

**INTEGRATED  
REGULATORY  
REVIEW SERVICE (IRRS)  
FOLLOW-UP MISSION  
TO  
THE KINGDOM OF NORWAY**

Oslo, Norway  
*25 November – 1 December 2025*

DEPARTMENT OF NUCLEAR SAFETY AND SECURITY



Integrated  
Regulatory  
Review Service

IRRS



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**REPORT OF THE  
INTEGRATED REGULATORY REVIEW SERVICE (IRRS)  
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THE KINGDOM OF NORWAY**



**DSA**

Norwegian  
Radiation and Nuclear  
Safety Authority



**REPORT OF  
THE INTEGRATED REGULATORY REVIEW SERVICE (IRRS)  
FOLLOW-UP MISSION TO  
THE KINGDOM OF NORWAY**

**Mission dates:** *25 November to 1 December 2025*  
**Regulatory body visited:** *Norwegian Radiation and Nuclear Safety Authority (DSA)*  
**Location:** *Oslo, Norway*

**Regulated facilities, activities, and exposure situations in the mission scope:** *Fuel Cycle facilities, Research Reactors, Radiation Sources in Industrial and Medical facilities, Waste Management facilities, Decommissioning activities, Transport of radioactive material, Emergency Preparedness and Response, Medical Exposure, Occupational Exposure, Public and Environmental Monitoring*

**Organized by:** *IAEA*

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IAEA-2025/07

**The number of recommendations, suggestions and good practices is in no way a measure of the status of the national infrastructure for nuclear and radiation safety. Comparisons of such numbers between IRRS reports from different countries should not be attempted.**

# CONTENT

EXECUTIVE SUMMARY.....	1
I. INTRODUCTION.....	3
II. OBJECTIVE AND SCOPE.....	4
III. BASIS FOR THE REVIEW.....	5
1. RESPONSIBILITIES AND FUNCTIONS OF THE GOVERNMENT .....	7
1.1. NATIONAL POLICY AND STRATEGY FOR SAFETY.....	7
1.2. ESTABLISHMENT OF A FRAMEWORK FOR SAFETY.....	8
1.3. ESTABLISHMENT OF A REGULATORY BODY AND ITS INDEPENDENCE .....	10
1.4. RESPONSIBILITY FOR SAFETY AND COMPLIANCE WITH REGULATIONS .....	13
1.5. COORDINATION OF AUTHORITIES WITH RESPONSIBILITIES FOR SAFETY WITHIN THE REGULATORY FRAMEWORK .....	14
1.6. SYSTEM FOR PROTECTIVE ACTIONS TO REDUCE EXISTING OR UNREGULATED RADIATION RISKS .....	15
1.7. PROVISIONS FOR THE DECOMMISSIONING OF FACILITIES AND THE MANAGEMENT OF RADIOACTIVE WASTE AND OF SPENT FUEL.....	15
1.8. COMPETENCE FOR SAFETY.....	17
1.9. PROVISION OF TECHNICAL SERVICES .....	18
2. THE GLOBAL SAFETY REGIME.....	20
2.1. INTERNATIONAL OBLIGATIONS AND ARRANGEMENTS FOR INTERNATIONAL COOPERATION .....	20
2.2. SHARING OF OPERATING EXPERIENCE AND REGULATORY EXPERIENCE .....	20
3. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY.....	22
3.1. ORGANIZATIONAL STRUCTURE OF THE REGULATORY BODY AND ALLOCATION OF RESOURCES .....	22
3.2. EFFECTIVE INDEPENDENCE IN THE PERFORMANCE OF REGULATORY FUNCTIONS .....	23
3.3. STAFFING AND COMPETENCE OF THE REGULATORY BODY .....	25
3.4. LIAISON WITH ADVISORY BODIES AND SUPPORT ORGANIZATIONS .....	26
3.5. LIAISON BETWEEN THE REGULATORY BODY AND AUTHORIZED PARTIES .....	28
3.6. STABILITY AND CONSISTENCY OF REGULATORY CONTROL.....	28
3.7. SAFETY RELATED RECORDS .....	28
3.8. COMMUNICATION AND CONSULTATION WITH INTERESTED PARTIES .....	28
3.9. POLICY ISSUES .....	28
4. MANAGEMENT OF THE REGULATORY BODY .....	29
4.1. RESPONSIBILITY AND LEADERSHIP FOR SAFETY.....	29
4.2. RESPONSIBILITY FOR INTEGRATION OF SAFETY INTO THE MANAGEMENT SYSTEM.....	30
4.3. THE MANAGEMENT SYSTEM.....	31

