

DS534: Protection Strategy for a Nuclear or Radiological Emergency

(Comments received from members of EPRéSC and NUSSC based on DS534_v.5 dated 25/10/2021)

Version 1 dated 27/10/2021

Country/ Org.	COMMENTS RECEIVED				RESOLUTIONS			
	Comment Number	Paragraph/ Line Number	Proposed New Text	Reason	Accept ed	Accepted, but Modified as Follows	Rejecte d	Reason for Modification/Rejection
General Comments								
South Korea (EPRéSC)	1.	General Comment	The publication should specifically and clearly indicate that it is important to develop protection strategies and generic criteria for longer-term protective actions (e.g. permanent relocation), preferably with recommended values if possible.	An emergency involving large scale contamination resulting in exposures of the public due to long-lasting residual radioactive material in the environment will result in longer term exposures, which are expected to decrease with time. The importance of justification and optimization of protection strategy is already indicated in GSR Part 7 and so will be in the new publication, however it may be too general for each member state to properly develop a longer-term protection strategy. Though the development of generic criteria is up to each member state, it shall be developed with account taken of the generic criteria in Appendix II of GSR Part 7 (per 4.28.(3) GSR Part 7). Examples of generic criteria provided by GSG-2 or GSR Part 7 only take into account duration of a year as maximum period for projected dose values. For example, 100 mSv in the first year can be used as generic criteria for 'temporary' relocation of which target duration is weeks or months (per EPR-Protection			<input checked="" type="checkbox"/>	The generic criteria for deciding when evacuation can turn in relocation and when relocation can be lifted or may stay in longer term (permanent relocation) are given in Table 3 of Appendix in GSG-11 along with such considerations for all urgent and early protective actions. They will be used in this Safety Guide as reference as done in EPR Protection Strategy to avoid duplication. This safety guide doesn't provide guidance on the protection strategy for managing existing exposure situations and long-term recovery. New paragraph is added to clarify the scope: This safety Guide will not apply for managing existing exposure situations after the emergency is declared ended and for long term recovery. However, the basic concepts and approaches contained in this Safety Guide will support, within the context of overall emergency preparedness, planning for the protection strategy for the

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				<p>Strategy) but there is no example for longer-term relocation which was in Safety Series No. 109 (e.g. 1 Sv/lifetime for permanent relocation). Apparently, longer-term protective actions including permanent relocation shall have reasonably higher criteria compared to those of early protective actions to effectively reflect the adverse aspects of implementing longer-term protective actions (e.g. a significant impact on the local economy, on individuals as well as on whole communities, which may lead to mental health and psychological problems and social issues).</p> <p>With the emphasis of setting a reference level in the range 20-100 mSv acute or annual, and in consideration with the reference level is often seen as a 'dose limit' to the public and the authorities. Considering experiences in Fukushima accident, relocation criteria of 20 mSv/year was set by selecting lower-end of 20-100 mSv range of the reference level for emergency exposure situation. 20 mSv/year generic criteria can be seen as appropriate for 'temporary' relocation per GSG-2 or GSR Part7, however, it ended up with 'permanent' relocation (lasting several years) in Japan.</p>				existing exposure situation after the termination of the nuclear or radiological emergency.

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				It would be very beneficial for each member state if there is a clear indication or guidance on developing protection strategies and generic criteria for longer-term protective actions.				
Background								
Libya (NUSSC)	2.	18	Preparedness and Response for a Nuclear or Radiological Emergency require the Member States to ensure that protection strategies are developed, justified and optimized, at the preparedness stage1 19 for taking protective actions 20 and other response actions effectively in a nuclear or radiological emergency.	Clarity	<input checked="" type="checkbox"/>			
Libya (NUSSC)	3.	24	..., IAEA Safety Standards Series No. GS-R-2 (2002)) in which interventions (i.e. individual	Clarity			<input checked="" type="checkbox"/>	The used wording is grammatically correct.

