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Arrangements for Public Communication in Preparedness and Response for a Nuclear or Radiological Emergency

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CONTENTS

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1. INTRODUCTION

BACKGROUND

1.1. Under Article 5(a) (ii) of the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency ~~(the 'Assistance Convention')~~ [1]~~[1]~~, one function of the IAEA is "to (a) collect and disseminate to States Parties and Member States information concerning:… (ii) methodologies, techniques and available results of research relating to the response to ~~such~~nuclear accidents or radiological emergencies".

1.2. In March 2015, the IAEA's Board of Governors approved a Safety Requirements publication~~,~~ (safety standard), Preparedness and Response for a Nuclear or Radiological Emergency, which was issued in the IAEA Safety Standards Series as Part 7 of the General Safety Requirements (hereinafter referred to as GSR Part 7) [2]~~[2], which was jointly sponsored by thirteen international organizations. GSR Part 7 [2]~~.

~~1.2.~~1.3. GSR Part 7 [2]~~[2]~~ establishes requirements for an adequate level of preparedness and response for a nuclear or radiological emergency, irrespective of the ~~initiating cause~~initiator of the emergency~~.~~, which could be a natural event, a human error, a mechanical or other failure, or a nuclear security event[1]. GSR Part 7 [2]~~[2]~~ is jointly sponsored by 13 international organizations.

1.4. ~~Effective~~Public communication ~~with the public, which~~ is ~~transparent, timely, clear, factually correct, consistent and easily understandable, is paramount~~essential to ~~mitigating the~~the effectiveness of protective actions to mitigate adverse consequences ~~to~~ of an emergency for human life, health, property and the environment~~ from a nuclear or radiological emergency.~~. Effective communication with the public that is timely, clear and accurate is also important for maintaining trust on the part of the public.

~~1.3.~~1.5. Requirement 13 of GSR Part 7 [2]~~[2]~~ ~~addresses the~~concerns arrangements for communication with the public throughout a nuclear or radiological emergency. ~~Para. 5.70 of~~ Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.70) requires that "Arrangements shall be made to ensure that information provided to the public by response organizations, operating

[1] A 'nuclear security event' is an event that has potential or actual implications for nuclear security that must be addressed. Such events include criminal or intentional unauthorized acts involving or directed at nuclear material, other radioactive material, associated facilities or associated activities. A nuclear security event, for example, sabotage of a nuclear facility or detonation of a radiological dispersal device, may give rise to a nuclear or radiological emergency.

organizations, the regulatory body, international organizations and others in a nuclear or radiological emergency is coordinated and consistent, with due recognition of the evolutionary nature of an emergency~~. Para. 5.72 of Requirement 13 of GSR Part 7 [2] requires that a system for putting radiological health hazards in perspective in a nuclear or radiological emergency is developed and implemented. The purpose of this system is:~~ ".

1.6. Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.72) requires that "The government shall ensure that a system for putting radiological health hazards in perspective in a nuclear or radiological emergency is developed and implemented with the following aim:

- "To support informed decision making concerning protective actions and other response actions to be taken~~ in a nuclear or radiological emergency;~~ ;
- "To help in ensuring that actions taken do more good than harm~~ (i.e. that they are justified from a radiological perspective);~~;
- "To address public concerns ~~(e.g. answering the questions "Am I safe?", "Is my family safe?")~~ regarding potential health effects~~.~~."

~~1.4.~~1.7. ~~Furthermore it is required that in~~Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.72) requires that "In the development of such a system, due consideration shall be given to pregnant women and children as the individuals who are most vulnerable with regard to radiation exposure~~. Para. 5.73 of Requirement 13 of GSR Part 7 [2] requires arrangements to be made to explain any changes in protective actions and other response actions. To further clarify information released to the public, para. 5.74 of Requirement 13 of GSR Part 7 [2] requires arrangements to be made to identify and address misconceptions, rumours and incorrect and misleading information.~~ ."

1.8. Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.73) requires that "Arrangements shall be made to explain any changes in the protective actions and other response actions recommended in the State and any differences from those recommended in other States (paras 6.13–6.15)."

1.9. Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.74) requires that arrangements "be made to identify and address, to the extent practicable, misconceptions, rumours and incorrect and misleading information that might be circulating widely in a nuclear or radiological emergency, in particular those that might result in actions being taken beyond those emergency response actions that are warranted."

1.10. Effective public communication is contingent on the level of emergency preparedness of the States and organizations involved. ~~This~~Emergency preparedness includes ~~planning, training,~~

~~exercising and continuously~~ developing ~~the programme for~~ a public communication ~~in emergency response.~~ programme, including a strategy and plans for being adequately prepared for public communication in a nuclear or radiological emergency. ~~Such a strategy includes~~ . This plan should include planning, training and exercises for continuous improvement of the programme for public communication in emergency response.

~~1.5.~~1.11. Experience has demonstrated the importance of, and the challenges involved in, communicating with the public ~~during~~in a nuclear or radiological emergency. Past emergencies have had local, national, regional and international consequences, and have ~~raised public~~ led to high levels of awareness and concern ~~and placed~~on the part of the public. This has led to greater emphasis being placed on effective public communication ~~within overall emergency~~in preparedness for and response to a nuclear or radiological emergency.

1.12. Requirement 10 of GSR Part 7 [2]~~[2]~~ requires ~~governments to~~that "The government shall ensure that arrangements are in place to provide the public who are affected or are potentially affected by a nuclear or radiological emergency with information that is necessary for their protection, to warn them promptly and to instruct them on actions to be taken~~. For facilities within emergency planning zones and distances, para. 5.45 of~~ ."

1.13. Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.45) requires ~~governments~~that "For facilities in [emergency preparedness] category I or II-[2] and areas in [emergency preparedness] category V, arrangements shall be made to provide the permanent population, transient population groups and special population groups or those responsible for them and special facilities within the emergency planning zones and emergency planning distances~~,~~ (see para. 5.38 [of Requirement 9 of GSR Part 7 [2]~~[2]~~]), before operation and throughout the lifetime of the facility, with information on the response to a nuclear or radiological emergency. This information shall include information on the potential for a nuclear or radiological emergency, on the nature of the hazards, on how people would be warned or notified, and on the actions to be taken in such an emergency~~.~~."

~~1.6.~~1.14. Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.47) requires that "For facilities in [emergency preparedness] category III and [emergency preparedness] category IV, ~~para. 5.47 of Requirement 10 of GSR Part 7 [2] requires~~arrangements shall be made to provide the public

[2] The five categories for emergency preparedness specified in Table 1 of GSR Part 7 [2]~~[2]~~ establish the basis for a graded approach to the application of the requirements established in GSR Part 7 and for developing generically justified and optimized arrangements for preparedness for and response to a nuclear or radiological emergency. For a description of the emergency preparedness categories, see Table 1 (pp.13–14) of GSR Part 7 [2]~~[2]~~.

with information and instructions in order to identify and locate people who may have been affected by a nuclear or radiological emergency and who may need response actions such as decontamination, medical examination or health screening. These arrangements shall include arrangements for issuing a warning to the public and providing information in the event that a dangerous source could be in the public domain as a consequence of its loss or unauthorized removal.”

1.7.1.15. In meeting RequirementsRequirement 10 and Requirement 13 of GSR Part 7 [2][2] as mentioned above,, States will contribute to fulfilling, in part, Requirement 16 of GSR Part 7 [2][2], which addresses therequires that “The government shall ensure that arrangements necessaryare in place for the mitigation of non-radiological consequences of a nuclear or radiological emergency and of an emergency response.

1.16. Such non-radiological consequences of a nuclear or radiological emergency and of an emergency response could include, for example, fear and other anxiety and long term psychological effects that can be mitigated through among the public. Such non-radiological consequences could be mitigated by means of effective public communication on associatedradiological health hazards and clear instructions on any protective actions to be taken.

1.17. Requirement 16 of GSR Part 7 provides for [2][2] (para. 5.90) requires that “Arrangements shall be made for mitigating the non-radiological consequences of an emergency and those of an emergency response and for responding to public concern in a nuclear or radiological emergency. These arrangements for psychological and include arrangements for providing the people affected with (a) Information on any associated health hazards and clear instructions on any actions to be taken (see Requirement 10 and Requirement 13); (b) Medical counselling and psychological counselling, as appropriate; and (c) Adequate social support. To support this requirement, this, as appropriate.”

1.18. This Safety Guide addressesprovides recommendations and guidance on the arrangements to be put in place, as part of overall emergency preparedness, for effective public communication in anythe response to a nuclear or radiological emergency, regardless of whether or not there is a declared emergency from a technological standpoint. in order to meet this requirement.

~~1.8.~~1.19. This Safety Guide ~~therefore also considers unnecessary~~provides recommendations and guidance on public ~~fear, and the taking of protective~~communication in relation to anxiety among the public, actions on the part of the public that have not been ~~advised~~recommended by an authority and ~~those that should~~actions to be avoided~~, as situations warranting prompt action from a public communication point of view.~~ by the public.

~~1.9.~~1.20. ~~Para 4.5 (e) of~~ Requirement 43 of Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, IAEA Safety Standards Series No. GSR Part 3 ~~(hereinafter referred to as GSR Part 3)~~ [3]~~[3]~~ (para. 4.5(e)) requires ~~providing reliable communication, including public information, as part of an~~that "The emergency management system shall provide for essential elements at the scene, and at the local, national and international ~~levels~~level, as appropriate~~.~~, including… (e) Reliable communication, including public information".

~~1.10.~~1.21. At the international level, the Joint Radiation Emergency Management Plan of the International Organizations~~ (the 'Joint Plan') [4], managed by the Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE),~~[3] [4]~~[4]~~ provides for the release of consistent~~, complementary~~ and coordinated public information by international intergovernmental organizations ~~based on their roles and responsibilities, in case of~~ in a nuclear or radiological emergency~~.~~, on the basis of the respective roles and responsibilities of, and actions taken by, the organization.

OBJECTIVE

~~1.11.~~1.22. The objective of this Safety Guide ~~provides~~is to provide recommendations and guidance ~~for~~on meeting requirements in respect of arrangements for public communication in preparedness for and response to a nuclear or radiological emergency. The main requirements are principally Requirements 10, 13 and 16 of GSR Part 7 [2]~~[2] as described earlier,~~ and Requirement 43 of GSR Part 3 [3]~~[3]~~.

~~1.12.~~1.23. ~~The primary objective of this~~This Safety Guide ~~is to provide~~provides recommendations and guidance ~~and recommendations~~ to States on ~~developing~~ arrangements~~,~~ to be made at the preparedness stage~~,~~ for ~~communicating~~communication with the public and the

[3] The Inter-Agency Committee on Radiological and Nuclear Emergencies has been established as an inter-agency coordination mechanism to ensure that arrangements for emergency preparedness and response at the international level are consistent. The Committee, which comprises relevant international intergovernmental organizations, maintains the Joint Radiation Emergency Management Plan of the International Organizations.

news media~~ and for coordinating with all sources of~~. The Safety Guide also provides recommendations and guidance on the activation of these arrangements in an emergency response. It also provides recommendations and guidance on the coordination of response organizations and other authorities providing official information in ~~the~~ preparedness for and response to a nuclear or radiological emergency.

~~1.13.~~1.24. This ~~guide~~Safety Guide provides specific recommendations and guidance for:

(a) A public communication programme for ~~ensuring~~ transparent~~,~~ (i.e. frank and open), timely, clear~~,~~ and accurate (i.e. factually correct~~, and easily understandable information for communicating~~) communication with the public;

(b) Coordination, to the extent practicable, of ~~different sources of~~ response organizations and other authorities providing official information;

(c) Consistent and effective messaging.

~~1.14.~~1.25. This Safety Guide ~~should be used~~is for use in conjunction with GSR Part 7 [2]~~[2]~~, with due account taken of the recommendations and guidance provided in Arrangements for Preparedness for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GS-G-2.1 ~~(hereinafter referred to as GS-G-2.1)~~ [5]~~[5]~~, Criteria for Use in Preparedness and Response for a Nuclear or Radiological Emergency, IAEA Safety Standards Series No. GSG-2 (hereinafter referred to as GSG-2) [6]~~[6]~~ and Arrangements for the Termination of a Nuclear or Radiological Emergency, IAEA Safety Standard Series No. ~~GSG-X (DS474) [7].~~GSG-11 (hereinafter referred to as GSG-11) [1]~~[1]~~.

SCOPE

1.26. The ~~guidance~~ terms ‘emergency’ and ‘nuclear or radiological emergency’ are defined in the IAEA Safety Glossary, 2018 Edition, [8]~~[8]~~ as follows:

> “**emergency**. A non-routine situation or event that necessitates prompt action, primarily to mitigate a hazard or adverse consequences for human life, health, property or the environment. This includes nuclear and radiological emergencies and conventional emergencies such as fires, releases of hazardous chemicals, storms or earthquakes. This includes situations for which prompt action is warranted to mitigate the effects of a perceived hazard.

"***nuclear or radiological emergency***[4]. An emergency in which there is, or is perceived to be, a hazard due to: (a) The energy resulting from a nuclear chain reaction or from the decay of the products of a chain reaction; (b) radiation exposure[5]."

~~1.15.~~1.27. The recommendations and guidance provided in this Safety Guide are applicable ~~to any~~for a nuclear or radiological emergency, irrespective of ~~its cause, which includes those~~the initiator of the emergency, including emergencies due to a perceived hazard. ~~It~~The Safety Guide is applicable for all facilities and activities~~ that can give rise to a nuclear or radiological emergency that warrants emergency~~ [6] with the potential for causing radiation exposure, environmental contamination or concern on the part of the public warranting protective actions and other response actions[7].

~~1.16.~~1.28. ~~Considering the full range of potential nuclear or radiological emergencies they cover, these~~ The recommendations ~~necessitate the application of~~ and guidance provided in this Safety Guide cover the range of possible nuclear and radiological emergencies. This necessitates the use of a graded approach[8] in their ~~implementation. For specific~~application. Recommendations and guidance are provided on the use of a graded approach for arrangements for public communication in preparedness for and response ~~for~~to a nuclear or radiological emergency~~ see para. 3.8.~~.

~~1.17.~~1.29. ~~This~~ A nuclear or radiological emergency includes emergencies in which there is perceived to be a hazard due to: (a) the energy resulting from a nuclear chain reaction or from the decay of the products of a chain reaction; or (b) radiation exposure. This Safety Guide is also applicable for ~~events of~~ a nuclear or radiological emergency of heightened public concern or media attention ~~based on~~ deriving from misconceptions, rumours ~~or~~ and incorrect and (inadvertently or intentionally) misleading information (i.e. misinformation~~ without or prior to~~

[4] The term 'emergency' is used generally in this Safety Guide to mean a nuclear or radiological emergency.
[5] The term 'radiation' is used in this Safety Guide to mean ionizing radiation.
[6] 'Facilities and activities' is a general term encompassing nuclear facilities, uses of all sources of ionizing radiation, all radioactive waste management activities, transport of radioactive material and other practices or situations in which people may be subject to exposure to radiation from naturally occurring or artificial sources [8][~~8~~].
[7] The emergency response is the period of time from the detection of conditions warranting an emergency response until the completion of all the emergency response actions taken in anticipation of or in response to the radiological conditions expected in the first few months of the emergency. The emergency response typically ends when the situation is under control, the off-site radiological conditions have been characterized sufficiently well to identify whether and where food restrictions and temporary relocation are required, and all required food restrictions and temporary relocations have been put into effect (Ref. [1][~~1~~], para. 2.9; [8][~~8~~]).
[8] A graded approach is defined as: (1) For a system of control, such as a regulatory system or a safety system, a process or method in which the stringency of the control measures and conditions to be applied is commensurate, to the extent practicable, with the likelihood and possible consequences of, and the level of risk associated with, a loss of control. (2) An application of safety requirements that is commensurate with the characteristics of the facilities and activities or the source and with the magnitude and likelihood of the exposures.

~~an underlying emergency~~) and speculation that might be circulating, irrespective of any radiological hazard.

1.30. The recommendations and guidance ~~is~~provided here are applicable for all organizations with ~~a role~~roles and ~~responsibility~~responsibilities in ~~the~~ preparedness for and response to a nuclear or radiological emergency. The ~~principle~~principal users of this Safety Guide are all those ~~responsible~~with responsibilities for ~~communicating~~communication with the public and the news media in ~~a nuclear or radiological~~an emergency, including those who do not have ~~a~~ day-to-day public communication tasks.

1.31. This Safety Guide provides recommendations and guidance on public communication in an emergency for the purpose of mitigating adverse consequences of a nuclear or radiological emergency for human life, health, property and the environment. It provides recommendations and guidance for ensuring that due attention is paid to public communication in preparedness for and response to an emergency and for supporting decisions made on protective actions.

~~1.18.~~1.32. This Safety Guide also provides ~~therefore~~ recommend~~s~~ations and guidance on roles and responsibilities in relation to public communication for those who may not have ~~an obvious communication~~a designated function.

~~1.19.~~1.33. ~~The guidance~~ Terms are used in this Safety Guide with meanings as defined in GSR Part 7 [2]~~[2]~~ and in the IAEA Safety Glossary, 2018 Edition [8]~~[8]~~.

~~1.20.~~1.34. The term 'public communication' in the context of this Safety Guide refers ~~to any organizational element of the emergency response~~ ~~that is dedicated to communication information on or related to~~ primarily to the dissemination of officially approved and issued information (i.e. official information) on or in relation to a nuclear or radiological emergency to:

~~(a) The general public; The media;~~

~~(b)~~(a) The population affected by or potentially affected by the emergency;

(b) The public and the news media (i.e. public information);

(c) Other interested parties.

~~1.21.~~1.35. The recommendations and guidance provided in this Safety Guide ~~recognize the influence of social,~~will be subject to inevitable effects of linguistic, social, economic and

political ~~attributes~~factors on how information is received, ~~believed~~understood, credited and trusted, and acted upon.

~~1.22.~~1.36. ~~This Safety Guide is intended to ensure that due attention is paid to public communication in the preparedness for and response to a nuclear or radiological emergency and to support the decisions made on protective actions. It intends to give guidance on how to communicate technical aspects to the public in order to mitigate loss of life and other physical and mental health consequences. The implementation of protective actions and public trust is contingent on effective public communication.~~

~~1.23.~~1.37. ~~The guidance and recommendations~~ The recommendations and guidance on public communication provided in this Safety Guide are not ~~applied~~applicable to:

(a) ~~The involvement~~Communication with and consultation of interested parties in ~~activities related~~relation to the planning of new nuclear ~~power plants~~facilities or other facilities or ~~for ongoing interested parties involvement~~ activities ~~for~~, or in relation to existing facilities, such as: public information in visitor centres~~, routine background~~; communication and informational materials unrelated to nuclear safety and security, such as ~~those~~materials on nuclear energy or nuclear applications~~,~~; and public campaigns ~~related~~in relation to the nuclear industry.

(b) Arrangements for ~~communicating about an existing exposure situation~~ communication after ~~the~~an emergency ~~is~~has been declared ~~ended. However, the~~ terminated.

~~1.24.~~1.38. The recommendations and guidance on basic concepts and approaches ~~contained~~provided in this Safety Guide will support planning, within the context of ~~overall~~ emergency preparedness, ~~the planning~~ for public communication ~~in the existing exposure situation~~ following the termination of ~~the~~a nuclear or radiological emergency.

STRUCTURE

1.39. Section 2 ~~describes basic~~provides recommendations and guidance on considerations ~~with a focus on the~~in public communication in preparedness and response for a nuclear or radiological emergency, and its objectives, principles and challenges ~~of public communication.~~.

1.40. Section 3 provides ~~guidance and~~ recommendations and guidance on ~~the preparedness~~ arrangements for ~~public communication with~~preparedness for a public communication programme, including a strategy and plan ~~to be adequately prepared to communicate~~for preparedness for communication in ~~case of~~ a nuclear or radiological emergency. Additional

recommendations and guidance ~~is~~are provided on, ~~*inter alia*~~among other things, infrastructure, resources, budgeting, tools, training and ~~exercising~~exercises. Section 3 also provides recommendations and guidance on ~~how to place~~putting radiological health hazards ~~into~~in perspective.

1.41. Section 4 provides ~~response~~ recommendations and guidance on arrangements ~~in~~for response for a public communication programme, with emphasis on ~~activating~~actuating a public communication response and coordinating ~~at~~ different ~~levels. In this section, the handling of rumours~~activities and different roles and responsibilities. Responding to misinformation and rumours is ~~addressed.~~covered in Section 4.

1.42. Section 5 provides recommendations and guidance for public communication ~~necessary in~~under particular circumstances , such as nuclear or radiological emergencies initiated by an accident, a natural event or a security event, and the transition phase after the termination of an emergency. ~~for which additional guidance is needed.~~ .

~~1.25.~~1.43. The Appendix provides a system ~~to put~~ for putting radiological health hazards ~~into~~in perspective, in support of Section 3. ~~The~~ Annexes I–V provide supporting ~~and additional background~~ information on public communication, including ~~a number of~~ examples and templates to facilitate the choice of communication tools and ~~to draft messages.~~ the preparation of public information. Annex V provides information on the attribution of health effects to radiation exposure and the prospective inference of risks of radiation induced health effects.

~~BASIC~~

2. ~~BASIC~~ CONSIDERATIONS IN PUBLIC COMMUNICATION

OBJECTIVES OF PUBLIC COMMUNICATION

2.1. As part of ~~the overall~~ emergency preparedness and response, the ~~goal~~primary purpose of public communication should be to ~~support~~help to achieve the ~~overarching~~ goals of ~~the~~ emergency response as ~~outlined~~stated in ~~para. 3.2 of~~ GSR Part 7 [2]~~[2], particularly the goal~~ (para. 3.2). In particular, public communication should help to achieve the goals of keeping the public informed and of maintaining trust on the part of the public ~~trust. To~~ .

2.2. Public communication should also help to achieve ~~this goal~~the goals of mitigating adverse consequences of an emergency for human life, health, property and the environment;

~~4~~

and of preparing, to the extent practicable, for the resumption of normal social and economic activity.

~~2.1.~~2.3. To help achieve these goals of emergency response, the key objectives of public communication ~~regarding~~for a nuclear or radiological ~~emergencies,~~emergency should be ~~to~~:

(a) To p~~P~~rotect the public~~:~~;

(b) To i~~I~~nform the public, both at the preparedness stage and during the response, ~~about the nature of hazards,~~ of protective actions and other response actions ~~to increase compliance with these~~, and of the nature of any hazards, and to facilitate emergency response actions;

(c) ~~Build~~To gain and to maintain trust on the part of the public ~~trust~~ in the emergency response by ~~being~~means of transparent, timely ~~and~~, clear~~;~~, and accurate public communication (see para. 1.24~~1.24~~);

(d) To a~~A~~ddress public concerns ~~regarding~~with regard to potential ~~;~~ adverse consequences for human life, health, ~~effects;~~property and the environment;

(e) ~~Prevent panic and~~To prevent undue concern, to mitigate anxiety and long term psychological effects, and to help ensure that actions taken do more good than harm;

(f) ~~Minimize rumours and~~To respond to misinformation and rumours;

(g) To e~~E~~nable interested parties (see para. 3.131~~3.131~~) to make informed decisions.

PRINCIPLES OF PUBLIC COMMUNICATION

2.4. To be effective, the public communication programme for a nuclear or radiological emergency~~ies~~ should ensure that ~~all~~ public communication ~~will be~~is transparent, timely, ~~factually correct,~~ clear and accurate, to the extent possible (see para. 1.24~~1.24~~). Public communication should be in plain language for a general audience ~~and~~. These aims may be conflicting, and professional judgement should be made about the best balance (see para. 2.66~~2.65~~).

~~2.2.~~2.5. Public communication should be coordinated ~~among~~between response organizations and other authorities providing official ~~sources of~~ information, ~~in line~~and should comply with ~~the~~ national requirements on the protection of sensitive information.

~~**Transparency**~~

Openness in communication

2.6. ~~All~~ P~~p~~ublic communication in a nuclear or radiological emergency should be as 'transparent' as possible. ~~Transparency in communication~~This means that the organizations concerned should be ~~based on~~as frank, open and straightforward as possible, and should not intentionally misinform or mislead the public. As well as frankness and openness, their public communication should demonstrate integrity and accountability~~ and~~.

2.7. There should be ~~part of~~ a long term process of ~~long term communication~~ activities ~~contributing~~in relation to ~~building~~ public communication that contribute to gaining and maintaining trust~~. Having~~ on the part of the public. Gaining the trust on the part of the public will ~~strengthen~~increase the likelihood that the public will accept and will comply with protective actions and other response actions in ~~case of a nuclear or radiological~~an emergency.

2.8. Organizations should also be frank and open ~~about when~~if information cannot be released ~~because~~. Information might have to be withheld for reasons of security or for legal reasons, for example, or because it ~~may be sensitive for security or legal reasons or uncertain and would not be helpful to release.~~ is unverified.

~~2.3.~~2.9. In order to promote ~~a culture of transparency~~openness in communication, States should encourage public communication even when information is incomplete~~ or uncertain. Not having all~~. Trust on the part of the ~~information is not a justifiable reason not to communicate. Even when information is incomplete or uncertain, transparency can~~public should be gained and maintained ~~and used to build credibility and trust~~ by communicating on what is known, by explaining what is unknown and by stating what steps are being taken to find out more. The trustworthiness of organizations should be maintained when information is incomplete.

Timeliness of information

2.10. Delays ~~ed information is~~in public communication in an emergency are a ~~major~~ cause of anxiety~~, fear~~ and speculation among the public. ~~Effective communication~~Lack of communication undermines confidence on the part of the public and aids the spread of misinformation and rumours. Information should be provided in a timely manner to help in gaining confidence on the part of the public in the emergency response.

2.11. Those responsible for public communication should weigh different concerns, expectations and perspectives of interested parties, and should seek to take them into account and to communicate to the public in an effective and timely manner, especially during ~~a nuclear or radiological~~an emergency~~,~~.

~~2.4.~~2.12. Organizations should ~~be proactive~~make every effort to ~~weigh different concerns, needs~~communicate regularly and ~~viewpoints of interested parties, and address them~~ in a timely manner, while ensuring that their communications are clear and accurate. There is often a delay in the flow of information from ~~the~~a facility, ~~the affected~~from an area affected or from the response organizations or other authorities ~~during emergencies.~~in an emergency. The public and the news media may be faster in ~~communicating~~providing information at the ~~onset~~outset in an emergency, especially ~~with the availability of~~ online on web sites and social ~~networks~~media platforms, with ~~the~~their capacity for immediate ~~broadcasting on a global level. Therefore, organizations should make every effort to communicate in a timely manner and continuously, while remaining objective, clear and factually correct~~dissemination of information.

2.13. A target ~~lead~~ time for an initial communication to the public during an emergency response should be ~~defined,~~specified at the preparedness stage by the emergency response planners in coordination with the lead ~~Public Information Officer, for an initial communication with the public after the emergency response's public communication component of the unified command and control system has been activated. The lead time for the~~public information officer[9].

~~2.5.~~2.14. An initial message ~~being issued~~ should ~~not exceed~~ideally be communicated no later than one hour~~. This can~~ from the activation of the emergency response. This message should be facilitated by ~~using~~means of a ~~holding~~preliminary statement ~~developed~~[10] prepared at the preparedness stage (see para. 4.6~~4.6).~~ and Annex I).