4.4.	MANAGEMENT OF RESOURCES .....	31
4.5.	MANAGEMENT OF PROCESSES AND ACTIVITIES .....	31
4.6.	CULTURE FOR SAFETY .....	31
4.7.	MEASUREMENT, ASSESSMENT AND IMPROVEMENT .....	31
5.	AUTHORIZATION.....	32
5.1	GENERIC ISSUES .....	32
5.2	AUTHORIZATION OF RESEARCH REACTORS.....	32
5.3	AUTHORIZATION OF FUEL CYCLE FACILITIES .....	32
5.4	AUTHORIZATION OF RADIOACTIVE WASTE MANAGEMENT FACILITIES.....	32
5.5	AUTHORIZATION OF RADIATION SOURCES FACILITIES AND ACTIVITIES.....	32
5.6	AUTHORIZATION OF DECOMMISSIONING ACTIVITIES .....	32
5.7	AUTHORIZATION OF TRANSPORT.....	32
5.8	AUTHORIZATION ISSUES FOR OCCUPATIONAL EXPOSURE .....	32
5.9	AUTHORIZATION ISSUES FOR MEDICAL EXPOSURE .....	32
5.10	AUTHORIZATION ISSUES FOR PUBLIC EXPOSURE.....	32
6.	REVIEW AND ASSESSMENT .....	36
6.1	GENERIC ISSUES .....	36
6.2	REVIEW AND ASSESSMENT FOR RESEARCH REACTORS .....	37
6.3	REVIEW AND ASSESSMENT FOR FUEL CYCLE FACILITIES .....	37
6.4	REVIEW AND ASSESSMENT FOR WASTE MANAGEMENT FACILITIES.....	37
6.5	REVIEW AND ASSESSMENT FOR RADIATION SOURCES FACILITIES AND ACTIVITIES .....	38
6.6	REVIEW AND ASSESSMENT FOR DECOMMISSIONING ACTIVITIES.....	39
6.7	REVIEW AND ASSESSMENT FOR TRANSPORT .....	39
6.8	REVIEW AND ASSESSMENT FOR OCCUPATIONAL EXPOSURE .....	40
6.9	REVIEW AND ASSESSMENT FOR MEDICAL EXPOSURE .....	40
6.10	REVIEW AND ASSESSMENT FOR PUBLIC EXPOSURE.....	40
7.	INSPECTION.....	41
7.1	GENERIC ISSUES .....	41
7.2	INSPECTION OF RESEARCH REACTORS.....	43
7.3	INSPECTION OF FUEL CYCLE FACILITIES .....	43
7.4	INSPECTION OF WASTE MANAGEMENT FACILITIES .....	43
7.5	INSPECTION OF RADIATION SOURCES FACILITIES AND ACTIVITIES.....	43
7.6	INSPECTION OF DECOMMISSIONING ACTIVITIES .....	43
7.7	INSPECTION OF TRANSPORT.....	43
7.8	INSPECTION OF OCCUPATIONAL EXPOSURE.....	43
7.9	INSPECTION OF MEDICAL EXPOSURE .....	43
7.10	INSPECTION OF PUBLIC EXPOSURE .....	43
8.	ENFORCEMENT .....	43
8.1	ENFORCEMENT POLICY AND PROCESS .....	43
8.2	ENFORCEMENT IMPLEMENTATIONS.....	44
9.	REGULATIONS AND GUIDES .....	44
9.1.	GENERIC ISSUES .....	44

