Title: DS557 – Safety Requirements: Site Evaluation for Nuclear Installations – SSR-1 (Rev.1)

	COMMENTS BY REVIEWER Reviewer: Abdallah Amri Page.... of.... Country/Organization: Saudi Arabia Date:05 05 2025				RESOLUTION			
Sr. No.	Country	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/ rejection
1.			Many editorial comments		5		6	Not consistent with the document scope/terminology

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Marogulov Sergei Country/Organization: Russian Federation/Rosatom		Page 1 of 1 Date: 05/05/2025					
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	2. BACKGROUND	Change the text of the second sentence in the fifth bullet as follows: "…This includes technology neutrality, new scenarios (e.g., climate change), and siting of plants with standard design when a site specific hazard analysis has to be conducted"	The security-related scenarios are individual for every nuclear facility and are determined by the State. Security-related issues are out of scope of safety documents.	Changed into "human induced"			
2.	3. JUSTIFICATION FOR THE PRODUCTION OF THE PUBLICATION	Change the text of the sixth bullet as follows: "Safety–security interfaces: It is crucial to address safety and security interfaces since the stage of development of design basis for the installation".	Security-related issues – design basis threat in particular – are out of scope of safety documents.				This is a request by many Countries, to address the inetrfaces with security related scenarios since the early stages of siting. NSNS committees will review this document for this reason

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: USNRC							
Country/Organization: USNRC			Date: May 18, 2025				
Comment No.	Para/ Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	General	In the DS-557 Review Comment Instructions, remove this is ~~a new IAEA Safety Guide~~, and replace with "This is a revision to SSR-1, "Site Evaluation for Nuclear Installations".	DS-557 Review Comment Instructions describe this as a new IAEA Safety Guide. For clarification, this is not a new guide. Editorial change since the DPP proposed would be the next revision to SSR-1 requirements.	Yes			
2	Background		The term "new advancements in hazard development" is unclear. Please clarify meaning.	yes			
3	Justification		Could you provide additional information on how the revision will include characterization of low probability scenarios? Is this only high severity low impact scenarios or all low impact scenarios? If there is a need to refine this over time, what is achievable in this revision of a requirements level document?				Details are provided in the gap analysis below
4	Proposed TOC		The proposed use of the word "Criteria' under "Generic Requirements" creates potential for confusion with the GSR				Criteria is a generic term and it has been there in the current version: no conflict with whatsoever guide

			Part 7 “Generic Criteria”. Recommend avoiding this specific terminology.				
5	Proposed TOC, Section Heading 4	SITE CHARACTERISTICS AND THE POTENTIAL EFFECTS OF THE NUCLEAR INSTALLATION ~~IN~~ ON THE REGION	This appears to be a typo.	y			
6	Page 4, Section 6	Add SSG-18, “Meteorological, Hydrological, and Other Natural Hazards in Site Evaluation for Nuclear Installations,” to the list.	This is currently under development in another working group as DS541 but will be published before SSR-1 is updated. This fits in with other SSGs related to siting (SSG-9 / 79 / 89 / 21 / etc.)				It is there as DS541 as it is at the final stage of review
7	Page 7, Section 3. Third bullet	Direct consideration of climate change impacts during the lifetime of a nuclear facility.	The current text isn’t clear enough that climate change should be a major consideration for nuclear facilities that may operate for 60-100 years.	y			
8	Section 3, Technology Neutrality	Revise to read, “…associated with the selected or expected reactor technology…”	A specific technology may not have been selected yet. To remain technology neutral, standards should not require that specific technology be predetermined.				A site cannot be qualified in view of any technology that could be deployed in the future. It is licensed with reference to one technology, plant size and number.
9	Section 3, para 2, bullet 1	Site safety assessments should explicitly consider the compatibility between the site, number and type of installation to be built, and account for specific conditions associated with the selected reactor technology (e.g. SMRs, transportable NPPs, underground, etc.)- ~~must be explicitly addressed~~.	“must be explicitly addressed” not needed since sentence begins with “should explicitly consider…”	y			
10	Section 3, para 2, bullet 1	A plant parameter envelope may be applicable in early-stage site evaluation (i.e., site selection).	In the early stage of site evaluation, the project developers may not have	y			

			selected a specific reactor type.				
11	Section 7, line 1	The revision is ~~not~~ expected to substantially alter the current table of contents of SSR-1.	Comparing the proposed TOC to the TOC for the current revision of SSR-1, it looks like a significant reorganization.				I do not see any problem in a change of TOC by moving chapters (not deleting them!)
13	Annex Paragraph 3, bullet 3	Revise to read, "…(e.g., those affected by climate change);"	The bullet should be an "e.g." not an "i.e." The climate is only one factor that may change over time.	y			
14	Annex Paragraph 3, bullet 4	Revise to read, "Other external or human induced hazards not included in SSR-1 (2019)"	The guidance should be generic for emerging threats and hazards.	y			
15	Annex Paragraph 3, bullet 6	Delete, "Extreme and rare scenarios categorization for hazard development"	Clarification is needed since SSR-1 already designates some meteorological hazards into extreme and rare categories, Annex Paragraph 3, Bullet 6 should clarify what the intension of this bullet is. Is the intent to apply this categorization to all hazards?	y			
16	Annex, Paragraph 6, bullet 2	Revise to read, "Feasibility of emergency planning for reactors that may be transported to the site"	The purpose of SSR-1 is an assessment of the feasibility of emergency planning, not the actual emergency planning. Also, it should be clear that the focus is on the ultimate site characteristics and not the transportation route.	y			
17	Annex, Paragraph 6, bullet 3	Revise to read, "Identification of external hazards to inform the management of on-site and off-site emergencies"	The purpose of SSR-1 is site characteristics, not the actual management of emergencies. This bullet needs that clarification.	y			

			Also, the examples provided are vague and the terms are unclear (e.g., “circulation at site”) and should be deleted to avoid confusion.				
18	Annex, Paragraph 6, bullet 4	Delete	This bullet is redundant and not aligned with the purpose of SSR-1. The management of emergencies is left for emergency planning. The previous bullet already captures the idea that external hazards will help inform the planning.	y			
19	Annex, Paragraph 6, bullet 5	Revise to read, “Feasibility of emergency planning across national borders within the external zone.”	EPZs are not part of SSR-1 and may not be defined during the siting phase. SSR-1 describes an external zone as the area under assessment for emergency planning. A revision is needed to focus the scope of the feasibility assessment across national borders within the external zone as defined in SSR-1.	y			
20	Annex, Paragraph 6, bullet 6	Revise to read, “Identification of factors important to assessing the feasibility of emergency planning measures”	The term “feasibility” itself does not need assessed. Rather, the guidance should address the factors that contribute to developing an assessment of feasibility.	y			