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			protective 24 actions) were individually justified on the basis of Based on the dose that is avertable by that action,					
Libya (NUSSC)	4.	33	Understanding the concept of radiological protection strategy has been further complicated by the fact that the term ‘protection strategy’ is commonly used to refer to both a framework and its documentation...	Clarity			<input checked="" type="checkbox"/>	The DPP uses the term ‘protection strategy’ as introduced at Safety Requirements GSR Part 7 and GSR Part 3. When developing and implementing protection strategy radiological and non-radiological considerations associated with the emergency or the emergency response are taken into account
USA (EPRcSC)	5.	33	“Understanding the concept of radiological protection strategy has been further...”	Clarity			<input checked="" type="checkbox"/>	The DPP uses the term ‘protection strategy’ as introduced at Safety Requirements GSR Part 7 and GSR Part 3. When developing and implementing protection strategy radiological and non-radiological considerations associated with the emergency or the emergency response are taken into account.
USA (EPRcSC)	6.	33	“...and has risen a need for and could benefit from further clarification.	Clarity	<input checked="" type="checkbox"/>			

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Libya (NUSSC)	7.	40	A document (or set of documents) that describes the goals to be achieved, the decision making decision - making basis, and 40 the set of justified and optimized emergency response actions that comprise or set the framework.	Clarity			<input checked="" type="checkbox"/>	Spelling is in line with the Agency Style Manual
Japan (EPRcSC)	8.	Page 2, Section 2., 41-47	Although particular emphasis is placed on the protection strategy in the transition phase in GSG-11, GSG-11 states that “a protection strategy describes in a comprehensive manner what needs to be achieved in response to a nuclear or radiological emergency in all its phases and how this strategy will be achieved	We agree the EPR Series documents are an important input, but the GSG-11 descriptions related to a protection strategy should be mentioned.		<input checked="" type="checkbox"/>		With clarity given on GSG-11 coverage: “Although a particular emphasis is placed on the specifics of the protection strategy for the transition phase in GSG-11 (2018), GSG-11 does not describe the concept of protection strategy in a comprehensive manner, and it does not address all the phases of a nuclear or radiological emergency”

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			through the implementation of a justified and optimized set of protective actions and other response actions.”					
Justification for the Production of the Publication								
Japan (EPRReSC)	9.	Page 2, Section 3., 55-58	The existing safety guides in EPR (GS-G-2.1 55 (2007), GSG-2 (2011), GSG-11 (2018) , GSG-14 (2020)) have well defined scope (as such or their revision, if initiated) in terms of the requirements of GSR Part 7 for which they provide guidance for, with Requirement 5 of GSR Part 7 being outside their scope.	refer to comment No. 1	<input checked="" type="checkbox"/>			
Sweden (EPRReSC)	10.	62-63	During the 12th meeting of EPRReSC, the Committee identified the need to upgrade EPR	Please consider revising the text in accordance with the report of the ninth meeting of EPRReSC (line 1558) and the report of the 12th meeting of EPRReSC (lines 357-360 and 794-795).	<input checked="" type="checkbox"/>			

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			Protection Strategy 2020 to the status of a Safety Guide During the 9th meeting of EPRESC, the Committee identified the need to develop guidance on Protection Strategy at Safety Guide level. During the 12th meeting of EPRESC, the Committee approved the proposal to proceed with upgrading EPR-Protection Strategy to a General Safety Guide and suggested that the Secretariat work on preparing a DPP.					
Libya (NUSSC)	11.	64	The feedback received from the application of the EPR Protection Strategy 2020 publication (to be obtained through	Clarity	<input checked="" type="checkbox"/>			

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			65 NSS OUI) will provide essential input to the development of the proposed new safety guide.					
Objective								
Iran (EPRReSC)	12.	69-70	“...on the development (on the basis of the hazard assessed), justification and optimization...”	For clarification (according to the paragraph 1.17 of GSR Part 7)			<input checked="" type="checkbox"/>	Protection strategy is developed based on the planning basis, results of hazard assessment and goals of emergency response. The purpose of this section is to provide high level objective. The details and basis of development will be elaborated in relevant section.
Iran (EPRReSC)	13.	First paragraph		First paragraph is somehow the same as the first paragraph of the objective of EPR-Protection Strategy. In the second term of EPRReSc, there were a lot of discussion regarding preparing a safety guide or an EPR document on this subject. Let’s attract your attention to the Report of the Ninth Meeting of EPRReSC that was held 3-5 December 2019. On page 5 of this report, it is stated: “Australia commented that they appreciate the EPR series being developed currently and believes that protection strategy may be considered for elevation to a standard or other level, as other documents are more procedural when compared with protection			<input checked="" type="checkbox"/>	As noted in lines 62-63, discussion on the necessity of the safety guide on protection strategy continued and “during the 12th meeting of EPRReSC, the Committee identified the need to upgrade EPR Protection Strategy 2020 to the status of a Safety Guide and suggested that the Secretariat work on preparing a DPP”. Despite the EPR-Protection Strategy was published only in April 2021, a number of workshops on the subject were delivered since 2019. Based on these workshops only positive feedback was received on the concepts and guidance elaborated in the EPR Protection Strategy.