9.2. REGULATIONS AND GUIDES FOR RESEARCH REACTORS .....	46
9.3. REGULATIONS AND GUIDES FOR FUEL CYCLE FACILITIES.....	46
9.4. REGULATIONS AND GUIDES FOR WASTE MANAGEMENT FACILITIES.....	46
9.5. REGULATIONS AND GUIDES FOR RADIATION SOURCES FACILITIES AND ACTIVITIES .....	46
9.6. REGULATIONS AND GUIDES FOR DECOMMISSIONING ACTIVITIES.....	46
9.7. REGULATIONS AND GUIDES FOR TRANSPORT .....	46
9.8. REGULATIONS AND GUIDES FOR OCCUPATIONAL EXPOSURE .....	46
9.9. REGULATIONS AND GUIDES FOR MEDICAL EXPOSURE.....	49
9.10. REGULATIONS AND GUIDES FOR PUBLIC EXPOSURE.....	51
10. EMERGENCY PREPAREDNESS AND RESPONSE – REGULATORY ASPECTS.....	51
10.1 AUTHORITY AND RESPONSIBILITIES FOR REGULATING ON-SITE EPR OF OPERATING ORGANIZATIONS .....	51
10.2 REGULATIONS AND GUIDES ON ON-SITE EPR OF OPERATING ORGANIZATIONS .....	52
10.3 VERIFYING THE ADEQUACY OF ON-SITE EPR OF OPERATING ORGANIZATIONS .....	52
10.4 ROLES OF THE RB IN A NUCLEAR OR RADIOLOGICAL EMERGENCY.....	52
11. INTERFACE WITH NUCLEAR SECURITY .....	57
11.1 LEGAL BASIS .....	57
11.2 REGULATORY OVERSIGHT ACTIVITIES .....	58
11.3 INTERFACE AMONG AUTHORITIES .....	59
APPENDIX I – RECOMMENDATIONS (R) AND SUGGESTIONS (S) FROM THE PREVIOUS IRRS MISSION THAT REMAIN OPEN .....	60
APPENDIX II - RECOMMENDATIONS (RF), SUGGESTIONS (SF) AND GOOD PRACTICES (GPF) FROM THE 2025 IRRS FOLLOW UP MISSION .....	61
APPENDIX III – LIST OF PARTICIPANTS.....	62
GROUP PHOTO.....	63
APPENDIX IV – LIST OF COUNTERPARTS.....	64
APPENDIX V – MISSION PROGRAMME .....	68
APPENDIX VI – ORGANIZATIONAL CHART .....	70
APPENDIX VII – COUNTERPART’S REFERENCE MATERIAL USED FOR THE REVIEW .....	71
APPENDIX VIII – IAEA REFERENCE MATERIAL USED FOR THE REVIEW.....	79

## EXECUTIVE SUMMARY

At the request of the Government of Norway, an international team of senior safety experts met with representatives of Norwegian Radiation and Nuclear Safety Authority (DSA) from 25 November to 1 December 2025 to conduct an Integrated Regulatory Review Service (IRRS) follow-up mission. The purpose of the IRRS follow-up mission was to review Norway's progress against the recommendations and suggestions identified in the initial IRRS mission, which was carried out from 17 to 28 June 2019. The scope of the IRRS follow-up mission was the same as the scope of the initial mission in 2019, namely the regulatory framework for all nuclear and radiation facilities and activities in Norway.

The IRRS team consisted of six senior regulatory experts from six IAEA Member States, and three IAEA staff members.

The IRRS team carried out a review of the progress made on each recommendation and suggestion that was documented in the 2019 IRRS mission report. These recommendations and suggestions cover the following areas: responsibilities and functions of the government; the global safety regime; responsibilities and functions of the regulatory body; the management system of the regulatory body; the activities of the regulatory body, including authorization, review and assessment, inspection, enforcement and the development and content of regulations and guides; emergency preparedness and response; control of medical exposure; occupational radiation protection; control of radioactive discharges, materials for clearance and control of existing exposure situations and remediation; environmental monitoring for public radiation protection.