COMMENTS BY REVIEWER Reviewer: **Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV)** (with comments of GRS) Pages: 5 Country/Organization: **Germany** Date: 31.03.2025				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	Ch. 2, Page 2 2nd bullet	A recent IAEA publication on "Applicability of IAEA Safety Standards to Non-Water Cooled Reactors and Small Modular Reactors", which identified critical review areas for the Siting Requirements, particularly concerning SMR reactor types, new technologies and deployment forms; and the subsequent revision of safety standards that have attempted to address issues in relation to the licensing, safety demonstration, commissioning and operation correspondently ~~of SMRs.,~~ such as SSR-2/1 (Rev. 1) and SSG-77.	Clarification	y			
2.	Ch. 2, Page 2 4th bullet	A recent INSAG report on "Application of the principle of defence in depth in nuclear safety to small modular reactors, addendum to INSAG-10" , which highlighted the need for the 5 levels of Defence in Depth (DID) for the safety of SMR-type reactors as well as newly published SSG-88 "Design Extension Conditions and the Concept of Practical Elimination in the Design of Nuclear Power Plants";	Please insert reference to SSG-88, which is actually mentioned in this DPP as DS508, but has been finalized and published in the meantime.				SSG-88 has no interest for this document
3.	Ch. 3, Page 2 1st bullet	**Technology neutrality:** Site safety assessments should explicitly consider the compatibility between the site, number and type of installation to be built, and account for specific conditions associated with the selected reactor technology and deployment type (e.g. SMRs, transportable NPPs, underground, etc.) must be explicitly addressed.	Clarification. Transportable, underground is more about deployment type, not reactor technology	y			
4.	Ch. 3, Page 2 2nd bullet	**Development of extreme hazard scenarios for the safety assessment of design:** There is a need to clarify the hazard	Wording "beyond-design-basis scenarios" is outdated, please replace by the actual				Beyond design basis events I well in the Glossary, last version

		characteristics to be used in the safety assessment of all levels of ~~defence in depthDepth~~ ~~(~~DID~~)~~ for external event scenarios in all types of nuclear installations (especially~~,~~ those other than NPPs). Additionally, beyond design basis external events ~~which refer to beyond design basis scenarios~~ must be characterized to ensure a comprehensive safety assessment during the design phase, focusing on evaluating robustness and resilience.	terminology as in IAEA Safety and Security Glossary or up-to-date Safety Guides. Additionally, abbreviation DID has been explained before.				
5.	Ch. 3, Page 3 1st bullet New bullet	**Site characterization techniques:** Updated techniques for site characterization according to the current state of the art. ~~and g~~ **- Application of Graded Approach:** Guidance on the application of the graded approach are required for all phases of a plant's life, including site selection, site evaluation, construction, operation (incl. periodic safety review) and decommissioning.	Site characterization techniques and application of graded approach are two different aspects that should be addressed in separate bullet points.				One of the main applications of the graded approach is in the site investigation planning and optimization.
6.	Ch. 3, Page 3 2nd bullet	**Identification of "bounding site" conditions:** clarify how the compatibility of bounding site conditions for the design of standardized plants can be compared against the real site specific conditions ~~should be considered~~ in the site-specific licensing process in view of the design safety assessment of the standardized plant for any specific site.	The original text seems to imply that SSR-1 should "account" for the standardized design, whereas – to the contrary – the compatibility of the standardized design with the requirements of SSR-1 should be demonstrated by the licensee for the site under consideration.	y			
7.	Ch. 3, Page 3 3rd bullet	**Safety–security interfaces:** It is crucial to address safety and security interfaces since the stage of development of design basis for the installation, particularly in the establishment of design basis threats (DBT) and design basis external events ~~scenarios for~~ respectively, considering their role in the overall site assessment process.	Please put in line with IAEA Safety and Security Glossary.	y			
8.	Ch. 4,	The objective of this revision is to integrate	Decommissioning is important				Decommissioning is

	Page 3 Objective	the input, feedback and proposals from Member States, collected on multiple occasions, into an updated safety requirements publication. This revised publication will align with the IAEA Safety Fundamentals and the requirements related to design, operation, decommissioning and safety assessment.	part as well, please add.				outside the scope of SSR-1
9.	Ch. 5 Page 3 Scope	The revision of the existing document will impact all current chapters, with particular focus on ensuring its applicability to a wide range of emerging technologies and deployment types, including, but not exclusively, the following: small modular reactors (SMRs), transportable reactors (e.g. micro-reactors), underground installations, advanced reactors, fusion reactors, and others.	Clarification	y			
10.	Ch. 6 Page 4	18. DS552: Safety Assessment of Nuclear Installations in Relation to External Event Scenarios (2027); 18A. SSG-88: Design Extension Conditions and the Concept of Practical Elimination in the Design of Nuclear Power Plants (2024) 19. INSAG-28: Application of the Principle of Defence in Depth in Nuclear Safety to Small Modular Reactors, addendum to INSAG-10 (2024);	Please add SSG-88 as a reference.				See above
11.	Page 5 Content	2. GENERIC REQUIREMENTS FOR SITE EVALUATION FOR NUCLEAR INSTALLATIONS ….. 2.3 General criteria 2.4 Criteria for selecting hazards associated with external natural and human induced events and combination of hazards	Please add combination of hazards	y			
12.	Annex, general	Please make the document more reader-friendly using instead of RIPB, CDF, LERF, UHS, EE, BDBEE and DBE original terms, not abbreviations		y			
13.	Annex, Section 2, Page 7 4th bullet	~~With reference to SSR-1, a~~ Application of DID to the EE protection and safety assessment for all plant technologies~~, in particular level 4 and 5~~ and for transportable nuclear power plants,	Reference to SSR-1 is not needed as the whole document deals with it. The reference to DID levels 4	y			