Factual ~~communication~~content

~~2.6.~~2.15. ~~Information released to the public in a nuclear or radiological emergency should be based on facts and verified information and should not give way to any speculation or inappropriate reassurances to appease public opinion. All information from official sources should be provided to the~~

[9] The term 'public information officer' is used in this Safety Guide to denote a staff member of an organization whose primary responsibility it is to provide information to and to communicate with the public and the news media.

[10] A 'preliminary statement' is an official statement by an entity to inform the public and the news media of the occurrence of an event and the key points, and to state that the entity is actively responding to the event. A preliminary statement may be delivered in writing or orally.

~~public~~Response organizations and other authorities providing official information in an emergency should provide information to the public with the objectives of helping to ensure that protective actions are correctly followed and to ~~continue to build~~gain and ~~retain~~to maintain trust on the part of the public.

2.16. Those responsible for public communication in an emergency should ensure that information provided to the public is accurate (i.e. factually correct) and is based on verified information. Those responsible for public communication should ensure that public information does not include speculation and should not make unwarranted assurances. As stated in para. 2.8~~2.8~~, States should encourage public communication, as appropriate, even when information is incomplete.

~~2.7.~~2.17. Information provided to the public should ~~place public~~put protection of human life, health, property and ~~safety~~the environment first~~ and~~. These objectives should not be influenced by ~~reputation management or financial or political implications. Information should therefore be objective even if it places the source of information in a negative light. Showing this level of objectivity can, conversely, help increase public trust.~~ financial, commercial or political considerations.

2.18. Information provided should be factual and accurate and should not be withheld out of concern for harm to the reputation of its source. Impartiality should be demonstrated in this way and will help in gaining and maintaining trust on the part of the public.

Clarity of ~~Plain~~ language

2.19. ~~In~~One function of public communication in a nuclear or radiological emergency~~, the role of the public communication function~~ is to convey ~~complex~~ technical information in ~~an accurate and understandable way to~~suitable language for a ~~usually non-expert~~general audience. Such information should be provided to the extent possible in clear and ~~plain language. The use of technical or scientific~~comprehensible language ~~should be reduced to an essential minimum. If used for a specific reason, the technical expression should be explained in plain language. Otherwise, essential~~(i.e. 'plain language'). Essential information may otherwise not be understood, ~~remembered~~committed to memory or recalled~~. In~~, especially during an emergency, when stress and anxiety may affect comprehension~~ levels tend~~.

~~2.8.~~2.20. The language to ~~decrease due~~be used in public information should be given careful consideration, to ~~stress. The level of plain language chosen should not exceed a level understandable~~ensure, for example, that it is comprehensible to ~~adolescents~~people of different generations and in different population groups, , such as people with special needs.

2.21. In a nuclear or radiological emergency, priority should be given to providing information on ~~the basic~~ protective actions ~~and immediate~~for the public. This information ~~related to public health and safety over technical~~ on protective actions should include similar concepts and terms to those used in the information ~~needing~~provided to targeted groups at the preparedness stage.

USE OF SCIENTIFIC AND TECHNICAL TERMS

2.22. The use of scientific and technical terms, and of scientific quantities and units and numerical data ~~and units. The use of numerical data and units should always~~, should be kept to an essential minimum. Any such usage should be supported as necessary by ~~plain language~~definitions and explanations ~~to~~ in clear and comprehensible language, to the extent possible, and should put the radiological health hazard in perspective.

2.23. If the use of numerical data and scientific quantities and units is necessary — to explain limits and regulations established in national legislation, for example — the organizations concerned should use the International System of Units (the SI System), as appropriate. The use of differing quantities and units, with different orders of magnitude, could cause confusion and should be avoided as far as possible.

2.24. Experts in radiation protection may use various special terms, quantities and units in describing radiation and its effects. These include 'activity', with units of becquerel (Bq) (or curie (Ci)); various dosimetric quantities, both physical quantities, with units of gray (Gy) (or rad), and practical quantities for protection purposes, with units of sievert (Sv) (or rem). Amounts of these quantities may have prefixes to the units to indicate the order of magnitude. If and when used, units and terms should be used consistently to minimize confusion and to aid comprehension, (for example, if milli- (m) is to be used, then that unit should be used consistently in all communication).

2.25. ~~Units and terms should be used consistently to minimize confusion and to aid comprehension.~~

2.26. ~~Prefixes such as micro- and milli-, as well as rate per unit time components such as per year or per hour, should be used consistently (for example, if milli- (m) is to be used, then that unit should be used consistently in all communication).~~

2.27. Radiation quantities and units are not commonly understood by or used by the public, and they do not convey to the public a sense of what is hazardous and what is not. As monitoring data and sampling data become available, measurements and their units should be put in perspective (see para. 2.30~~2.29~~).

Use of tables, schematics, graphics, maps and graphs

2.28. ~~When used appropriately,~~ T~~t~~ables, schematics, ~~pictures~~graphics, maps and graphs ~~can be an~~ are effective and should be used appropriately to provide ~~and easily understandable technique for delivering relevant~~ information to the public in a comprehensible form. ~~Development of~~ Such material ~~requires~~should be developed with ~~time and~~ the expertise of both technical experts in the subject matter and ~~experts and communication~~ professionals in communication~~, and should be prepared, to the extent possible, at the preparedness stage.~~

2.29. Material should be developed, to the extent possible, at the preparedness stage, and should be tested with selected audiences for its usefulness (see also paras 3.165~~3.165~~–3.169~~3.169~~ and 4.78~~4.78~~–4.80~~4.80~~ on background information). Testing of material for usefulness should also be considered before providing information that puts radiological health hazards ~~into~~in perspective. ~~See para. 3.124 for a system~~

Use of comparisons

~~2.9.~~2.30. Comparisons made to put radiological health hazards ~~into perspective as required in para. 5.72 of Requirement 13 of GSR Part 7 [2].~~and radiation exposure in perspective should be as clear and comprehensible as possible consistent with being accurate and not misleading. Comparisons made should be appropriate to the national context and the social context, and they should be relevant to the audience to ensure that such references increase understanding and do not cause confusion. ~~Comparisons used to put radiation doses into perspective should be simple, easy to understand and scientifically correct. Comparisons should be appropriate to the social context and relevant to the audience to ensure that such references increase understanding and do not create greater confusion. Comparisons should use references the addressed audiences could understand. Experience from past emergencies shows that the comparison with natural background levels or radiation received from nuclear applications can alleviate public anxiety [9].~~

~~4~~

~~2.10. In case the use of numerical data and units is deemed to be necessary, e.g. to describe limits and regulations laid down in national legislation, relevant organizations should consider that using different units and orders of magnitude can cause confusion. Internationally, radiation protection experts use various units and terms when describing radiation and its effects. These include Curie (Ci) and Becquerel (Bq), Rad and Gray (Gy), and Rem and Sievert (Sv). Additionally, these units might have prefixes to indicate the order of magnitude.[11] To minimize confusion and enhance comprehension, units and terms should be used consistently. However, because radiation units are not commonly understood or used by the general public, they have no real meaning in terms of creating understanding of what is dangerous or not.[12] While the use of units should be avoided whenever possible, how they relate to radiological health hazards should be clearly explained.~~

~~2.11. When used appropriately, tables, schematics, pictures and graphs can be an effective and easily understandable technique for delivering relevant information to the public. Development of such material requires time and expertise of both subject matter experts and communication professionals, and should be prepared, to the extent possible, at the preparedness stage. See also paras 3.112–3.115 and 4.57–4.58 on background information. This should also be considered when providing information on the effects from the exposure to ionizing radiation to facilitate a better understanding of the magnitude of the effects. Radiation dosage charts should be carefully used when explaining the basics of radiation in everyday life and making comparisons with the situation in a nuclear or radiological emergency to avoid misinterpretations and the taking of actions, which are beyond those that are warranted.~~

~~2.12. Organizations should refrain from comparing any prospective inference of radiation risks in a nuclear or radiological emergency with other risks (see para. 3.127).~~

~~2.13.~~2.1. ~~Comparisons used to put radiation doses into perspective should be simple, easy to understand and scientifically correct. Comparisons should be appropriate to the social context and relevant to the audience to ensure that such references increase understanding and do not create greater confusion. Comparisons should use references the addressed audiences could understand. Experience from past emergencies shows that the comparison with natural background levels or radiation received from nuclear applications can alleviate public anxiety.[9].~~

Field Code Changed

2.31. Comparisons made by using published reference material should refer to material that can be validated, and that audiences can access and understand for themselves. Those responsible for public communication in an emergency should be aware that comparisons of

~~[11] Prefixes such as micro and milli, as well as a time component such as per year or per hour, should be used consistently. For example if milli (m) is used, then that is the unit that should be used for all communication moving forward.~~
~~[12] Questions are likely to arise from the use of unfamiliar terms such as: How much is too much? What is normal?~~

radiation related risks with voluntary risks and with non-radiation-related risks are contentious and should be avoided.

~~2.14.~~2.32. In the light of experience from past emergencies, those responsible for public communication in an emergency should consider making comparisons of radiation levels with natural background levels of radiation, or with radiation levels used in medical exposure or in other applications of radiation, for helping to relieve anxiety among the public [8]~~[8]~~.

COORDINATION OF PUBLIC COMMUNICATION

2.33. Requirement 2 of GSR Part 7 [2]~~[2]~~ requires that "The government shall make provisions to ensure that roles and responsibilities for preparedness and response for a nuclear or radiological emergency are clearly specified and clearly assigned".

2.34. Requirement 2 of GSR Part 7 [2]~~[2]~~ (para. 4.10) requires that ~~roles and responsibilities in emergency preparedness and response are clearly specified and clearly assigned. Para. 4.10 of Requirement 2 of GSR Part 7 [2] requires that the government establishes~~"The government shall establish a national coordinating mechanism[13] to be functional at the preparedness stage, consistent with its emergency management system~~. Furthermore it~~".

2.35. Requirement 2 of GSR Part 7 [2]~~[2]~~ (para. 4.10(i)) requires that one of the functions of this national ~~coordination~~coordinating mechanism is ~~to~~"To coordinate effective communication with the public in preparedness for a nuclear or radiological emergency~~.~~".

~~2.15.~~2.36. Organizations ~~should make all efforts to ensure~~responsible for public communication in an emergency should coordinate their public communication with the aim of avoiding conflicting messages and ensuring consistency in messaging ~~as conflicting messages create~~to prevent confusion~~, misinformation and rumours. Therefore, public communication should be coordinated with all official sources of public information, as well as with additional appropriate stakeholders, involved to ensure consistent messaging. Inconsistencies in information released to the public also have the potential to cause a loss of trust in the~~. The same message should be heard from various trusted sources in a 'one message, many voices' approach, to gain and to maintain trust on the part of the public in the emergency response.

[13] The mechanism for ensuring the necessary coordination may differ for different tasks. It may involve an existing body or a newly established body (e.g. a committee consisting of representatives from different organizations and bodies) that has been given the authority for coordination.

2.16. 'One message, many voices' describes an approach for sending coordinated and consistent messages from different levels and organizations using various communication channels and tools. All organizationsOrganizations responsible for responding to an emergency public communication should convey a consistent message throughout the emergency.

2.37. All relevant involved organizations should only communicate information to the public reflecting that corresponds to their own areas of responsibility and authority (i.e.g. public health, protection of the environment, or law enforcement, etc.).).

2.17.2.38. In the exceptional circumstance where it is determined tocircumstances, it may be appropriate for an organization to communicate information outside their that is not within its area of responsibility (for example, when thatc.g. if an organization, even though not the authority of jurisdiction, is nevertheless best placed to rapidly communicate pertinent information for the protection of human health) mechanisms should be in place to ensure the consistency of messaging between the communicating organization and the organization having ultimate responsibility and authority for that topic.public).

2.39. Para. 5.70In such cases, mechanisms should be put in place to ensure consistency of messaging between the organization communicating information and the organization having that area of responsibility and authority of jurisdiction.

2.18.2.40. Requirement 13 of GSR Part 7 [2][2] (para. 5.70) requires arrangements thatthat "Arrangements shall be in placemade to ensure that all information provided to the public by response organizations, operating organizations, the regulatory body, international organizations and others is coordinated and consistent. In general, the primary source of information in a nuclear or radiological emergency will be the designated lead Public Information Officer within the unified command and control system established, although this position may be supported by other organizations according to their mandates. A coordination mechanism should be implemented to ensure message consistency. Procedures should be drafted, agreed upon and exercised amongst the different sources of information. This should include information sharing procedures in an emergency amongst Public Information Officers (PIOs)[14]. in a nuclear or radiological emergency is coordinated and consistent, with due recognition of the evolutionary nature of an emergency."

[14] The term Public Information Officer (PIO) in this Safety Guide describes staff members of an organization whose primary responsibility it is to provide information to and communicate with the public and the media.

2.41. In general, the primary provider of public information in a nuclear or radiological emergency should be the designated lead public information officer within an established unified command and control system (see para. 3.30~~3.30~~). This position may be supported by other organizations in accordance with their mandates.

2.42. Procedures should be drafted, agreed upon and exercised among organizations responsible for public communication at the preparedness stage. This should include procedures for sharing information among public information officers in an emergency.

CHALLENGES OF PUBLIC COMMUNICATION

~~Risk p~~Perception of risk

2.43. It should be ~~considered~~borne in mind that the ~~public's perception of risk~~ perception of risk on the part of the public may be different from assessments of risk[15] provided by experts in radiation protection, and this has implications for public communication during a nuclear or radiological emergency~~ may be different from assessments provided by experts.~~. Risk perception can be influenced by various ~~individual~~ factors, including individual beliefs, ~~emotions~~values and norms, as well as ~~by~~ wider ~~social~~societal and national aspects.

2.44. Experts in radiation protection define risk in terms of cause and effect relationships, and attempt to quantify the ~~amount of harm~~ likelihood that ~~can~~harm may result from ~~taking part in a given activity, whereas members~~radiation exposure. Members of the public take account more of qualitative factors in deciding whether or not they consider ~~a~~an involuntary risk to be acceptable.

~~2.19.~~2.45. ~~Organizations~~Those responsible for public communication should be aware of the fact that this ~~may cause~~ tendency may mean that risks quantified as being of low ~~probability 'real risks' to be converted into~~ 'estimated likelihood are nonetheless perceived among the public to be high risks.~~'~~ Detailed guidance on and examples of qualitative factors that influence perceptions of risk ~~perception~~ are provided in the IAEA EPR~~-~~ Series publication on

[15] 'Risk' in this context means the estimated probability that a specified health effect will occur in a person (or among people in a group) in a given time period as a result of exposure to radiation (i.e. it is prospective). The health effect(s) in question need to be stated — e.g. risk of fatal cancer, risk of serious hereditary effects or overall radiation detriment. Risk is commonly expressed as the product of the estimated probability that exposure will occur and the estimated probability that the exposure, assuming that it occurs, will cause the specified health effect(s). The latter probability is sometimes termed the conditional risk. Risks can be estimated by using evidence from epidemiological investigations of disease rates in previously exposed populations (i.e. based on past observations). [8][~~8~~]

Communication with the Public in a Nuclear or Radiological Emergency, Section 4, PC-IS.5 ~~[10]~~, p.46 [10]~~[10]~~.

~~2.20.~~2.46. To address ~~this perception~~the tendency for risks quantified as being of low estimated likelihood to be perceived as high risks, a process that includes regular ~~outreach~~information activities and/or regular ~~dialogue~~communication with and consultation of the public should be ~~implemented~~put in place at the preparedness stage~~ and in coordination~~. This process should be coordinated with routine activities for ~~the involvement of~~communication with and consultation of other interested parties.~~ (Further guidance on routine stakeholder involvement can be found in IAEA Safety Standard Series No. GSG-X (DS460), Communication and Consultation with Interested Parties by the Regulatory Body [11])~~

~~2.21. Communication efforts can also be impeded by the public's perceptions of risks for the reasons described above, and by the use of scientific terms or variations in scientific units without plain language explanations during the emergency that also place radiological health hazards in perspective. Communication that does not use plain language and instead focuses on scientific terms or variations in scientific units for explanation of radiological health hazards during the emergency will also add to an increased perception of risk because this kind of communication emphasizes the science over the safety of the audience and their need to understand the situation. Clear, consistent information can calm fears, but unclear information can lead to misunderstanding or confusion in the public's perception of risk and thus, communication with the public during preparedness and the emergency should be in consistent plain language information and messages. Further information on developing messages for the public based on the principles of public communication and taking into account aspects of risk perception is provided in Section 3, PC-AG.6 of Ref. [10].~~

~~Rumours and m~~Misinformation and rumours

~~2.22.~~2.47. Para 5.74 of Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.74) requires that ~~arrangements~~"Arrangements shall be made~~ at the preparedness stage~~ to identify and address, to the extent practicable, misconceptions, rumours and incorrect and misleading information~~.~~ that might be circulating widely in a nuclear or radiological emergency, in particular those that might result in actions being taken beyond those emergency response actions that are warranted."[16]

[16] Actions beyond those emergency response actions that are warranted include: actions that interfere with prompt taking of protective actions, such as self-evacuation both from within and from outside areas from which evacuation is ordered; actions that unnecessarily burden the health care system; actions that shun or otherwise

2.48. Requirement 16 of GSR Part 7 [2]~~[2]~~ (para. 5.92) requires that "Arrangements shall be put in place for any actions taken, beyond those emergency response actions that are warranted, by members of the public and by commercial, industrial, infrastructural or other governmental or non-governmental bodies to be, to the extent practicable, promptly identified and appropriately addressed. This shall include the designation of organization(s) with the responsibility for monitoring for, identifying and addressing such actions."

2.49. Rumours will arise from various sources during ~~a response. Ref. [10] provides detailed information on rumours and the~~ an emergency response ~~to them~~. Social media ~~has intensified this challenge, facilitating the almost instant spreading of rumours and~~ platforms, which enable immediate dissemination of information — including misinformation~~. Arrangements for~~, rumours and speculation — have exacerbated the challenge of responding to misinformation and rumours in an emergency. A discussion of the response to rumours during an emergency response is provided in Ref. [10]~~[10]~~.

~~2.23.~~2.50. Arrangements for responding to misinformation and rumours should be ~~applied as it is essential to ensure that misinformation does~~ put in place with the aim of ensuring that they do not lead to ~~decision making based on false~~actions being taken by the public on the basis of incorrect and misleading information~~ and consequently to~~. Such actions ~~being taken~~could go beyond those emergency response actions that are warranted and could do more harm than good ~~(see para. 5.74 of Requirement 13 of GSR Part 7 [2]).~~.

~~2.24.~~2.51. The arrangements made for responding to misinformation and rumours should be such as to enable the identification of misinformation and rumours through media monitoring (see ~~para.~~paras 0~~0–3.80)~~–3.116~~3.116~~) and the correction of ~~this~~incorrect and misleading information ~~via the~~by means of various public communication tools (see paras 3.140~~3.140–3.123).~~–3.181~~3.181~~).

Maintaining trust

2.52. All reasonable efforts should be made to gain and to maintain ~~the public's~~ trust ~~and these~~on the part of the public in the emergency response. These efforts should ~~already~~ be ~~taking~~

discriminate against people or products from an area affected by a nuclear or radiological emergency; elective terminations of pregnancy that are not warranted; and cancellations of commercial flights that are not warranted.

~~4~~

~~place~~commenced at the preparedness stage. Gaining ~~public~~ trust on the part of the public takes ~~times. Though it is not realistic to expect that~~time and may need continuing public communication.

2.53. Gaining and maintaining trust ~~can be built in~~on the ~~chaos~~part of ~~an emergency, it~~the public should ~~still~~ remain an underlying objective at all times. However, it should not be expected that trust, once lost, can be regained during an emergency.

2.54. The principles of public communication (see paras 2.4~~2.4~~–2.40~~2.39~~2.41~~2.40~~2.21~~2.21~~) should be applied to help maintain trust on the part of the public during a nuclear or radiological emergency. Experience shows that trust on the part of the public in the emergency response, and in response organizations and other authorities providing official information, could otherwise be undermined.

~~2.25.~~2.55. Who ~~people~~the public decide to trust is ~~also~~ not uniform ~~for everyone: some~~; it should be expected that different people will place their trust in different authorities, organizations or individuals. ~~In an emergency, the higher the level of trust, the more likely the public will be willing to comply with protective and other response actions reducing the risk that actions will be taken beyond those emergency response actions that are warranted.~~ Background information on the importance of trust in public communication is provided in Section 4, PC-IS.6 of Ref. [10]~~[10]~~ (p.49).

2.56. ~~Para. 5.45 of~~ It should be expected that the level of trust on the part of the public will influence how willing the public will be to comply with instructions on protective actions and other response actions.

2.57. It should be expected that a loss of trust on the part of the public will increase the likelihood that people will take unwarranted actions during an emergency (see para. 2.47~~2.46~~).

2.58. Requirement 10 of GSR Part 7 ~~stipulates that~~ [2]~~[2]~~ (para. 5.45) requires that "For facilities in [emergency preparedness] category I or II and areas in [emergency preparedness] category V, arrangements shall be ~~in place for facilities in category I and II and areas of category V~~made to provide the permanent population, transient population groups and special population groups or those responsible for them and special facilities within the emergency planning zones and emergency planning distances (see para. 5.38 [of GSR Part 7 [2]~~[2]~~]), before operation and throughout the lifetime of the facility, with information on the response to a nuclear or radiological emergency~~, including~~. This information shall include information

on the potential for ~~such emergencies,~~a nuclear or radiological emergency, on the nature of the hazards, on how people would be warned or notified, and on the actions to be taken~~. Such public communication activities~~ in such an emergency." (See para. 1.13~~1.13~~.)

~~2.26.~~2.59. Public information on facilities in emergency preparedness category I or II and areas in emergency preparedness category V should be provided at the preparedness stage ~~will~~to help~~ to~~ familiarize the public with the facility and with the associated emergency arrangements~~.~~ (see paras 1.13~~1.13~~ and 1.14~~1.14~~).

~~2.27. Experience shows that trust can be easily lost when not following the principles of effective public communication during nuclear or radiological emergencies (see paras 2.2–2.17).~~

Timeliness and accuracy

~~2.28.~~2.60. The early hours of the response to a nuclear or radiological emergency are crucial for the public communication ~~activities. Social~~response. The use of social media platforms, for example, increases the ~~pressure~~demand for timely public communication. ~~Not providing an early statement also allows other unofficial sources of information to spread information. While the public and specific groups of interested parties demand immediate and comprehensive information, the emergency response organization might not have details confirmed early on. Arrangements should be made to immediately communicate to the public even when detailed specific information is not available.~~

2.61. ~~Holding statements should be used at this time~~A statement should be provided early on with the aim of dissuading providers of unofficial information from spreading misinformation and rumours and undermining trust in the emergency response.

2.62. Arrangements should be made to communicate promptly to the public ~~to make it aware of a situation and, as appropriate, of the activation of the emergency response.~~ even before confirmed information is available. While the public and interested parties may demand detailed information immediately, the response organizations might not have confirmed information available early in the response.

2.63. In such cases, organizations responsible for public communication should clarify which types of information are confirmed and which are unconfirmed. It should also indicate when, and the conditions under which, further information will be made available.

2.64. A pre-approved ~~holding~~preliminary statement should be prepared for ~~immediate~~prompt distribution in an emergency, either actively (e.g. ~~via~~by press release, on the web site and/or ~~via~~on social media~~) and/~~ platforms) or reactively (~~to~~i.e. in answer to specific requests ~~by~~from the news media, the public or other interested parties~~)~~), as ~~deemed~~ necessary. ~~Templates~~

~~2.29.~~2.65. A preliminary statement should be issued for public information early in an emergency, to inform the public of ~~holding statements can be found~~the emergency and, as appropriate, of the activation of an emergency response. An example template of such a preliminary statement is provided in Annex ~~V. Timely communication facilitates public confidence in the emergency response. Lack of communication undermines public confidence and facilitates the spread of rumours and misinformation.~~ I.

2.66. Accuracy should not~~, however,~~ be sacrificed for timeliness~~. A single piece of inaccurate~~ in public communication. Incorrect and misleading information ~~can damage the public's~~may undermine trust ~~in~~ on the part of the public in the emergency response and may jeopardize ~~all~~the objectives of public communication~~ objectives~~. This might ~~consequently~~ lead to actions being taken that go beyond those emergency response actions that are warranted~~. Unconfirmed~~ (see paras 2.47~~2.46~~–2.48~~2.47~~).

~~2.30.~~2.67. Unverified information or ~~speculated information~~ speculation should not be released to the public. However, it may be necessary to issue incomplete information, together with appropriate explanations and qualifications (see para. 2.8~~2.8~~).

Recognizing social context

~~2.31. Public~~The public communication ~~programmes~~programme should take ~~into~~ account of the fact that the ~~way~~conduct of public communication ~~is conducted~~ and ~~perceived~~its perception by the public may ~~differ~~vary depending on the social context.

~~2.32.~~2.68. ~~Understanding these~~ For effective public communication with the public and interested parties, an understanding should be gained of differences in ~~a~~the social context~~ is instrumental in effectively communicating with interested parties. When~~. In organizing public communication~~ activities~~, arrangements should be made to ~~ensure that all members of~~ enable interested parties ~~can~~to participate ~~in them. Appropriate arrangements and preparation of activities supports the meaningful participation of interested parties~~as appropriate and activities should be prepared accordingly.

Two-way communication

~~2.33.~~2.69. A nuclear or radiological emergency will ~~give rise to increased demand for~~necessitate two-way communication. Arrangements should be put in place for official information to be ~~disseminated quickly and directly~~made available to the public~~. Simultaneously,~~ promptly and directly. At the same time, lines of communication ~~to the~~ with response organizations and other authorities providing official ~~sources of~~ information should remain open ~~and capable to address~~. Such organizations should be able to use the lines of communication for responding to questions and concerns of interested parties.

~~2.34.~~2.70. Arrangements, including arrangements for resources and logistics, should be put in place ~~to communicate through a variety of~~ for the use of various channels ~~in order~~of communication to ~~support and~~ encourage and support two-way communication. ~~These~~The arrangements ~~will~~should help to ensure that ~~all members of~~ the public ~~have a mechanism to access credible~~has the means to communicate with response organizations and other authorities providing official information and guidance in ~~a nuclear or radiological~~an emergency.

2.71. ~~The increased~~Arrangements should be put in place for traditional two-way channels of communication such as dedicated telephone enquiry lines ('hotlines') for the news media and the public, open public meetings and other meetings with interested parties.

2.72. Those responsible for public communication in an emergency should anticipate that the changing nature of the news media and social media, and in particular the use of social media platforms as providers of unofficial information, will generate increasing demand for two-way communication during ~~a nuclear or radiological emergency is also challenged by the changing media landscape and the rise of social media.~~ an emergency.

~~2.35.~~2.73. Official information ~~can now be disseminated quickly~~should be made available to the public promptly and directly~~ to the~~. Those responsible for public~~. Two~~ communication in an emergency should anticipate that an increasing demand for two-way communication ~~demands~~during an emergency will necessitate increased resources~~, faster paced information~~ to enable the prompt dissemination ~~and continuous engagement around the clock~~of information and public communication at any time, depending on the nature and severity of the emergency.