To assess progress, the IRRS team conducted a series of interviews and discussions with DSA and reviewed the advance reference material provided by them.

The IRRS team notes significant changes have occurred in Norway since 2019, for instance:

- In December 2022, Norwegian Nuclear Decommissioning (NND) applied for licences to own and operate the 3 nuclear facilities in the country. Following an agreed stepwise approach, and after review and assessment by DSA, the transfer of the licence for Halden took place on 1 April 2025. Licences for the other sites will take place in the coming years.
- Norway has taken initiatives related to assess various aspects of a potential nuclear power programme. In June 2024, the Government appointed an independent public commission of national and international experts to assess all aspects of potential nuclear energy introduction, with a report due in April 2026. In parallel, the company Norsk Kjernekraft AS notified plans for an impact assessment of a small modular reactor project, which underwent public hearing in 2024. At the request of the Ministry of Energy, the Ministry of Health and Care Services, the Ministry of Climate and Environment and the Ministry of Justice and Public Security, DSA and other agencies recommended requirements for a strategic environmental impact assessment of the proposed project in September 2025.

The IRRS team concluded that all the recommendations and suggestions detailed in the IRRS initial mission report have been given due consideration and have, or will, be addressed through the implementation of a comprehensive action plan. Out of the 21 recommendations and 19 suggestions from 2019, 16 recommendations and 17 suggestions have been successfully addressed and closed.

A new recommendation related to further strengthening the effective independence of DSA in discharging all its regulatory functions has been given to the Government. The Recommendations and Suggestions from 2019 that remain open also pertain to ongoing efforts to build and maintain national competence in radiation

protection and safety, as well as to completing the alignment of national regulations with the relevant IAEA safety standards

Notable achievements since 2019 include the following:

- National Policies and Strategies - The Government has adopted several strategic documents, including the first National Strategy for Radiation Protection and Nuclear Safety (2025), the National Strategy for the Safe, Secure, and Environmentally Sound Management of Radioactive Waste (2024) and a renewed National Radon Strategy (2025–2029).
- Enhancing National Competence - Norway has implemented a comprehensive approach to strengthen national competence in radiation protection and nuclear safety. Key actions include establishing the Norwegian Nuclear Research Centre, launching new academic programs, and introducing DSA's Knowledge Management Strategy and Strategic Competence Plan.
- Regulatory Framework Upgrades – The legal framework has been strengthened through new and revised regulations and the introduction of general licensing conditions for nuclear facilities. DSA has also extensively updated existing guidance documents and developed new ones, following a structured prioritization process.
- Improved Regulatory Processes – DSA has implemented a comprehensive Integrated Management System covering all core regulatory functions. Specifically, DSA has made significant progress in enhancing review and assessment processes.

The first National Strategy for Radiation Protection and Nuclear Safety was published as an official publication of Norwegian Ministries. This single document for policy provides a clear framework for national safety objectives and responsibilities and serves as an excellent example of a well-structured national safety policy.

A policy discussion on regulatory considerations associated with possible development of a new nuclear power programme in Norway took place with DSA, IRRS team and representatives from Ministry of Health and Care Services, the Ministry of Climate and Environment, the Ministry of Foreign Affairs and the Ministry of Energy. Norway explained the recent developments on that matter. The importance of a national strategy and approach, comprehensive assessment of regulatory framework, international cooperation and thorough planning were highlighted. Further, early consideration of radioactive waste generation and management was stressed.

In conclusion, the IRRS team recognized that the DSA preparation for the follow-up mission was very thorough, and the administrative and logistical support was excellent. The IRRS team was extended full cooperation by its Norwegian counterparts during the technical discussions. The counterparts presented clear evidence of the actions they have taken, or are yet to take, to successfully address all the IRRS initial mission findings from 2019. Completing this work should lead to sustainable improvements to the nuclear and radiation safety framework within Norway. The specific findings of the follow-up mission are summarized in Appendices I and II.