		especially for the assessment of the feasibility of emergency planning measures, in particular for DID level 4 and 5.	and 5 would make more sense at the end of the paragraph.				
14.	Annex, Section 4, Page 7	Use of site conditions (hazards, etc.) in all important phases of a nuclear installation project like ~~of plant lifetime~~: site selection, site licensing, design, safety assessment, operation, decommissioning	Stages of the lifetime of the facility, according to IAEA Glossary, are (1) siting, (2)°design, (3) construction, (4)°commissioning, (5)°operation and (6)°decommissioning. We suggest to reformulate statement in DPP respectively..				Here there is a need for mode details on the phases
15.	Annex, Section 4, Page 8 5th bullet	~~Control~~ Quantification of uncertainties, exp. the epistemic component;	"Control" sounds like reduction of uncertainties which is hardly possible for epistemic uncertainties. Probably, "quantification" was originally intended.	y			
16.	Annex, Section 5 Page 8	Siting of standard design plants • ~~Selection of bounding site conditions (and later assessment of the site specific conditions);~~ • The case of transportable reactors (micro reactors, floating, etc.); • The case of underground siting; • Definition of site boundary, site vicinity and region; • Security related issues in hazard identification (i.e. DBT interfaces with DBE), definition of site boundary (e.g. fence in a marine environment), design of protection (i.e. malevolent and accidental scenarios may require similar engineering provisions) and emergency planning.	The standard design and the corresponding bounding site conditions have to be specified by the applicant/licensee. SSR-1 should only address the issue of how to verify their compatibility with the real site specific conditions. (This issue is already addressed in Ch. 3, 5th bullet of this DPP.)				The issue has to be addressed: how a valid site bounding condition can be defined and how it can be compared with the site specific conditions
17.	Annex, Section 6 Page 8	Emergency planning issues • Realistic identification of source terms for population evacuation, to be used at the siting phase for site safety assessment; • Emergency planning for	Requirements regarding management of emergencies seems to be out of scope for siting requirements. A more appropriate place for these items would be SSR-2/2.				See above on the feasibility assessment

		transportable reactors; • ~~Management of on-site emergencies induced by external scenarios (circulation at site, etc.);~~ • ~~Management of on-site and off-site emergencies and evacuation in case of major destructions, circulation impediment (e.g. pandemics) and infrastructure damage;~~ • EPZ in transboundary conditions • - Assess the appropriateness of the term “feasibility” of emergency planning measures.					

COMMENTS BY REVIEWER Country/Organization: Nuclear and Radiological Regulatory Commission (NRRC) – Saudi Arabia Date: **13/05/2025**		Page 1.... of....		RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	Section 2 (Background), paragraph 2, line 4	Please consider removing from the text “site selection”.	Site selection is not relevant for site evaluation.				Site selection is in the scope of this doc
2.	Section 2 (Background), paragraph 2, line 8	Please consider replacing “extreme external scenarios” with “extreme external hazards”	Terminology.				Hazard is the risk induced by the scenarios
3.	Section 2 (Background), paragraph 2, bullet 9.	Please consider adding “external” .	More precise formulation.	y			
4.	Section 3, paragraph 2, bullet 2.	Please consider correcting edits and replacing scenarios by events.	Editorial/ terminology.				A scenario may be composed by many event types
5.	Section 3, paragraph 2, bullet 3.	Please consider reformulating the end of the bullet to read “to project the corresponding risks over time”.	No risks have been mentioned before; therefore, ‘these risks’ is not relevant.	y			
6	Section 3, paragraph 2, bullets 4 and 7	Please consider removing the word ‘guidance’ from bullets 4 and 7 and replace it with ‘requirements’ in bullet 7.	The word ‘guidance’ might be misleading in the context of specific safety requirements.				Many requirements are accompanied by statements providing guidelines and context.
7	Section 3, paragraph 2, bullet 5	Please consider reformulating the bullet to include the case based on Plant Parameter Envelope (PPE).	The case of a site evaluated on the basis of Plant Parameters Envelope (PPE) should also be covered here.	y			
8	Section 4, paragraph 2, line 2	Please consider replacing guide’ with ‘basis’.	Better to avoid wording such as ‘guide’, ‘guidance’, ‘guidelines’ in the context of specific safety requirements.	y			

9	Section 5, paragraph 1	Please consider reformulating this paragraph by considering the following proposal: - The revision of the existing document will impact all current chapters, with particular focus on ensuring its applicability to a wide range of emerging technologies, including, but not exclusively, the following: small modular reactors (SMRs), transportable reactors (e.g. micro-reactors), underground nuclear installations, advanced reactors~~, fusion reactors, and others.~~	- We don't have enough information (source term data) to consider impact of fusion reactors on the site. - "and others" is not precise to be put in the list.				Some fusion reactors have been licensed in the world and many others are going to be. Their experience should be covered by this document
			-				
10	Section 6	Please consider reformulating the first paragraph by considering that several interfacing requirements are under revision and will be revised soon.	Several safety requirements are under revision (e.g. SSR-2/2 (Rev.1)) or will be revised soon (e.g. GSR Part 7, SSR-2/1 (Rev. 1), GSR Part 4). The issue is how ensure the consistency among requirements that are revised in parallel.	y			

11	Annex, 2nd paragraph, line 4	Please consider reformulating the last sentence of the paragraph by considering the following: - SSR-2/1 (Rev. 1) is not a safety guide; - The difficulty of taking into account IAEA documents being revised at the same time.	- SSR-2/1 (Rev. 1) is not a safety guide; - The difficulty of taking into account IAEA documents being revised at the same time as the revision of SSR-1.	y			
12	Annex, 4th paragraph, bullet 4, line 1	Please consider replacing "EE protection" with protection against external hazards.	More precise terminology.	y			
13	Annex, 6th paragraph, line 2	Please consider reformulating the first two lines by considering only plant lifetime phases.	There is a mixing between plant life time phases and licensing steps.				They are interchangeable
14	Annex, 7th paragraph	See comment No. 7.		y			

COMMENTS BY REVIEWER Reviewer: Page..1.. of...1. Country/Organization: FINLAND / STUK Date:19.5.25			RESOLUTION			
Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	This document will interface with the following related documents: SSG-38 Construction for Nuclear Installations	Please add ref to SSG-38, although the Specific Safety Guide is quite an old one. Site Evaluation shall be continued during the NPP construction and commissioning. There will be new information available during this life-cycle-period, which should be high lighted in revised guide (e.g. geology, ground water conditions,,,)	y			