~~2.36. Lack of or slow communication on social media will rapidly lead to a loss of trust and foster and accelerate the spread of rumours and misinformation.~~

2.74. Clear guidelines should be put in place on how to communicate with the public on ~~various~~ social media platforms, as appropriate in the ~~State's~~national context. ~~This~~There should ~~also include~~be a code of conduct ~~to address~~in place for the private use of social media platforms by members of ~~the~~ response organizations~~ as their messaging~~. This is because messages posted in a private capacity could be mistaken ~~as official.~~ for official information if they include comments on an emergency.

~~2.37.~~2.75. Codes of conduct should be drafted ~~to inform~~ at the preparedness stage, and staff members ~~on~~should be informed of the rules for the use of social media~~, what the dangers are~~ platforms, and of associated pitfalls and how to ~~avert~~avoid them.

~~2.38. Traditional two-way communication channels such as hotlines for the media and the public, town-hall meetings, and other meetings with interested parties should also be set up.~~

3. ARRANGEMENTS FOR PUBLIC COMMUNICATION ~~ARRANGEMENTS~~ IN EMERGENCY PREPAREDNESS

~~BACKGROUND~~

GENERAL

3.1. ~~Para. 4.1 of~~ Requirement 1 of GSR Part 7 [2]~~[2]~~ (para. 4.1) requires ~~governments to~~that "The government shall ensure that an emergency management system is established and maintained on the territories of and within the jurisdiction of the State for the purposes of emergency response to protect human life, health, property and the environment in the event of a nuclear or radiological emergency~~. This section~~".

3.2. Section 3 of ~~the~~this Safety Guide ~~elaborates on the~~provides recommendations and guidance on arrangements that should be put in place at the preparedness stage in order to communicate effectively ~~communicate~~ with the public in the response to a nuclear or radiological emergency.

~~3.1.~~3.3. An effective emergency management system ~~requires~~ should incorporate effective public communication at all stages: the preparedness~~,~~ stage, the emergency response phase and the transition ~~to an existing or planned exposure situation. Setting up~~phase (see Section 2 of GSG-11 [1]~~[1]~~ on the ~~arrangements~~phases of an emergency). Arrangements should be put

in place at the preparedness stage ~~should facilitate~~for public communication ~~in~~during the ~~later stages.~~ emergency response phase and during the transition phase.

PUBLIC COMMUNICATION PROGRAMME

~~3.2.~~3.4. A public communication programme is an ~~overarching structure~~arrangement made at the preparedness stage for organizing public communication during ~~an~~a nuclear or radiological emergency. It should specify (a) the principal ~~communication~~ objectives of and approach to communication in ~~the~~a public communication strategy~~,~~; (b) a public communication plan; and (c) the necessary infrastructure and resources~~,~~; all ~~based~~ on the basis of (d) a ~~specific~~specified budget.

3.5. ~~Para. 4.7 of~~ Requirement 2 of GSR Part 7 [2]~~[2]~~ (para. 4.7) requires ~~the~~that "The government ~~to~~shall ensure that all roles and responsibilities for preparedness and response for a nuclear or radiological emergency are clearly allocated in advance among operating organizations, the regulatory body and response organizations~~. Thus, the~~." [17]

~~3.3.~~3.6. The public communication programme should be prepared in advance in accordance with this allocation of roles and responsibilities and in coordination with all responsible operating organizations, the regulatory body and response organizations within ~~the~~an unified command and control system~~, and~~ (see para. 3.30~~3.30~~). The public communication programme should be evaluated and updated at regular intervals.

3.7. Any transfer of responsibilities for public communication in the transition phase should be considered at the preparedness stage and should be included in the public communication programme.

~~3.4.~~3.8. The public communication programme, including the necessary resources, should be approved by ~~the responsible~~ response ~~organization or~~ organizations. Appropriate human resources ~~-~~and financial ~~and human~~ resources should be allocated on a continuing basis ~~to ensure~~for ensuring preparedness and ~~to maintain~~for maintaining a high level of readiness ~~to respond to~~for an emergency~~.~~ response.

[17] This also includes the allocation of roles and responsibilities, as appropriate, among members of the government.

~~3.5.~~3.9. The public communication programme should identify at the preparedness stage all practical arrangements and logistics necessary ~~to implement~~for a public communication strategy and a public communication plan~~ at the preparedness stage.~~. These arrangements will support public communication ~~activities~~ during the response to a nuclear or radiological emergency.

~~3.6.~~3.10. A public communication programme should be developed in ~~every~~a State~~, with~~ irrespective of whether or ~~without~~not it has a nuclear power programme. ~~Emergencies~~An emergency involving a radioactive ~~sources can~~source could occur ~~anywhere and experience~~in any State. Experience has demonstrated that ~~emergencies at facilities~~an emergency at a facility in one State could have ~~an impact on any State, including~~effects among the public in other States. Possible effects include non-radiological consequences ~~like fear and~~such as anxiety as well as economic and commercial consequences~~.~~ such as disruption to shipping and to flights of commercial airlines.

PUBLIC COMMUNICATION STRATEGY

~~3.7.~~3.11. Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.69) requires that "Communication ~~A public communication~~ with the public in a nuclear or radiological emergency shall be carried out on the basis of a strategy ~~should~~to be developed at the preparedness stage as part of the protection strategy". The public communication strategy should be developed and applied at the preparedness stage in order to identify key issues~~,~~ and target audiences, to prepare appropriate messages and to carry out communication activities.

~~3.8.~~3.12. The public communication strategy, and the public communication plan that is formulated from the strategy, should be based on a graded approach~~. Related~~ (see para. 1.28~~1.28~~1.14~~1.14~~). The graded approach should be applied to public communication ~~during a nuclear or radiological~~ on the basis of the nature and severity and the characteristics of the emergency, ~~a graded approach describes the principle to scale the response to the~~ the magnitude of its actual or expected ~~impact of a nuclear or radiological emergency on the need~~consequences and its significance for ~~and~~ the ~~extent of~~ public~~ communication activities, based on the emergency's characteristics and magnitude. The elements of a public communication strategy should include, but not be limited to:~~.

3.13. The elements of a public communication strategy should include, but is not limited to:

(a) A description of all relevant scenarios for hazard assessment~~scenarios~~[18];

(b) Strategic considerations ~~identifying~~determining the main challenges for public communication ~~specifically~~ for each scenario;

(c) Specific objectives for the public communication response for each scenario, ~~taking into~~with account taken of the strategic considerations, ~~to~~in support of achieving the ~~overarching~~goals of emergency response and the key objectives ~~as laid~~of public communication set out in ~~para.~~paras ~~2.1~~2.2.1~~2.2.1~~ and 2.2.3~~2.2.3~~;

(d) An identification of the key target audiences for each scenario;

(e) ~~Specific key~~Key specific messages for each scenario~~,~~ that can be ~~pre-developed~~prepared at the preparedness stage~~, to~~ in support of achieving the objectives for the scenario;

(f) Recommended ~~tactics~~approach for the most effective ~~implementation~~performance of ~~the~~ public communication tasks (see paras 3.106~~3.106–3.87)~~–3.132~~3.132~~) and the use of ~~the~~ public communication tools (see paras 3.140~~3.140–3.123).~~–3.181~~3.181~~);

(g) Anticipation of any transfer of responsibilities for public communication in the transition phase.

~~3.9.~~3.14. Guidance for ~~strategizing~~ developing a communication strategy is ~~also~~ provided in ~~the~~an EPR- Series publication on Method for Developing a Communication Strategy and Plan for a Nuclear or Radiological Emergency ~~[12].~~[11]~~[11]~~.

~~3.10.~~3.15. The ~~public environment within which~~context of application of the public communication strategy ~~will be implemented~~ should be considered. Surveys should ~~therefore~~ be made ~~to understand~~of the ~~public risk~~ perception ~~on~~of risks and the information needs of the public, both at a national level and among the population potentially affected~~population~~in areas around nuclear facilities or ~~in areas with regular activities using~~around facilities in which ionizing radiation is used.

3.16. On the basis of information obtained in these surveys, a public awareness programme should be established to provide information in plain language (see para. 2.2.19~~2.2.19~~) at the

18 Hazard assessment is the assessment of hazards associated with facilities, activities or sources within or beyond the borders of a State in order to identify: (a) Those events and the associated areas for which protective actions and other response actions may be required within the State; (b) Actions that would be effective in mitigating the consequences of such events [1]~~[1]~~.

~~4~~

preparedness stage. Information provided should cover how the response to a nuclear or radiological emergency would be conducted and how the public would be protected.

3.17. The information should be made available to the population within the emergency planning zones and emergency planning distances, to assist them in making informed decisions in compliance with protective actions or other response actions in an emergency response (see Requirement 9 of GSR Part 7 [2]~~[2]~~, para. 5.38).

~~3.11.~~3.18. The arrangements ~~that enable the~~for public communication ~~response~~as outlined in the public communication strategy should be explained and described ~~and defined~~ in the public communication plan.

3.19. Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.69) requires that "arrangements shall take into account the need to protect sensitive information in circumstances where a nuclear or radiological emergency is initiated by a nuclear security event". Arrangements for public communication in an emergency initiated by a nuclear security event should be established at the preparedness stage (see paras 5.11~~5.11~~5.10~~5.10~~–5.14~~5.14~~).

PUBLIC COMMUNICATION PLAN

3.20. Requirement 23 of GSR Part 7 [2]~~[2]~~ requires that "The government shall ensure that plans and procedures necessary for ~~the~~ effective response to a nuclear or radiological emergency are established~~. Thus, arrangements~~".

~~3.12.~~3.21. Arrangements should be made to develop a public communication plan for a nuclear or radiological ~~emergencies~~emergency on the basis of the public communication strategy. A ~~methodology~~method for ~~planning~~developing a public communication plan for a nuclear or radiological emergency is provided in Ref. ~~[12].~~[11]~~[11]~~.

~~2.1. A~~The public communication plan for ~~a nuclear or radiological~~an emergency should~~:~~

~~3.13.~~3.22. ~~Be tailored to~~ apply the ~~chosen~~ public communication strategy~~ taking into~~, with account ~~the~~taken of relevant ~~potential emergencies~~scenarios for an emergency derived on the basis of hazard ~~assessments scenarios, in order to achieve successful communication with the public and other interested parties during a nuclear or radiological emergency;~~ assessment scenarios.

~~3.14.~~3.23. ~~Set~~The public communication plan for an emergency should set out a clear framework ~~for communication activities and allocate responsibilities and~~and an organizational

structure~~, tasks and~~ for public communication. The public communication plan should allocate responsibilities, goals ~~to members of~~and tasks within the organizational structure for the public communication ~~team;~~ response.

3.24. The ~~exact nature of any emergency cannot be foreseen. Therefore, a~~ public communication plan should be ~~considered~~regarded as providing operational guidelines for an appropriate public communication response~~.~~ to an emergency whose nature cannot be foreseen.

3.25. A The purpose of strategic planning is to enable the public communication response to draw upon the resources stipulated in the public communication strategy and the public communication plan (see para. 4.12) as necessary under the specific circumstances .~~PIOpublic information officer should be responsibleassigned the responsibility for the strategic planning to complementfor public communication. The strategic planning should enable the public communication response to be complemented as necessary, based under the specific circumstances, on the basis of the public communication strategy and the public communication plan, to the specific situation (see para. 4.12).~~

~~3.15.~~3.26. The elements of a public communication plan should include, but are not ~~be~~ limited to:

(a) A description of the ~~responsibilities and~~ organizational structure ~~of~~and responsibilities for the public communication response;

(b) A description of the available infrastructure and resources;

(c) A list of ~~identified potential~~possible spokespersons and technical briefers (i.e. technical experts for the preparation of briefing materials) already identified;

(d) A description of the tasks for public communication ~~tasks~~ and a plan for allocating ~~staff to~~ these tasks to staff;

(e) An operational manual ~~that defines~~specifying actions~~, based on the~~ to be taken for public communication ~~strategy, that should be implemented~~in an emergency, and at ~~what~~which stage they should be ~~implemented during an emergency using the~~taken, on the basis of the use of public communication tools~~.~~ [10]~~[10]~~;

(f) ~~A~~A description of any expected transfer of responsibilities for public communication in the transition phase.

~~3.16.~~3.27. The public communication plan should be reviewed at least once a year and should be revised as necessary ~~during~~at the preparedness stage ~~using~~in ~~the~~ light of lessons to be learned from exercises and from actual emergency responses.

Responsibilities and organizational structure

~~3.17.~~3.28. There may be numerous organizations involved in public communication during a nuclear or radiological emergency, at ~~a~~the facility level, local level, national level, regional~~,~~ level or international level. Arrangements should be made to ensure that the responsibilities for public communication tasks (see paras 3.106~~3.106~~–3.126~~3.126~~) are specified and are understood ~~at~~for all levels of the emergency response.

~~3.18.~~3.29. ~~Tasks,~~The responsibilities and tasks and the coordination of the various organizations ~~who will~~that would be involved in public communication during ~~a nuclear or radiological~~an emergency should be planned and ~~defined~~specified in advance~~, and~~ (see para. 3.5~~3.5~~3.4~~3.4~~). The responsibilities and tasks and the coordination of the organizations that would be involved in public communication should be reflected in all organizational, local and national ~~response~~emergency plans.

Public communication in a unified command and control system

3.30. ~~Para. 5.7 of~~ Requirement 6 of GSR Part 7 [2]~~[2]~~ (para. 5.7) requires ~~arrangements to~~that "Arrangements shall be made for the establishment and use of a clearly specified and unified command and control system~~. The public~~ for emergency response under the all-hazards approach as part of the emergency management system (see para 4.1~~4.1~~–4.3~~4.3~~)".

~~3.19.~~3.31. Public communication ~~function~~ should operate as part of the emergency management system~~, as described in~~ (see Section 2.1 of Ref. [10]~~[10]~~). Within the unified command and control system, the lead ~~PIO[19] is~~ public information officer[20] should be in direct contact with and ~~reports~~should report to the ~~overall emergency~~head of the response ~~commander~~organization.

~~[19] For the purpose of better readability of the document, the term "lead PIO" will be used in subsequent paragraphs even when the response does not warrant the establishment of a PIO section. The lead PIO is the PIO within the unified command and control system who leads the public communication response.~~

[20] The lead public information officer is the public information officer within the unified command and control system who leads the public communication response. The term 'lead public information officer' is used here although the public communication response may not warrant the establishment of a public information officer section.

3.32. ~~The~~In the emergency management system~~ uses a unified command and control approach whereby all~~, responsibilities for decision making within the unified command and control system during an emergency response ~~is consolidated into pre-identified decision making entities~~are required to be assigned to designated authorities at the ~~operational~~policy, strategic and ~~policy~~operational levels~~. This includes preparing~~ (see Requirements 1, 2 and 6 of GSR Part 7 [2]~~[2]~~ (paras 4.1, 4.10 and 5.7).

~~3.20.~~3.33. The responsibilities in the unified command and control system should include developing a system or methods for coordination and harmonization of all emergency~~-related information~~ communication to the public or to the news media. ~~The emergency management system defines~~ The relevant roles and responsibilities ~~and a command and control system, which provides for a system to ensure a~~within the unified command and control ~~approach with~~ system, as specified in the emergency management system, should provide for a 'one message, many ~~voices.'~~voices' approach (see para. 2.2.36~~2.2.35~~).

~~3.21.~~3.34. A ~~PIO~~public information officer should be on the initial activation list ~~on~~at all levels of the unified command and control system when the ~~emergency~~response organization is activated. ~~This will~~The public information officer should ensure that ~~an~~a channel for immediate ~~or~~communication and timely ~~channel of~~ communication to the public is initiated.

3.35. The unified command and control system ~~should enable scaling a response to be commensurate with the level of~~enables an emergency response to be scaled to the level warranted~~.~~ by the nature and severity of an emergency. The public communication ~~function~~response should also be scalable~~, as described in Section 2.2 of Ref [10]~~ so that the organizational structure can be ~~increased or decreased according~~adapted to the nature and severity of the emergency and to the need for public information ~~needs~~(see Section 2.2 of Ref. [10]~~[10]~~).

3.36. The lead public information officer in the public~~. This means preparing~~ communication response should be prepared to meet the need for additional staff ~~needed around the clock fulfilling~~at any time and to have available all necessary ~~skillsets (writing~~skill sets (e.g. drafting press releases, acting as spokesperson~~,~~ or monitoring social media~~, etc.), workspace,~~), work space and resources for ~~information~~the dissemination~~. The~~ of information~~ needs of the public are not necessarily proportional to the hazard or threat involved and, therefore,~~. Availability of these resources should be approved in advance.

~~3.22.~~3.37. Those responsible for public communication in an emergency should be prepared for a high level of ~~public~~ concern ~~should be anticipated for any situation involving radiation~~on the part of the public in a nuclear or radiological emergency. Those responsible for public communication should anticipate that the level of concern on the part of the public and the demand for public information will not necessarily be commensurate with any actual or existing~~extant~~ hazard or threat.

~~3.23.~~3.38. Arrangements should be made for an emergency for which public communication tasks exceed the capacity of ~~a single~~the lead ~~PIO~~public information officer. In this case, ~~arrangements should be made to establish a PIO~~a public information officer section should be established within the unified command and control system, with the lead ~~PIO leading the PIO~~public information officer as section~~.~~ head.

~~3.24.~~3.39. The lead ~~PIO should~~public information officer:

(a) ~~Be~~Should be responsible for ~~the~~ strategic planning ~~of~~for the public communication response ~~based~~ on the basis of arrangements made at the preparedness stage;

(b) ~~Consult and~~Should liaise with and consult the head of the emergency response ~~commander~~organization and other relevant ~~PIO contacts within~~staff in the unified command and control system;

(c) ~~Initiate the activation of~~ Should activate additional staff for the ~~PIO~~public information officer section as ~~needed~~necessary.

~~3.25.~~3.40. Arrangements should be put in place ~~so that~~for the lead ~~PIO has~~public information officer to have direct access to ~~the~~ decision makers ~~within~~in the unified command and control system, for the purposes of information sharing, liaison and coordination.

3.41. Arrangements should be made at the preparedness stage for a clearly ~~defined~~specified approval process ~~of~~ for public information and official ~~public information and~~ messages ~~should be made.~~. Processes for the collection and dissemination of information should also be established at the preparedness stage. The approval process should ~~focus~~be focused on providing ~~both~~ accurate and verified information in a timely ~~and accurate information.~~ manner.

~~3.26.~~3.42. Templates~~,~~ (e.g. for ~~holding statements, press releases~~a preliminary statement or an initial ~~statement~~press release) should be ~~pre~~-approved, to the extent possible, at the preparedness stage to ~~ensure~~enable public communication in a timely ~~communication.~~manner.

3.43. ~~The public~~Public communication tasks ~~that~~ should be carried out by the lead ~~PIO and, as necessary,~~public information officer and should be supported ~~by a PIO,~~ as necessary, by a public information officer section~~-~~. These public communication tasks are described in detail ~~starting~~ from para. 3.106~~3.106. The~~ to para. 3.130~~3.130~~.

3.44. All the various public communication tasks should be set out and should be assigned to staff in a clearly ~~defined~~specified organizational ~~chart. An~~plan (see Annex II for an example ~~can be found in Annex I. All tasks should be addressed. These~~ of an organizational plan for a public information officer section).

~~2.2.~~ The public communication tasks may be ~~fulfilled~~performed by staff from one organization or from several organizations, depending on the ~~size and~~ nature of the emergency.

3.45. ~~To support the implementation of paras 3.27–3.44 below, the~~ The roles ~~in~~and responsibilities assigned should be clearly specified and should be rehearsed through training and exercises.

~~3.27.~~3.46. Roles and responsibilities for communication with the public at national, local and international levels, in accordance with the recommendations of paras 3.47~~3.47~~–3.69~~3.69~~, are described in Section 2.3 of Ref. [10]~~[10]~~.

National authorities

3.47. Usually, several ~~governmen~~national authorities are involved in a response to a nuclear or radiological emergency. ~~To avoid contradictory messages and miscommunication between national organizations involved in the response, public~~Public communication during an emergency should be coordinated at the national level~~. The~~ to avoid miscommunication and inconsistency between the various national authorities involved in the emergency response.

~~3.28.~~3.48. National authorities involved in public communication may include the competent authority under the ~~Assistance Convention and under the~~ Convention on Early Notification of a Nuclear Accident ~~(the 'Notification Convention')~~and under the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency [1]~~[1]~~, a national coordinating authority, a disaster management authority, a national health and welfare authority, ~~regulators,~~ the regulatory body, technical and scientific support organizations, the corporate office of the ~~operators~~operating organization, and other government departments and ministries.

3.49. In ~~case multiple government~~ the event that several national authorities are involved in ~~a~~an emergency response, their public communication should be limited to their respective areas of responsibility and expertise.~~ Additionally, any~~

~~3.29.~~3.50. Key statements ~~providing advice to the public~~for which a 'one message, many voices' approach (see para. 2.2.36~~2.2.35~~) is taken should be coordinated with all other national authorities involved in the emergency response through the unified command and control system~~ with all other response authorities.~~. This coordination mechanism should be established ~~and~~ as part of emergency plans and arrangements, and its capabilities should be tested ~~through~~by means of regular training and exercises~~.~~ (see Requirement 2 of GSR Part 7 [2]~~[2]~~ (para. 4.10(i)).

~~3.30.~~3.51. A ~~public communication~~ point of contact for public communication should be established at each national ~~organization~~authority at the preparedness stage and the contact details should be ~~established and~~ communicated ~~among~~to all ~~the~~ response organizations.

~~3.31.~~3.52. ~~Where~~As far as possible, appropriate technology and equipment for communicating between these points of contact for public communication should be prepared, tested, exercised and maintained~~.~~ at the preparedness stage.

~~3.32.~~3.53. ~~These inter-organizational~~The arrangements made between response organizations should be documented in the public communication plan~~ and~~. The arrangements should be consistent with arrangements for ~~the~~ response to ~~non-nuclear and non-radiological~~conventional emergencies~~, including~~ such as fires or releases of hazardous chemicals, or natural disasters such as storms or earthquakes.

~~3.33.~~3.54. National authorities should ~~have~~make prior arrangements ~~in place~~ to provide information to the public outside ~~the~~areas affected ~~area in general, and specifically~~by an emergency. National authorities should make specific prior arrangements to provide information to those who may be concerned for relatives in ~~the~~areas affected ~~zone or~~ by an emergency or who may be concerned by the possibility of ~~contaminated~~ goods and food products being contaminated.

~~3.34.~~3.55. ~~To support and facilitate the work of the PIOs in answering related questions and communicating with the public, the PIOs~~Public information officers should be familiar with the national emergency ~~response~~ plan, including the roles and responsibilities of the various

~~agencies~~national authorities and officials, as well as with relevant national legislation and regulations.

3.56. To the extent possible, bilateral and ~~multi-lateral~~multilateral agreements~~, which include public communication,~~ should be established at the preparedness stage on the coordination necessary for disseminating accurate information on an emergency to ~~ensure~~the public ~~communication will be coordinated with~~in neighbouring ~~countries. This could be accomplished through~~States in a timely manner.

~~3.35.~~3.57. A coordination mechanism by means such as regional networks ~~that are~~prepared and exercised in advance should be established by the ~~communication~~ organization in ~~each~~the State with the main responsibility for the public communication ~~programme during~~response in an emergency.

~~3.36.~~3.58. ~~PIOs from neighbouring States should have an opportunity~~Public information officers should be provided with opportunities to be involved as observers in the ~~national~~ emergency exercises of ~~other~~neighbouring States.

Local authorities

3.59. Requirement 10 of GSR Part 7 [2]~~[2]~~ requires that "The government shall ensure that arrangements are in place to provide the public who are affected or are potentially affected by a nuclear or radiological emergency with information that is necessary for their protection, to warn them promptly and to instruct them on actions to be taken."

~~3.37.~~3.60. Local authorities and, as applicable, national authorities should ~~have~~put in place arrangements ~~in place for the warning of~~to provide the ~~affected population as required by Requirement 10 of GSR Part 7 [2].~~public with information that is necessary for their protection. The preparations should include ~~availability~~the provision of reliable channels of communication ~~channels~~ (e.g. warning sirens, mobile~~/~~ or fixed ~~loud speakers~~loudspeakers, local television and radio~~/TV), pre-defined and possibly recorded~~ stations), the preparation and recording, as appropriate, of announcements in the ~~local~~ languages mainly spoken by the population, and ~~designated individuals who will~~the designation of staff to make announcements.

3.61. Announcements on an emergency response should be prepared in other languages, as appropriate. For facilities in category I or II and areas in category V (see paras 1.13~~1.13~~ and

1.14~~1.14~~), it should be ensured that announcements are comprehensible to all those who might be affected by an emergency.

3.62. This includes the permanent population, transient population groups and special population groups or those responsible for them, and special facilities within the emergency planning zones and emergency planning distances (see paras 3.168~~3.168~~, 3.169~~3.169~~). It should also be considered, for example, whether to prepare suitable information for schools and hospitals.

~~3.38.~~3.63. Arrangements should be made to ~~ensure that~~ inform the public promptly during an emergency~~, the public will be promptly informed about~~ of protective actions and other response actions ordered, and other ~~facts and~~ activities ~~related to public~~ for the protection of human life, health~~ and safety. Intensive~~, property and the environment. Extensive communication ~~efforts~~ should be undertaken if ~~there is~~ an evacuation is ordered or ~~where~~if long term measures may be required for the public who are affected ~~community~~or are potentially affected.

3.64. Arrangements should be made for coordination of ~~the~~ local authorities with ~~the~~ national ~~level~~ authorities within the unified command and control system to avoid ~~any contradiction in~~inconsistencies between statements issued at the different levels. ~~It will be imperative that local authorities' spokespersons are~~

~~3.39.~~3.65. Spokespersons of local authorities should be aware of ~~what~~information that is being ~~said~~disseminated about emergency response actions taken and risk assessments performed at the national level~~.~~ and in neighbouring areas. National spokespersons should be aware of information that is being disseminated at a local level.

~~2.3. A public awareness programme should be established for providing information in plain language at the preparedness stage on how a response to a nuclear or radiological emergency would be conducted and how the public will be protected.~~

~~2.4. This information should be distributed to all population groups within the emergency zones, to support them in making informed decisions to comply with protective actions or other response actions.~~

~~3.40.~~3.66. ~~Para. 5.45 of~~ Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.45) requires that ~~the~~"For facilities in category I or II and areas in category V,… [t]he effectiveness of these arrangements for public information ~~for facilities in category I or II and areas in category V shall~~ be periodically assessed~~. This~~" (see paras 1.13~~1.13~~ and 1.14~~1.14~~). The assessment should include

consultation of the public by means of conducting ~~public feedback surveys on a~~ regular ~~basis,~~public surveys, holding discussion groups ~~or evaluation of public~~ and evaluating understanding ~~during~~on the part of the public in exercises.

International organizations

~~3.41.~~3.67. Under the Joint Radiation Emergency Management Plan of the International Organizations ~~Under the Joint Plan [4],~~ [3]~~[3]~~, the IAEA, as the lead international organization for coordinating the ~~international~~ interagency response to a nuclear or radiological emergency, should ensure that international organizations participate in the response to ~~emergencies~~an emergency, as appropriate, including the public communication ~~efforts.~~ response.

~~3.42.~~3.68. International ~~interagency~~ organizations participating in the public communication ~~activities~~response to an emergency should ~~be~~ensure the following:

(a) ~~Communicated~~Information on their public communication should be disseminated among the ~~co-sponsoring~~ international ~~interagency~~ organizations of the Joint Radiation Emergency Management Plan ~~[4];~~of the International Organizations [4]~~[4]~~.