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				<p>strategy. Mr. De La Vega replied that in one of the previous discussions on the EPReSC Roadmap this point was discussed, and it was decided to start with an EPR Series document since Protection Strategy is a novel requirement with <u>very limited available experience within Member States upon which to draw.</u></p> <p>Also, on pages 18 and 19 of this report, it is stated: “The consensus on protection strategy is good, but the EPR series on this topic is almost complete. He supported the view that is better to allow for feedback on this document instead going straight to upgrade it to SG.”</p> <p>Is there enough experience available now? Any feedback on EPR-Protection Strategy? It is suggested to add an annex to DPP, providing a report about received feedback on EPR-Protection Strategy and available experience within member states that should be considered in developing Safety Guide.</p>				<p>During the process of safety guide development, the Secretariat will continue gathering feedback on EPR-Protection Strategy through the available channels and will work in close cooperation with Member States and international organizations to accurately address their experience.</p>

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Iran (EPRReSC)	14.	First paragraph		<p>According to the lines 64 and 65 of DPP, the feedback received from the application of EPR Protection Strategy 2020 publication (to be obtained through NSS OUI) will provide essential input to the development of the proposed new safety guide. It is supposed that NSS OUI is for accessing to electronic versions of all printed Safety Standards and Nuclear Security Series. So it is suggested to clarify the Lines 64 and 65 on how to receive feedback on a document such as EPR-Protection Strategy through NSS OUI.</p>		<p style="text-align: center;"><input checked="" type="checkbox"/></p> <p>The feedback received from the application of EPR Protection Strategy 2020 publication (from e.g. conducted workshops, expert missions or, as appropriate, to be obtained through NSS OUI²⁾ will provide essential input to the development of the proposed new safety guide.</p> <p>² https://nucleus-apps.iaea.org/nss-oui/</p>		<p>Usual means for gathering feedback were added. Link to the Nuclear Safety and Security Online User Interface (NSS OUI) platform is added as footnote two (2).</p> <p>On the main web page of the platform, the user may find a link:</p> <ul style="list-style-type: none"> - to access a brochure on the user interface https://www-ns.iaea.org/committees/files/CSS/205/NSS-oui_Users_guide.pdf <p>to access a self-learning tool on how to use this interface https://www-ns.iaea.org/committees/files/CS/205/ScriptdemoNSSOUI.pdf</p>
Japan (EPRReSC)	15.	Page 2, Section 4., 69-71	The objective of this Safety Guide is to provide Member States with guide and recommendations on the development, justification and optimization as well as implementation of a protection strategy for a nuclear or radiological emergency.	clarification		<input checked="" type="checkbox"/>		'Guide' is replaced for 'guidance' for consistency with the IAEA Style Manual.

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Iran (EPRReSC)	16.	73	The target audience for this publication is decision makers (emergency managers) in an emergency, emergency planners (at the facility, local, regional and national level), operating organizations, response organizations, regulatory bodies and other competent authorities, emergency response coordinators, qualified experts/radiation protection officers (radiological assessors, technical advisers to decision makers) and relevant staff of different response organizations at all levels with roles and	Who are the emergency response coordinators and emergency planners ? Someone or a body except from operating organizations, response organizations, regulatory bodies and other competent authorities, and interested parties? Not so agree with using terms such as “emergency managers” that is not used in GSR Part 7, GSR Part 3, GSG-11 and GSG-14 and IAEA Safety Glossary.		<input checked="" type="checkbox"/> The publication will be beneficial for operating organizations, response organizations, regulatory body and other relevant competent authorities involved in emergency preparedness and response either directly or through the national coordinating mechanism. The target audience for this publication is are decision makers (or emergency managers response commanders) and emergency planners (at the facility, local, regional and national levels), emergency response coordinators, qualified experts/radiation protection officers (e.g. radiological assessors, technical advisers to decision makers) and relevant staff of different response organizations at all levels with roles and responsibilities in preparedness and response for a nuclear or radiological emergency.		Following the internal rules for DPP development, Section ‘Objective’ should provide a target audience (i.e. specific group of people). These people with certain responsibilities may work in deferent organizations or/and be representatives in coordination/decision making committees or bodies. Term ‘emergency manager’ is replaced by ‘emergency response commander’ for being in line with the IAEA Safety Glossary. Term emergency planner is used by the IAEA safety standards (e.g. GSG-11) and is self-explanatory. Emergency planner is a qualified expert responsible for development of emergency plans and procedures. Emergency coordinator is a person authorized to coordinate function(s) of an emergency coordinating mechanism (e.g. hazard assessment, development of protection strategy, effective communication). For further details please see para 4.10 of GSR Part 7.