COMMENTS BY REVIEWER Reviewer: NUSSC Member Page.... of....: Country/Organization: Republic of/ Korea Institute of Nuclear Safety (KINS) Date: May 19, 2025				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Proposed contents of DS557	Chap. 3 3.1 Earthquake and Surface Faulting → 3.1 Geological characteristics and Seismological hazards	Earthquakes and faulting are part of broader geological and seismological hazards. Including "geological characteristics" reflects the importance of comprehensive geological context (e.g., volcanism, fault activity), which is consistent with approaches in SSG-9 and SSG-21.				It is already in 3.4
2		3.2 Meteorological events →3.2 Meteorological hazards	This section needs to be focused on the evaluation than the investigation. Aligns terminology with the focus on hazard evaluation rather than just event itself. Emphasizes analytical perspective (risk, frequency, intensity), consistent with GSR Part 4 and SSG-68	y	Changed the title of chapt.3		
3		3.3 Flooding →3.3 Hydrological hazards	This section needs to cover the hydrological aspects including	y			

			flooding, availability of water, etc. "Flooding" is a consequence of various hydrological phenomena. Broader terminology avoids confusion with meteorological events and supports inclusion of riverine, dam break, and tsunami-related hazards.				
4		3.5 External human induced events → 3.5 External human induced hazards	Replacing "events" with "hazards" strengthens the focus on hazard assessment and characterization, which is one of the key factors in site evaluation.	y			
5		4.1 Atmospheric dispersion of radioactive material 4.2 Dispersion of radioactive material through surface water 4.3 Dispersion of radioactive material through groundwater 4.4 Population distribution 4.5 Uses of land and water in the region 4.6 Ambient radioactivity → 4.1 Population distribution 4.2 Uses of land and water in the region 4.3 Ambient radioactivity 4.4 Atmospheric dispersion of	Before evaluation, the information or data should first be investigated or collected. The revised order reflects the logical progression from site environmental features and population impact (relevant to emergency planning) to radiological dispersion pathways. This also reflects the assessment flow: (1) collect demographic and environmental	y	It is already there, in the title of chapt 4		

		radioactive material 4.5 Dispersion of radioactive material through surface water 4.6 Dispersion of radioactive material through groundwater	context → (2) model dispersion phenomena.				

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 1 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Page 1	**To remove the sentence «The implementation of the last years' SEED (Site and External Events Design Review Service) safety reviews, particularly concerning site selection and site safety, as summarized in the publication «Highlights from Site and External Events Design (SEED) Missions».**	The publication «Highlights from Site and External Events Design (SEED) Missions» is mentioned. Since this publication is not available in the public domain, we propose either removing its mention from the DPP or providing public access to it. The reasons for revising SSR-1 are not fully clear without providing access to the above-mentioned document.				Added in publication
2	Page 1	**To elaborate the text «The development of several technical documents that consolidate Member States' experiences with recent events, new advancements in hazard development, and modern approaches to installation design, especially regarding extreme external scenarios. These efforts also focus on**	Several technical documents are mentioned without naming them. We propose to elaborate the text and specifically name all the technical documents intended to be used as input for revising the Safety Requirements SSR-1. The reasons for revising SSR-1 do not appear to be adequately justified without referencing the documents mentioned above.	y	The list is available at the EESS website and cannot be provided here. Clarified		

		assessing safety margins beyond the design basis».					
3	Page 2	Rewrite the sentence: «Technology neutrality: Site safety assessments should explicitly consider the compatibility between the site, number and type of installation to be built, and account for specific conditions associated with the selected reactor technology (e.g. SMRs, transportable NPPs, underground, etc.) must be explicitly addressed.	1. Explicit consideration of the type of installation to be built cannot be regarded as technological neutrality. 2. Not clear what specific conditions associated with SMRs are meant.	y			

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 2 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
4	Page 5 Contents	Propose to rewrite the 'Contents' section to avoid using the same name, 'Objective,' for two different sections – 1.2 and 2.1	The Contents of the document contain two sections «Objective» – section 1.2 and section 2.1.	y			
5	Page 5 Contents 3. Evaluation of external events in site evaluation for nuclear installations	1. Propose to rewrite subsections in section 3 of Contents 2. Propose to replace words «external events» by «external hazards»	1. Some important types of hazards in subsection 3 of Contents are not mentioned: - Ground motion hazards; - Volcanic hazards; - Geological hazards 2. Usage of words «external events» instead of «external hazards» is not in line with SSR-2/1 (Rev.1) or SSG-64.	y			
6	Page 5 Contents	Propose to modify contents	It is recommended that sections 3.4 and 3.5 take into account the external influences of natural and man-made origin, including those that form hazardous geological processes. The concept of 'geotechnical hazards' does not fully consider these aspects. It is also recommended that a subsection providing measures for the engineering protection of the territory is included.				Geological hazards is covered by faulting and geotechnical…anything else?
7	Page 5 Contents	Propose to modify contents	It is recommended to provide additional subsections describing hydrogeological monitoring (hydrogeodynamic and hydrogeochemical aspects) and geotechnical monitoring (including monitoring using geodetic observations and assessing changes in soil	y	Modified at the title level		

			properties, geocryological observations).				
COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 3 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
8	Section 5	Rename section 5 as «MONITORING AND PERIODIC REVIEW OF THE SITE»	We propose restoring the chapter name from the existing SSR-1, as the title «Monitoring of Hazards in Site Evaluation for Nuclear Installations» proposed in the DS547 draft is insufficient. It is essential to include the monitoring of other site characteristics and the periodic review of the site.	y			
9	Page 7	Propose to rewrite the phrase: «All changes will consider compatibility with all recently reviewed SGs and in particular with SSR-2/1 (rev.1).	The sentence should be rewritten since: - Safety Requirements shall not be compatible to Safety Guides. Vice versa, the Safety Guides are to be compatible with Safety Requirements - SSR-2/1 (rev.1) is not IAEA Safety Guide	y			
10	Page 7	Remove the phrase «Clarification of the «nuclear installations» in the scope of the document».	Propose to delete the sentence since the term «nuclear installation» is defined in IAEA Nuclear Safety and Security Glossary.	y			

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 4 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
11	Page 7	Propose to delete the phrase «Applicability to transportable reactors (micro reactors, propelled ships/submarines, floating, etc.)»	Propose to delete the phrase since 1. Propelled ships have no sites. 2. Nuclear submarines are military vessels which are out of scope of IAEA mandate. 3. It is unclear what distinguishes microreactors. If a microreactor is operating on-site, it does not differ from a non-transportable reactor of similar capacity that is also operated on-site. 4. Floating NPPs can have more than one site, that require site selection and evaluation procedure (e.g. the shipyard, where first criticality tests are done, and the operational site).	y	clarified		
12	Page 7	Propose deleting the bullet: «Application of graded approach: RIPB and alternatives»	Propose modify the bullet as RIPB or alternative approaches for site assessment are not discussed yet in IAEA publications. It is proposed to retain only the reference to the graded approach, but to specify that DS557 requires detailed provisions on its application to different nuclear installations (SMRs, non-water, research, fusion reactors, etc.).				The application of graded approach is a requirement

