriction, use of land). The examples presented are dominated by radiological impacts and not socio-economical factors (e.g., evacuation of a large area would be necessary if the doses in that area are above the reference criteria

			with the subsequent sentences that suggest somehow such "unacceptability" criteria be established or derived from dose or emergency action criteria which are health or safety based criteria.				for emergencies). We avoided considering socio-economic impacts in a detailed form in this Safety Guide, despite it is mentioned that other non-radiological potential consequences could be considered in the assessments (based on national regulations).
Japan, 30/09/2013	Section 5	Add a new sub-section regarding "Identification of representative organisms (flora and fauna) for potential exposure" to this section.	For assessment of the possible radiological impacts of potential exposures, the organisms likely to be most affected in accident conditions should be identified as representative organisms.		Being considered		This could be discussed under the tittle CONSIDERATIONS ON THE IMPACTS OF POTENTIAL EXPOSURES ON THE ENVIRONMENT
Sweden, SSM, 24/09/2013	5.91	Please consider comment.	This paragraph states that different age groups should be considered, whereas paragraph 5.37 suggests that typically only adults are considered in REIA.	X	Being considered.		See reply to comment 5.37 Sweden
Sweden, SSM, 24/09/2013	5.100	Please consider comment.	Please include some reference on how to determine costs and benefits for the flora and fauna.		Clarification will be added		The approach to assess/control the impact to flora and fauna is based on ICRP publication 124 (not

							published yet but already approved). Discussions on this topic will be delayed until publication appears. Having said that,. "cost and benefits" of the impact to flora and fauna (in connection to planned exposures) could be determined in a qualitative manner. For instance, if the selection of one particular site or the addition of one simple mitigating measure produces less impact to representative plants and animals, these "optimum" options could be chosen on that basis.
Argentina, ARN 24/9/2013	5.101	*Uncertainty reflects the state of knowledge about the system being investigated and 5.101.relates to how accurately the doses and or risk can be estimated: for example,……..*	To include potential exposures.	X			
USA/ US NRC/ 9/24/20	5.103	If the guidance is not formally evaluating uncertainty it should not be using or advocating best estimates. This text conflicts with section 5.105. Suggest "should be based on best	Consistency within the text..		Amendment being considered		Being considered

13		estimates with an uncertainty evaluation or conservative values."					
USA/ US NRC/ 9/24/2013	5.104	Complexity of the assessment is being mixed with site-specific data. A site may or may not be complex. The data may or may not be complex. If an initial assessment is generic or conservative, then site-specific information may be necessary to better assess the site-specific impacts. Site-specific does not necessarily mean complex.	Technical inaccuracy.		Clarification being considered		Being considered
Sweden, SSM, 24/09/2013	5.104	Please consider comment.	This could be discussed in the context of a tiered approach. Paragraph I-12: An important factor is if the assessment methodology is conservative chosen.		To be considered		
USA/ US NRC/ 9/24/2013	5.105	Drop "any" in the first occurrence in the first sentence. It is unnecessary and can't be defined.	Improve clarity.	X		X	
USA/ US NRC/ 9/24/20	Pg 39 Para 5.10	Delete second part of first sentence.	The uncertainties have a role in ensuring the dose limits are not exceeded. But they have nothing to do with	X		X	

13	5		the optimization. Optimization is the selection of the best option, and uncertainties will apply to each of the options. So it is incorrect to say that uncertainties should be adequately small to ensure doses are optimized.				
USA/ US NRC/ 9/24/2013	Pg 40 Para 5.108	Last sentence. Consider deletion, or elaboration	The question of whether the individuals, in a population, are a small fraction of the total population, or not, is potentially confusing. What criteria are to be used to determine if the population selected is a small fraction of a much larger population, and therefore impacts are insignificant?	X			
Japan, 30/09/2013	5.108/L10 p40	In addition, the number of individuals in the populations to be most affected ~~most highly exposed~~ are fractions which, when compared to the total size of the populations, permits ~~to conclude~~ the conclusion that the impact at the levels of the entire sub-populations is insignificant.	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with "affected."		Being considered		(see explanation to 5.10)
France / ASN - IRSN 17 sept 2013	5.108 p40	Last sentence	This statement can be removed. If kept, it needs revision. Even if only a small fraction of a population is affected, this	X			