A press release was issued by the IAEA at the end of the IRRS follow-up mission.

## I. INTRODUCTION

At the request of the Government of Norway, an international team of senior safety experts met representatives of the Norwegian Radiation and Nuclear Safety Authority (DSA) from 25 November to 1 December 2025 to conduct an Integrated Regulatory Review Service (IRRS) follow-up mission. The mission took place at DSA Headquarters in Oslo. The purpose of this peer review was to review Norway's progress against the recommendations and suggestions identified in the initial IRRS mission which was carried out from 17 to 28 June 2019.

The review mission was formally requested by the Government of Norway in March 2024. An on-line preparatory meeting was conducted on 1 April 2025 to discuss the purpose, objectives, and detailed preparations of the follow-up review in connection with regulated facilities, activities and exposure situations in Norway and their related safety aspects and to agree the scope of the IRRS follow-up mission.

The IRRS team consisted of 6 senior regulatory experts from 6 IAEA Member States and 3 IAEA staff members. The IRRS team carried out the review in the areas covered by the initial mission in June 2019. In addition, a policy issue on regulatory considerations associated with possible development of a new nuclear power programme in Norway was discussed.

In preparation for the IRRS follow-up mission, Norway conducted a self-evaluation of the status of recommendations and suggestions set out in the initial IRRS mission report and prepared a self-assessment follow-up report accordingly. This report and supporting documentation were provided to the IRRS team as advance reference material (ARM) for the mission. During the mission, the IRRS team performed a systematic review of all topics by reviewing the advance reference material, additional information provided, and by conducting interviews with management and staff of DSA, a representative of the Ministry of Health and Care Services also took part in interviews. Representatives of the Ministry of Climate and Environment, Ministry of Foreign Affairs and Ministry of Energy were present at the Entrance and Exit Meetings and took part in the Policy Discussion.

Throughout the mission, the IRRS team received the full cooperation in regulatory and technical areas by all parties. In particular, the staff of DSA provided excellent assistance and demonstrated extensive openness and transparency.

## **II. OBJECTIVE AND SCOPE**

The purpose of this Integrated Regulatory Review Service (IRRS) follow-up mission was to conduct a review of the of the 21 recommendations and 19 suggestions that were given to Norway during the IRRS initial mission conducted from 17 to 28 June 2019 and to exchange information and experience in the areas covered by the IRRS.

The IRRS follow-up mission scope was the same as the scope of the initial mission covering the following areas: responsibilities and functions of the government; responsibilities and functions of the regulatory body; the management system of the regulatory body; the activities of the regulatory body related to regulation of nuclear and radiation facilities and activities, including authorization, review and assessment, inspection, enforcement, the development and content of regulations and guides; emergency preparedness and response; occupational radiation protection; control of discharges; and environmental monitoring for public radiation protection.

The review was carried out by comparison of existing arrangements against the IAEA safety standards.

It is expected that the IRRS follow-up mission will facilitate regulatory improvements in Norway and other Member States from the knowledge gained and experiences shared between Norwegian Counterparts and IRRS reviewers, and through the evaluation of the effectiveness of Norway's regulatory infrastructure for nuclear and radiation safety.

### **III. BASIS FOR THE REVIEW**

#### **A) PREPARATORY WORK AND IRRS TEAM**

At the request of the Government of Norway, a preparatory meeting for the Integrated Regulatory Review Service (IRRS) follow-up mission was conducted on 1 April 2025. The preparatory meeting was carried out by the appointed Team Leader Mr Jussi Heinonen, the appointed Deputy Team Leader Mr Cantemir Ciurea and the IRRS IAEA Team representatives, Mr Hilaire Mansoux, Team Coordinator and Mr Gabriel Soare, Deputy Team coordinator and Ms Baan Fischer, Administrative Assistant.

The IRRS follow-up mission preparatory team had discussions regarding regulatory programmes and policy issues with the senior management of DSA represented by Mr Per Strand, DSA Director General, other senior management and staff. The discussions resulted in agreement that the review will cover the areas covered by the initial mission conducted in June 2019.