(b) ~~Factual and based on the role~~Public information should be factual and accurate and should be conducted on the basis of the roles and responsibilities of, and actions taken by ~~the IAEA. This includes~~, the respective international organizations. This public information should include press releases, interviews, postings on social media ~~communication~~platforms and issuing of situation reports~~, issued~~ by organizations participating ~~organizations;~~in the public communication response.

(c) ~~Consulted with each other: if~~ Communication should be coordinated between the organizations of the Joint Radiation Emergency Management Plan of the International Organizations [3]~~[3]~~. If the subject ~~matter~~matter of ~~the~~ press ~~release~~releases, interviews, postings on social media platforms or situation reports involves the competence and mandate of two or more ~~than one organization~~organizations, the respective organizations should ~~coordinate to ensure~~consult each other as relevant under the 'one message, many voices' approach~~.~~ (see para. 2.2.36~~2.2.35~~).

3.69. If a ~~joint~~ message is to be released~~, the goal of international interagency~~ jointly by organizations under the Joint Radiation Emergency Management Plan of the International Organizations [4]~~[4]~~, communication should be coordinated.

3.70. The coordination should ~~be to achieve~~have the goals of achieving agreement on the content in a timely manner and ensuring to the extent possible ~~ensure~~ that ~~respective~~ press releases and other communications contain consistent messaging and information. If this is not possible, the international organizations should limit their public information to their own area of competence.

3.71. International organizations should ensure to the extent possible that their public information is consistent with public communication by the other international organizations and by State in which the emergency arises.

~~3.43.~~3.72. In ~~case~~the event that an international organization receives a request for assistance ~~to respond~~in the response to a nuclear or radiological ~~incident or~~ emergency, the international organization should ~~make every effort to~~ coordinate with the other international organizations as per the arrangements in Ref [3] and obtain the requesting State's clearance if at all possible before ~~releasing related~~issuing public information on the emergency to the news media and to the public.

INFRASTRUCTURE AND RESOURCES

~~3.44.~~3.73. ~~In~~Appropriate infrastructure for public communication should be developed, in accordance with the results of the ~~hazards~~hazard assessment and the identified potential consequences of a nuclear or radiological emergency, irrespective of the ~~cause, an appropriate~~initiator of the emergency. The infrastructure for public communication ~~purposes~~ should be ~~developed and~~ described in the public communication plan~~.~~ (see para. 3.26~~3.26~~(b)~~(b)~~).

~~3.45.~~3.74. Appropriate ~~and sufficient public communication~~ infrastructure and capabilities for public communication, both on-site and off-site, including resources (both human resources and financial resources), should be allocated ~~to ensure~~. Such infrastructure and capabilities should be sufficient for ensuring effective and efficient communication ~~activities~~as required during an emergency ~~and, following the termination of an emergency,~~ response phase and during the ~~subsequent~~ transition ~~to either a planned exposure situation or an existing exposure situation~~phase (see paras ~~5.11–5.22).~~5.16~~5.16~~–5.33~~5.33~~).

3.75. ~~Public needs for information are different~~ Those responsible for public communication in an emergency should anticipate that the need for public communication during the transition phase

~~than~~will be different from the need for public communication in the~~an~~ emergency response phase.

~~3.46.~~3.76. All resources necessary for communication during the emergency response phase~~,~~ and ~~all resources needed to address~~in the ~~emergency and~~ transition ~~phases~~phase should, ~~where~~as far as practicable, be ~~identified, established~~specified, allocated and evaluated at the preparedness stage. This includes the potential ~~for~~ long term ~~needs~~availability of personnel~~, communication~~ and of infrastructure and equipment~~, and facilities~~ for public communication.

~~2.5. Resources should be designated for the development and continued maintenance of the infrastructure.~~

~~2.6.~~ The infrastructure for public communication should be robust and redundant (see para. 3.89~~3.89~~).

~~3.47.~~3.77. The components of the infrastructure for public communication should be maintained and, as necessary, ~~upgraded~~developed to ensure ~~continued development~~their regular upgrading and modernization. Resources should be designated for the development and continuing maintenance of the infrastructure for public communication.

Personnel

3.78. Sufficient numbers of personnel~~, including a reasonable~~ should be available to conduct public communication in a timely manner during a nuclear or radiological emergency. These personnel should include an adequate number of ~~PIOs that will be adequate~~ public information officers to cover public information (i.e. for the public and the news media and ~~public relations,~~for social media platforms), internal communication, ~~social media,~~ online communication and ~~media~~ monitoring~~, as well as trained~~ of the media.

3.79. Trained spokespersons and technical briefers~~,~~ (i.e. technical experts for the preparation of briefing materials), and experts in fields such as health physics~~ or~~, radiation protection ~~experts, are essential to conduct public communication activities in a timely manner and provide factually correct information to the public during a nuclear or radiological emergency.~~ , medical counselling and psychological counselling, should also be available as and where necessary for public communication.

~~3.48.~~3.80. Sufficient numbers of personnel ~~are also needed~~should be available to respond to ~~address any incorrect information~~misinformation and rumours in a timely manner, and to respond to requests for information from the public and the news media.

~~2.7. A PIO should be part of the emergency response on-call roster and on stand-by 24 hours a day, 7 days a week in case an emergency or a situation with increased media interest occurs.~~

3.81. Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 6.10) requires that "Appropriate numbers of suitably qualified personnel shall be available at all times (including during 24 hour a day operations) so that appropriate positions can be promptly staffed as necessary following the declaration and notification of a nuclear or radiological emergency."

3.82. Arrangements should be made to ensure that suitably qualified personnel are available for a public communication response at all times (including during 24 hour a day operations) so that positions can be promptly staffed as necessary following the declaration and notification of an emergency.

~~2.8.~~ A rotation staffing plan should be prepared for the ~~PIOs~~public information officers and other communication personnel. Depending on the nature and severity and the progression of ~~the emergency, PIOs may have to respond to the media around the clock and hold regular press conferences and media updates.~~

~~2.9. The rotation plan should be prepared, for example, using three eight-hour shifts or two twelve-hour shifts that provide 24 hours a day, 7 days a week coverage.~~

3.83. ~~During~~ an emergency, ~~extra staff~~ public information officers may have to participate in a response and to provide regular public information during 24 hour a day operations for seven days a week.

~~3.49.~~3.84. Extra staffing for communication may be ~~needed to respond~~necessary for responding to enquiries from the public~~.~~ during a nuclear or radiological emergency. The number of ~~extra~~ staff ~~needed to cover~~necessary for covering dedicated telephone enquiry ~~hotlines and~~ lines ('hotlines') and for activities in relation to social media ~~activities~~ should be estimated ~~and a~~at the preparedness stage. A plan for ~~how to assemble them~~making such personnel available should be prepared and exercised.

~~3.50.~~3.85. All public communication~~ activities~~, including ~~establishment~~the setting up and staffing of telephone enquiry hotlines, should be regularly trained and exercised.

Infrastructure

~~3.51.~~3.86. ~~Public communication should always have the necessary~~ The infrastructure necessary for public communication in a nuclear or radiological emergency should be available ~~to facilitate its work. This includes~~ at all ~~technical installations to both receive~~ times. The available infrastructure should include all necessary systems for receiving and ~~distribute~~disseminating information, ~~to coordinate~~ for coordination and ~~communicate~~ communication with other elements of the emergency response operation, and ~~to monitor~~ for communication and ~~communicate with/on~~ monitoring by means of traditional~~,~~ media (e.g. the press, television and radio stations), online news media and social media ~~and emerging media~~ platforms.

~~Unified~~ ~~O~~off-site ~~public communication~~information centres

~~3.52.~~3.87. ~~Unified off~~Off-site ~~public communication~~ information centres ~~(e.g. joint information centers),~~for public communication~~–~~, whether fixed, ~~-~~mobile or virtual (i.e. in an online setting), should be used to provide a means for effective coordination of all activities for public information and related activities ~~associated with any~~for public communication in a nuclear or radiological emergency, depending on the scale of the emergency. ~~These off~~Off-site information centres ~~can~~should be integrated within existing fixed or mobile units or ~~be~~ set up separately for ~~public communication~~ operations~~.~~ in public communication.

~~3.53.~~3.88. ~~These~~Off-site information centres ~~should~~:

(a) ~~Be~~Should be established ~~and kept ready for use~~ at the preparedness stage and should be kept ready for use;

(b) ~~Be~~Should be made known to the news media in advance of public communication in an emergency;

(c) ~~Provide~~Should provide for effective coordination and control of all ~~official~~ public information and related activities for public communication within the unified command and control system;

(d) ~~Provide~~Should provide sufficient work space and facilities for the necessary public communication staff and, ~~if~~as appropriate, for media representatives to interact and work ~~from; and~~with the public communication staff;

(e) ~~Provide~~Should provide systems for public information officers to exchange ~~PIO~~ information and data throughout the unified command and control system.

~~Concept of r~~Redundancy

3.89. The concept of redundancy~~, which~~ is the provision of alternative (identical or diverse) structures, systems and components~~,~~ so that ~~anyone~~any single structure, system or component can perform the required function ~~regardless~~irrespective of the state of operation or failure of any other~~,~~.

~~3.54.~~3.90. The concept of redundancy should be applied to all planning for infrastructure and ~~resource planning.~~resources. This includes, but is not limited to~~-~~, the provision of back-up equipment and systems, the training of multiple staff ~~trained~~ for the same responsibilities and tasks, and the use of different ~~communication~~ channels ~~and~~ of communication and different service providers.

3.91. As ~~stipulated~~established in ~~para. 5.69 of~~ Requirement 13 of GSR Part 7 [2]~~[2], specific consideration should be given to~~ (para. 5.69), "Arrangements shall be made for providing… information to the public in a nuclear or radiological emergency, with account taken of the possibility that the usual means of communication might be damaged in the emergency or by its initiating event (e.g. by an earthquake or flooding) or overburdened by demand for its use."

~~3.55.~~3.92. These arrangements ~~that ensure~~ should include as appropriate the provision of redundant infrastructure ~~in case of emergencies caused by, during or following natural disasters such as earthquakes, floods or heavy storms as, for example, mobile communication channels might be more affected by these events than radio broadcasting~~to compensate for possible loss of power resulting from a nuclear or radiological emergency or from its initiating event.

~~Budget~~

Financial resources

~~3.56.~~3.93. In order to maintain a high level of readiness, the public communication programme for a nuclear or radiological emergency should receive ~~adequate and~~ dedicated and adequate funding.

~~3.57.~~3.94. ~~The budget~~The financial resources allocated for the public communication programme should be sufficient ~~enough~~ to ensure effective and efficient ~~implementation~~application of the public communication plan ~~during~~in routine day~~-~~ to~~-~~ day

activities~~,~~ as well as during emergency response activities~~, and includes~~. The financial resources allocated should include, but ~~is~~are not limited to, funding for:

(a) ~~-~~Training and exercises;

(b) ~~-~~Communication equipment and facilities;~~ and~~

(c) ~~Identification~~Designation of, and as necessary contracts for, ~~call~~off-site information centres, additional personnel and ~~other necessary PIO emergency communication~~ equipment~~.~~ necessary for public information officers for communication in an emergency.

~~3.58.~~3.95. ~~Financial resources~~The financial resources allocated should~~ also~~ enable funding for analyses to verify that objectives, goals and actions ~~defined~~set out in the public communication plan are being met and ~~the~~that the public communication plan is effective.

~~3.59.~~3.96. ~~Contracted~~The use of contracted services should be considered for activities that ~~do~~are not ~~require~~required to be carried out by regular staff members ~~to carry them out~~ but that are necessary ~~to ensure~~for ensuring an effective public communication response.

3.97. ~~Contracted~~The use of contracted services that could be ~~required~~necessary for ~~delivery~~the provision of certain communication activities during a response ~~(such~~should be assessed and exercised in advance to verify that the requested service can be provided in a timely manner, if and when needed.

3.98. Such contracted services should include, as appropriate, translation, web site hosting, acquisition of additional bandwidth, printing, rental of equipment, temporary ~~help~~assistance services ~~or establishing~~and setting up a telephone enquiry ~~centre) should be assessed and exercised in advance to determine that the requested service can be delivered in a timely manner, if and when needed.~~ hotline.

~~3.60.~~3.99. Assessments and exercises should ~~also~~ take into account whether and how such contracted services would be ~~delivered~~provided in the event of an emergency that affects the electricity supply or means of communication or other infrastructure.

SPOKESPERSONS AND TECHNICAL BRIEFERS

~~3.61.~~3.100. ~~Potential~~ Possible spokespersons and technical briefers ~~assisting~~for the preparation of briefing materials in support of the spokesperson should be identified at the

preparedness stage. Detailed operational guidance on selecting and preparing a spokesperson is provided in Section 3~~,~~ PC-AG.5 of Ref. [10]~~[10]~~.

~~3.62.~~3.101. ~~As~~The spokesperson, as the ~~Spokesperson is the "face"~~'public face' of the organization's public communication response and therefore of ~~the~~an emergency response, ~~the spokesperson~~ should ~~be~~play a key ~~element to gain~~part in gaining and ~~maintain the public's~~maintaining trust on the part of the public in the emergency response and in the response organizations ~~involved~~.

~~3.63.~~3.102. The selection of the spokesperson should be based primarily on ~~the level of~~ authority and communication skills and ~~their~~the capacity to build a relationship ~~of trust and~~based on authority and trustworthiness with the audience.

~~3.64.~~3.103. The selection of technical briefers should be based primarily on relevant technical expertise and communication skills ~~and their ability to relate to and engage with the audience~~with particular audiences.

~~3.65.~~3.104. The ~~more severe an emergency, the more senior the~~ spokesperson should be~~.~~ appropriate for the severity of the emergency. For a ~~worst-case scenario, this~~severe emergency, the spokesperson should be ~~as a minimum~~ the head of the ~~leading~~ response organization~~.~~ or the head of a higher organization. For less severe emergencies, a less senior ~~managers~~manager or a ~~PIO can~~public information officer should act as ~~a~~ spokesperson. This also applies ~~to~~for recurrent briefings for news media after the initial stages of an ~~event~~emergency.

~~3.66.~~3.105. Technical briefers should be ~~senior~~technical experts in relevant subject matter ~~experts,~~; for instance, experts in health physics, radiation protection ~~experts~~ or ~~first responders~~related fields. Technical briefers should prepare briefing materials in support of the spokesperson, for use in briefings for news media, for example ~~during media briefings~~, as ~~required~~necessary to ~~address~~deal with topics and questions ~~related~~relating to ~~his or her~~the subject matter of their expertise.

PUBLIC COMMUNICATION TASKS

3.106. The selection ~~of the appropriate~~ process for suitable individuals for ~~the~~ core ~~and auxiliary~~ public communication tasks and auxiliary tasks should take into account the specific skills necessary and the job descriptions ~~required~~ for each role (e.g. ~~media monitor, webmaster,~~ spokesperson, technical briefer, public information officer), as well as the personal

~~capacities~~characteristics necessary to perform under ~~the~~ circumstances of high demand and high stress ~~circumstances of~~in an emergency.

~~3.67.~~3.107. The ~~human~~capacity for performance and the resilience ~~capacity~~necessary for roles in public communication ~~roles~~ should be ~~of high~~matters for consideration~~ and~~. Personal characteristics should include the ability to ~~overcome~~be effective in difficult situations, ~~effectively~~to solve problems~~,~~ effectively and to cope in extraordinary, unpredictable and ~~manage strong feelings and changeable situations~~trying circumstances.

Core public communication tasks

Production~~/~~ and writing

~~3.68.~~3.108. For efficient communication in an emergency, various materials should be ~~pre-produced~~prepared to the extent possible at the preparedness stage. These materials should include, but are not limited to, templates for press releases and statements, presentations for ~~press~~ briefings for news media, background information, and sample questions and answers ~~(Q&As).~~ .

Relations with traditional media and online news media

3.109. Relations with traditional media (e.g. the press, television and radio stations) and online news media should be developed and maintained to enable interactions, communication and liaison with journalists ~~representing~~for media outlets ~~like~~such as newspapers, news magazines~~, TV~~ and television and radio stations, and for online news ~~websites.~~ sites.

~~3.69.~~3.110. Key journalists and news media should be identified, to the extent possible, ~~identified~~ at the preparedness stage. Routine communication ~~with the identified journalists~~ should be established with the journalists identified.

Social media ~~relations~~platforms

3.111. Arrangements should be made for ~~an ongoing~~ a presence on social media ~~presence~~platforms in an emergency in order to disseminate information, ~~address~~ to respond to misinformation and rumours, and to respond to enquiries as ~~needed~~necessary and as possible.

~~3.70.~~3.112. Such arrangements should include the provision of sufficient human resources and infrastructure, and the development of standard operating procedures, including an

expedited approval process. ~~This will~~ These arrangements should allow for a timely response to questions ~~raised, discussed or flagged~~ on relevant social media ~~channels~~platforms.

~~3.71.~~3.113. Relevant social media ~~channels~~platforms should be identified, to the extent possible, at the preparedness stage. The ~~selection of~~decision on which social media ~~channels~~platforms to use should be ~~based~~made on the basis of their ~~popularity~~usage and ~~outreach capabilities~~their audience.

~~3.72.~~3.114. Organizations should have clear guidelines in place ~~regarding~~for the official use of social media platforms by members of ~~the~~ response organizations. ~~Also, organizations~~Organizations should have a clear code of conduct in place ~~regarding~~for the private use of social media platforms by members of ~~the~~ response ~~organization, as,~~organizations. This is because messages posted in a private capacity~~, messages~~ could be mistaken ~~as~~for official ~~when commenting~~information if they include comments on an emergency~~.~~ (see para. 2.1~~2.1~~.)

~~Media m~~Monitoring of the media

~~3.73.~~3.115. ~~In~~ in a nuclear or radiological emergency~~, media monitoring~~ is the process of reading, watching or listening to ~~a variety of~~various media sources and looking for the inclusion of specific keywords or topics of interest ~~related~~in relation to the emergency. Media monitoring should be conducted by using appropriate resources and technical ~~arrangements~~systems to monitor traditional media, online news media and social media.

3.116. Media monitoring should ~~provide necessary~~be used to obtain data for use in strategic planning for public communication, and in relations with traditional media and relations on social media ~~relations. Media~~platforms.

3.117. Data from media monitoring ~~data~~ should be used to enable ~~PIOs~~public information officers to know what concerns the public, what information is getting through to the public, and how ~~it~~information is being interpreted. The data should also be used to help to identify misconceptions, rumours and incorrect and misleading information (i.e. misinformation) that might be circulating in an emergency.

~~3.74.~~3.118. Media monitoring should be used to provide access to potentially valuable information for the response~~ as~~. For example, real-time information ~~e.g.~~ from eyewitnesses or live coverage ~~might~~could help ~~to improve~~by raising awareness of the situation ~~awareness and identify potential risks~~and could help in identifying hazards and problems~~ in the field~~.

Internal communication

3.119. Internal communication should be used to inform members of ~~the~~ response organizations about ~~the~~an emergency and the emergency response~~. The~~ and to meet their needs for information~~ should address their information needs.~~. Internal communication in this context ~~does~~should not ~~comprise~~include operational communication ~~to organize~~for organizing the emergency response. ~~It is therefore also~~Internal communication should be a part of public communication and it should not ~~contain~~include confidential or ~~propriety~~proprietary information.

~~3.75.~~3.120. Members of ~~the~~ response organizations ~~will be multipliers of the official messaging.~~should be able to act as channels for public communication. Arrangements should be made and should be communicated ~~via~~by means of internal communication to ensure that members of ~~the~~ response organizations who are contacted by journalists ~~are knowledgeable~~know to refer ~~these~~such requests to the ~~PIO~~public information officer section.

~~*Public relations*~~

Other public information activities

~~3.76.~~3.121. Other public information~~ Public relations~~ activities are activities other than those conducted ~~by~~as public information for traditional media, online news media and social media ~~relations. Public relations~~. Other public information activities should ~~coordinate and organize~~include communication with interested ~~party engagement~~parties, as appropriate, to provide ~~consistent and, as needed,~~ additional information on emergency preparedness and response, as necessary, to the public. ~~This~~Such activities should ~~comprise~~include, as appropriate, newsletter services and two-way communication~~ formats~~, including~~ newsletter services~~, for example, telephone enquiry hotlines and public meetings.~~ More guidance on the communication with interested parties in general can be found in Ref. [11].~~

~~2.10. The PIO(s) responsible for public relations should conduct all efforts following the 'one message, many voices' principle and coordinating closely with those responsible for other communication tasks, especially with social media relations as another tool for two-way communication.~~

~~2.11. The focus of public relations should be set on providing background information, both generic and specific to the relevant interested parties.~~

Online communication

3.122. ~~The~~ Those public information officers responsible for online communication ~~team or team member~~ should be responsible for ~~disseminating the~~making messages of the response organization ~~via~~available on its web site. The maintenance of an emergency web ~~site~~page when activated for a severe ~~emergencies is~~emergency should also be a responsibility of the public information officers responsible for online communication~~ function~~.

~~3.77.~~3.123. The public information officers responsible for online communication should be in close contact with the public information officers responsible for online communication on social media platforms.

Auxiliary public communication tasks

Logistics and technical support

~~3.78.~~3.124. ~~The logistics~~Logistics and technical support for the ~~PIO~~public information officer section should be provided either by the logistics section within the unified command and control system or by the ~~PIO~~public information officer section's own logistics ~~organization~~section. Logistics and technical support ~~includes~~functions should include the ~~set~~ setting up and maintenance of ~~a media~~an off-site public information centre, telephone enquiry hotlines and ~~operations~~ facilities for operation of the ~~PIO section including telecommunication and IT infrastructure as well as the technical and administrative arrangements for press briefings.~~ public information officer section.

3.125. Facilities for operation of the public information officer section should include infrastructure for telecommunication and information technology, as well as the technical systems and administrative arrangements necessary for briefings for news media.

Translation services

3.126. ~~Para. 5.45 of~~ Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.45) requires that information on the response to a nuclear or radiological emergency, for facilities in category I and II and areas in category V, "shall be provided in the languages mainly spoken by the population residing within the emergency planning zones and emergency planning distances~~,~~" (see para. 1.13~~1.13~~).

3.127. Capabilities for any necessary translation services should be arranged at the preparedness stage for information to be prepared for public communication during an

emergency response for facilities ~~in category I~~ and ~~II~~activities and areas in ~~category V. For those to be prepared for emergencies in~~ other emergency preparedness categories~~, translation services~~ (see 1.14~~1.14~~ Requirement 4 of GSR Part 7 [2]~~[2]~~, para. 4.19 and Table 1).

3.128. The capabilities ~~should be arranged at the preparedness stage. They~~ for translation services should be ~~able~~adequate to provide translations ~~in~~into languages that could be relevant for public communication during ~~the~~an emergency response. This should ~~at least comprise~~include capabilities to translate ~~any information~~ to and from all ~~local~~ languages spoken by the population, and capabilities to translate from ~~local~~these languages to English and vice versa.

3.129. Consideration should be given ~~for~~to the use of translation services ~~in~~for languages spoken among foreign ~~residents~~nationals living in ~~the~~areas affected ~~area~~by an emergency as well as ~~among residents of neighboring~~languages spoken by the populations of neighbouring States. ~~Background plain~~Plain language background materials in ~~foreign~~relevant languages ~~are useful and~~ should ~~also~~ be developed at the preparedness stage. ~~In the case that~~

~~3.79.~~3.130. Where national legislation ~~dictates~~requires that communication ~~must~~ be ~~completed~~conducted in more than one official language, mechanisms should be developed at the preparedness stage to ensure that the need for translation does not delay the release of information.

~~INTERESTED PARTY DIALOGUE AND ENGAGEMENT~~

COMMUNICATION WITH AND CONSULTATION OF INTERESTED PARTIES

~~3.80.~~3.131. An interested party is typically a person or company with a concern or interest in the activities and performance of an organization~~.~~ [8]~~[8]~~ [21] The public communication

[21] The IAEA Safety Glossary, 2018 Edition [8]~~[8]~~, defines 'interested ~~parties~~party' as ~~follows: A~~a person, company, etc., with a concern or interest in the activities and performance of an organization, business, system, etc.
– The term interested party is used in a broad sense to mean a person or group having an interest in the performance of an organization.
– Those who can influence events may effectively become interested parties — whether their 'interest' is regarded as 'genuine' or not — in the sense that their views need to be considered.
~~— Interested parties would need to be specified as relevant.~~
– Interested parties have typically included the following: customers, owners, operators, employees, suppliers, partners, trade unions; the regulated industry or professionals; scientific bodies; governmental agencies or regulatory bodies (national, regional and local) whose responsibilities may cover nuclear energy; the media; the public (individuals, community groups and interest groups); and other States, especially neighbouring States that have entered into agreements providing for an exchange of information concerning possible transboundary impacts, or States involved in the export or import of certain technologies or materials.

programme and the public communication plan should include interaction with interested parties ~~during~~at the emergency preparedness stage and should include arrangements for communication with and consultation of interested parties in the course of an emergency response~~.~~, as appropriate (see Fig. 1).

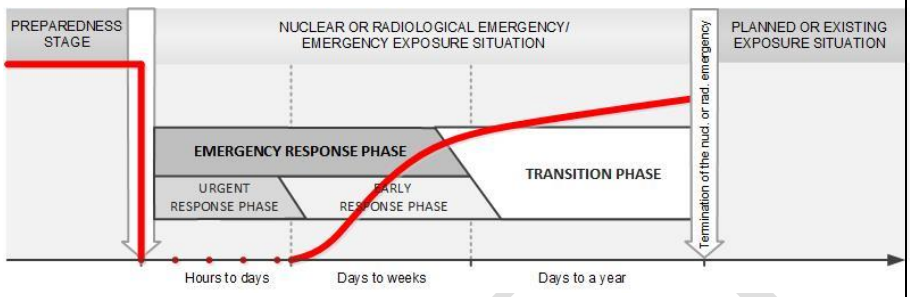

FIG. 1. Communication with and consultation of interested parties in the course of a nuclear or radiological emergency. (From GSG-11 [1]~~[1]~~, Fig. 4, p.80.) [Figure to be edited.]

~~3.81.~~3.132. Key interested parties should be identified to the extent possible at the preparedness stage~~ prior to an emergency.~~. Examples of key interested parties are presented in para. 4.38~~4.38~~.

3.133. Regular ~~dialogue~~communication with ~~identified~~and consultation of key interested parties should be established at the preparedness stage to support ~~a better~~greater understanding of protective actions or other response actions~~, and thus facilitate~~. This regular communication should enhance acceptance of decisions taken ~~during~~in a nuclear or radiological emergency. ~~This dialogue~~

~~3.82.~~3.134. The communication and consultation in an emergency should follow the principles of ~~effective~~ public communication ~~in emergencies~~ (see ~~para.~~paras ~~2.2~~2.2.4~~2.2.4~~–2.2.4~~2.2.41~~) to ~~amplify~~gain and to maintain trust ~~and credibility.~~on the part of the public. Established public communication networks ~~are also~~should be a useful ~~mechanisms~~means to support consistent ~~messages~~messaging in ~~emergencies~~an emergency.

