

Review of the IAEA Safety Fundamentals
Opinion of the Radiation Safety Standards Committee (RASSC)

Date: February 2019

KEY MESSAGES

1. The fundamental safety principles established in SF-1 remain fully valid and their stability is essential for the entire safety system.
2. It is important to maintain confidence in ongoing work on implementation of safety standards.
3. There is no justification to initiate an immediate revision of SF-1.
4. RASSC recognizes that at some time in the future it will be appropriate to revise SF-1.
5. The formal endorsement of SF-1 by a number of International Organisations reflects a broad and worldwide consensus, which is of paramount importance for the system and practice of protection.
6. A framework needs to be developed and agreed on involvement of cosponsoring International Organizations in the review and revision process for SF-1.

Background

1.1. The 44th meeting of the Radiation Safety Standards Committee (RASSC) in June 2018 considered a request from the Commission on Safety Standards (CSS) to undertake a review of the IAEA Safety Fundamentals (SF-1). The purpose of this review was to determine whether or not a revision of SF-1 is justified at this time.

1.2. During the June 2018 meeting RASSC established an *ad-hoc* Working Group¹ to undertake a preliminary review of SF-1. The Working Group met on two occasions during the RASSC meeting and reported on its discussions to the plenary session. The report of the Consultants' Meeting² held in February 2018, and which undertook a detailed review of SF-1, was made available to all RASSC members and observers in advance of the meeting.

1.3. RASSC subsequently established an Electronic Working Group (EWG)³ of Member States to seek views on the need to revise SF-1. A draft position paper was prepared by the EWG. This was

¹ The Working Group that met during the RASSC meeting consisted of RASSC members, observers and experts from Argentina, Australia, Belgium, Czech Republic, Finland, France, India, Indonesia, Israel (chair), Singapore, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States and the European Nuclear Installations Safety Standards Initiative.

² Report of the Consultants' Meeting to consider the Implications of the UNSCEAR 2012 Report on *Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks* for the development of Safety Standards.

³ The Electronic Working group consisted of RASSC members and nominated national experts from Argentina, Australia, Belgium, Czech Republic, Egypt, Finland, France, Greece, Hungary, India, Israel (chair), Korea, Montenegro, Romania, Spain, Sweden, United Kingdom, United States and Viet Nam.

provided to all RASSC members and observers in advance of the RASSC 45 meeting held in November 2018.

1.4. During the RASSC 45 meeting, RASSC discussed the draft position paper prepared by the EWG. International Organizations who cosponsor SF-1 (EC, ILO, WHO and UNEP) expressed their views. On the basis of these inputs, as well as contributions from Member States, RASSC agreed on a number of changes to the document.

1.5. A final draft text was developed by the EWG and agreed by all RASSC members.

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1.6. RASSC underlines the importance of SF-1, being the highest-level document in the Safety Standards Series. As such, SF-1 consists of fundamental safety principles that should not be revised unless there is a strong justification for and clear benefit from doing so.

1.7. RASSC reaffirmed that there is no new scientific evidence that would necessitate a revision of SF-1 at this time.

1.8. RASSC agrees with the CSS that the UNSCEAR Report *Attributing Health Effects to Ionizing Radiation Exposure and Inferring Risks* is not in itself a sufficient basis for revising SF-1.

1.9. Experience from the development of SF-1 has shown that the revision process will necessarily require considerable human and financial resources from the IAEA Secretariat, the cosponsoring International Organizations and the national authorities in Member States. There are many demands on these resources and diverting these to work on revising SF-1, without any apparent significant benefit, would necessarily mean that other important work would need to be deferred. RASSC considers that a full evaluation of the associated benefits and costs is essential prior to undertake such revision.

1.10. The full set of Safety Requirements has only very recently been completed. The IAEA, the cosponsoring International Organizations and national authorities are presently focusing on implementation of these requirements and the consequential improvements to safety. Stability is important and the impact on implementation efforts of initiating a revision of SF-1 are not well understood.

1.11. RASSC recognizes that there is some lack of harmonization in both approach and terminology between the text of SF-1, the Safety Requirements and the IAEA Safety Glossary, but considers that this cannot be avoided completely since the whole system is constantly evolving. It is also the case that a number of important topics, such as stakeholder involvement, international cooperation and assistance and the graded approach are either absent or not sufficiently addressed in SF-1. However, RASSC considers that these considerations do not significantly impact the cogency or implementation of the Safety Standards.

1.12. While SF-1 is not fully harmonized with the terminology and approach used in the 2007 Recommendations of ICRP (ICRP Publication 103), the recommendations therein are already reflected in GSR Part 3 and GSR Part 7. Those Safety Guides that have been developed to support GSR Part 3 are also consistent with the ICRP Recommendations. RASSC therefore considers that the recommendations of ICRP Publication 103 are not a sufficient justification to initiate an immediate revision but could be reflected in SF-1 when it is revised. RASSC has not identified any negative implications from such an approach.

1.13. The view of the vast majority of RASSC members⁴ is that there is no compelling argument to initiate a revision of SF-1 at this time. RASSC considers that the considerable work involved cannot be justified by what it considers would be no improvement in radiation safety.

1.14. In countries with a less developed radiation safety infrastructure, SF-1 is often used as the basis of national legislation. This observation reinforces the need for stability of the fundamental safety principles.

1.15. RASSC recognizes that, at some time in the future, it will be appropriate to revise SF-1. When that time comes, it will be important to firstly undertake a gap analysis to ensure full consistency between SF-1 and the Safety Requirements. RASSC didn't identify a specific timeframe for such work. However, it recognizes that there could be many different circumstances, as yet unidentified, that could justify review and revision of SF-1.

1.16. The co-sponsorship of IAEA Safety Standards by other International Organizations represents a broad international consensus that is particularly important for a document such as SF-1. Cosponsoring International Organizations also play an important role in the implementation of Safety Standards, including outreach to non-IAEA Member States.

1.17. RASSC considers that there is joint ownership of SF-1 by all cosponsoring International Organizations. RASSC underlines the importance of establishing a formalized framework and procedures to allow discussions to take place prior to any decision to either review or revise SF-1. Such decisions should be made jointly by all cosponsoring International Organizations, so that their co-sponsorship of a revised SF-1 and the Safety Requirements can be maintained.

⁴ All countries represented, with the exception of Argentina and Australia.