Mr Strand made presentations on the national context, the current status of DSA and the self-assessment results to date.

IAEA staff presented the IRRS principles, follow-up mission process and methodology.

The proposed composition of the IRRS Team was discussed. Logistics of the mission, including meetings and workplaces, counterparts and Liaison Officer, proposed site visits, lodging and transportation arrangements were also addressed.

The DSA Liaison Officer for the IRRS mission was confirmed as Ms Carol Robinson.

DSA provided IAEA with the advance reference material (ARM) for review on 1 October 2025. In preparation for the mission, the IAEA review team members reviewed the ARM and provided their initial impressions to the IAEA Team Coordinator prior to the commencement of the IRRS follow-up mission.

#### **B) REFERENCES FOR THE REVIEW**

The relevant IAEA safety standards and the Code of Conduct on the Safety and Security of Radioactive Sources were used as review criteria. The complete list of IAEA publications used as the references for this mission is provided in Appendix VIII.

#### **C) CONDUCT OF THE REVIEW**

The initial IRRS Team meeting took place on Monday 24 November 2025 in Oslo, directed by the IRRS Team Leader and the IAEA Team Coordinator. Discussions encompassed the general overview, the scope and specific issues of the mission, clarification of the bases for the review and the background, context and objectives of the IRRS programme. The understanding of the methodology for review was reinforced. The agenda for the mission was presented to the team. As required by the IRRS Guidelines, the reviewers presented their initial impressions on the ARM and highlighted significant issues to be addressed during the mission.

The DSA Liaison Officer was present at the initial IRRS team meeting, in accordance with the IRRS Guidelines, and presented logistical arrangements planned for the mission.

The IRRS entrance meeting was held on Tuesday 25 November 2025, with the participation of DSA senior management and staff, representatives from the Ministry of Health and Care Services, the Ministry of Climate and Environment and the Ministry of Foreign Affairs. Mr Per Strand gave an overview of the Norwegian context, DSA's activities and the action plan prepared as a result of the pre-mission self-assessment.

During the IRRS mission, a comprehensive review was carried out across all areas within the agreed scope. The objective was to assess Norway's and DSA's actions in response to the recommendations and suggestions identified during the initial mission.

The review was conducted through meetings, interviews and discussions. The IRRS Team performed its review according to the mission programme given in Appendix V.

The IRRS exit meeting was held on Monday 1 December 2025. The opening remarks at the exit meeting were presented by Mr Per Strand and were followed by the presentation of the results of the mission by the IRRS Team Leader Mr Jussi Heinonen. Closing remarks were made by Mr Hilaire Mansoux, on behalf of Ms Hildegard Vandenhove, IAEA, Director, Division of Radiation, Transport and Waste Safety.

An IAEA press release was issued at the end of the mission.

## 1. RESPONSIBILITIES AND FUNCTIONS OF THE GOVERNMENT

### 1.1. NATIONAL POLICY AND STRATEGY FOR SAFETY

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** While Norway has implemented most objectives of a national policy and strategy for safety within its framework for safety, said strategy is yet to be promulgated in a policy document. This has been recognized in the ARM and is part of the action plan.

<p>(1)</p>	<p><b>BASIS: GSR Part 1 (Rev 1) Requirement 1 states that</b> <i>“The government shall establish a national policy and strategy for safety, the implementation of which shall be subject to a graded approach in accordance with national circumstances and with the radiation risks associated with facilities and activities, to achieve the fundamental safety objective and to apply the fundamental safety principles established in the Safety Fundamentals.”</i></p>
<p>(2)</p>	<p><b>BASIS: GSR Part 1 (Rev 1) Requirement 1 para 2.3 states that</b> <i>“National policy and strategy for safety shall express a long term commitment to safety. The national policy shall be promulgated as a statement of the government’s intent. The strategy shall set out the mechanisms for implementing the national policy. In the national policy and strategy, account shall be taken of the following:</i></p> <ul style="list-style-type: none"> <li><i>(a) The fundamental safety objective and the fundamental safety principles established in the Fundamental Safety Principles;</i></li> <li><i>(b) Binding international legal instruments, such as conventions and other relevant international instruments;</i></li> <li><i>(c) The specification of the scope of the governmental, legal and regulatory framework for safety;</i></li> <li><i>(d) The need and provision for human and financial resources;</i></li> <li><i>(e) The provision and framework for research and development;</i></li> <li><i>(f) Adequate mechanisms for taking account of social and economic developments;</i></li> <li><i>(g) The promotion of leadership and management for safety, including safety culture.”</i> </li></ul>
<p>R1</p>	<p><b>Recommendation:</b> <b>The Government should establish a comprehensive national policy and strategy for safety promulgated as a statement of the Government’s intent, the implementation of which shall be subject to a graded approach.</b></p>