3.135. An ~~analysis and identification~~evaluation should be carried out ~~on the different interested parties'~~to determine perceptions ~~on radiation~~of radiological health hazards and radiation related risks~~, the communication~~ on the part of different interested parties, the channels of communication that ~~they~~interested parties use, and their differing needs and priorities. ~~This~~

~~3.83.~~3.136. Measures for such an evaluation should include the monitoring of public opinion (e.g. by means of surveys~~, face-to-face~~), discussions in person and public meetings. ~~The~~Observations and lessons from the results of this evaluation should be incorporated ~~in~~into the ~~respective~~ public communication strategy.

~~3.84.~~3.137. ~~Based on this evaluation the~~The most effective public communication tools ~~to reach the~~for reaching various interested parties and ~~their~~the specific needs of interested parties for background information should be identified on the basis of the evaluation.

~~3.85.~~3.138. ~~This~~Such an evaluation should be conducted regularly as the perceptions, needs and priorities of interested parties ~~might~~could change over time. Arrangements should be adapted accordingly.

~~3.86.~~3.139. ~~Dialogue~~Communication with and consultation of interested parties should be tested regularly during emergency exercises.

PUBLIC COMMUNICATION TOOLS

3.140. The following communication tools should be used as appropriate ~~to disseminate the public communication messages effectively. An example list~~for effective public communication in an emergency: press releases; statements for television and radio stations; briefings for news media; postings and communication on social media platforms; telephone enquiry hotlines; background information material; an emergency web page; and maps and mapping products.

~~3.87.~~3.141. A listing of advantages and disadvantages of these and other communication tools ~~can be found~~is provided in Annex III. Example templates for press releases adapted ~~to~~for different types of emergencies are provided in ~~Appendix~~appendix I of Ref. [10]~~[10]~~.

Press releases

~~2.12.~~ Templates for press releases ~~should be prepared at the preparedness stage to ensure a quick start of the initial response.~~

~~3.88.~~3.142. ~~Templates for press releases on emergencies~~ in a nuclear or radiological emergency should be based on the organization's standard templates for press releases. ~~Apart from room for the specific details of the emergency, the~~The template should ~~contain:~~ include the following:

(a) The issuing organization's name and logo;

~~4~~

(b) –A clear ~~indicator~~indication that it is a press release on an emergency;

(c) ~~Date~~The date and the time (in both local time and universal coordinated time (UTC));

(d) -Contact details for ~~further~~ enquiries~~.~~ from the news media or the public;

(e) ~~Based on~~Space for details of the emergency.

3.143. Generic templates for initial press releases in an emergency only should be prepared at the preparedness stage to enable a quick activation of the initial public communication response.

~~3.89.~~3.144. On the basis of the communication strategy, various generic templates should be prepared for initial press releases covering ~~likely~~possible scenarios as identified in the communication strategy~~ e.g.~~. These scenarios should include, as appropriate, an accident at a nuclear power plant, a lost radioactive source~~ or~~, and a nuclear or radiological emergency initiated by a nuclear security event.~~ These generic templates should be used for initial press releases only to shorten the response time. The templates should foresee the possibility to enter situation specific details.~~

~~3.90.~~3.145. The approval process ~~of the~~for an initial press release should be ~~designed in a way~~ such that ~~the~~a target time could be met for issuing the initial press release ~~of~~within one hour ~~can be met after PIO activation.~~ of activation by the public information officer of the public communication response.

~~Holding~~Preliminary statement

3.146. -A template of a generic ~~holding~~preliminary statement should be prepared and ~~pre-~~approved at the preparedness stage for immediate release, if deemed necessary by the lead ~~PIO, during the~~ public information officer, in the public communication response to a nuclear or radiological emergency (see para. 2.2.64~~2.2.63~~).

3.147. The availability and use of such a ~~pre-produced holding~~generic preliminary statement ~~enables~~should enable immediate communication~~,~~ (including communication on social media~~,~~ platforms) without ~~having~~information specific to the event ~~specific information~~ being available ~~yet. This can~~.

~~3.91.~~3.148. The use of a generic preliminary statement should contribute to limiting ~~rumours~~the spread of rumours and to ~~fostering~~gaining and maintaining trust ~~into the~~

~~organization's~~on the part of the public in the public communication response~~ abilities. Example templates~~. An example template of such a ~~holding~~preliminary statement ~~can be found~~is provided in Annex ~~V~~I.

Statements for television and radio stations

~~3.92.~~3.149. ~~A~~Under the following circumstances, a spokesperson should give a first statement for ~~T V~~television and radio stations simultaneously with the issuing of a first press release or as soon as possible ~~after issuing a first press release~~afterwards:

(a) When ~~there is~~ considerable demand for such a statement is expressed ~~for such a statement by~~in the news media or on social media~~; and/~~ platforms; or

(b) When the lead ~~PIO~~public information officer considers that such a statement would be beneficial ~~to explain~~for explaining the ~~specific~~ circumstances of the emergency to the public and ~~to maintain the public's~~for gaining and maintaining trust on the part of the public.

~~3.93.~~3.150. -Arrangements should be made to identify, to the extent possible, possible locations ~~to give such~~for making statements~~.~~ for representatives of television and radio stations. These locations should not be ~~located within~~in areas that might be subject to restrictions on access for reasons of safety or security~~ restrictions. These~~. The locations should be easily accessible by ~~the media.~~ representatives of television and radio stations.

3.151. ~~It is preferable to give the media the~~Representatives of television and radio stations should if possible be given an opportunity to record a statement or to broadcast a statement live ~~such a statement~~ themselves.~~ However~~

~~3.94.~~3.152. If the lead public information officer deems it appropriate, such ~~a statement can also~~statements should be recorded by the organization and ~~subsequently~~should be ~~provided to the media,~~made available on the organization's web site~~-~~, to the news media and ~~via~~on social media ~~in case the lead PIO deems this appropriate e.g. due~~platforms. This might be necessary owing to time constraints or organizational constraints, for example.

3.153. If the lead public information officer deems it appropriate, such statements should also be provided via live streaming on various web sites.

~~Media b~~Briefings for news media

~~3.95.~~3.154. Briefings for news media~~Media briefings~~ should be conducted when there is significant new information ~~on~~ available pertaining to an emergency or when there is high interest in the news media~~ attention regarding the emergency. More guidance on media~~. Guidance on briefings for news media can ~~also~~ be found in Section 4~~,~~ PC-IS.13 of Ref. [10]~~[10]~~.

3.155. Arrangements should be made to identify, to the extent possible, possible locations for ~~media~~ briefings for news media. These locations should not be ~~located within~~in areas that might be subject to restrictions on access for reasons of safety or security~~ restrictions. These~~. The locations should be easily accessible by representatives of the news media.

~~3.96.~~3.156. Arrangements should be made to ensure that the following necessary infrastructure for ~~media~~ briefings for news media is available at these locations to ~~ensure that the~~enable news media representatives who are attending ~~media can understand,~~ to be provided with information and to process and ~~further~~ communicate the information received~~ information:~~ :

(a) An audio system;

(b) ~~The possibility to present slides~~A means for projecting or presenting text, charts, ~~photos~~photographs, graphics, videos, etc.;

(c) ~~Power~~A power supply for ~~the~~equipment of news media representatives;

(d) Internet access.

~~3.97.~~3.157. The capacity of the ~~location~~locations should be ~~commensurate with the magnitude of the emergency,~~such as to ~~ensure that all~~enable news media representatives ~~can~~to be accommodated adequately for the possible scale of an emergency and of the public communication response.

~~Social media postings~~Postings and ~~dialogue~~

~~A~~C~~c~~ommunication on social media platforms

3.158. A strategy ~~should be implemented~~for public communication by means of social media platforms should be followed at the preparedness stage~~ including setting~~. The public

information officers responsible for online communication on social media platforms should set up ~~own~~ accounts for the response organization on the most relevant social media platforms to reach a maximum number of users and to gain the necessary experience~~ necessary.~~.

~~3.98.~~3.159. Communication on the ~~chosen~~most relevant social media platforms should be continuous ~~by sharing~~and information should be shared with ~~and engaging~~ followers regularly ~~even when there is no emergency.~~at the preparedness stage. This will help ~~to increase~~in gaining trust on the ~~number~~part of ~~followers~~the public, in gaining an audience and ~~to ensure~~in ensuring that ~~posting~~the use of social media platforms in an emergency will not be new ~~or confusing for the communication team. Regardless of the number of followers on social media platforms, communication should be done on all channels~~for the public information officers.

3.160. ~~In a number of States, social media is~~ Those responsible for public communication in an emergency should take into account that the use of social media platforms will be the preferred ~~medium~~means for ~~asking questions~~making enquiries and receiving information for many audiences. ~~Efficient use of social~~Social media ~~channels can~~platforms should be used as an effective method ~~to relieve~~of reducing the need for individual enquiries by other means of public communication~~ tools~~, such as telephone enquiry hotlines and email~~ enquiries. Answers~~.

~~3.99.~~3.161. Those responsible for public communication in an emergency should anticipate that answers provided to questions raised on social media platforms will be read by other users, ~~as well as media, often resulting in a decreased need for individual enquiries.~~ including users in the news media.

Telephone enquiry hotlines

~~3.100.~~3.162. Arrangements should be made at the preparedness stage to ensure the availability of telephone enquiry hotlines~~. These~~ and of trained operators to answer telephone enquiries from the public during a nuclear or radiological emergency. The arrangements for telephone enquiry hotlines for the public communication response should be scalable to ~~meet~~ the ~~needs caused by emergencies~~differing nature and severity of ~~various severities~~an emergency.

~~3.101.~~3.163. Arrangements should be made at the preparedness stage for the use of ~~pre-recorded~~prerecorded messages ~~that should additionally be used~~for telephone enquiry hotlines, and for using telephone enquiry hotlines to provide the latest press release ~~as well as~~and recent

information on ~~the most up-to-date~~ protective actions and other response actions~~, to help alleviate telephone congestion~~.

~~3.102.~~3.164. Arrangements should be made at the preparedness stage to ensure that telephone enquiries can be ~~answered~~dealt with in ~~all relevant~~the languages mainly spoken ~~within a State~~by the population.

Background information material

3.165. Background information material ~~that could be useful to~~ in support of the public communication ~~efforts during the~~ response should be prepared at the preparedness stage.

~~2.13.~~ Background information material should~~, to the extent possible, be developed at the preparedness stage.~~

~~3.103.~~3.166. ~~It should be designed in a way~~ be such that it can be ~~published via~~ made available on the organization's web site, in traditional media and online news media, at public meetings, ~~via~~on social media~~, via traditional and online news media~~ platforms and on request. ~~This~~Background information material should ~~also~~ include a catalogue of ~~most~~ frequently asked questions and ~~respective~~ answers ~~(FAQs).~~.

~~3.104.~~3.167. ~~Such background~~Background information material should ~~further~~ include ~~but not be limited to~~ maps, graphics and basic information ~~about~~on the ~~basics~~uses of nuclear energy, radiation protection, exposure pathways, protective actions and other response actions, the roles and responsibilities of ~~the~~ response organizations, and ~~plain language explanations about the type~~types of nuclear or radiological emergencies~~y~~. (See Annex IV for ~~an example~~a list of useful background information ~~materials. These materials~~material.) The background information material should be regularly reviewed and revised as appropriate.

3.168. ~~Para 5.45 of~~ Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.45) requires that ~~for~~"For facilities in category I or II and areas in category V, arrangements shall be made to provide the permanent population, transient population groups and special population groups or those responsible for them and special facilities within the emergency planning zones and emergency planning distances…, before operation and throughout the lifetime of the facility, with information on the response to a nuclear or radiological emergency~~. Para.~~" (see para. 1.13~~1.13~~ and see 1.14~~1.14~~Requirement 9 of GSR Part 7 [2]~~[2]~~, para. 5.~~45 of~~ 38).

~~3.105.~~3.169. Requirement 10 of GSR Part 7 [2]~~[2] furthermore~~ requires that ~~this~~"This information shall include information on the potential for a nuclear or radiological emergency, on the nature of the hazards, on how people would be warned or notified, and on the actions to be taken in such an emergency~~. This information should be based on guidance given above on background information material and should be incorporated, as appropriate, in the interested parties dialogue and engagement (see paras 3.88–3.94).~~."

3.170. Background information material on the response to an emergency should be incorporated, as appropriate, into communication with interested parties (see paras 3.131~~3.131~~–3.139~~3.139~~).

Emergency ~~webpage~~web page

~~3.106.~~3.171. -Arrangements should be made for all ~~officially published~~official information in a nuclear or radiological emergency and for contact details for use by the news media and by the public to be made available on the organization's web site.

~~3.107.~~3.172. -For ~~more~~a severe ~~emergencies with significantly increased~~emergency with significant interest on the part of news media and the public~~ interest~~, a specific emergency ~~webpage~~web page should be made available~~, following~~. The emergency web page should follow a graded approach~~, to ease the~~ (see para. 1.28~~1.28~~) to simplify its use and its updating ~~process for PIOs. This will also simplify the availability of information for the media and the~~by public ~~and will reduce the web site traffic as relevant~~ information ~~can be found more easily. The latter ensures the stability of the web site and therefore its availability.~~officers. The emergency ~~webpage~~web page should be prepared at the preparedness stage.

3.173. -The design of the emergency web page and arrangements made for ~~the use and~~its activation ~~of the emergency webpage~~ and use should be suitable for use by the public information officer section.

~~3.108.~~3.174. In particular, the web page and arrangements should allow ~~the PIO section, especially~~ those ~~PIOs~~public information officers responsible for online communication, ~~to easily upload~~as well as others in the public information officer section, to upload material in predefined formats and without the need for technical support. Such material should include press releases, video statements, background information and other relevant official information~~ without specific IT support and in a predefined format~~.

~~3.109.~~3.175. Arrangements should be made ~~to facilitate~~ for the incorporation of a specific group in the public information officer section dedicated to ~~addressing rumours and~~ responding on the emergency web page to misinformation and rumours. Rumours on social media platforms should also be responded to. Links to relevant information on the emergency ~~webpage. In parallel, rumours should also be addressed~~web page and/or other web sites where accurate factual content is available should be provided on social media ~~with links to the web page where factual information is contained~~platforms.

~~3.110.~~3.176. ~~Due to the nature of a severe~~The emergency~~, the emergency webpage~~ web page should have a ~~very~~ clear, ~~lean~~plain design ~~that supports~~ for usability and ~~easy~~ease of navigation~~.~~ and it should be readily displayed on mobile devices. The use of ~~colours~~colour and other design elements should ~~be considered carefully to clearly~~ differentiate it clearly from any promotional content or advocacy material elsewhere on the web site.

3.177. The design of the web page should ensure ease of access to the extent possible for all groups of the population, including special groups such as those with impaired vision or hearing.

~~3.111.~~3.178. The emergency ~~webpage~~web page should be designed in such a way that it ~~only~~ displays ~~officially published~~only official information on the emergency. It should not ~~contain~~include promotional content or advocacy material or other content that could be considered inappropriate in ~~light~~the context of ~~the ongoing~~an emergency. ~~This webpage~~The emergency web page should not be accessible for the public when there is no emergency that warrants ~~the~~its activation~~ of the emergency webpage. It should be kept as a "dark" webpage, i.e. not visible for and accessible to the public during non-emergency times~~.

3.179. The organization's web site, including the emergency ~~webpage~~web page, should be hosted in such a way that the ~~server~~ capacity of the server is sufficient ~~to manage~~for the ~~intense~~volume of traffic to be expected in ~~such situations.~~an emergency. The ~~breakdown~~capacity of the server should undergo regular and realistic testing.

~~3.112.~~3.180. Disruption of the emergency ~~webpage, making~~web page that ma~~d~~kes it unreachable for a ~~longer~~long period~~, may harm~~ should be avoided. Such disruption could undermine the organization's ~~credibility~~trustworthiness and ~~the public's~~ trust on the part of the public in the emergency response~~ as a whole~~.

~~3.113.~~3.181. ~~The activation~~Activation of the emergency ~~webpage~~web page should be ~~part of~~included in relevant ~~trainings. The server capacities should undergo regular and realistic stress tests~~training.

~~2.14. Para. 5.72 of Requirement 13 of GSR Part 7 [2] requires that governments ensure that a system for putting radiological health hazards in perspective in a nuclear or radiological emergency is developed and implemented with the following aim:~~

~~(a) To support informed decision making concerning protective actions and other response actions to be taken;~~

~~(b) To help in ensuring that actions taken do more good than harm;~~

~~(c) To address public concerns regarding potential health effects.~~

PUTTING RADIOLOGICAL HEALTH HAZARDS IN PERSPECTIVE

3.182. In a nuclear or radiological emergency, the response organizations ~~are likely~~should expect to receive questions from the news media and the public on ~~the potentially harmful effects to people~~potential adverse consequences for human life, health, property and the environment. This has been demonstrated by ~~the~~ experience from the response to past emergencies~~ including~~.

~~3.114.~~3.183. In the Report by the Director General of the IAEA on the Fukushima Daiichi accident ~~when~~[12]~~[12]~~, it was ~~observed that the "factual~~concluded in the observations and lessons that "Factual information on radiation effects needs to be communicated in an understandable and timely manner to individuals in affected areas in order to enhance their understanding of protection strategies, to alleviate their concerns and [to] support their own protection initiatives" ~~[13]. Thus, arrangements should be in place to address these concerns in a timely, understandable and effective way.~~[12]~~[12]~~.

3.184. ~~As part of the arrangements referred to in para 3.125, the system to put radiological health hazards in perspective in line with~~ Requirement 13 of GSR Part 7 [2]~~[2] should be~~ [2]~~[2]~~ (para. 5.72) requires that "The government shall ensure that a system for putting radiological health hazards in perspective in a nuclear or radiological emergency is developed and implemented ~~to ensure that~~with the ~~public is~~following aim:

— "To support informed ~~on the manner in which they are protected when complying with recommended~~decision making concerning protective actions and other response actions ~~(or~~to be taken;

— "To help in ~~absence of any such recommendation) and to~~ ensuring that actions taken do more good than harm;

— "To address ~~their~~public concerns regarding potential health effects."

3.185. A report by the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) [13]~~[13]~~ (see Annex V) distinguishes between: .

(a) health effects that are objectively demonstrable and therefore can be attributed[22] to radiation exposure; and

(b) radiation 'risks', or possibilities of harm usually associated with radiation exposure, which could be subjectively inferred in possible or future exposure situations, and are used mainly for radiation protection purposes.

3.186. Health effects that are objectively and scientifically attributed to radiation exposure have been considered in the past[23] in parallel with those health effects that are possibly associated with radiation exposure in a large population and cannot be demonstrated but may be subjectively inferred. This has created communication problems, which on occasion have been detrimental to the people to be protected, resulting in psychological harm to the people affected.

3.187. Radiological health hazards in a nuclear or radiological emergency should be explained and put in perspective in clear and accurate yet comprehensible language. The system of putting radiological health hazards in perspective is important to explain any technical or scientific information in a nuclear or radiological emergency. It is an equally important to be used when addressing the primary ~~concerns.~~ public concerns (i.e. "Am I safe?") in a nuclear or radiological emergency. In ~~addition, maintaining regular dialogue and other forms of information sharing~~the context of this Safety Guide, the term 'radiological health hazards' is used in relation to health effects that can be attributed to exposure to radiation.

[22] In the context of the UNSCEAR report [13]~~[13]~~ and this Safety Guide, attributability refers whether or not a manifest health effect in an individual or a manifest change in frequency of health effects in a population is capable of being ascribed as having [been] induced by radiation exposure.

[23] For example, in the Report by the Director General of the IAEA on the Fukushima Daiichi accident [12]~~[12]~~ it was stated that "the risks of radiation exposure and the attribution of health effects to radiation need to be clearly presented to stakeholders, making it unambiguous that any increases in the occurrence of health effects in populations are not attributable to exposure to radiation if levels of exposure are similar to the global average background levels of radiation."

3.188. The system for putting radiological health hazards in perspective in an emergency should be developed at the preparedness stage for use in the public communication at any stage.

3.189. The system for putting radiological health hazards in perspective should be developed with the involvement of relevant technical experts as well as professionals in public communication. The system should be developed in consultation with the public and other interested parties ~~should also be considered. This information-sharing should also aim at explaining the rationale for~~ .

3.190. The concepts underlying the system for putting radiological health hazards in perspective should be sufficiently well understood by those involved in the public communication to ensure they are consistently reflected at any stage. The system should be tested with selected audiences for its suitability and adequacy prior to its adoption.

3.191. The system for putting radiological health hazards in perspective should be suitable for use in informing the public and other interested parties of the reasons for complying with instructions on protective actions and other response actions ~~in order to facilitate better understanding, acceptance and~~ (or as appropriate, why no specific emergency response actions are necessary).

~~3.115.~~3.192. The system for putting radiological health hazards in perspective should be used to address concerns of the public about potential radiation induced health effects. Those responsible for public communication should consider maintaining regular communication with and consultation of the public and other interested parties on concerns about potential radiation induced health effects at the preparedness stage as well as during an emergency response to support the effective implementation of ~~the recommended~~protective actions and other response actions.

~~2.15. Taking into account lessons learned from experience[24], the development of a system for putting radiological health hazards in perspective should consider:~~

3.193. The system for putting radiological health hazards in perspective should support effective public protection and should not prevent implementation of additional measures

~~[24] For example, the lesson learned in the response to the Fukushima Daiichi accident stating that "The risks of radiation exposure and the attribution of health effects to radiation need to be clearly presented to stakeholders, making it unambiguous that any increases in the occurrence of health effects in populations are not attributable to exposure to radiation if levels of exposure are similar to the global average background levels of radiation." [11]~~

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should they be justified and optimized. Thus, such a system should not substitute the need for authorities to further implement monitoring and assessments, medical screenings and diagnosis as well as the need to conduct epidemiological studies, when appropriate, with the aim to make an accurate attribution of radiation induced health effects after a nuclear or radiological emergency. Instead, it is intended to facilitate an effective communication when detailed assessments are not yet available.

3.194. The following should be considered in developing a system for putting radiological health hazards in perspective:

(a) The rationale for ~~implementing~~taking protective actions and other response actions in a nuclear or radiological emergency~~, including the national criteria used for this purpose~~;

(b) ~~-~~The ~~retrospective attribution of radiation induced~~ health effects ~~[14] on~~that have been scientifically and objectively attributed to exposure to radiation and the ~~basis of~~association of such health effects with an indicator such as estimated doses or measured quantities;

(c) ~~-The need for public~~Public concerns and the need to ~~be addressed~~respond to them in ~~a plain~~clear and ~~understandable~~comprehensible language;

(d) ~~-~~The ~~differences in the~~ perception of ~~the~~ radiological health hazards ~~among~~on the part of the public in comparison to that of ~~emergency preparedness and response experts and other~~ technical experts~~.~~ or among different experts.

3.195. ~~A system for putting radiological health hazards in perspective should be based on the retrospective attribution of radiation induced health effects and not on the prospective inference of radiation risks~~[25]~~. However, the prospective~~The inference of radiation risks should continue forming a basis for precautionary radiation protection measures in normal situations primarily (i.e. planned and existing exposure situations) to be applied ~~to allow for protection and safety of the affected population~~ even in the longer term after ~~a~~the nuclear or radiological emergency~~,~~ as ~~appropriate. However, consideration should be given to the ICRP recommendation that "it is not appropriate, for the purposes of public health planning, to calculate the hypothetical number of cases of cancer or heritable disease that might be associated with very small radiation doses received~~ long as they are justified.

~~[25] For retrospective attribution of radiation induced health effects and the prospective inference of radiation risks see Ref [14].~~

~~3.116.~~3.196. UNSCEAR "does not recommend multiplying very low doses by large numbers of ~~people over very long periods of time" [15].~~ individuals to estimate numbers of radiation induced health effects within a population exposed to incremental doses at levels equivalent to or lower than natural background levels" [13]~~[13]~~ (see Annex V).

~~2.16. Any system developed taking into account para. 3.126 for the purpose of effective public communication should not substitute individual assessments, medical screenings, or examinations needed to ensure an accurate attribution of radiation induced health effects after a nuclear or radiological emergency. Instead it is intended to facilitate an effective communication when detailed assessments are yet not available.~~

~~2.17. The system for putting radiological health hazards in perspective should be developed with involvement of technical experts as well as experts in public communication. The public and other interested parties should also be consulted throughout the development process. The system should be tested with selected audiences for its appropriateness and adequateness prior to adoption.~~

3.197. -UNSCEAR also discusses that the public health authorities may need to make such projections of the number of radiation induced health effects within a population for comparative purposes when allocating resources, but cautious that such projections should not lead to inference that the projected health effects were anything other than hypothetical (see Annex V).

3.198. Hypothetical calculations of numbers of health effects associated with exposure at low doses and low dose rates among a large population may be used in justification and optimization of protection and safety. However, such hypothetical calculations are open to misinterpretation and misrepresentation, and they should not be used by those responsible for public communication on radiological health hazards.

3.199. Experience has shown that the models used to provide for precautionary radiation protection measures at low doses and low dose rates in normal situations (i.e. planned exposure situations) and associated regulatory dose limits were understood, primarily by the public and non-technical community, as demarcations for a safe radiation exposure levels. Thus, this should be considered in the public communication strategy to avoid any misunderstanding and to bring clarity on the applicability of the models and on radiological health hazards related to low doses and low dose rates taking into account the UNSCEAR 2012 Report [13]~~[13]~~.

~~3.117.~~3.200. An example system for putting radiological health hazards in perspective, developed taking into account the recommendations given in para. ~~3.127~~3.194~~3.194~~, is provided in the Appendix~~ 1. This example system is based on the generic criteria for taking protective actions and other response actions in a nuclear or radiological emergency provided in IAEA Safety Standards (GSR Part 7 [2] and GSG-2 [6]). Based on the scientific evidence, for doses below these generic criteria there will not be any severe deterministic effects or an observable increase in the incidence of cancer, even in a very large exposed group~~.

3.201. -In a nuclear or radiological emergency, the ~~public~~public's perception of ~~safety of the situation~~hazards may be associated not only with ~~the~~ radiological health hazards but also with non-radiological ~~aspects~~factors (such as ~~the fear~~anxiety and stress ~~present~~ and their ~~impact~~possible effects on ~~individual mental~~ health). ~~Thus, the~~The relevant authorities should differentiate between radiological health hazards and non-radiological factors in ~~addressing the question~~responding to questions of the public such as "Am I safe?".

3.202. If the radiological situation allows, the relevant authorities may consider answering ~~this question positively by applying~~questions of the public by referring, as appropriate, to the third level of the proposed example system ('no ~~observable~~attributable radiation induced health effects') in the Appendix~~ I. The~~.

~~3.118.~~3.203. To avoid confusion and misleading the public into overestimating the radiological consequences, non-radiological considerations ~~of an answer to such a question raised by the public~~ should be addressed separately ~~and should not lead to an overestimation of~~from radiological consequences in a response to such questions raised by the public.

~~3.119.~~3.204. ~~The~~An example graphic for the system ~~given~~for putting radiological health hazards in perspective for use in the public communication is provided in Annex VI.

TRAINING AND EXERCISES

Training

~~3.120.~~3.205. Public information officers and others involved in the public communication ~~aspects of the emergency~~ response such as senior managers, spokespersons and technical briefers, and emergency response personnel, should be prepared for situations ~~when~~in which members of the public or ~~the~~representatives of the news media address questions to them, including questions raised on social media~~. Respective~~ platforms. Regular media training

simulating these situations and providing strategiesshould be conducted on how to properly respond toin such situations should be conducted.