			small fraction can be a critical portion of the population (for example, the population demography for a specific species can be driven by a small specific age category of the entire population).				
USA/ US NRC/ 9/24/2013	Pg 40 Para 5.109	Line 4. Consider replacing "a less generic" with "more specific".	Clarity. Endangered species and other considerations mean you need a more specific assessment.	X			
Japan, 1/10/2013	5.110	To add a new item as follows; (e) In considering potential exposures at geological disposal, evolution of the biosphere, the geosphere and the engineered system will increase the uncertainly of these probabilities at long time scales.	In case of disposal facility, more specifically, future exposure such as post-closure period has to be derived from potential exposure scenarios. The uncertainly of these probabilities should be emphasized in this guide. If this guide does not cover post-closure period of disposal, it should be addressed in the scope.		Inclusion/Exclusion of disposal in the scope is being considered		Differences exist and have been commented between planned in-the-near-future exposures and exposures that may occur many years after disposal.
Germany, BMU, w/ comments of GRS - 2013-09-23	5.110 (c)	"… potential releases will usually ~~by~~ be short and the impact will be dependent on conditions at the time …"	Editorial.	X			

Argentina, ARN, 23/9/13	Appendix I	Change for Annex	As stated in IAEA Safety Standards, an Appendix is considered to form an integral part of the standard and to have the same status as the main text. Annexes, footnotes and references, if included, are used to provide additional information or practical examples that might be useful to the user. Appendix I only provides a compilation of INSAG and ICRP statements without additional guidance.		An introduction will be added to Appendix I or the entire appendix will be moved to the main text.		All the criteria presented in this Safety Guide is based in international references and are part of the main document
Germany, BMU, w/ comments of GRS - 2013-09-23	Appendix I, I.3	"The annual probabilities for the last two criteria – accidents leading to effective doses of 10-100 mSv and 1 Sv – are lower than would be implied by the first criterion of the annual probability of death of 10^{-5} given the currently accepted value of 0.05 for the probability of death per Sv for members of the general population; …"	Wording/Editorial.	X			
ENISS, 23-09-2013	*Annex 1*	Delete annex 1	It is not road tested and received considerable critique during the ICRP consultation process. This critique cannot be ignored.			X	ICRP 124 resolved the comments during the consultation process and it is close to publication. This will delay for a while the discussions.
Japan, 30/09/2013	ANNEX I-3/L2	It should change as follows: "reference ~~flora and fauna~~ animal and plants" or " ~~reference~~ flora and fauna"	ICRP defines as RAP. To avoid confusion, it should be changed to either.	X			

	P49						
Japan, 30/09/2013	ANNEX I-5/L4 p49	The representative organism represents the flora and fauna to be most affected by radiation ~~most highly exposed~~.	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with "affected."		Being considered		(see explanation to 5.10)
Germany, BMU, w/ comments of GRS - 2013-09-23	Annex I, I-6	"… the representative organism for flora and fauna should be a group of a particular species located where the exposure conditions lead~~s~~ to the highest doses …"	Grammar.	X			
Germany, BMU, w/ comments of GRS - 2013-09-23	Annex I, I-8	3rd sentence: "The activity concentrations in the environment decrease~~s~~ significantly with the distance from such highest concentrations."	Grammar.	X			
Japan, 30/09/2013	I-8/L1 p50	To define the ~~most highly exposed~~ group to be most affected of flora and fauna for generic assessments of radiological impact,	It is incorrect as the definition of "representative organisms". According to the definition of the ICRP, "exposed" must be replaced with "affected."		Being considered		(see explanation to 5.10)
Germany, BMU,	Annex I,	Note: The statement of the 1st sentence	Clarification or reformulation of the whole sentence may be	X			

w/ comments of GRS - 2013-09-23	I-13	"ICRP RAPs where selected to be used as references considering the amount of quality data on radiobiology available, including data on probable radiation effects, that they are considered typical representative flora and fauna of particular ecosystems and have a wide geographical variation, as well as considering their potential use in a pragmatic manner [I-2]." is not clear.	required.				
Germany, BMU, w/ comments of GRS - 2013-09-23	Annex I, I-14	2nd sentence: "This could be the case, for instance, for desert, arctic or tropical climates, …"	Editorial.	X			
France / ASN - IRSN 17 sept 2013	Annex II France		Description of France practices is not accurate and should be updated.		Description was requested to France representatives nominated to the Technical Meeting November 2011, drafted accordingly and discussed by mail exchange. If not accurate, France should provide the description according to the national regulations and practice.		Information not provided.
USA/ US NRC/	Annex II,	**After Para II-32:** **US Nuclear Regulator ~~(to be completed)~~** **Insert the following text:**	Completion of information requested from US Nuclear Regulator:	X			