#### Changes since the initial IRRS mission

Since the initial IRRS mission, Norway has taken action in addressing Recommendation R1. As a result, the Norwegian Government published its first National Policy and Strategy for Radiation Protection and Nuclear Safety on 2 July 2025 (hereinafter referred to as “2025 National Policy and Strategy for Safety”). This document consolidates Norway’s commitments to radiation protection and nuclear safety, aligning with IAEA Safety Fundamentals and General Safety Requirements. It outlines ten overarching goals and serves as a framework for other strategies, action plans, and policy documents.

This strategy integrates international obligations, applies a risk-based approach, and includes mechanisms for implementation through legislation, regulatory oversight, and coordination among authorities.

## Status of the initial mission finding

**R1 is closed** as the National Policy and Strategy for Safety was published on 2 July 2025 as a statement of the Government's intent.

This comprehensive single policy document provides a clear framework for national safety objectives and responsibilities and serves as an excellent example of a well-structured national safety policy aligning well with the requirements of IAEA Safety Standards.

**A Policy Discussion took place during this follow up mission**, where DSA outlined the current status of considerations for a potential nuclear power programme in Norway, noting the growing public debate, recent industry initiatives led by Norwegian Nuclear Power Limited, and the government's appointment of an independent commission to assess all aspects of introducing nuclear power. The commission's report is expected in April 2026. DSA also highlighted the regulatory and societal challenges involved, with contributions from various Norwegian ministries and agencies.

IRRS reviewers shared regulatory experiences and lessons learned, focusing on the importance of clear government direction, regulatory preparedness, international cooperation, addressing waste management early enough and the adaptation of established frameworks for Norway's potential nuclear program.

The main regulatory and technical challenges DSA would face include regulatory clarity (licensing steps, responsibilities of all stakeholders), adaptation of regulatory framework for new nuclear, human and financial resources (cost recovery model for pre-licensing work) and competence development.

On-going discussions between Norway and IAEA regarding its programme for supporting Member States embarking in a new nuclear programme were mentioned. Inviting an INIR mission phase 1 would be valuable for Norway, even before the governmental decision.

## 1.2. ESTABLISHMENT OF A FRAMEWORK FOR SAFETY

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The framework for safety does not contain clear provisions with regard to siting, design and decommissioning as licensing phases. Provisions to this effect are made through decisions by the regulatory body, yet a concrete legal basis is missing to address these topics.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 2 para 2.5 states that</b> <i>“The government shall promulgate laws and statutes to make provision for an effective governmental, legal and regulatory framework for safety.”</i>
(2)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 2 para 2.5 (2) states that</b> <i>“This framework for safety shall set out the following: ... The types of facilities and activities that are included within the scope of the framework for safety.”</i>
(3)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 2 para 2.5 (3) states that</b> <i>“This framework for safety shall set out the following:</i>

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	... <i>The type of authorizations that is required for the operation of facilities and for the conduct of activities, in accordance with a graded approach;”</i>
<b>R2</b>	<b>Recommendation:</b> The Government should update the framework for safety to include clear legal provisions and definitions for siting, design and decommissioning as licensing phases.