3.121.3.206. Personnel, who are part of or who could be part of the unified command and control system, including first responders, should be provided with at least basic sufficient information to understand the arrangements for public communication–. Such personnel should also receive at least basic training to ensure that they understand the complexity and problems that could arise fromin public communication. The basic training should cover possible difficulties in discussions with the news media, the public, and other interested parties and others who seek information regarding thein an emergency.

3.122.3.207. PIOsPublic information officers should be trained on the factors that support risk and crisis strategies for communication strategies, the construction ofin an emergency, risk perception, and its social amplification of risks, context, and the importance of communication with and consultation of interested party dialogues and interested party involvementparties, as well as on understanding terminology and using it correctly (e.g. risk vs. hazardin relation to hazards and risks).

3.123.3.208. In accordance with their respective roles and responsibilities, PIOs need to be particularly public information officers should be trained in:

(a) Preparation of clear, accurate and consistent messaging in a timely and transparent, timely, clear, factually correct, and plain language public messaging; manner (see para. 1.241.24);

(b) Coordination of all official public information;

(c) Consistent messaging;

(d)(c) The characteristics and use and specificsof channels of communication channels, platforms and tools;

(e)(d) RiskBest practices in communication best practices;on radiological health hazards and radiation related risks;

(f)(e) TV/video and audioMaking statements and giving interviews on television and radio stations, video and audio.

3.124.3.209. Additionally, PIO training of public information officers should be integrated into overall training programmes for emergency preparedness and response training programmes

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to ensure appropriate training of all ~~emergency~~ personnel~~.~~ for emergency preparedness and response. Specific training of public information officers should include:

(a) Basic knowledge of the emergency management system~~;~~ (see para. 3.1~~3.1~~);

(b) Basic knowledge of ~~the~~ relevant scientific and technical subject matter;

(c) Training of technical briefers and other personnel, including first responders ~~on public communication procedures relevant to~~, for their role~~. Such training will not only improve~~ in public communication, to enhance their effectiveness~~, but will also provide such experts with a better~~ and their understanding of the demands ~~and challenges for public communication, in particular the need to distill complex,~~;

~~(c)~~(d) Training on how to convey scientific concepts ~~down into easy to understand plain language information, usually within very short timeframes~~clearly, such as the basics of radiation and radiological health hazards, radiation related risks and emergency response actions;

~~(d) Training in order to convey in plain language such things as an explanation of the basics of radiation, risk, protective actions and other complex technical information that is understandable to non-technical audiences; and~~

(e) Training on ~~bi-~~bilateral and multilateral liaison with other States to ensure that any possible transboundary ~~implications and concerns are identified, known and addressed~~impacts on people, property and the environment in an emergency are considered and to provide for any necessary exchange of information.

~~3.125.~~3.210. Spokespersons and technical briefers, once identified, should be trained in dealing with ~~the~~news media~~,~~; in preparing for and giving interviews and on-camera statements~~, how to show~~; in demonstrating understanding and empathy; and ~~to deal~~in dealing with strong ~~emotions, and in responding to aggressive questions.~~feelings and hostile questioning. The training should ~~comprise lectures on risk and crisis~~include elements on communicating radiological health hazards and radiation related risks, and on communicating in an emergency, including associated working sessions and exercises~~communication on radiological health hazards and radiation related risks and communication in a crisis, working sessions and exercises~~.

~~3.126.~~3.211. ~~Spokesperson training~~Training of spokespersons should ~~also~~ include training on ~~"what not to say" and how to avoid responding in ways that jeopardize~~protecting confidential or classified information, or information that is subject to ~~other~~ legal restrictions~~. This training~~

~~should be provided by a communication expert with hands-on experience in media relations,~~ and on avoiding speculation and avoiding making judgements and inappropriate statements.

~~3.127.~~3.212. Training programmes ~~should be:~~ on public communication:

(a) ~~Institutionalized as part of~~ Should be integrated into the organization's ~~emergency preparedness and response~~ training programme for emergency preparedness and response;

(b) ~~Continuously~~ Should be regularly reviewed and updated to ensure that observations and lessons are current and that training is consistent with ~~a changing environment~~meeting requirements for emergency preparedness and response;

(c) ~~Mandatory~~ Should be mandatory for ~~all identified~~those with responsibilities in emergency response ~~functions, e.g.; PIO,~~, such as senior managers, technical experts, ~~and~~ emergency response personnel, public information officers and spokespersons, and ~~commensurate~~should be in accordance with ~~identified emergency response~~their duties~~; and~~ in emergency response;

(d) Should be s~~S~~cheduled regularly~~on a recurring basis~~.

Exercises

~~3.128.~~3.213. Exercises, including drills, should be conducted to test and validate the effectiveness of the public communication programme ~~effectiveness~~, for the purpose of continuous improvement and necessary ~~adjustments to~~ adjustment of plans, procedures and response ~~protocols~~arrangements. Drills and exercises should be as realistic as possible~~. Therefore~~:

(a) ~~Public~~ A programme of regular drills and exercises for the public communication programme should be integrated ~~within existing~~into the drills and exercises of the emergency preparedness and response ~~programmes as a routine component of the overall drill and exercise programme;~~programme;

(b) Regular drills and exercises should be conducted to test the knowledge and expertise of ~~PIOs, spokespersons, and other~~ senior managers, technical experts ~~and~~, emergency response personnel, public information officers, spokespersons and others responsible for public ~~and media interactions. Periodic~~communication;

~~(b)~~(c) Regular exercises should include all ~~relevant~~ national ~~organizations involved~~authorities with responsibilities in emergency response;

~~(c)~~(d) The use of contracted services for public communication should be periodically tested in drills and exercises;

~~(d)~~(e) Drills focusing only on public communication should ~~also~~ be carried out;

~~(e)~~(f) ~~The spokesperson's skills~~Spokespersons should be ~~routinely~~regularly tested in drills and exercises, ~~with~~and their performance should be assessed ~~with~~by means of mock media interactions;

~~(f)~~(g) Others ~~identified emergency communicators, i.e.;~~ with specified responsibilities in the public communication programme, such as technical briefers~~,~~ and emergency response personnel, ~~etc.;~~ should ~~also~~ be ~~routinely~~regularly tested in drills and exercises;

~~(g)~~(h) ~~Inter-governmental~~Intergovernmental organizations~~ should~~, as part of their ~~drill and exercise~~ programmes~~,~~ of drills and exercises, should exercise public ~~messaging~~ communication to ~~enable a~~ensure consistent messaging ~~process~~ as described in the Joint Radiation Emergency Management Plan ~~[4].~~of the International Organizations [4]~~[4]~~ (see para. 3.69~~3.69~~).

~~3.129.~~3.214. The drills and exercises for t~~T~~he public communication ~~component of drills and exercises~~programme ~~of~~ should include, to the extent possible, tests of the communication strategy, ~~to~~ including processes and procedures for:

(a) Provision~~ding~~ of~~transparent, timely,~~ clear, accurate and consistent ~~factually correct, and plain language public~~ messaging in a transparent and timely manner (see para. 1.24~~1.24~~);

~~(a)~~(b) Collection ~~ng~~ and assessment~~ing~~ of information in a public communication response;

~~(b)~~(c) Coordination of ~~all sources of~~response organizations and other authorities providing official information;

~~(c)~~(d) Development of messages, including communication of ~~uncertain information~~uncertainties;

~~(d)~~(e) Necessary ~~message~~ coordination and consistency of messaging and necessary approval of messages;

~~(e)~~(f) Dissemination of information;

~~(f)~~(g) Media monitoring~~; ~~.

~~(g) Consistent messaging.~~

3.130.3.215. -Arrangements should be made for an evaluation, a review and after actiona report following the conclusion of each drill and exercise to determine. The purpose of the evaluation and review should be to identify gaps, observations and lessons and other. The report should recommend any necessary improvements for an effective public communication componentresponse within the emergency management system.

3.131.3.216. -Arrangements should be made regarding the frequency of drillfor regular drills and exercise programmesexercises to ensure that the skill level of PIOsskills of public information officers, spokespersons, technical briefers and other identified emergency communicators remainsothers responsible for public communication are sufficient to respond tofor an emergency eventresponse.

4. ARRANGEMENTS FOR PUBLIC COMMUNICATION ~~ARRANGEMENTS~~ IN EMERGENCY RESPONSE

~~THIS SECTION~~GENERAL

4.1. Section 4 provides recommendations and guidance for public communication ~~activities~~ in the response to a nuclear or radiological emergency. ~~Effective~~As an effective public communication response in an emergency is contingent on the level of ~~adequate~~ preparedness, ~~as elaborated~~public communication in emergency response should be subject to the arrangements recommended in Section 3.

4.2. Public communication ~~is~~should be part of ~~any~~the emergency management system ~~and is a critical means for ensuring~~in an ~~effective and efficient~~emergency response. ~~Thus, the~~ Those responsible for public communication ~~group~~ should be involved ~~at the onset of any actual emergency, potential emergency or~~ from the initiation of ~~a~~an emergency response. ~~Information~~Relevant information on ~~situations at~~ facilities and activities ~~involving nuclear or radiological material, even before an emergency has been declared, should~~ should be shared ~~immediately~~ at the preparedness stage with those responsible for public communication ~~to ensure timely and consistent messaging.~~ in an emergency.

ACTIVATING A PUBLIC COMMUNICATION RESPONSE

4.3. Those responsible for public~~,~~ communication in an emergency should anticipate that the public, news media and other interested parties will demand ~~immediate and comprehensive~~detailed information from ~~the emergency~~ response ~~organization.~~organizations immediately after an emergency is declared. However, ~~in most instances~~ not all ~~necessary~~relevant information ~~and data regarding the emergency is not~~ will be available ~~at the onset. Arrangements should be made to communicate with the public at the earliest possible stage of a~~for the public communication response. ~~Demonstrating, from the onset, an appropriate response, will support efforts to build and maintain public trust. Lack of communication undermines public confidence and facilitates the spread of rumours and misinformation.~~

4.4. ~~Therefore, an~~An organization's public communication response should be activated as soon as there ~~is an indication~~are indications of an emergency. Public communication should be listed as a priority in an organization's ~~priority~~ internal notification and ~~alarming~~alarm system ~~and the~~for an emergency.

4.4.4.5. The lead PIOpublic information officer should have immediate and continuedcontinuing access to seniordecision makers respondingin the response to an emergency as part of the unified command and control system to an emergency.. This helpsaccess to decision makers should ensure the PIOs' earliest possible participation in responding and ensures communicatorsthe response by public information officers. Access to decision makers should also ensure that those responsible for public communication have access to the most relevant, up-to-date and recent information available.

2.1. As detailed in the public communication plan (see paras 3.11–3.44) appropriate resources should be available and scalable anytime to address the situation.

HoldingPreliminary statement

4.5.4.6. The lead PIOpublic information officer should have the authority to release the pre-an approved generic holdingpreliminary statement (see para. 3.1463.146)), before information on an emergency becomes available, as he/she deems appropriate when, if there are already requests for information by the news media or theif an emergency is discussedunder discussion on social media, before specific information on the emergency is available platforms.

Spokespersons and technical briefers

4.6.4.7. The spokesperson should address the news media in a timely manner and at a reasonable frequency via regular intervals, by means of statements to camera and/or audio statements, or recorded video, or during mediain briefings. for news media. The spokesperson should provide the news media with statements and quotes for print, audio and visual communicationvideo communications.

4.7.4.8. Technical briefers should assist the spokesperson to provide more detailed information on theirthe subject matter in which they are technical experts, as deemed necessary consideringfor the specific kind of emergency response.

4.8.4.9. Spokespersons and technical briefers suitable for the emergency response should be appointed from among those identified and trained at the preparedness stage (see paras 3.67–3.72) taking into account the specific kind of emergency.3.1003.100–3.1053.105).

PUBLIC COMMUNICATION TASKS

4.10. Public communication tasks should be ~~conducted~~performed by the ~~PIO~~public information officer section~~ and~~. The tasks should be coordinated by the lead ~~PIO~~public information officer (see Annex ~~I). As cited above, the PIO's response to the emergency will~~ II).

~~4.9.~~4.11. The public communication response of the lead public information officer should be based on a graded approach ~~and this determines if~~(see para. 1.28~~1.28~~). The graded approach should be used to determine whether the lead ~~PIO responds to the event~~public information officer will work alone ~~or~~in the public communication response or will work with a ~~PIO~~public information officer section of ~~relevant~~appropriate size. ~~The actions described below might therefore be conducted~~~~The graded approach should also be used to determine whether the public communication tasks will be performed by an individual or by a team~~~~number of people.~~

Core public communication tasks

Strategic planning

4.12. ~~Based on~~On the basis of the communication strategy and the communication plan developed at the preparedness stage, the lead ~~PIO~~public information officer should ~~develop a situation-specific~~conduct strategic ~~approach~~ planning for the public communication response to ~~address~~ the ~~actual and ongoing~~ emergency and should set priorities.~~ This~~

4.13. Strategic planning for the public communication response to the emergency should include:

(a) making an assessment ~~of the~~for public communication ~~situation based~~purposes on the basis of data from media monitoring~~ data, the definition~~;

(b) specification of key messages~~, the~~;

(c) identification of key channels of communication and key audiences~~, and the decision~~;

~~(a)~~(d) making decisions on public communication ~~actions~~ to be ~~taken~~undertaken, in ~~line~~accordance with ~~the~~ decisions ~~of~~made in the unified command and control system.

Production~~/~~ and writing

4.14. ~~In~~ Specific information material should be prepared for the public communication response (see para. 3.108~~3.108~~), in addition to materials ~~developed~~prepared at the preparedness

stage~~,~~. This information material should be ~~produced addressing the specific situation and be~~ disseminated ~~using~~by means of the ~~various~~public communication tools that were identified~~. This~~ at the preparedness stage.

4.15. The information material should include, but is not ~~to be~~ limited to, press releases, statements, presentations for ~~press~~ briefings for news media, background information that ~~has~~was not ~~been pre-produced, Q&As~~prepared in advance, frequently asked questions and answers, and recorded video statements ~~which~~.

~~4.10.~~4.16. This information material should be used as appropriate by those responsible for public communication who are responsible for relations with traditional~~,~~ media and online ~~and~~ news media, relations on social media ~~relations~~platforms and telephone enquiry hotlines.

-Relations with t~~T~~raditional media and online news media ~~relations~~

4.17. ~~Using the pre-established traditional~~ Information should be provided to traditional media (e.g. the press, television and radio stations) and online news media ~~relations, as per the arrangements in para. 3.75, information via press~~ by means of briefings~~, camera~~ for news media, statements to camera, recorded video statements, quotes~~,~~ and interviews~~, on the basis of pre-established relations~~ (see para. 3.109~~3.109~~).

~~4.11.~~4.18. During an emergency, public information officers should ~~be provided. Maintaining~~maintain relations with traditional media and online news media ~~relations in an emergency means remaining constantly~~. Public information officers should be available at all times for ~~journalist requests throughout the emergency via~~dealing with enquiries by telephone and by email from the news media.

Social media ~~relations~~platforms

4.19. ~~Social media relations~~Public information officers responsible for online communication on social media platforms (see para 3.111~~3.111~~–3.114~~3.114~~) should ensure that ~~all published~~official information on ~~the~~an emergency is ~~being~~ made available ~~via~~on social media ~~and~~platforms as early as possible.

~~2.2.~~ Public information officers should ensure that ~~a dialogue~~communication with social media users is established and maintained as appropriate.

4.12.4.20. Social media relations should inform social media users about information newly available as soon as this is published. A link to the Links to relevant information on the web site or emergency web site should page and/or other web sites where accurate factual content is available should be provided on social media platforms.

Media mMonitoring of the media

4.13.4.21. Media monitoring (see para. 00) should be established or extended as soon as reasonably possible for reading, watching or listening to traditional, online and social media possible for sources. in traditional media, online news media and social media. Keywords predefined at the preparedness stage to narrow the and search terms selected at the preparedness stage should be reviewed and should be complemented as necessary with targeted keywords reflectingparticular to the situation, e.g.emergency, such as the name of the facility or its location or facility.

4.14.4.22. Specific considerationParticular attention should be givenpaid to hashtagsidentifiers such as 'hashtags' or similar markers used by the public, the media or the response organizations, the news media or the public to identify messages coveringrelating to the emergency.

4.15.4.23. MediaData from media monitoring data should be used to identify rumours and other misinformation, and rumours and topics of specialparticular interest to the public, and the need forto assess whether additional public information is necessary.

4.16.4.24. MediaData from media monitoring data should be made available continuously to the whole public communication response organization throughout public information section and the unified command and control system.

Internal communication

4.25. Internal communication should (see para. 3.119 3.119) should be used to provide information to be published to all members of the response organizations, also those and relevant persons who are not directly involved in the response, about with information that is to be issued to the emergencynews media and the response at least simultaneously with informingpublic.

4.17.4.26. Such internal communication should be carried out when public information is provided to external audiences or earlier. If information is provided by internal communication before public information is provided to external audiences, the information should be provided

solely on a need-to-know basis and confidentiality should be maintained~~the time lag should not exceed 30 minutes or so~~, to avoid intentional or unintentional unofficial release of the information.

~~2.3. However, if new information is communicated internally significantly earlier than to the public or the media, this information might be leaked by members of the organization intentionally or unintentionally. Thus, the delay between internal communication and publishing new information should not exceed 30 minutes.~~

Other p~~P~~ublic ~~relations~~information activities

~~4.18.~~4.27. ~~Public relations necessary~~Other public information activities (see para. 3.121~~3.121~~) should be conducted to coordinate and organize the public communication response for interested ~~party engagement~~parties, as appropriate, and to provide ~~consistent and, as needed,~~ additional information on the emergency to the public~~ should be established~~, as necessary.

Online communication

~~4.19.~~4.28. All ~~published~~official information should be made available on the organization's web site immediately~~.~~ in an emergency response (see para. 3.122~~3.122~~).

4.29. ~~The~~An emergency web ~~site~~page should be activated in ~~case of~~ an emergency ~~whose magnitude~~response that is likely to ~~create high public and media~~ be of great interest~~. It can~~ to the news media and to the public. Activation of an emergency web page should also be ~~activated~~considered in the case of ~~events~~an event that ~~cause high media~~receives attention ~~but are based on~~in the news media owing to misinformation or rumours.

~~4.20.~~4.30. The emergency web ~~site~~page should be monitored ~~permanently~~constantly by technical staff ~~to be able to~~ who should take action ~~in case increased server~~ if the volume of traffic ~~might~~is expected to exceed the capacity of the server and to jeopardize the ~~web site's~~availability of the web site during the emergency response.

Auxiliary public communication tasks

~~4.21.~~4.31. Auxiliary public communication tasks, such as logistics, technical support~~,~~ and translation services, should be activated as necessary ~~to~~in support of an emergency response~~.~~ (see paras 3.124~~3.124~~–3.126~~3.126~~).

4.32. If deemed necessary by the lead PIO and following the public communication plan,information officer, telephone enquiry hotlines, mediapublic information centres, operations facilities and facilities necessary for theoperation of the public information officer section and systems for coordination of the public communication response should be activated as soon as possible. This includes in an emergency.

4.22.4.33. These activations should be in accordance with the public communication plan. The activations should include telecommunication and IT information technology infrastructure, as well as the technical systems and administrative arrangements for press briefings for news media.

4.34. All publishedofficial information should be drafted in or translated as soon as possibleon the response to all relevant local languages. In case the lead PIO deems the a nuclear or radiological emergency to create significant international media interest, capacities, for facilities in category I and II and areas in category V, should be provided in the languages mainly spoken by the population residing within the emergency planning zones and emergency planning distances (see para. 1.131.13).

4.35. Any necessary translations should be available to translate relevant publishedprovided for information in to be prepared for public communication during an emergency response.

4.36. Translations should be provided in languages that could be relevant for public communication during the emergency response. This should include translations to and from all languages spoken by the population, and translations as appropriate from these languages to English. However, and vice versa.

4.23.4.37. If the lead public information officer deems that there is significant interest in the emergency on the part of international news media, relevant official information should be translated into English as necessary. However, the need for translation should not delay the first releaseissue of information in any language.the languages mainly spoken by the population. (See para. 3.1263.126.)

~~INTERESTED PARTIES~~

COMMUNICATION WITH INTERESTED PARTIES

~~4.24.~~4.38. Interested parties identified at the preparedness stage or during the emergency response should be provided with relevant information ~~regarding the emergency.~~about an emergency (see paras 3.131~~3.131~~–3.139~~3.139~~). Experience from past emergencies shows that ~~this includes but is~~interested parties in an emergency response include, but are not limited to:

(a) ~~-~~The ~~affected~~ population affected (directly or indirectly~~);~~) by an emergency;

(b) ~~-~~The first responders and members of the response organization;

(c) ~~-~~Those working for ~~the~~ response ~~organization~~organizations but not directly involved in the response;

(d) ~~-~~The news media;

(e) ~~-~~Community ~~and~~leaders, business leaders ~~as well as~~and the scientific community, ~~which~~who help to disseminate ~~correct~~relevant information to their respective audiences;

(f) ~~-~~International and non-governmental organizations;

(g) ~~-Affected~~Personnel in the agricultural, fishing~~,~~ and forestry ~~professionals~~sectors, and ~~other business~~ owners affected and concerned for property and for the environment;

(h) ~~-Operators and manufacturers of~~ Operating organizations, registrants and licensees, and suppliers of and for nuclear power plants or other ~~nuclear~~ facilities and activities;

(i) ~~-~~The ~~interested~~ public (~~local, national, regional~~locally, nationally, regionally and ~~international).~~internationally);

(j) ~~Based on the topics of interest identified at the preparedness stage and on media monitoring data or other information, the~~ Health professionals;

(k) Governmental organizations and government officials, including the regulatory body.

~~2.4.~~ The concerns and information needs of ~~the various interest groups~~interested parties should be ~~addressed~~dealt with in a timely manner ~~as outlined in~~on the basis of the public communication plan developed at the preparedness stage and ~~following~~ the strategic planning for public communication of the lead ~~PIO~~ public information officer.~~.~~

4.25.4.39. Public Communication Coordinationinformation officers should make use of the topics of interest identified at the preparedness stage, data from media monitoring and relevant information.

4.40. Public information officers should respond to specific concerns and questions of the affected population and other interested parties. Arrangements should be made for setting up dedicated telephone enquiry hotlines, organizing public meetings and answering enquiries by email and on social media platforms. Arrangements should be made to enable communication with interested parties at any time to the extent possible.

PUBLIC COMMUNICATION COORDINATION OF PUBLIC COMMUNICATION

National coordination

4.26.4.41. All public communication of organizations involved in the emergency response, including facility or activity, localfacilities and national levelsactivities locally and nationally, should be operational under the unified command and control system to ensure a consistent message according tomessaging in accordance with the 'one message, many voices' principle approach (see para. 2.2.362.2.35).

4.27.4.42. The coordination should ensure that all organizations adhereengaged in the public communication response confine their communication to their respective areamandates and areas of responsibility.

4.43. There should be coordination between organizations at state, territory and federal levels, as appropriate to the State.

4.28.4.44. Regular briefings for all PIOs and relatedpublic information officers and relevant staff should be conducted in person, viaby video conference or by comparable means. These regular briefings should aimbe aimed at providing an overview of the current situationemergency and the emergency response actions planned and they should provide a platform to flagfor identifying issues and challenges.

International coordination

4.45. Under ~~Article~~article 2 of the Convention on Early Notification of a Nuclear Accident ~~(~~[1]~~[1]~~, "in the ~~'Notification Convention') [1] each~~ event of an accident specified in article 1…, the State Party ~~is required~~referred to in that article shall:

(a) forthwith notify~~ the IAEA of any accident involving facilities~~, directly or ~~activities, from~~through the International Atomic Energy Agency…, those States which ~~a release of radioactive material occurs or is likely to occur and which has resulted~~are or may ~~result in an international transboundary release that could be~~ be physically affected as specified in article 1[26] and the Agency of the nuclear accident, its nature, the time of ~~radiological significance for another State.~~its occurrence and its exact location where appropriate".

~~4.29.~~4.46. ~~Para 5.48 of~~ Requirement 10 of GSR Part 7 [2]~~[2]~~ (para. 5.48) requires ~~the~~that "Arrangements shall be made by response organizations in a State to promptly provide information and advice to its nationals and to those people with interests in other States[27] in the event of a nuclear or radiological emergency declared beyond national borders, with due account taken of the emergency response actions recommended in the State in which the emergency occurs as well as in the State(s) affected by that emergency~~. This should be done by providing relevant public information and instructions either directly or via the IAEA to all potentially affected States for further dissemination to its nationals.~~ (see paras 5.73 and 6.14)".

4.47. ~~Para. 5.36 of~~ This requirement should be met by providing public information and advice either directly or through the IAEA to any State that is potentially affected in the emergency for dissemination to its nationals.

~~4.30.~~4.48. Requirement 9 of GSR Part 7 [2]~~[2]~~ (para. 5.36) requires that "A~~a~~rrangements shall be made such that information on emergency conditions, assessments and protective actions and other response actions that have been recommended and have been taken is

[26] Article 1 of the Convention on Early Notification of a Nuclear Accident states that " This Convention shall apply in the event of any accident involving facilities or activities of a State Party or of persons or legal entities under its jurisdiction or control, referred to in paragraph 2 below, from which a release of radioactive material occurs or is likely to occur and which has resulted or may result in an international transboundary release that could be of radiological safety significance for another State. Article 2 states that "The facilities and activities referred to in paragraph 1 are the following: (a) any nuclear reactor wherever located; (b) any nuclear fuel cycle facility; (c) any radioactive waste management facility; (d) the transport and storage of nuclear fuels or radioactive wastes; (e) the manufacture, use, storage, disposal and transport of radioisotopes for agricultural, industrial, medical and related scientific and research purposes; and (f) the use of radioisotopes for power generation in space objects.

[27] Examples of people with interests in other States include people travelling, people working and/or living abroad, importers and exporters, and people working in companies operating abroad.

promptly made available, as appropriate, to all relevant response organizations and to the IAEA throughout the emergency~~. Furthermore, the IAEA should be also informed on significant public communication activities to facilitate the international coordination and provision of public communication.~~."

4.49. The IAEA should be informed of a significant public communication response in order to facilitate the international coordination of public communication~~ among the~~.

~~4.31.~~4.50. The coordination of public communication between participating international organizations should ~~be following~~follow the Joint Radiation Emergency Management Plan ~~[4].~~of the International Organizations [4]~~[4]~~, in coordination with response organizations to the extent feasible.

PUBLIC COMMUNICATION TOOLS

Press releases

~~4.32.~~4.51. If a press release is deemed to be necessary ~~given~~on the basis of the nature and severity of the emergency, the target time for issuing ~~the~~an initial press release should be within one hour and its release time should not exceed two hours after ~~PIO~~ activation~~. The~~ of the public communication response by the public information officer (see paras 2.1~~2.1~~–3.145~~3.145~~). To avoid delay, the initial press release should be in general terms and ~~should~~ not be ~~too~~ detailed~~, to avoid delaying publication~~.

~~4.33.~~4.52. Press releases on the emergency should be ~~written~~ in plain and ~~understandable~~comprehensible language ~~with information on the emergency and~~ and should be issued simultaneously to ~~all~~ relevant journalists and media outlets~~ simultaneously.~~. Press releases should also be made available on the organization's web site and ~~via~~on social media platforms.