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			responsibilities in preparedness and response for a nuclear or radiological emergency.					
Iran (EPRReSC)	17.	74	<p>“...the body¹ with the authority at the preparedness stage to ensure the necessary coordination, emergency response coordinators, ...”</p> <p>As the footnote 1: An existing body or a newly established body (e.g. a committee consistent of representatives from different organizations and bodies)</p>	<p>GSR Part 7 in the Preface states: “One of the most important elements of emergency preparedness is the coordination of arrangements among the different bodies involved to ensure clear lines of responsibility and authority.”</p> <p>Coordination of the arrangements in preparedness for a nuclear or radiological emergency is important too (Page 9 and requirement 22 of GSR Part 7).</p>		<p><input checked="" type="checkbox"/></p> <p>The publication will be beneficial for operating organizations, response organizations, regulatory body and other relevant competent authorities involved in emergency preparedness and response either directly or through the national coordinating mechanism.</p>		Modification is introduced to address this comment taking into account the others (see the comment above)
USA (EPRReSC)	18.	73	“The target audience for this public is are decision makers...”	Clarity	<input checked="" type="checkbox"/>			
Scope								
Japan (EPRReSC)	19.	Page 3, Section 5., 81-82	The Safety Guide will apply to any nuclear or radiological emergency that	As described in GSG-11, the comprehensive protection strategy developed at the preparedness stage should extend beyond the termination of the emergency to		<p><input checked="" type="checkbox"/></p> <p>New under Scope The Safety Guide will apply to any nuclear or radiological emergency that could occur in</p>		This safety guide doesn't provide guidance on the protection strategy for managing existing exposure situations and long-term recovery.

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			could occur in relation to a facility, an activity or a source, irrespective of the cause, <u>from the declaration of the emergency to the longer term within the framework of an existing exposure situation.</u>	support all the activities necessary for achieving any long term objectives, particularly for a large scale emergency.		relation to a facility, an activity or a source, irrespective of the cause. The Safety Guide will cover all the phases of the nuclear or radiological emergency, from the urgent response phase to the transition phase. ... This safety Guide will not apply for managing existing exposure situations after the emergency is declared ended and for long term recovery. However, the basic concepts and approaches contained in this Safety Guide will support, within the context of overall emergency preparedness, planning for the protection strategy for the existing exposure situation after the termination of the nuclear or radiological emergency.		New paragraph is added to clarify that.
USA (EPRReSC)	20.	81-82	The scope is not clearly defined with respect to emergency plan phases. The overall effort will increase with each phase considered (i.e., early, intermediate, late). Recommend defining the scope in terms of the	Completeness/Consistency	<input checked="" type="checkbox"/>			Additional info is added (“The Safety Guide will cover all the phases of the nuclear or radiological emergency, from the urgent response phase to the transition phase”) in the Scope.

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			emergency phase(s) to be considered (e.g., early, intermediate, and/or late phase) to be consistent with Paragraph 7 line 154 which describes “different phases”.					
USA (EPRReSC)	21.	79-86	It is unclear if “transportation of radioactive material” is included or is intended to be included within the scope of DS534. The DPP should consider the information/direction found in the EPR Protection Strategy 2020 related to radiological emergencies during transportation.	Add clarity			<input checked="" type="checkbox"/>	The first line of the scope refers to any nuclear or radiological emergency and thus applies for nuclear or radiological emergency during transport. Providing specific examples in the scope is not appropriate as the list cannot be exhaustive.
USA (EPRReSC)	22.	79-86	Ensure that the GSG-2 Operational Criteria will be	IAEA staff notes that the detailed recommendations and guidance on for operational criteria (provided in GSG-2) is currently under revision.	<input checked="" type="checkbox"/>			