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 5 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
13	Page 7		Propose replacing «scenario combinations» with «combination of hazards» since scenarios cannot be combined. Additionally, the possibility of hazard combinations should be duly considered during site assessment.	y			
14	Page 7	Propose deleting the bullet: «Application of safety goals (generically expressed in terms of CDF, LERF or others) for all safety related facilities (i.e. reactor island, UHS, etc.) at the siting phase, supporting a site license application».	Propose modifying or clarify the bullets since: - There is no such a term as «safety related facilities» (see IAEA Nuclear Safety and Security Glossary) - The Ultimate Heat Sink (UHS) refers to the medium, such as the atmosphere or a body of water, that absorbs the heat generated in nuclear fuel. It is not a facility. - There is no such a term as «reactor island» in IAEA Safety Standards or IAEA Nuclear Safety and Security Glossary - Metrics like CDF or LERF cannot be applied to UHS or «reactor island».	y	corrected		There is safety related structures, systems and components….which includes the facilities

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 6 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
15	Page 7	Propose rewriting the bullets: «BDBEE scenarios identification to be used for the assessment; Investigation of the low probability scenarios to be considered in the BDBEE assessment»	Propose to rewrite the bullets since the term BDBEE is not defined. Such term is also absent in IAEA Nuclear Safety and Security Glossary and Safety Standards. Please also explain how BDBEE are related to DEC scenarios (see Req. 20 of SSR-2/1 (rev.1)			clarified	The BDBEE has nothing to do with the DEC. It is well defined in SGs for external events
16	Page 7	Propose deleting the bullet: «With reference to SSR-1, application of DID to the EE protection and safety assessment for all plant technologies, in particular level 4 and 5 and for transportable nuclear power plants, especially for the assessment of the feasibility of emergency planning measures.» .	Propose deleting the bullet since: - The reference to SSR-1 in the DPP for the new revision of SSR-1 appears to be inappropriate. - The term «DiD to the EE protection» is unclear, as it is neither explained nor presented in the IAEA Safety Standards. - It is not clear why EEs has specific considerations compared to non-EE scenarios in the application of DiD and safety assessment, particularly at DiD levels 4 and 5. - It is not clear what specificity of transportable NPPs meant here. Also see the reason in comment No 11.				The interpretation of level 4 and 5 of DID in many advanced reactor design should be clarified, as it is not straightforward
17	Page 7	Propose to modify	Propose to modify the sentence				It is well defined in

		sentence «Extreme and rare scenarios categorization for hazard development»	«Extreme and rare scenarios categorization for hazard development» because it is unclear what is the meant by «hazard development».				current SSR-1 and in many SGs

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 7 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
18	Page 7	Propose rewriting the sentence: «Use of site conditions (hazards, etc.) in all phases of plant lifetime: site selection, site licensing, design, safety assessment, operation, decommissioning».	Propose rewriting the sentence to clarify that site licensing is not a separate phase from site selection in the NPP lifetime, and that safety assessment is not a distinct phase of the plant's lifetime.	y			
19	Page 7	Propose to remove the sentence: «Different site investigation campaigns in all phases of hazard evaluation, data sources and validation».	Propose rewriting the sentence: - The term «different site investigation campaigns» is ambiguous and not found in the IAEA Safety Standards. - The term «all phases of hazard evaluation, data sources, and validation» lacks clarity and is not referenced in the IAEA Safety Standards.				Scope and objectives of site investigation campaigns are very different in site selection, evaluation, construction, operation etc.
20	Page 8	Propose to modify the paragraph: «Impact of plant technology/design on needs for hazard development (screening, hazard recurrence period, variables, combinations, etc.)»	Propose to modify the sentence: - The meaning of «hazard development» is unclear. - It is not clear how technology or design influences external hazards. We are not aware of any IAEA publications that discuss such an influence.				Hazar development is a clearly addressed in Glossary. Hazard is graded according to the risk posed by the facility to the environment.
21	Page 8	Propose to remove text «Dispersion in water in the deep sea	It seems that dispersion in the water in deep sea (at least for transportation stage of floating				It is in the scope when a floating reactor is anchored to

		(important for floating reactors)» or to supplement with clarification that dispersion in water in the deep sea is to be analysed only for floating NPP parked at site.	NPP) is out of scope of site selection and evaluation process. Also see the reason in comment No 11.				an off-shore platform for example

COMMENTS BY REVIEWER Reviewer: Andrey KIRKIN, Dmitrii SVIRIDOV Page 8 of 8 Country/Organization: Russia/ SECNRS Date: 16.05.2025				RESOLUTION			
22	Document in general	Propose to mention such specificity of floating NPPs that they can have more than one site that require site selection and evaluation (e.g. the shipyard, where first criticality tests are done, and operational site).	Floating NPPs can have more than one site that require site selection and evaluation procedure (e.g. the shipyard, where first criticality tests are done, and the operational site).	y			Floating NPP site is the site where they are anchored…they can be many
23	Document in general	Propose to modify the document	It is recommended to reflect the need and procedure for using monitoring results (updating forecast calculations and assessing the current level of safety), the observed processes, phenomena, factors and criteria values of the observed parameters (safety criteria (adopted on the basis of design requirements, as well as those established in the	y			

			design of the NPP), the principles of monitoring organization to achieve optimal composition of work and the volume of monitoring networks.				
24	Document in general	Propose to elaborate the gap analysis.	Propose to provide information on which sections of the updated SSR-1 will address each of the identified gaps presented in the DPP.				It will be done by the experts in the drafting stage

COMMENTS BY REVIEWER Reviewer: Page.... of.... Country/Organization: Belgium Date:				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	ANNEX – GAP Analysis / 3) event scenario, bullet 4	"New entries": space weather, drought as hazard, permafrost (repeated freezing and thawing), pandemics, loss-of-offsite-power, potential impact from armed conflict etc …	Mentioning explicitly "potential impact from armed conflicts" aligns with IAEA's commitment to nuclear safety, security and emergency preparedness. The purpose is not to engage in political discussions but to point out the importance that nuclear installations should as far as possible remain resilient and safe under all credible external conditions and that measures have to be taken, regardless of the party, to maintain the level of safety.	y			
2	ANNEX – GAP Analysis / 3) event scenario, bullet 4	"New entries": space weather, drought as hazard, permafrost (repeated freezing and thawing), pandemics, loss-of-offsite-power, off-site authorized (and unauthorized) human activities beyond the control of the Operator with impact on Safety, etc…	Infrastructure works carried out in the surrounding areas of the nuclear installation and possible modification of the effluent (storm water) evacuation capacity, rapid population growth with densification of buildings in the surroundings and associated decreased retention capacity of the soil by paving, modification of natural landforms and	y			

			reduction of green spaces. As an example, there is an OPEX from an event in 2013 in the province of Buenos Aires, Argentina, which induced a flooding of the nuclear installation.				