~~4.34.~~4.53. Updates of press releases should be ~~sent frequently~~ issued regularly as new information becomes available ~~that can be shared with the public~~for release.

Statements for television and radio stations

~~4.35.~~4.54. ~~In case~~If there is demand for video ~~footage~~material and audio material, a spokesperson should give a first statement for ~~TV~~television and radio stations simultaneously

with or as soon as possible after issuing a first press release. (see paras 3.149~~3.149~~–3.153~~3.153~~).

4.55. Spokespersons and technical briefers should state what is known, the origin of the available information, what is not known and what is being done to find out more information. ~~They~~

~~4.36.~~4.56. Spokespersons and technical briefers should refrain ~~from speculating~~ at all times ~~as this can harm the public's~~from speculation. Spokespersons and technical briefers should be aware that speculation could undermine the organization's trustworthiness, and should be aware that speculation could undermine trust ~~in~~on the ~~overall response and specifically~~ part of the public in the public communication ~~efforts~~response and in the emergency response generally.

~~4.37.~~4.57. ~~All~~Key statements should be video recorded and the video recording should be made available ~~via~~on the organization's web site and on social media ~~channels, with a~~ platforms. A link to the video should be included in press releases to meet the needs of online media and social media platforms.

~~Media~~ B~~b~~riefings - for news media

~~4.38.~~4.58. Briefings for news media or conferences should be conducted when there is significant information on the emergency or a high ~~media~~degree of attention ~~regarding~~in the ~~situation.~~ news media (see paras 3.154~~3.154~~–3.157~~3.157~~).

~~4.39.~~4.59. ~~During unfolding emergencies, regular press~~Regular briefings for news media should be conducted during an emergency, to ~~keep~~inform the news media ~~updated~~as necessary and to contribute to ~~transparent and continuous~~continuing public communication ~~activities~~.

~~4.40.~~4.60. ~~The procedures of~~Procedures for the ~~media~~ briefing for news media should be made clear to all spokespersons and technical briefers ~~beforehand.~~ prior to the briefing. Journalists should be ~~briefed about~~informed of the procedures for the briefing, to the extent possible, ~~prior to~~before the ~~media~~ briefing. ~~Specific consideration~~Consideration should be given to communicating the policy ~~if~~as to whether and how questions ~~will~~are to be taken and answered.

4.41.4.61. A time limit should be set for the duration of the briefing for news media. The time limit for the briefing should be set and communicated to the journalists prior to or at the beginning of the briefing.

4.62. The briefing for news media should be moderated by the lead public information officer, if possible.

4.42.4.63. Live streaming or dial-in audio access should be arranged, if possible, for journalists who cannotare unable to attend the briefing for news media in person, such as journalists in other States.

4.64. All briefings Briefings for news media should be recorded by means of audio and/or video recording, if possible, and a. A summary of key points of the briefing should be prepared, in the form of a press release, for issue after the briefing, as appropriate. When

4.43.4.65. If available, the minutesa summary of key points of the briefing for news media should also be posted online for those unable to attend in person.

2.5. The media briefing should be moderated, if possible, by the lead PIO.

Postings and communication on sSocial media postings and dialogue platforms

4.44.4.66. All publishedPublic information should be madeofficers responsible for online communication on social media platforms should make official information available viaon relevant social media channelsplatforms at the same time as it is releasedmade available on the organization's web site and viaby means of other communication channels.channels of communication (see paras 3.1583.158–3.1603.160).

4.45.4.67. Social media platforms should be used to communicate protective actions for those directly affected by the emergency and to address concerns and questions raised on the various onlinethose and other social media platforms.

4.68. Reasonable identifiers e.g. hashtags Identifiers such as 'hashtags' for messages should be used when communicating an emergency via social media to facilitate messages being easily found by on those interestedsocial media platforms used for public information in them. Socialan emergency.

4.69. Public information officers responsible for online communication on social media platforms should ~~be monitored by media monitoring officers to enable the~~monitor social media ~~relations team to react~~platforms and should respond in a timely manner to concerns, questions and rumours.

~~4.46.~~4.70. Specific attention should be ~~given~~paid by the responsible public information officers to those social media ~~channels~~platforms with ~~an~~ institutional ~~account and~~accounts on which the organization is active.

~~**Interested party dialogue**~~

Telephone enquiry hotlines

~~2.6. The affected population and other interested parties will have specific concerns and questions that should be addressed. Arrangements should be established for dedicated telephone hotlines, organizing public meetings and answering inquiries via e-mail and social media.~~

~~2.7. Arrangements should ensure a continuous dialogue to the extent possible with all interested parties.~~

4.71. Telephone ~~inquiry~~enquiry hotlines should be ~~established to handle questions by~~set up for dealing with enquiries from the public, the news media and other interested parties~~.~~ (see paras 3.162~~3.162~~–3.164~~3.164~~).

4.72. Telephone enquiry hotlines should be adequately staffed ~~sufficiently during a response~~ to be able to deal with the volume of calls~~.~~ to be expected during a public communication response.

~~4.47.~~4.73. Staff from ~~Technical and Scientific Support Organizations (TSOs)~~technical and scientific support organizations who can answer technical ~~questions can~~enquiries should be assigned as necessary to assist the ~~hotline~~ staff~~.~~ of telephone enquiry hotlines.

4.74. ~~Hotline pre~~Staff from technical and scientific support organizations should be involved as necessary in preparing technical briefings for the staff of telephone enquiry hotlines.

4.75. Staff from technical and scientific support organizations should be involved as necessary in preparing information to be made available on the organization's web site and other web sites and on social media platforms, and other public information material.

4.76. Pre-recorded messages for telephone enquiry hotlines should ~~additionally~~ be used to provide the latest ~~status update as well as~~press release and recent information on ~~the most up-to-date~~ protective actions and other response actions. ~~It would also be useful~~

~~4.48.~~4.77. Pre-recorded messages should be used to direct callers to the emergency web ~~site~~page or ~~the~~to social media ~~channels~~platforms for the most ~~up-to-date~~recently released information. ~~This will help alleviate telephone congestion~~ on emergency response actions.

Background information material

~~4.49.~~4.78. Background information material~~, such as plain language explanations on the basics of radiation, exposure pathways, the different uses of nuclear technology in the State and radiation protection, should be disseminated~~ should be made available as appropriate ~~via~~on the ~~organizations'~~organization's web ~~sites~~site, at public meetings, ~~via~~on social media~~, via~~ platforms, in traditional media and online news media, and on request. (see paras 3.165~~3.165~~–3.169~~3.169~~).

4.79. Background information material should include a catalogue of frequently asked questions and answers. Written background information material may be supported by graphics, such as illustrations or photographs of the facility or of the radiation source concerned. (See Annex IV for a listing of typical background information material.)

~~4.50.~~4.80. Background information material should be used as ~~deemed~~ appropriate ~~to communicate to~~for communicating with the public ~~also and~~, especially when ~~no or~~ little or no information on the ~~situation~~emergency is available. ~~However, care~~Care should be taken that background information material is clearly marked as such and clearly explained, ~~so as not~~ to ~~be mistaken as current~~distinguish it from official information issued on ~~a developing situation.~~ the emergency response.

Emergency web page

~~4.51.~~4.81. The emergency web page should be activated as outlined in the communication plan, or as deemed necessary by the lead ~~PIO, when significantly increased media and~~ public information officer if significant interest in the news media and among the public is expected. (see paras 3.171~~3.171~~–3.181~~3.181~~).

4.82. The emergency web page should be updated immediately when ~~new official~~ public information is issued~~ and~~. The emergency web page should ~~serve as~~provide a compilation of all ~~official~~public information on the emergency.~~ It~~

~~4.52.~~4.83. The emergency web page should ~~contain~~include the latest press release and an archive of all ~~previous~~previously issued press releases on the emergency, other statements issued for television and radio stations and video statements, ~~the~~ relevant background information and contact details for further enquiries.

~~2.8. A Frequently Asked Questions section on the emergency web page is an effective way to disseminate accurate information and to indirectly address rumours and misinformation.~~

Maps and mapping products

~~4.53.~~4.84. ~~When possible, maps~~Maps and mapping products should be used to convey information to the public and the news media~~. However, care~~ if possible. Care should be ~~used~~taken to ensure that all maps and mapping products are clearly ~~labeled~~and accurately labelled and consistently presented. Maps and mapping products should be used as necessary to ~~convey~~provide information ~~as accurately as possible and that they use a consistent coloring scheme. Maps and mapping products, when used, should highlight~~on the following:

(a) ~~Known~~ Areas known to be affected or ~~potential areas~~potentially affected by ~~the~~ a radioactive release;

(b) ~~Protective~~ Recommendations on protective actions and other response ~~action recommendations, to include~~ actions, including an urgent protective action planning zone ~~(UPZ),~~, a precautionary action zone~~ (PAZ),~~, operational intervention levels~~ (OILs),~~, extended planning distances~~ (EPD),~~ and ingestion and commodities planning distances ~~(ICPD);~~[28];

[28] The planning zones are defined in the IAEA Safety Glossary, 2018 Edition [8]~~[8]~~, as follows: Urgent protective action planning zone (UPZ): an area around a facility for which emergency arrangements have been made to take urgent protective actions in the event of a nuclear or radiological emergency to avert doses off the site in accordance with international safety standards; precautionary action zone (PAZ): an area around a facility for which emergency arrangements have been made to take urgent protective actions in the event of a nuclear or radiological emergency to avoid or to reduce the risk of severe deterministic effects off the site; operational intervention level (OIL): a set level of a measurable quantity that corresponds to a generic criterion; extended planning distance (EPD): distance around a facility within which emergency arrangements are made following the declaration of a general emergency to conduct monitoring and to identify areas warranting emergency response actions to be taken off the site within a period following a significant release that would allow the risk of stochastic effects among members of the public to be effectively reduced; ingestion and commodities planning distance

(c) ~~Radiation~~Data from radiation monitoring, including data~~, including~~ from aerial ~~survey data~~surveys;

(d) ~~Actual~~Data on the dispersion of an airborne plume ~~pathways~~;

(e) Other ~~pertinent~~relevant data such as data on the population affected~~,~~ or potentially affected, and data on types of livestock and crops affected or ~~possibly~~potentially affected;

(f) ~~Organization and authority~~ Details of the organization responsible for issuing the ~~product~~maps and mapping products and its authority for issuing maps and mapping products.

~~4.54.~~4.85. ~~Subsequent maps~~Maps and mapping products that are issued subsequently should ~~continue to~~ include ~~factual~~ data ~~as it becomes~~that have become available~~.~~ subsequently. Such ~~factual~~ data ~~could~~should include data from radiation monitoring ~~data as it becomes~~that have become available~~.~~, as appropriate. All products should be ~~continuously issued~~regularly reissued as ~~updated~~appropriate to include new data ~~becomes~~that have become available.

~~4.55.~~4.86. All maps and mapping products should ~~use~~include plain language explanations ~~that place health hazards into perspective (see~~. Comparisons made to put radiological health hazards and radiation doses in perspective (see paras 3.182~~3.182~~–3.204~~3.204~~ and the Appendix) should be as clear and comprehensible as possible yet any plain language explanation must remain accurate to avoid misleading the public ~~consistent with being accurate and not being misleading~~ (see para. ~~3.124~~2.2.30~~2.2.29~~).

~~The~~ International Nuclear and Radiological Event Scale (INES)

~~4.56.~~4.87. When communicating with the public, States may ~~use~~consider using the International Nuclear and Radiological Event Scale (INES) ~~[16].~~[1]~~[1]~~. INES is intended as a tool ~~to assess~~for communicating the safety significance of ~~events[29] associated with sources of~~

(ICPD): distance around a facility within which emergency arrangements are made to take effective emergency response actions following the declaration of a general emergency in order to reduce the risk of stochastic effects among members of the public and to mitigate non-radiological consequences as a result of the distribution, sale and consumption of food, milk and drinking water and the use of commodities other than food that may have contamination from a significant radioactive release.

~~[29] **Event (GSR Part7)**~~

~~In the context of the reporting and analysis of events, an event is any occurrence unintended by the operator, including operating error, equipment failure or other mishap, and deliberate action on the part of others, the consequences or potential consequences of which are not negligible from the point of view of protection and safety.~~

radiation. It is also a tool to communicate an event to the public, media and technical community. INES is used voluntarily and it is the prerogative of the State where the event occurred to issue an INES rating.nuclear and radiological events to the public.

2.9. If a State decides to use INES, a difference between communication with the technical community and communication with the public should be taken into account. For the general public, an explanation on how a rating, presented as a single number, is reached, is important. When communicating with the public, the whole rating process should be described using plain language. For communication with the technical community, on the other hand, a single number rating, supplemented with information on criteria relevant for the rating, is sufficient.

2.10. Experience of using INES has shown that provision of a rating, in general and particularly for low level events, can calm down public concern and media interest. For example, the rating of an event at Level 1 or Level 2 communicates that such event is, in terms of safety significance, several orders of magnitude less significant than a major accident, i.e. a Level 6 event. However, issuing an INES rating in an evolving emergency has proven to increase public concern, therefore States using INES should issue a rating of the event only when the situation is stabilized, no further aggravation is reasonably expected and the nature and specifics of the event are understood.

4.88. States may use INES on a voluntary basis to rate and to communicate on events that occur within their territory. It is not a notification or reporting system and it should not be used in emergency response. The International Nuclear and Radiological Event Scale User's Manual [14] provides further guidance on the proper use of the INES scale in public communication

HANDLING RESPONDING TO RUMOURS AND MISINFORMATION AND RUMOURS

4.89. Those responsible for public communication in an emergency should expect that misinformation and rumours will be generated iIn the public domain, rumours and misinformation may be created eitherboth intentionally or unintentionally. Arrangementsand inadvertently.

4.57.4.90. Public information officers should be made to take immediate action to immediately correct counteract misinformation and rumours and misinformation that could impact responseaffect operations. in the emergency response. Arrangements should be put in place to do the following:

Event (INES Manual)
Any occurrence that requires a report to the regulator or the operator or a communication to the public.

4

(a) Monitor To monitor traditional media, online and social news media and social media platforms and to counteract misinformation swiftly, for instance by responding and rumours promptly;

(a)(b) To respond to incorrect and misleading information (e.g. incorrect and misleading postings on social media postingsplatforms) with accurate information;

(b)(c) Follow To monitor the developmentorigin and the spread of any misinformation and rumours and to respond accordingly;

(c) Note what To take account of the concerns of the public and the media are interested in and provide respective information;

(d) Inform the news media about existing misinformation and potential consequences to discredit the misinformationto provide information correspondingly;

(e) Ensure To inform the news media of misconceptions, rumours and incorrect and misleading information (i.e. misinformation) that factually correct and updatedmight be circulating and of their potential harmful consequences;

(e)(f) To ensure that accurate and current information is continuouslyregularly provided;

(f)(g) Use To use the organizationsorganization's web sitessite or emergency web pagespage to provideissue corrections to the most prevalent and the most harmful misinformation and rumours.

2.11. It is not realistic to expect to be able to correct all misinformation. To avoid the perception that uncorrected misinformation is true, disclaimers should be included when correcting misinformation. These disclaimers should make clear that information that has not been flagged as misinformation and has not been corrected by the responsible organization must not automatically be considered as correct.

POST EMERGENCY PUBLIC COMMUNICATION FOLLOWING THE TERMINATION OF AN EMERGENCY

4.91. Organizations Those responsible for public communication in an emergency should be aware that public communication onin an emergency may need to continue even with thebe continued following termination of the emergency. Arrangements should be established to be prepared to respond to a shifted interest and questions related to

4.92. Arrangements should be made to ensure that communication with and consultation of interested parties can be continued for as long as there is significant interest. Arrangements

should be made in anticipation of increased interest on the part of the public in subjects such as liability and compensation, actions to provide for their wellbeing and health issues.

4.58.4.93. Arrangements should be made for responding to questions concerning the immediate and long term consequences of the emergency that may include areas such as liability and compensation, safety arrangements and the benefits of nuclear or radiological applications, health issues and more.. Arrangements should be made to continue to inform the public, as appropriate, to inform about ongoingprotective actions in place and on-going recovery efforts and lessons learned. Arrangements should also ensure that interested party engagement continues as long as there is considerable demand for dialogue.

5. ARRANGEMENTS FOR PUBLIC COMMUNICATION UNDER PARTICULAR CIRCUMSTANCES

~~BACKGROUND~~

GENERAL

5.1. There are specific sets of circumstances that ~~might~~could influence public communication in a nuclear or radiological emergency. ~~This section only~~Section 5 recommends ~~specific~~ arrangements for public communication under particular circumstances that ~~demand~~necessitate additional ~~consideration~~considerations to ~~what has been~~those recommended in the previous sections.

5.2. All arrangements for public communication should be based on the principles of ~~effective~~ public communication ~~and recognize~~ as set out in Section 2 (see paras 2.2.4~~2.2.4~~–2.2.39~~2.2.38~~). All arrangements should take into consideration the challenges of public communication ~~described in Section 2~~(see paras 2.2.43~~2.2.42~~–2.2.75~~2.2.74~~), irrespective of the particular circumstances.

NUCLEAR OR RADIOLOGICAL EMERGENCY INITIATED BY AN ACCIDENT~~; HUMAN OR TECHNICAL ERROR~~

5.3. In case a nuclear or radiological emergency is ~~caused~~initiated by an accident~~, human or technical~~ such as an operating error~~, organizations~~ or equipment failure, those responsible for ~~the~~ public communication ~~response~~in an emergency should expect ~~an increased demand by~~ interest on the part of the public, the news media and other interested parties ~~on information on~~in the ~~root~~ cause of the ~~event, on~~accident, and in responsibilities and liabilities.

5.4. ~~Although, the~~The provision of ~~this~~such information might be ~~challenging, e.g.~~ difficult; for legal reasons ~~related~~relating to an investigation~~, the~~ of the accident, for example. The principles of public communication (see ~~para.~~paras 2.2.4~~2.2.4)~~–2.2.42~~2.2.41~~) should ~~always~~ be applied ~~for~~ in relation to information on the ~~root~~ cause of the ~~event~~accident, and on responsibilities and liabilities~~ in order not to jeopardize the~~.

5.4.5.5. The objectives of public communication (see para. 2.2.12.2.1), 2.2.32.2.3) should be maintained, especially regardingwith regard to gaining and maintaining trust on the part of the public trust in the emergency response.

NUCLEAR OR RADIOLOGICAL EMERGENCY INITIATED BY A NATURAL DISASTEREVENT

5.6. In caseThose responsible for public communication in an emergency is caused by a natural disaster, organizations should consider that the occurrence of multiple events, i.e. the initial natural disaster and theanticipate that, if a nuclear or radiological emergency mightis initiated by a natural event such as a hurricane, an earthquake or a flood, the occurrence of multiple events (i.e. the initial natural event and the subsequent events giving rise to the emergency) could increase the complexity of the public communication response. A special focus

5.5.5.7. Special attention should be put onpaid to the coordination of the public communication effortsresponse within the unified command and control system in an emergency initiated by a natural event (see para. 2.2.332.2.32 and para. 4.414.41), as the overall). The public communication response should addressdeal with all relevant aspects of boththe events according toin accordance with the responsibilities defined in specified for the unified command and control system.

5.8. As the effects of a natural disaster might affect the public communication infrastructure and some public communication tools might not be useable to the full extent (e.g. due to interrupted mobile communication services) The public communication strategy and the public communication strategy and plan should give guidance foron the use of other communication tools to compensate for these effects. For example, plans public communication tools in the event of disruption of the infrastructure for communication. The consequences of a natural event might disrupt infrastructure and some means of public communication (e.g. mobile communication services) might be unavailable or might not be usable to the full extent.

5.6.5.9. Plans should be developed and pre-established messages should be developed for prepared for broadcasting on television and radio stations as well as for TV and the web. The impact of a natural disaster on thepossible dissemination online. Those responsible for public communication responsein an emergency should be reduced to the extent possibleanticipate at the preparedness stage, to the extent possible, the impact of a natural event on the public

communication response by applying the concept of redundancy as outlined in paras 3.89~~3.89~~ and 3.91~~3.91~~.

NUCLEAR OR RADIOLOGICAL EMERGENCY INITIATED BY A NUCLEAR SECURITY EVENT

~~5.7.~~5.10. A nuclear security event is an event that has potential or actual implications for nuclear security that must be addressed ~~[17].~~[1]~~[1]~~. Such ~~an event~~events would typically ~~involves a~~involve criminal or intentional unauthorized ~~act~~acts involving ~~(e.g. a radiological dispersal device)~~ or directed at nuclear ~~or~~material, other radioactive material~~ (e.g. theft of material)~~, associated facilities or ~~an~~ associated ~~facility~~activities, or ~~activity~~credible threats thereof (e.g. theft of radioactive material or sabotage). A nuclear security event ~~may~~might also initiate a nuclear or radiological emergency, in which case the response will include addressing both safety aspects and security aspects of the emergency.

5.11. ~~Para 5.69 of~~ Requirement 13 of GSR Part 7 [2]~~[2]~~ (para. 5.69) requires that "arrangements ~~to be established to~~shall take into account the need to protect sensitive information in circumstances where a nuclear or radiological emergency is initiated by a nuclear security event~~.~~".

~~5.8.~~5.12. In accordance with the IAEA Nuclear Security Fundamentals ~~No. 20 [18],~~[1]~~[1]~~, the legislative and regulatory framework should provide for the establishment of regulations and requirements for protecting the confidentiality of sensitive information. Arrangements for ~~communicating~~public communication in an emergency ~~triggered~~initiated by a nuclear security event should be established at the preparedness stage~~ to efficiently take into account the difference between accidents and deliberate acts that are intended to cause harm.~~. Guidance on protecting the confidentiality of information is provided in Ref. ~~[17], Security of Nuclear Information, IAEA Nuclear Security Series No. 23-G.~~[1]~~[1]~~.

~~5.9.~~5.13. ~~PIOs~~Public information officers should be made familiar at the preparedness stage with the nature of sensitive information~~,~~ and with why ~~this~~such information cannot be ~~published.~~issued (for example, information could be sensitive for reasons of nuclear security or for legal reasons).

5.10.5.14. Requirements to protect sensitive information may be perceived by the public and other interested parties as compromising the principles of transparency. of public communication (see paras 2.2.62.2.62.2.212.2.21–2.2.212.2.21).

5.15. Therefore, Tthe public communication response should explain, to the extent possible and without compromising sensitive information, why certain types of some information cannot be provided or why its release might be delayed. However t This should not delay or prevent or delay the provision of any non-sensitive information from being published that is essential to meeting the goals of emergency response, as required in outlined in para. 3.2 of GSR Part 7 [2][2] (para. 3.2).

TRANSITION PHASE

5.11.5.16. Those responsible for public communication should anticipate that tThe need for public communication changes aswill change in the course of an emergency evolves. During theanemergency response phase[20], the primary focus of public communication will be on means to communicate with the public on aspects that will support informed decisions on the onset of the emergencydecision making and effective implementation of necessary emergencyprotective actions and other response actions as recommended by respectivethe relevant authorities.

5.17. As the sourcesituation is being brought under control and stabilized, the situation is stabilizing,relevant authorities will shift the emergency response efforts to actions that supportaimed at enabling the termination of the emergency and a return topreparation for the resumption of normal living conditions for affected populations, including. This includes preparation for the resumption of normal social and economic activities.activity.

5.12.5.18. During this period (referred to as the transition phase, (see paras 3.46–3.47 and DS474 [7]),3.743.74–3.753.75 and Ref. [1][1], Section 2), various emergency response actions that were taken or restrictions imposed during the emergency response are towill be adapted or

[20] The emergency response phase is defined as the period of time from the detection of conditions warranting an emergency response until the completion of all the actions taken in anticipation of or in response to the radiological conditions expected in the first few months of the emergency. The emergency response phase typically ends when the situation is under control, the off-site radiological conditions have been characterized sufficiently well to identify whether and where food restrictions and temporary relocation are required, and all required food restrictions and temporary relocations have been put into effect (see Ref. [19]).

restrictions that were imposed will be lifted. This will ~~impact~~have consequences for affected populations and other interested parties, as well as for their information needs and priorities.

5.19. Requirement 18 of GSR Part 7 [2]~~[2]~~ (para. 5.97) requires that ~~the~~"The termination of a nuclear or radiological emergency ~~is~~shall be based on a formal decision that is made public and ~~includes~~shall include prior consultation with interested parties, as appropriate~~. In addition, it specifies the need for~~".

5.20. Requirement 18 of GSR Part 7 [2]~~[2]~~ (para. 5.96) also requires that "Arrangements for communication with the public in a nuclear or radiological emergency (see Requirement 13) shall include arrangements for ~~public~~ communication ~~to include~~on the ~~"~~reasons for any adjustment of protective actions and other response actions and other arrangements aimed at enabling the termination of the emergency~~." The monitoring of public opinion and~~. This shall include providing the public with information on the need for any continuing protective actions following termination of the emergency and on any necessary modifications to their personal behaviour. Arrangements shall be made, during this period, to closely monitor public opinion and the reaction in the news media ~~"~~in order to ensure that any concerns can be promptly addressed~~" [2] must also~~."

~~5.13.~~5.21. The monitoring of public opinion and of the reaction in the news media should be considered ~~when developing~~in ~~public communication~~ at this stage.

5.22. ~~To address the needs for~~ GSR Part 7 [2]~~[2]~~ requires (para. 5.100) that "The government shall ensure that, as part of its emergency preparedness, arrangements are in place for the termination of a nuclear or radiological emergency. The arrangements shall take into account that the termination of an emergency might be at different times in different geographical areas. The planning process shall include as appropriate:… (g) Arrangements for continued communication ~~and consultation with the public and other interested parties during the transition phase in line~~ with ~~GSR Part 7 [2], DS474 [7]~~the public, and for monitoring of public opinion and the reaction in the news media…".

~~5.14.~~5.23. GSG-11 [1]~~[1]~~ recommends (paras. 3.20(e)) that a mechanism and the means for continued communication with and consultation ~~with all~~of the public and other interested parties, including local communities, ~~are~~during the transition phase should be put in place~~ for the purposes of smooth and orderly transitioning~~. This is a specific prerequisite that should be met

in order to ~~an existing exposure situation as part of the prerequisites~~be able to ~~enable~~declare the termination of ~~the~~an emergency.

~~*Specifics in public communication arrangements forthe transition phase*~~

~~5.15.~~5.24. The expected changes in priorities and in the needs for public information during an emergency response phase and during the transition phase ~~Emergency arrangements for public communication in a nuclear or radiological emergency should consider the shift in priorities and information needs during the emergency response phase and the transition phase.~~should be considered in making arrangements for public communication in an emergency. These emergency arrangements should include ~~those~~arrangements for communicating with the public on the decision made by the ~~respective~~response organization or other relevant authority to terminate the emergency and to transition to either an existing or a planned exposure situation.

~~5.16.~~5.25. ~~DS474 [7] recognizes that the transitioning~~GSG-11 [1]~~[1]~~ (see paras 2.14, 3.4(a)) recognizes that the transition to an existing exposure situation or a planned exposure situation and the subsequent termination of the emergency might occur at different times in different geographical areas~~/~~ or sites. ~~Public communication arrangements should address possible~~Possible concerns and ~~information~~ needs ~~regarding~~ for public information with regard to the termination ~~itself and~~of the ~~transition to an existing or planned exposure situation with~~ emergency should be taken into account ~~taken~~ in arrangements for public communication. It should be taken into account in the arrangements that the ~~public~~ concerns ~~and~~ of the public and needs for public information ~~needs~~ might be different in different geographical areas~~/~~ and sites ~~at the same time~~.