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			finalized prior to issuance of this Safety Guide.	However, the GSG-2 operational criteria will be referenced in the protective strategy throughout this Safety Guide and should be finalized before this Safety Guide				
South Korea (EPRReSC)	23.	83-86	The publication needs to provide guidance on generic & operational criteria.	It is the essential part for developing the protection strategy. Tables of generic criteria and operational criteria may be included in a form of appendices as in GSR Part 7.			<input checked="" type="checkbox"/>	In line with approved DPP DS527, these are within the scope of the revised GSG-2.
Overview								
USA (EPRReSC)	24.	140-176	In section 7. <i>Overview</i> , sub-section 3. <i>Development of Protection Strategy</i> , include a section on emergency responses to security-related events and coordination and response with local law enforcement in securing the area to preserve evidence for further evaluation by law enforcement. Also reference this subject in sub-section 6.	While GSR Part 7, requirement 5: Protection Strategy for a Nuclear or Radiological Emergency, provides associated guidance for responding to emergencies from a safety perspective, this DPP needs to include a reference to security series document(s) which could work as a companion to GSR Part 7 if radiological sabotage or a security-related initiating event occurs. Currently, this DPP does not include security-related comparison documents or references to leverage for development of post incident implementation for a coordinated Safety-Security response	<input checked="" type="checkbox"/>			The Safety Guide is considered as an interface document (with NSGC involvement) as these aspects raised in the comments are expected to be covered throughout the Safety Guide as done within EPR Protection Strategy 2020. As such specifics in relation to other aspects (e.g., radioactive waste, disaster management, monitoring, etc.) are not addressed specifically in the DPP, addition on it is deemed not necessary to be made. Coordination with nuclear security is expected to take place in line with the paragraph before the last one of Section 6 of the DPP.

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			<i>Consultation with Interested Parties.</i>					
Iran (EPRReSC)	25.	149	“3. Development of Protection Strategy on the basis of the hazards assessed ”	According to the paragraph 1.17 of GSR Part 7.			<input checked="" type="checkbox"/>	Protection strategy is developed based on the planning basis, results of hazard assessment and goals of emergency response. The purpose of this section is to provide high level objective. The details and basis of development will be elaborated in relevant section.
USA (EPRReSC)	26.	151	“...recommendati ons on the planning basis, hazard assessment, and emergency response goals to enable development of the strategy and steps to be taken.”	Planning basis, hazard assessment, and emergency response goals are all critical inputs to the development of the protection strategy.	<input checked="" type="checkbox"/>			The planning basis will consider all of these aspects consistently with other Safety Guides and with EPR Protection strategy 2020, while avoiding duplication.
USA (EPRReSC)	27.	153-155	“This Section is expected to address the implementation of the pre-planned strategy and to provide guidance and recommendations on how to implement the strategy during	Assessing the effectiveness of the protection strategy and adjusting as necessary are critical components of implementation and should be highlighted	<input checked="" type="checkbox"/>			

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			different phases of the emergency, including means of assessing the effectiveness of the protection strategy and for its adjustment as the emergency evolves, and the implications for its development.”					
Iran (EPRReSC)	28.	New Paragraph	“6. Revision of Protection Strategy”	Please take into account the bullet (g) of paragraph 4.31 (GSR Part 7). Revising the protection strategy is important and it is suggested to be considered in a separate section.		<input checked="" type="checkbox"/> 4. Implementation of Protection Strategy <i>(This Section is expected to address the implementation of the pre-planned strategy and to provide guidance and recommendations on how to implement the strategy during different phases of the emergency and the implications for its development. It will include guidance on necessary means of assessing the effectiveness of the protection strategy and for its adjustment as the emergency evolves).</i>		The topic will be covered in Content 4 in Section 7 of the DPP, taking account of other comments. Addition is made to clarify the scope.
USA (EPRReSC)	29.	164-166	More specific information about the envisioned appendices and annexes should be provided.	Completeness/vagueness	<input checked="" type="checkbox"/>			EPR Protection Strategy 2020 can indicate the type of information that can be given in Appendices or Annexes while accounting the need to avoid for duplication and prevent gaps within the safety guides under development (DS504, DS527).