COMMENTS BY REVIEWER Reviewer: WASSC Member Page 1 of 1 Country/Organization: Republic of Korea (ROK)/Korea Institute of Nuclear Safety (KINS) Date: May 16, 2025				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Page 2/ Line 34	The following is suggested. (before) ~~~ all levels of defense in depthDepth (DID) for external ~~~ (after) ~~~ all levels of Defense in Depth (DiD) for external ~~~	o I think it is a typo.	y			
			o				

COMMENTS BY REVIEWER Reviewer: Japan NUSSC member Page of Country/Organization: Japan / NRA Date: 16, May, 2025				RESOLUTION			
No.	Accepted	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	Definition	Define “nuclear installations” here.	Clarification. It is unclear whether the reactors listed in the latter paragraph are included in the current glossary definition of "nuclear installations," so the definition should be clarified first.				The definition of nuclear installations is in the Glossary and cannot be changed
2.	**2.BACKGROUND**	The following documents should be stated in references or experiences as gaps in short. - Highlights from Site and External Events Design (SEED) Missions - Climate Change Challenges to the Safety of Nuclear Installations - Protection of Nuclear Installations Against External Hazards	Clarify the background documents and briefly describe the gaps in the current requirements. Also identify missing links.				References for a Requirement doc can only contain other Requirements or Safety Guides, not technical documents in preparation
3.	**2. BACKGROUND** 6th bullet	A recent IAEA publication on “Applicability of IAEA Safety Standards to Non-Water Cooled Reactors and Small Modular Reactors”, which proposed critical review areas for the Siting Requirements, particularly concerning SMR reactor types; and the subsequent revision of safety standards that have attempted to address specific issues in relation to the documents on site evaluation processes such as SSR-1 and SSG-35.~~licensing, safety demonstration, commissioning and operation of SMRs., such as SSR-2/1 (Rev. 1) and SSG-77~~	The IAEA document provides a general discussion of siting in Section 3.1 and then addresses individual issues related to the SSR-1 and associated Safety Guides in Section 4.2. There should be about siting-related Requirements and Guides, instead of SSR-2/1 (Rev. 1) or SSG-77.				That document is not specific to site evaluation. The meaning of the text is that other documents raised issues in relation to siting that have to be addressed here

4.							
5.	**2. BACKGROUND** 8th bullet	A recent INSAG report on "Application of the principle of defence in depth in nuclear safety to small modular reactors, addendum to INSAG-10" (INSAG-28), which highlighted the need for the 5 levels of Defence in Depth (DID) for the safety of SMR-type reactors, with stating "Care needs to be taken in the way relevant information is expressed so that designers cannot think they can 'eliminate' or 'not implement' one or more levels of defence in depth, but rather they can demonstrate that the way to implement the concept meets all relevant safety principles and ensures the safety of design.";;	INSAG-28 also presents important message in developing safety standards, and suggested to be added.	y			
6.	**3. JUSTIFICATION**	**- Technology neutrality:** Site safety assessments should explicitly consider the compatibility between the site~~, number~~ and type/number of installation to be built, and account for specific conditions associated with the selected reactor technology (e.g. SMRs, transportable NPPs, underground, etc.) must be explicitly addressed.	1) To clarify that site evaluation should be comparable with the type and/or number of installation. 2) Transportable NPPs do not differ significantly in the selection of the site, because there are clearly different factors (e.g. geotechnical hazards, capable fault), especially for floating NPPs. Therefore, the draft should be carefully developed so as not to affect on the requirements for land-based NPPs.				Nothing to do with the floating reactor

7.							
8.	**5. SCOPE**	The revision of the existing document will impact all current chapters, with particular focus on ensuring its applicability to a wide range of emerging technologies, including, but not exclusively, the following: small modular reactors (SMRs), ~~t~~ransportable reactors (e.g. micro-reactors) underground installations, advanced reactors, ~~fusion reactors,~~ and others.	The scope of the target includes small modular reactors, transportable reactors (e.g. micro-reactors) underground installations, advanced reactors, fusion reactors, and others. However, in particularly, fusion reactors seem premature to include the same list as nuclear installations that are still at an early stage of development and for which no clear risk assessment has yet been made as targets for site evaluation. They should therefore not be included here.				Many fusion reactors have been already licensed. It is not premature
9.	**7. OVERVIEW**	3. EVALUATION OF EXTERNAL EVENTS IN SITE EVALUATION FOR NUCLEAR INSTALLATIONS 3.1 Earthquakes and surface faulting 3.# Volcanic hazards 3.2 Meteorological events 3.3 Flooding 3.4 Geotechnical hazards 3.5 External human induced events 3.6 Other important considerations	Volcanic hazards are missing.	y			
10	**CONTENTS**	Clarify “4.6 Ambient radioactivity”.	Clarification.				It is in the glossary
11	**ANNEX**	**A detailed gap analysis of the current version of SSR-1 has been conducted based on the feedback collected during the events outlined in Section 1.**	Reference is not indicated.				There is no reference: it is this chapter
12	**ANNEX**/L17	**Application of graded approach: Risk-Informed and Performance-Based(RIPB) and alternatives.**	Wording.	y			
13	**ANNEX – GAP Analysis**	2) Safety objectives for external event scenarios **• Site related aspects affecting the evaluation of robustness and resilience of the whole power distribution infrastructure in case of extreme external event scenarios;**	Clarification the scope of “the whole power distribution infrastructure”.	y			

14							
15	**ANNEX – GAP Analysis**	6) Emergency planning issues ·~~Realistic~~ identification of source terms for population evacuation, to be used at the siting phase for site safety assessment;	The word “realistic” is not suitable for site safety assessment“.	y	clarified		

COMMENTS BY REVIEWER Reviewer: Page.... of.... Country/Organization: Belgium Date:				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	P3 “identification of bounding site condition”	add ‘including the specific aspect where nuclear installations/SMR are integrated into other existing industrial installations’	Some SMRs are designed to supply energy to (sometimes already existing) industrial facilities. In the business model, the operator may be different from the operator of the industrial facility. The land for the SMR may also be ‘made available’/leased, and not necessarily owned by the nuclear operator. These points may raise questions about the choice of sites: - clear definition of site boundaries - legal aspects - what is an internal or external hazard (now, the notion of “on site” includes what is under controlled of the owner – inside the fence) (More details fit probably better in the revision of SSG-35 DS559)				The site ownership does not affect the site safety valuation process
2	P5 §2.5	Add “on the people & environment”	the concept of the environment does not appear in the table of contents (linked to				No need: the safety objectives are defined at the level of fundamentals