5.26. Direct ~~dialogue~~ public communication and ~~personal communication should be applied in a transition phase because the~~consultation about decisions ~~may~~that could affect the daily lives of ~~affected~~the populations concerned for an extended period~~. These~~ should be conducted in the transition phase. This public communication ~~efforts~~ should aim to help affected populations to cope with the ~~psychological~~ effects of stress and should provide the public with reassurance. ~~They~~

~~5.17.~~5.27. The affected populations should ~~also~~ be ~~supported~~assisted by the establishment of public support ~~centers~~centres as recommended in ~~DS474 [7]. The knowledge and risk~~GSG-11 [1]~~[1]~~ (paras 4.101(c), 4.178). Risk perception ~~gap between experts and the public~~ and its social context (see para. 2.2.43~~2.2.42~~) should be taken into account in public communication.

~~4~~

5.18.5.28. Para.GSG-11 [1][1] (para. 3.18 of DS474 [7]) recommends that prior to"Before the termination of a nuclear or radiological the emergency, the following information is also providedshould be discussed with and communicated to the public and other interested parties, as appropriate:

(a) -"The basis and rationale for the termination of the emergency, including the rationale on why it is safe to end the emergency and an overview of the actions taken and the restrictions imposed;

(b) -"The need for adjustingto adjust imposed restrictions, for continuingto continue protective actions or for introducingto introduce new protective actions, as well as the expected duration of these actions and restrictions;

(c) -"Any necessary modification inmodifications to people's personal behaviours and habits;

(d) Possible "Options for the implementation of self-help actions[31], as appropriate;

(e) -"The need for continued environmental monitoring and source monitoring followingafter the termination of the emergency;

(f) -"The need for continued efforts to restore services and workplaces;

(g) -"Radiological health hazards associated with the new exposure situation."

5.19.5.29. DuringGSG-11 [1][1] recommends (para. 4.9) that "In the transition phase, the necessary transfer of responsibilities to different jurisdictions or different authorities (or to different units within an organization) should be carried out in a formal, coordinated and fully transparent manner and should be communicated to all interested parties".

5.30. This transfer of responsibilities in various areas is expected to happen to allow for long term management of the situation under different exposure situation (GSG-11 [1][1], paras 4.10–4.15). [7]. In this context, any transfer of authority and responsibilities for public communication in during the transition phase should be considered at the preparedness stage. Any such transfer of responsibilities and should be unambiguously addressed in the respective plan andpublic communication programme and in for the public communication plan.

[31] See DS474 [7] for examples of self-help actions. Examples of self-help actions include, but are not limited to, avoiding prolonged visits to certain areas, changing farming practices and land use, and reducing the consumption of certain foods [6][6].

~~5.20.~~5.31. ~~Engagement~~Communication with and consultation of interested parties in the transition phase should be increased in comparison ~~to~~with the emergency response phase, as required in GSR Part 7 ~~and~~ [2]~~[2]~~ (para. 5.99) and as recommended in ~~DS474 [7]~~GSG-11 (Ref. [1]~~[1]~~, paras 4.38, 4.197–4.207). The affected local community should ~~actively~~ be encouraged to participate ~~and be involved~~actively in the communication and consultation in the transition phase, as enabled by the emergency ~~management~~response organization. This participation ~~and involvement~~ will ~~contribute~~help to ~~the public's~~maintain trust ~~in adapting and lifting protective actions~~on the part of the public when emergency response actions are to be adapted and when restrictions that were imposed, for instance ~~where~~ food restrictions, are to be lifted.

~~5.21.~~5.32. ~~DS474 [7] recommends that consultation with relevant~~ Consultation of interested parties should be based on effective ~~communication~~ mechanisms ~~which~~of communication that are founded on ~~transparency, inclusiveness, shared~~openness, accountability and measures of effectiveness, and should allow for feedback to be accommodated in a timely ~~fashion.~~manner (see GSG-11 [1]~~[1]~~, para. 4.202).

~~5.22.~~5.33. ~~Past experience~~Experience has shown that ~~late or low-level involvement~~communication with and consultation of interested parties ~~will~~that is late or is at a low level is likely to have long term consequences ~~on~~for relations with and communication with interested parties in the long term recovery phase. The following ~~are~~ major points ~~that~~ should be addressed in the public communication plan to enable effective public communication in the transition phase~~ of a nuclear or radiological emergency:~~ :

(a) The public and interested parties should be ~~continually~~regularly informed about ~~on-going~~ongoing actions ~~to protect~~for protection of the public ~~health, safety~~ and protection of the environment~~;~~.

(b) ~~Educational programmes on the~~ Programmes of public information on radiation induced health effects~~ of radiation along with~~, including the concept of risk, should be ~~implemented and continued after termination of the emergency~~ introduced, in cooperation with educational institutions~~, to improve the~~.

~~(b)~~(c) These programmes of public information should be aimed at improving knowledge and understanding of the emergency response actions ~~applied during~~taken in the transition phase~~;~~. The programmes should be continued after the termination of the emergency.

~~(c)~~(d) Organizations should ~~consider~~anticipate that concerns ~~regarding~~on the part of the public with regard to other aspects of the emergency response, such as waste management and waste disposal~~ as related to the emergency~~, may ~~intensify~~grow as the ~~transition phase progresses~~efforts made to enable the termination of an emergency progress.

APPENDIX ~~I:~~
EXAMPLE SYSTEM FOR ~~TO~~ PUTTING RADIOLOGICAL HEALTH HAZARDS IN PERSPECTIVE IN A NUCLEAR OR RADIOLOGICAL EMERGENCY

A.1. The following system for putting radiological health hazards in perspective has been derived on the basis of the findings of the UNSCEAR 2012 Report [13]~~[13]~~ and the generic criteria established in GSR Part 7 [2]~~[2]~~ and GSG-2 [6]~~[6]~~ for taking protective actions and other response actions in a nuclear or radiological emergency~~:~~.

A.2. The example system in para. A.1 should be considered by the relevant authorities in developing a national system for putting radiological hazards in perspective, as required in GSR Part 7 [2]~~[2]~~ (paras 5.72, 5.83, 5.96, II.16), the national context being taken into account.

'Dangerous to ~~your~~ health'~~:~~

A.3. There is a possibility ~~of severe deterministic effects (i.e. radiation induced health effects~~ to develop in an individual a serious injury and/or physical harm that ~~are~~is life threatening or that could ~~result in a permanent injury that reduces~~ reduce the quality of life~~) and a small possibility of a discernable increase in the incidence of radiation induced cancers (if the number of exposed people is more than a few hundred) to be observed if~~ as being due to radiation exposure.

A.4. The 'dangerous to health' level corresponds to doses ~~are received~~(i.e. doses exceeding the generic criteria in Table II.-1 of Appendix II of GSR Part 7 ~~[2]. Hence, should these levels for dose be~~[2]~~[2]~~) at which health effects in an individual could be scientifically and objectively attributed to radiation exposure.

A.5. If such doses are projected, protective actions and other response actions ~~need to~~should be taken under any ~~circumstance~~circumstances to protect individuals~~ from incurring such doses. If doses are received at these levels, medical examination and treatment might be warranted.~~.

A.6. If such doses are received, medical examination and screening should be provided followed, as required, by medical treatment.

'Possible health effects resulting from radiation ~~induced health effects':~~ exposure'

A.7. There is a ~~very~~ small possibility ~~of a discernable~~that epidemiological studies would reveal an increase due to radiation exposure in the ~~incidence~~frequency of occurrence of ~~radiation induced~~specific cancers ~~for some members~~in a large population. However, attributing any individual case of ~~the public~~cancer as being due to radiation exposure will not be possible.

A.8. The 'possible health effects resulting from radiation exposure' level corresponds to doses (i.e. pregnant women and children) to be observed if the number of exposed people is very large and if doses are received doses exceeding the generic criteria in Table II.-2 of Appendix II of GSR Part 7 . Hence, should these levels for dose[2][2]) at which an increase in the frequency of occurrence of specific cancers in a population could be scientifically and objectively attributed to radiation exposure by means of epidemiological analysis.

A.9. If such doses are projected, protective actions and other response actions need toshould be taken as a precaution to protect individuals from incurring .

A.10. If such doses. If doses are received at these levels, long, longer term medical follow-up should be provided to detect radiation induced health effects early and to treat them effectively may be warranted. 'No observable specific radiation induced health effects.':

a) : No radiation induced health effects have been observed (i.e. no severe deterministic effects and discernable

A.11. Care should be taken in public communication on projections of numbers of health effects among a population in such cases. The meaning of the numbers should be clearly explained and should be clearly related to the objective of the longer term medical follow up.

'No observable health effects resulting from radiation exposure'

A.12. At present, there is no possibility that epidemiological studies would reveal an increase due to radiation exposure in the incidencefrequency of occurrence of specific cancers have been observed), even in a very large exposed group composedpopulation. Attributing any individual case of the most sensitive members cancer as being due to radiation exposure will also not be possible.

A.13. The 'no observable health effects resulting from radiation exposure' level corresponds to doses of the public when doses have been receivedorder of magnitude of doses due to global average background levels of radiation and below the generic criteria provided in Table II.1 and Table II.2 of Appendix II of GSR Part 7 [2]. Hence, should these levels for dose be [2][2].

A.14. If such doses are projected, protective actions and other response actions for protecting individuals against radiological health hazards are not warranted based on the radiological health hazards to further reduce doses although. Taking such actions may be considered, as a precaution,

to ~~further~~ reduce doses to be as low as ~~reasonable~~reasonably achievable~~ as long as they~~, but only if the actions are justified~~.~~ and optimized (see para. 3.195~~3.195~~).

A.15. If such doses are received~~ below these levels~~, no medical attention in relation to radiation induced health effects is warranted.

~~I.1. The example system in para. I.1 should be considered by respective authorities when developing their national system for putting radiological health hazards in perspective in line with GSR Part 7 [2].~~

~~I.2. Only for doses above the generic criteria given in Table II.2 of Appendix II of GSR Part 7 [2], radiation induced health effects have been observed in epidemiological studies or otherwise scientifically confirmed. Doses above these generic criteria may therefore not be considered safe. This does not contradict the cautious principles of radiation protection which aim to reduce the exposure to radiation in a population to as low as reasonably achievable even below these generic criteria, based on the prospective inference of radiation risks (see para. 3.128) as long as this is justified to do more good than harm.~~

~~I.3. Due to the conservatism built into the generic criteria (given in Tables II.1 and II.2 of Appendix II, GSR Part 7 [2]), receiving a dose above the generic criteria does not mean that a radiation induced health effect will definitely take place in an individual, but that there is only a small chance of the particular radiation induced health effect to take place.~~

~~I.4. Paras I.3 and I.4 should be taken into account in the public communication arrangements applying the example system proposed in para. I.1 so that they can be clearly explained to decision makers and the public.~~

A.16. Projections of numbers of health effects among a population in such cases, made for whatever reason, should not be used in public communication on radiological health hazards.

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4.1.

ANNEX ~~V~~I

EXAMPLE TEMPLATES OF A PRELIMINARY~~HOLDING~~ STATEMENT AND AN INITIAL PRESS RELEASE

PRELIMINARY STATEMENT

I-1. Example ~~1 in case of~~ of a preliminary statement for use if there are media reports and/or rumours about a situation with no confirmed information available ~~yet~~:

> *"[Organization] is aware of [media reports; rumours~~on social media~~; etc.] with regard~~sing~~ to [a situation; an emergency/incident etc.] at [location]. At ~~the moment~~ present [organization] ~~can neither confirm nor deny these reports. [Organization] has [activated/contacted] [resources/counterpart] to look into the matter. [Organization]~~ is looking into this matter and will provide more information as it becomes available"*

INITIAL PRESS RELEASE

I-2. Example ~~2 in case~~ of an initial press release for use if the organization has been informed about an emergency, incident or event but has not received any details~~yet~~:

> *"[Organization] has been informed that [a situation; an emergency/incident etc.] has occurred at [location]. [Organization] has [activated] [resources] and remains in close contact with [operator,~~;~~ point of contact at location, etc.]. [Organization] will provide more information as it becomes available."*

ANNEX II

EXAMPLE OF A ~~PIO SECTION~~ PUBLIC INFORMATION OFFICER SECTION WITHIN A UNIFIED COMMAND AND CONTROL SYSTEM

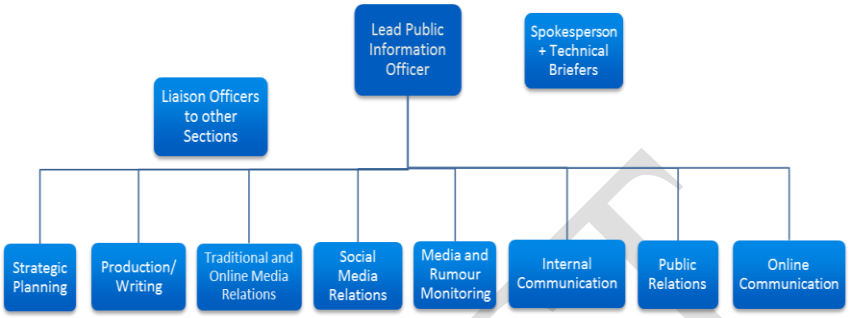

FIG. I-1. Example of an organizational plan for a public information officer section within a unified command and control system.

II-1. Figure ~~I~~I-1 shows an example of ascalable~~n~~ organizational plan for a public information officer section within a unified command and control system for use in public communication in a nuclear or radiological emergency.

ANNEX III
~~EXAMPLE~~ LISTING OF ADVANTAGES AND DISADVANTAGES OF ~~SELECTED~~ VARIOUS COMMUNICATION TOOLS

III.-1. Table III-1 provides a listing of advantages and disadvantages of various communication tools for use in public communication in a nuclear or radiological emergency.

TABLE III-1. LISTING OF ADVANTAGES (PROS) AND DISADVANTAGES (CONS) OF VARIOUS COMMUNICATION TOOLS

Channel ~~type~~of communication	Examples	Pros	Cons
One way	Press release Web site or 'dark' site update Newsletter for i~~I~~nterested parties~~y newsletter~~ Intranet update ~~Q/A~~ Question and answer lists on web sites Text messages and mobile messaging apps Warning apps Announcements on ~~Radio and~~ television and radio ~~announcements~~stations Printed information products Digitally distributed information products, e.g. photographs, graphics, infographics, podcasts Warning sirens and loudspeakers Live streaming Spokesperson interview ~~in~~e.g. in the press~~, TV~~ or on television or radio stations An internal meeting	Scalable~~;~~ May reach a large group at the same time~~;~~ A highly ~~C~~credible ~~source~~ provider of information; Gives the possibility to answer questions and clarify subjects~~;~~ A way to address ~~also~~difficult issues~~;~~	Limited or no opportunity ~~at all~~ to clarify on request and to have a dialogue~~;~~ Might be time sensitive~~;~~ Requires trained spokespersons ~~who have~~ with good communication skills~~;~~
Two way	Online chats Press conference ~~Media~~Briefings for news media Public meetings Public information centre Answering service to enquiries by~~via~~ telephone, by email and on social media platforms Technical	~~A highly c~~Credible ~~source~~ provider of information ~~Creating~~Establishing a dialogue with interested parties Gives a possibility to make communication more human ~~and empathetic~~ A way to ~~also~~ address difficult issues Possibility to check what information is getting through and how it is being interpreted May a~~A~~ssist in the gathering of real-time information from eye witnesses for raising awareness of ~~that might help to improve~~	Social media platforms ~~should be~~ need to be adapted before ~~the~~ an emergency occurs; Might need ~~a lot of~~ many staff, e.g. for answering services Good communication and interaction skills needed

		the situation ~~awareness~~ and identifying ~~potential risks~~ hazards and problems in the field	
Email, web sites	Internal emails to staff and stakeholders 'Microblogs~~-~~': p~~P~~latforms where people share short posts (~~i.e.~~e.g. Twitter, Weibo) Content communities~~-~~: Platforms that work around specific content type ~~which~~that people create and comment on. Forums~~-~~: Online discussion platforms Wikis~~-~~: Web pages where people create and edit content together Blogs~~-~~: Online logs or journals Social networks ~~-~~Individual web sites as platforms in which people share content and communicate	Information sharing between communication staff, technical staff and other staff Creating a dialogue with interested parties Gives a possibility to make communication more human ~~and empathetic~~ Gives an opportunity to connect people with questions to people with answers Gives a possibility to check what information is getting through and how it is being interpreted	If no official email communication is in place, important emails can be lost Social media platforms need to be adapted before an emergency occurs The platform ~~is dictating~~ determines the pace of communication Might need ~~a lot of~~ many staff, ~~resources~~ e.g. for answering ~~to~~ questions ~~that has been presented~~

ANNEX IV

EXAMPLE LIST OF USEFUL BACKGROUND INFORMATION MATERIALS

IV-1. ~~THE~~ BASICS OF RADIOACTIVITY

Types of radiation;

Radiation dose, does rate and units~~;~~ (and common multiples);

Putting radiation doses in perspective (radiation dosage chart);

Natural background radiation;

Monitoring radiation (sampling, hot spots, types of detection~~—~~: networks, air-borne, mobile, Safecast);

~~Descriptions and~~ E~~e~~xplanations of most common isotopes ~~like~~: Am-241, Ir-192, Cf-252, Pu-238, Cs-137, Po-210, Co-60, Ra-226, Sr-90, Se-75, I-131.

IV-2. APPLICATIONS AND USES~~AGE~~ OF IONIZING RADIATION, NUCLEAR MATERIAL AND OTHER RADIOACTIVE MATERIAL

Nuclear p~~P~~ower u~~U~~ses;

Industrial u~~U~~ses;

Medical u~~U~~ses;

Irradiation f~~F~~acilities and a~~A~~ctivities;

Research r~~R~~eactors; ~~and~~

Accelerators.

IV-3. NUCLEAR POWER PLANTS

"How does a nuclear reactor work?"

"How does fission work?"

Reactor types ~~/~~ /designs;

Pressurized w~~W~~ater r~~R~~eactor;

Boiling w~~W~~ater r~~R~~eactor;

Pressurized h~~H~~eavy w~~W~~ater r~~R~~eactor;

Light w~~W~~ater g~~G~~raphite r~~R~~eactor;

Fast b~~B~~reeder r~~R~~eactor;

Gas c~~C~~ooled ~~R~~reactor;

Nuclear ~~Marine Propulsion Reactors~~marine propulsion reactors;

Information on key safety systems (cooling);

Concepts of redundancy ~~&~~and diversity (defence in depth);

Different accident scenarios and fundamentals of accident progression;

Beyond design basis accidents;

Hydrogen ignition events;

Meltdown;

Loss of c~~C~~oolant a~~A~~ccident;

Is nuclear power safe and is it safe to live near a nuclear power plant?

IV-4. NUCLEAR FUEL CYCLE

Uranium milling and conversion (chemical hazards);

Fuel enrichment;

Fuel fabrication;

Spent fuel;

Storage of fuel;

Dry storage of fuel;

Different types of wet storage of fuel;

Reprocessing;

Transport.

IV-5. APPROACHES FOR WASTE MANAGEMENT AND ~~PHASES OF~~ DECOMMISSIONING

IV-6. PAST RADIOLOGICAL ACCIDENTS

Chernobyl~~;~~ [IV-1–IV-4);

Three Mile Island~~;~~ [IV-5];

Fukushima~~;~~ Daiichi [IV-6];

Windscale;

Goiânia~~;~~ [IV-7];

Tokaimura~~.~~ [IV-8].

IV-7. NUCLEAR SECURITY

National laws and requirements;

Definition of a nuclear security event;

International guidance~~;~~.

IV-8. EMERGENCY MANAGEMENT

Roles and qualifications of first responders and decision makers;

Emergency classification;

International standards and national law;

Where to find ~~correct~~ information~~.~~;

Why emergency exercises are held.

~~**How can you protect yourself from radiation?**~~

IV-9. PROTECTION AGAINST RADIATION

How to act during an emergency;

Time, distance, shielding;

Exposure pathways;

National radiation protection system~~,~~ and mitigation steps;

How to recognize a radiation source;

~~Stochastic effects;~~

~~Deterministic~~Radiation induced health effects;

Iodine thyroid blocking;

How to protect food and livestock;

~~Actions~~Taking actions beyond ~~those that are~~ what is warranted.

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ANNEX V

ATTRIBUTION OF HEALTH EFFECTS TO RADIATION EXPOSURE AND PROSPECTIVE INFERENCE OF RISKS

V-1. The United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) reports to the General Assembly of the United Nations (UN) on the sources, effects and risks of ionizing radiation.

V-2. "In its resolution 62/100 of 17 December 2007, the General Assembly, in recalling the intention of the Committee "to clarify further the assessment of potential harm owing to chronic low-level exposures among large populations and also the attributability of health effects",[32] encouraged the Committee "to submit a report on that issue at its earliest convenience"." (Ref. [V-1], Chapter III, p.9, para. 22.).

V.-3. In this context, attribution refers to the ascribing of an outcome — in particular a health effect — to radiation exposure: an outcome may be an individual outcome (such as the occurrence of a health effect in an individual) or a collective outcome (such as a change in the frequency of occurrence of health effects in a population or a group).

V-4. Demonstrating the relevance of this issue for UN member states, "the Assembly, in its resolution 66/70, called upon the [UNSCEAR] Committee to submit to it at its sixty-seventh session the report requested by the Assembly on the attributability of health effects from radiation exposure."(Ref. [V-1], Chapter III, p.9, para. 24.)

V-5. The Committee finalized its Report [V-1] at its Fifty-ninth session from 21 to 25 May 2012, and submitted it to the sixty-seventh session of the General Assembly (Document A/67/46), which welcomed the report. Its findings are summarized as follows:

In case of high doses and high dose rates, deterministic effects[33] in an individual could be unequivocally attributed to radiation exposure if possible alternative causes could be eliminated (Ref. [V-1], Chapter III, p.9, para. 25(a) [13]~~[13]~~);

[32] Official Records of the General Assembly, Sixty-first Session, Supplement No. 46 and corrigendum (A/61/46 and Corr.1), para. 5.

[33] A deterministic [health] effect [of radiation] is a radiation induced health effect for which generally a threshold level of dose exists above which the severity of the effect is greater for a higher dose [8]~~[8]~~.

Stochastic effects[34] in an individual cannot be unequivocally attributed to radiation exposure, because radiation exposure is not the only possible cause and there are at present no generally available biomarkers that are specific to radiation exposure (Ref. [V-1], Chapter III, p.9, para. 25(b));

An increased incidence of stochastic effects in a population could be attributed to radiation exposure through epidemiological analysis — provided that the increased incidence were sufficient to overcome inherent statistical uncertainties (Ref. [V-1], Chapter III, p.10, para. 25(c));

An increase in the incidence of hereditary effects in human populations cannot at present be attributed to radiation exposure (although demonstrated in animal studies) (Ref. [V-1], Chapter III, p.10, para. 25(d));

Increases in incidence of health effects in populations cannot be attributed reliably to chronic exposure to radiation at levels that are typical of the global average background levels of radiation. This is because of the uncertainties associated with the assessment of risks at low doses, the current absence of radiation specific biomarkers for radiation induced health effects and the insufficient statistical power of epidemiological studies (Ref. [V-1], Chapter III, p.10, para. 25(f)).

V-6. In line with para. V-5(d) and (e), the UNSCEAR Report [VI-1] clearly indicates that increases in the incidence of health effects in populations cannot be attributed reliably to chronic exposure to radiation at levels that are typical of the global average background levels of radiation; and that an increase in the incidence of hereditary effects in human populations cannot at present be attributed to radiation exposure.

V-7. These outcomes are crucial in communications relating to radiation induced health effects: decision-makers and the public need to be informed that relatively low level radiation exposure would not cause health effects that can be attributed to radiation.

V-8. UNSCEAR "does not recommend multiplying very low doses by large numbers of individuals to estimate numbers of radiation-induced health effects within a population exposed to incremental doses at levels equivalent to or lower than natural background levels" (Ref. [V-1], Chapter III, p.10, para. 25(f)).

[34] A stochastic [health] effect [of radiation] is a radiation induced health effect, the probability of occurrence of which is greater for a higher radiation dose and the severity of which (if it occurs) is independent of dose [8][~~8~~].

V-9. UNSCEAR "notes that public health bodies need to allocate resources appropriately, and that this may involve making projections of numbers of health effects for comparative purposes. This method, though based upon reasonable but untestable assumptions, could be useful for such purposes provided that it were applied consistently, the uncertainties in the assessments were taken fully into account, and it were not inferred that the projected health effects were other than notional" (Ref. [V-1], Chapter III, p.10, para. 25(g)).

V-10. Hence, the results from such theoretical calculations are to be used for the purpose of justifying and optimizing the protection and safety. However, . it is incorrect and unwarranted to make inferences of expectations of numbers of health effects in an affected population from such theoretical calculations.

V-11. These considerations are important for public communication relating to possible health effects resulting from exposure to radiation. Technical experts, those responsible for public communication and decision makers need to be aware that such theoretical calculations of numbers of health effects should not be used in public communication.

V-12. Use of such theoretical calculations of potential numbers of health effects in public communication during or following past emergencies resulted in inappropriate projections being made of potential numbers of deaths among large numbers of people exposed to radiation at relatively low levels.

V-13. This gave rise to widespread anxiety and other harmful~~deleterious~~ non-radiological consequences and the impression that the impact of the emergency was far more severe than what the actual impact was.

REFERENCES TO ANNEX V

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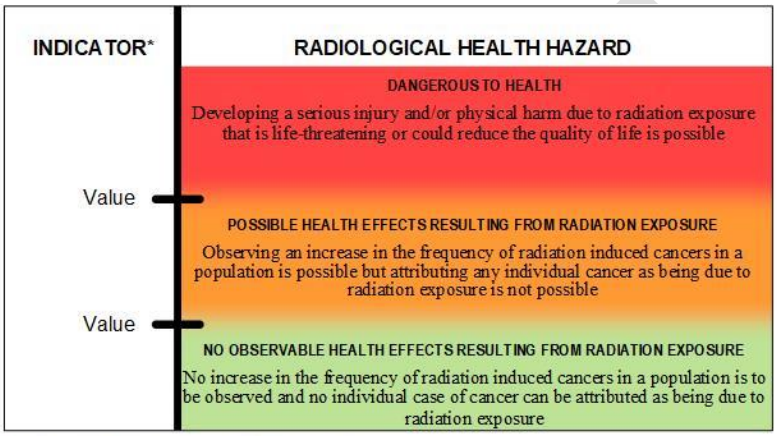
ANNEX VI~~I~~
EXAMPLE ~~DISPLAY OF~~GRAPHIC FOR THE SYSTEM FOR~~TO~~ PUTTING RADIOLOGICAL HEALTH HAZARDS IN PERSPECTIVE

VI-1. Table VI-1 shows an example graphic for the system for putting radiological hazards in perspective for use in public communication in a nuclear or radiological emergency.

TABLE VI-1. EXAMPLE GRAPHIC FOR THE SYSTEM FOR PUTTING RADIOLOGICAL HEALT HAZARDS IN PERSPECTIVE



* E.g. dose, dose rate or any another indicator.

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