9/24/2013	Page 61 (requested information from US Nuclear Regulator) II-33,-34,-35, and II-36.	II-33. The United States Nuclear Regulatory Commission (NRC) is the Federal agency responsible for protecting the health and safety of the public and the environment by licensing and regulating civilian uses of source material, byproduct material, and special nuclear material in medical, academic, research, and industrial applications (including the generation of nuclear power). The primary safety consideration in the operation of any nuclear reactor is the control and containment of radioactive material, under both normal and accident conditions. Numerous controls and barriers are installed in nuclear plants to protect workers and the public from the effects of radiation II-34. The U.S. National Environmental Policy Act of 1969, as amended (NEPA) directs that an environmental impact statement be prepared for major Federal actions that significantly affect the quality of the human environment. This includes considering other past, present, and reasonably foreseeable future actions that could potentially affect the same resources for both radiological and non-radiological effects. The NRC has implemented its NEPA obligations through 10 CFR Part 51. When reviewing an application for a					

		nuclear plant, the NRC evaluates the potential exposures to the public due to radiological releases. In order to perform this analysis, the exposure pathways and receptor locations are determined. Receptor locations include areas having populations such as schools, hospitals, or residences, or they may be locations at which plants or animals that become food for the public may be exposed to either direct radiation or radionuclides contamination. Parameters necessary to determine the exposure pathways to calculate the dose include the population of the affected area (assumed to be within an 80-kilometer [50-mile] radius), the distance from the reactor to the receptor location, and the time required for the plume to reach the receptor locations. 11.35. The NRC analyzes radiological consequences under normal conditions against the requirements of 10 CFR Part 20, and affluent release limits (Part 20, Appendix B) as well as "Standards for Protection Against Radiation," under10 CFR Part 50. II-36. The NRC analyzes design basis accident radiological consequences against the 10 CFR Part 100 and/or 10 CFR Part 50.67 dose criteria. The base guidance that the NRC provides for facilitating compliance with these criteria is					

		contained in multiple NRC Regulatory Guides					
Sweden, SSM, 24/09/2013	II-3	Please consider comment.	Add that the risk coefficient is valid for members of the public. The risk coefficients in ICRP publication 103 is not the same as in ICRP publication 60, although similar.		To be considered		
Sweden, SSM, 24/09/2013	II-5	Please consider comment.	How can the risk constraint of 10^{-5} per year represent the annual dose of 10^{-3} mSv?	X			There is a mistake in the draft safety guide. It should say "the annual dose of 10^{-3} Sv" (1 mSv).
Germany, BMU, w/ comments of GRS - 2013-09-23	Annex II, II-7	last sentence: "Since the likelihood of such ~~an~~ extreme scenarios is very low, it seems clear that the probability or frequency of occurrence must be taken into account for the postulated accidents with large radiological impacts."	Editorial.	X			
Sweden, SSM, 24/09/2013	II-14	Please consider comment.	Refer to appendix I in last sentence.	X			
Germany, BMU, w/ comments of	Annex II, II-17	last sentence: "… a set of accidents are selected with probabilistic techniques based ~~in~~ on the analysis of the response of the safety systems …"	Wording.	X			

GRS - 2013-09-23							
Germany, BMU, w/ comments of GRS - 2013-09-23	Annex II, II-19	1st sentence: "In the characteristic approach a dose is estimated for each source term, which is selected considering predefined accidents with ~~a~~ certain annual frequencies, resulting from safety analysis, and then it is compared to a dose criterion."	Editorial.	X			
USA/ US NRC/ 9/24/2013	General	The document needs to be refined and edited for missing text, words, grammatical errors, and consistency within the text as well as between the Table of contents and the text (e.g.; see comments below and vivid examples in paragraphs: 1.14, 1.16, 3.5, 3.18 for missing words; 2.3, 4.8, 5.19, I-6, and I-8 for grammatical errors, and a missing Title "CONSIDERSTION ON THE IMPACTSOF POTENTIAL EXPOSURES ON THE ENVIRONMENT" in the Table of contents.	Editorial, grammatical errors and consistency.	X			Many thanks for this and the following comments. All will be incorporated. The document will be revised at a later stage by a professional English Technical Editor.
Germany, BMU, w/ comments of GRS - 2013-09-23	General	Please use uniform spelling in the whole document: • 'countermeasures' versus 'counter-measures'; • 'decision making' versus 'decision-making'; 'site specific' versus 'site-specific'.	Harmonization throughout the document is required.	X			Idem comment before
Japan, 30/09/2013	General	It should be used the same notation in some term. For example, 5. METHODOLOGY FOR RADIOLOGICAL ENVIRONMENTAL IMPACT ASSESSMENT（REIA）, -Radiological Environmental Impact Assessment,	Editorial	X			Idem comment before