			requirement 12 – where people & environment are mentioned)				
3	P 5 -New first section in section 3?	give guidance on the period to be envisaged in the assessment of the site, in particular in relation to the assessment and protection against hazards to be provided (in particular, should account be taken of the assumed duration of dismantling?)					Duration cannot be a requirement. Managerial aspects are covered in section 6
4	4 - §6 item 17: SSG-35	Indicate that the guide is under revision: "(under revision – see DS559)"					There is a generic disclaimer in the introduction that many SGs are under revision
5	ANNEX – GAP Analysis / 3) event scenario, bullet 4	"New entries": space weather, drought as hazard, permafrost (repeated freezing and thawing), pandemics, loss-of-offsite-power, <u>potential impact from armed conflict etc …</u>	Mentioning explicitly "potential impact from armed conflicts" aligns with IAEA's commitment to nuclear safety, security and emergency preparedness. The purpose is not to engage in political discussions but to point out the importance that nuclear installations should as far as possible remain resilient and safe under all credible external conditions and that measures have to be taken, regardless of the party, to maintain the level of safety.	y			
6	ANNEX – GAP Analysis / 3) event scenario, bullet 4	"New entries": space weather, drought as hazard, permafrost	Infrastructure works carried out in the surrounding areas of the	y			

		(repeated freezing and thawing), pandemics, loss-of-offsite-power, off-site authorized (and unauthorized) human activities beyond the control of the Operator with impact on Safety, etc…	nuclear installation and possible modification of the effluent (storm water) evacuation capacity, rapid population growth with densification of buildings in the surroundings and associated decreased retention capacity of the soil by paving, modification of natural landforms and reduction of green spaces. As an example, there is an OPEX from an event in 2013 in the province of Buenos Aires, Argentina, which induced a flooding of the nuclear installation.				

COMMENTS BY REVIEWER Reviewer: NUSSC PoC Pakistan Page.... of.... Country/Organization: PAEC/Pakistan Date:				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Page 1/ bullet 2	The development of several technical documents that consolidate Member States' experiences with recent events, new advancements in hazard development, and modern approaches to installation design, especially regarding extreme external scenarios **such as flooding, heat waves, earthquakes (large and/or frequent small) & draughts, etc**. These efforts also focus on assessing safety margins beyond the design basis;	Addition is made to cover the aspects of climate change for consideration in design of nuclear installation.	y	BDBEE is well addressed throughout the document		

COMMENTS BY REVIEWER Reviewer: Kuryndin Anton, Shapovalov Albert, Pazhitnykh Kuzma Page 1 of. 2 Country/Organization: SECNRS, Russian Federation Date:				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	5	Add new para in section 5 SCOPE: «This Safety Guide is applicable for all nuclear installations for peaceful purposes».	1. This new para is proposed in order to comply with the Statute of the IAEA, in particular, article III of the Statute, according to which «The Agency is authorized to encourage and assist the development and practical application of atomic energy for peaceful purposes throughout the world». 2. The proposed wording is taken from GSG-14 «Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency» (para. 1.16 GSG-14). 3. Without new para DS557 is not fully consistent with scope of Safety Fundamentals № SF-1 (para. 1.9) and Nuclear Security Fundamentals IAEA Nuclear Security Series No. 20 (para.1.14). 4. The principles of Safety				The scope of SSR-1 is well defined in current 1.7: there is no need to repeat it here as it is not subjected to any change

			Fundamentals № SF-1 (with account of its scope (para. 1.9) are applicable to facilities and activities utilized for peaceful (civil) purposes.				

COMMENTS BY REVIEWER Country/Organization: FRANCE Date: NUSSC 59 pages				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.	2 + annex	A recent IAEA publication on "Applicability of IAEA Safety Standards to Non-Water Cooled Reactors and Small Modular Reactors", which identified critical review areas for the Siting Requirements, particularly concerning SMR reactor types; and the subsequent revision of safety standards that have attempted to address issues in relation to the licensing, safety demonstration, commissioning and operation of SMRs., such as SSR-2/1 (Rev. 1) and SSG-77 + all changes will consider compatibility with all recently reviewed SGs and in particular with SSR-2/1 → **the process to ensure the compatibility between both document at each future step should be more developed**	Considering that the link with SSR-2/1 is particularly highlighted by the DDP – which is fully relevant - and that revision of SSR-2/1 is at its very first step, the process to ensure the compatibility between both document at each future step should be more developed				The compatibility with SSR-2/1 is well spelt in chapter 6 and in the annex

2.	3 5 annex	- Technology neutrality: … (e.g. SMRs, **transportable NPPs**, underground, etc.) must be explicitly addressed The revision of the existing document… ensuring its applicability to a wide range of emerging technologies, including… **transportable reactors** … •Applicability to **transportable reactors** (micro reactors, **propelled ships/submarines**, floating, etc.) •With reference to SSR-1, application of DID to the EE protection and safety assessment for all plant technologies, in particular level 4 and 5 and for **transportable nuclear power plants**, especially for the assessment of the feasibility of emergency planning measures •The case of **transportable reactors** (micro reactors, floating, etc.); •Emergency planning for **transportable reactors**;	Current SSR-1 does not mention "technology neutrality" and the concept of a site that could be convenient for any installation is not clear: please provide some complement regarding the meaning and the expectations for "technology neutrality More details should be provided regarding the consideration of transportable NPPs within the context of site evaluation to ensure that this general guidance is adapted to this. Applicability should be clarified in the DPP I would propose something like : "*Technology neutrality: requirements should be applicable to all the facilities in the scope of SSR-1. This is challenging regarding the need that site safety assessments should also explicitly consider the compatibility between the site, number and type of installation to be built; account for specific conditions associated with the selected reactor technology and deployment type (e.g. SMRs, transportable NPPs for which the notion of "site" may need a more complex approach, underground, etc.) should be provided. A plant parameter envelope may be applicable in the site selection phase.*"	y	The technology neutrality is not a site characteristics but it is a characteristics of the requirements: they are equally applicable to all types of technologies. The proposed text is approved and inserted into the DPP		
3.	3	Deletion or clarification of the paragraph "Identification of "bounding site" conditions:"	Current SSR-1 does not mention "bounding site conditions" and it is not clear if the topic is related to site characterization or to nuclear installation design				Bounding site condition is mentioned in section 3 and in the annex. Of course they are "site conditions"