Sweden, SSM, 24/09/2013	Throughout	Consistant use of British or U.S. English should be used. U.S. spelling e.g. “ionization”, “optimization"; British spelling e.g. “kilometres”; “recognised”.	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	Throughout	Check pluralisation of ‘organism(s)’ and ‘situation(s)’ for example the following sentences lacks pluralisation: “... to representative organism.”; “... planned exposure situation"	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.2	Repetition of phrase: “The requirement for the assessment ... is identified as a requirement in the BSS.”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.3	Delete ‘s’: “... named with the acronyms EIA...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.5	Incorrect form of ‘different’: “...bear in mind that differently to...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.5	Use of ‘respectively’ appears unfitting: “... being developed by ICRP and the IAEA, respectively.”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.8	Consider rephrasing sentence beginning: “This Safety Guide describes...”	Grammar, typographical errors, etc.	X			

Sweden, SSM, 24/09/2013	1.12	Delete 'purposes': "... consequences for planning of emergency response purposes."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.14	Consider rephrasing sentence beginning: "However, the assessment..."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.16	Consider rephrasing sentence beginning: "Some Member States may consider..."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.16	Add the word 'to': "... together with doses to flora and fauna..."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	1.19	Suggest rephrasing of "Some consideration on flora and fauna radiological protection..." to "Some considerations on the radiological protection of flora and fauna…"	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	2.7	Add the word 'an': "... viewed in an integrated manner..."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	2.9	Split up the sentence beginning: "In the context of..."	Grammar, typographical errors, etc.	X			
Sweden, SSM,	2.10	'Environment' is already defined above, remove: "for example flora and fauna"	Grammar, typographical errors, etc.	X			

24/09/2013							
Sweden, SSM, 24/09/2013	3.1	Phrase should read: “The Fundamental Safety Principles [2] establish...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	3.5	Add the word ‘of’: “..protection of the environment..”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	3.13	Replace ‘the’ with ‘in’: “... is addressed the Section 5...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	4.9	Delete ‘s’: “... constitute a hold points…”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	4.9	Add ‘s’: “...ensure by means of an...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	4.9	Repetition of phrase: “... by mean of an assessment ... is adequately assessed.”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.13	Add ‘s’: “... by means of…”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.17	Misspelling– ‘discussed’: “... considering the factors discusses in...”	Grammar, typographical errors, etc.	X			
Sweden, SSM,	5.20	Suggest ‘physicochemical’ instead of “physical-chemical"	Grammar, typographical errors, etc.	X			

24/09/2013							
Sweden, SSM, 24/09/2013	5.26	Misspelling– ‘overly’: “... or overlay costly.”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.37	Delete extraneous ‘.’ at beginning of paragraph: “. Dose coefficients…"	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.46	Add ‘a’: “... that a representative organism...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.51	Consider rephrasing sentence beginning: “In view of the aim...”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	5.53	Add ‘the’: “... in the previous paragraph."	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	II-12	Misspelling in footnote 30 – “hereditary”: “…heritable effects”	Grammar, typographical errors, etc.	X			
Sweden, SSM, 24/09/2013	II-15	Remove “risk”	Grammar, typographical errors, etc.	X			

END TABLE

COMMENTS BY REVIEWER Reviewer: ENISS (Extract prepared by IAEA) Country/Organization: ENISS Date: 23.09.2013							
Comment No.	Para/ Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
General		a) DS 427 is closely connected with DS 432 and DS 442. Both are not available. DS 427 should therefore put on a halt until the other drafts are ready for discussion. b) DS 427 reflects the current practice of REIA with regard to the radiological impact on humans and normal operations. Nevertheless, it might be difficult for a less experienced user to find out the right way of the graded approach. The guide is formulated basically in general terms and it would be more useful to give a detailed guidance specific for concrete facilities and activities. E.g. it would be very helpful to define a cut-off criterion in terms of activity which could be released to say that the impact is negligible and a REIA is not needed. c) General impression of the document is that the first four chapters are inconsistent and unclear whether REIS is a part of SAR or EIA and the guide does not mention the source of data to be used for the REIA. The modelling chapter seem to be well structured and written. d) The most critical issue is the use of the ICRP concept of reference animals and plants. This concept has been strongly criticized in the ICRP consultation process and is not adequate and not proven by practical experience to be			a) DS 432 and DS 442 are being developed in parallel and consistently. Some comments can be resolved meantime. b) The intention of the guidance is to be broad, covering all the topics in REIA but general enough to avoid a very large document. Further more detailed guidance and specific for particular installations could be developed in separated publications once this framework is agreed. Discussions on cut-off criteria could be included. c) Being considered for clarification. d) After the consultation process ICRP is close to publish ICRP 124 (Application of Protection of the Environment for different		

	used in an IAEA safety guide. Until now it was sufficient to show that humans are adequately protected. The basic conviction – protection of humans implies protection of nature – has not changed as can be read in ICRP 103. Conceptual work of ICRP towards reference animals and plants rather arises from the desire for a proof of that conviction. So, it is not to be expected that any non-human biota are endangered from the release of radioactivity if this release is governed by the protection of humans. Since a dose assessment for reference animals and plants, as proposed by the Guide, in nearly all cases will show compliance with reference levels (DCRL) by far, usually a generic assessment will be sufficient. Therefore, the Guide should present the results of generic assessments for typical facilities and activities instead of giving advice which probably will never have any relevance. e) The proposed safety guide includes a detailed methodology for dose calculation for planned facilities. However, the basis and methodology for dose calculations and estimations should be the same for both existing and planned nuclear facilities. Therefore, it could be relevant considering the advantage of publishing a safety guide specifically dealing with the methodology for radiological environmental impact assessment rather than limiting its scope to planned facilities. It would be advantageous to streamline the scope of the safety guide to methodology of dose calculations. f) The current scope of the safety guide implies risks for discrepancies in the dose calculation methodologies applied in different situations (existing facilities contra planned facilities). In parallel, one could clarify the range of applications of the assessment of radiological impacts on		Exposure situations). Regarding protection of environment, DS 427 and DS442 are being developed in agreement with this new ICRP publication. Notwithstanding that it is important to delay the discussions until all these documents are available to Committee members, the proposal by IAEA based on ICRP is of a very general character. More detailed and specific assessments could be presented in other IAEA guidance, after this general framework based on ICRP proposal and IAEA experience is endorsed. e) The Safety Guide is intended to provide general guidance to perform all the elements in a REIA (based on Safety Fundamentals, BSS and other Requirements and relevant international recomendations, like those of ICRP and ISAG) in connection with the process of Safety Assessments for licensing and within the EIA process. f) The methodology is for prospective assessment and it		

	the public and the environment in a separate safety guide. It is therefore suggested to assess the possibility to split the safety guide into two different documents. g) It is also not correct to quote chapter 1 of the BSS. Chapter 1 is an introduction only and has no requirement character. A guide needs to start from the requirement and should give advice how to fulfil this requirement. It must not define new requirements. h) To call the assessment of the radiological impacts "REIA" may create an association with EIA that may not be apt in all circumstances. As mentioned in the safety guide, the EIA process is well established and regulated. At the same time it appears clearly in the safety guide that the scopes of REIA and EIA, even though there are some common points, are fairly different. For instance the frequency at which an REIA is recommended to be produced (according to figure 2) is significantly higher than that of an EIA. The EIA process for projects of the same dignity as new nuclear facilities means several years of work. i) Another example is the usually extensive public participation that is a central part of the EIA process and may not be adapted to the numerous REIAs that are proposed to be produced during the lifetime of a nuclear facility. j) The assessment of potential impacts related to incidents and accidents is presented as a natural part of the REIA. This topic has been discussed extensively within the field of EIA but both national and international regulations have yet to clearly integrate risk assessment as part of the EIA process. At the same time those risk assessments are a		could be applied for new or existing installations as required (prospective assessment are necessary for an existing installations when changes could arise or periodic safety reviews are requested). g) The requirement for doing REIA is as part of Safety Assessment is well established in IAEA Safety Standards. REIA as part of an EIA is an international practice, based on national legislations and conventions. The IAEA is the better International Organization to "guide" on what a REIA for a EIA should include. The option to consider explicitly or not the impact to flora and fauna is based on national or other international regulations/instruments. h), j) and k): It is truth that calling REIA could be confusing. It is also valid to say that EIA procedure is not to be defined by IAEA, despite as it was said, it is better that IAEA define what is necessary for an EIA. We will request advice		

	given part of the safety assessments that are required for nuclear facilities. In that sense the REIA may be blurring the boundary between safety assessment and EIA. This may not be negative per se but needs to be further analysed. k) It is proposed that the name used for the assessment of radiological impacts for the public and the environment is discussed further due to the fact that REIA may imply some confusion and amalgam with the already established EIA process.		from the Committees. i) It is truth that EIA procedure is participative (e.g. public) in a different manner than in a Safety Assessment process for licensing. However, stakeholders' involvement is a process necessary and mandatory in the development of the nuclear industry. Differences will be clarified		
Secretariat	Note by the Secretariat: the rest of the comments from ENISS and the resolutions by the IAEA were included in the first table at the beginning of this document/				