4.	3	- Site related issues during the operating life of the installations: Develop guidance on monitoring systems and reliable sources of information on site hazards, especially addressing meteorological and hydrological hazards, climate change consideration to support proactive operator actions, hazard review on the occasion of the periodic safety review (or any other relevant occasion) , management of emergency actions at the site and in the site vicinity when affected by extreme external event scenarios	Climate change consideration is one of the justifications for revision. It is notably related to operating life and the need to consider all relevant source of information Review could also be initiating by operating experience related to hazard for example	y			
5.	6	1… 4.SSR-2/1 (Rev. 1): Safety of Nuclear Power Plants: Design (2016); … 10.SSG-9 (Rev. 1): Seismic Hazards in Site Evaluation For Nuclear Installations (2022); 11.SSG-89: Evaluation of Seismic Safety for Nuclear Installations (2024); 12.SSG-79: External Human Induced Events in Site Evaluation for Nuclear Power Plants (2023); 13.DS529: Investigation of Site Characteristics and Evaluation of Radiation Risks to the Public and the Environment in Site Evaluation for Nuclear Installations (2025); 14.DS531: Geotechnical Aspects in Siting and Design of Nuclear Installations (2025); 15.DS541: Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Installations (2027); 16.SSG-21: Volcanic Hazard in Site Evaluation for Nuclear Installations (2012); 17.SSG-35: Site Survey and Site Selection for Nuclear Installations (2015); 18.DS552: Safety Assessment of Nuclear Installations in Relation to External Event Scenarios (2027);	Considering the close link with these documents (see also comment 1 for SSR-2/1), it would be worthwhile to develop more the process to adequately consider the correspondingon-going work				It is well spelt in the annex and in chapter 6
6.	7	6. SITE EVALUATION FOR NUCLEAR INSTALLATIONS WITHIN THE INTEGRATED MANAGEMENT SYSTEM ~~FOR SITE EVALUATION FOR NUCLEAR INSTALLATIONS~~	The notion of integrated management system is essential in GSR part 2	y			

7.	Annex	•Application of safety objectives ~~goals (generically expressed in terms of CDF, LERF or others)~~ for all safety related facilities (i.e. reactor island, UHS, etc.) at the siting phase, supporting a site license application;	Safety goals is not a clear concept. GSR part 4, SSR-2/1, 3 and 4 mention only safety objectives Safety objectives are expressed in qualitative manner in many countries (not only CDF, LERF). Moreover, from the editorial point of view it does not make sense to say "generally" and finish with "or other"				
8.		•Site related aspects affecting the evaluation of robustness and resilience of the whole power distribution infrastructure in case of extreme external event scenarios	Wouldn't the topic be more relevant for the list named "event scenarios"? It would be worthwhile to explain further what is included in "whole power distribution infrastructure".	y			
9.		•"New entries": space weather, ~~drought as hazard~~, permafrost (repeated freezing and thawing), pandemics, ~~loss of offsite power~~, etc.;	Drought is not new (mentioned in current SSR-1 Consideration of loss offsite power is not new either.	y			Drought is not new as condition for business interruption, but it is new as a hazard when it is connected to the UHS
10.		•Hazard characteristics, uncertainty levels, review, data sources as function of the project development phase … •Control of uncertainties, exp. the epistemic component	Wouldn't the topics be more relevant for the list named "event scenarios"?	y	explained		
11.		5)Siting of standard design plants … •Security related issues in hazard identification (i.e. DBT interfaces with DBE), definition of site boundary (e.g. fence in a marine environment), design of protection (i.e. malevolent and accidental scenarios may require similar engineering provisions) and emergency planning	Why is this topic mentioned only in the "standard NPP" issue?	y	Because the definition of PPE for standard design poses all those questions, while it is a well established process for current NPPs		
12.							

COMMENTS BY REVIEWER Reviewer: Elisa PENDA Country/Organization: WNTI			Page 1 of 1 Date: 29 April 2025	RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
WNTI -01	Section 6 "Place in the overall structure of the relevant series and interfaces with existing and/or planned publications "	SSR-6: Regulations for the Safe Transport of Radioactive Material (2018) (currently under revision).	Since Transportable and Floating Nuclear Power Plants (TNPP and FNPP) are included in the scope of the publication, it would be appropriate to mention the IAEA 'Regulations for the Safe Transport of Radioactive Material' (SSR-6) in Section 6				The SSR-1 does not address floating NPPs in transport

COMMENTS BY REVIEWER Reviewer: Dr. Marco Zeiher, Mona Lisa Keller Page 1 of 1 Country/Organization: **WNA CORDEL** Date: 22. April 2025				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	Page 1	"Ongoing discussions within the Steering Committee for the Coordinated Research Program (CRP) on "Climate Change Challenges to the Safety of Nuclear Installations", which emphasized the need to gather experience and disseminate updated guidance on hazards affected by climate change" **– please add: "such as more intensives floodings, heatwaves, droughts etc.;"**	From our point of view, it would be useful to go into the 'Climate Change Challenges' in more detail and to list various scenarios, for example: Are the cooling systems sufficiently designed for long heatwaves?	y			
2	Page 3	"Site characterization techniques: Updated techniques and guidance on the application of the graded approach are required for all phases of a plant's life, including site selection, site evaluation, construction, operation (incl. periodic safety review) and decommissioning" **– please add: "as well as waste treatment options."**	It would be desirable if dismantling concepts and waste disposal options (e.g. interim storage and waste processing) could be considered.				Waste treatment is outside the scope of SSR-1. Please refer to 1.7 of SSR-1

COMMENTS BY REVIEWER Reviewer: SHASHI SHEKHAR PRASAD Page.1... of...1. Country/Organization: BARC, Mumbai, INDIA Date:				RESOLUTION			
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1.		The typical characterization of the natural and human induced external hazards that might affect the safety of the various types of nuclear installation may be included as Annexure.	For clarity				The yare all addressed by the current draft of SSR-1 and will be reviewed/addressed by the drafting Team of consultants
2.		A typical structure of the management system for conducting Site evaluation in a comprehensive, systematic, planned and documented manner may be included as Annexure.	For clarity and ease of implementation				
3.		The important considerations for /steps in site evaluation covering all external hazards, monitoring activities and site-specific parameters relevant for the safety of the nuclear installation may be brought out in the document in tabular format or depicted in pictorial format	A summary of the values may be useful for application.				

4.		The typical screening distance values and rejection criteria for the site based on the deficiencies observed that cannot be compensated for by means of a combination of measures for site protection, design features of the nuclear installation and administrative procedures may be included as Annexures.	For clarity and ease of implementation				
5.		The typical criteria for site evaluation considering the potential for natural and human induced external hazards to affect multiple nuclear installations on the same site as well as on adjacent sites may be listed out.	For clarity and ease of implementation				
6.		The summary of typical methods used for assessment of Hazards such as, extreme meteorological hazards, rare meteorological events, flooding hazards, geotechnical hazards and geological hazards, hazards due to earthquake induced ground motion and evaluation of volcanic hazards may be included in tabulated form as Annexures.	For clarity and ease of implementation				