### Changes since the initial IRRS mission

The Government and DSA have taken steps to address Recommendation 2 by clarifying the legal provisions for siting, design, and decommissioning as distinct licensing phases.

The 2025 National Policy and Strategy for Safety include a commitment under Goal 4 to apply a life-cycle approach and to review the legal framework to ensure alignment with IAEA safety standards. The strategy represents a significant step forward in addressing the gaps identified during the initial IRRS mission. It demonstrates a clear understanding of the challenges and sets out concrete actions to strengthen the regulatory framework and support infrastructure.

The Nuclear Energy Act (NEA) and its associated regulations include provisions on the licences required throughout the entire lifetime of a nuclear facility, including that a licence is required during decommissioning, even if not explicitly stated. After the initial mission, DSA has published “Guidance no 15 on Planning the Clean-up of the Norwegian Nuclear Programme”, and this guidance document is a part of the framework for safety. In this publication, DSA gives guidance on the siting, design and decommissioning phases and gives guidance on how the phases are regulated.

As per the “Preliminary Allocation Letter 2026”, DSA is tasked to review and revise the legal framework accordingly and to ensure harmonization with the IAEA Safety Standards.

### Status of the initial mission finding

**R2 is closed on the basis of progress made and confidence in effective completion in due time** as the Government sets out further actions to review the legal framework ensuring alignment with IAEA safety standards.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA is involved in preparing and drafting changes to the legal framework, however there are no processes that ensure due consideration of these proposals by the Government.

<b>(1)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 2 states that</b> <i>“The government shall establish and maintain an appropriate governmental, legal and regulatory framework for safety within which responsibilities are clearly allocated.”</i>
<b>(2)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 2 para. 2.5 (3) states that</b> <i>“This framework for safety shall set out the following:</i> ...

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<i>The authority and responsibility of the regulatory body for promulgating (or preparing for the enactment of) regulations and preparing guidance for their implementation;”</i>
<b>S1</b>	<b>Suggestion:</b> The Government should consider formalizing the periodic review of the legal framework through DSA.

### Changes since the initial IRRS mission

The Government and the Ministries have the authority to enact regulations in the area of DSA responsibilities. DSA, however, can currently only propose regulatory updates and is involved in and sometimes tasked by the responsible ministry in preparing and drafting changes. Following the IRRS initial mission, DSA has actively assessed the needs for changes to the legal framework, drafted new regulations, and updated existing ones. Recognizing the importance of a structured review process, DSA formally suggested that its responsibility for periodic regulatory review be incorporated into its general instructions from the ministries. In 2025, the Ministry of Health and Care Services (HOD) acknowledged this proposal and requested DSA’s input on the appropriate review frequency. DSA recommended a ten-year review cycle, ensuring that international developments and operational experience are systematically taken into account, and emphasized the need for a process that guarantees governmental consideration of its proposals.

As the revision of DSA’s general instructions is ongoing, both DSA and the ministries expect this matter to be resolved promptly. Additionally, the 2025 National Policy and Strategy for Safety confirms the Government’s commitment to periodic reviews of the legal framework, reinforcing the need to formalize these responsibilities through DSA.

### Status of the initial mission finding

**S1 is closed on the basis of progress made and confidence in effective completion in due time** as the Government acknowledged the need for a process and is taking actions for formalizing the periodic review of the legal framework through DSA.

## 1.3. ESTABLISHMENT OF A REGULATORY BODY AND ITS INDEPENDENCE

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Both DSA as regulatory authority and the hospitals as authorized parties are financed by HOD, this setup can potentially constitute a conflict of interest if faced by the decision whether to prioritize funds for regulatory control or licensed activities.

A potential conflict of interest has been recognized in the ARM and is part of the action plan.

<b>(1)</b>	<b>BASIS: GSR Part 1 (Rev. 1) Requirement 4 states that</b> <i>“The government, through the legal system, shall establish and maintain a regulatory body, and shall confer on it the legal authority and provide it with the competence and the resources necessary to fulfil its statutory obligation for the regulatory control of facilities and activities.”</i>
<b>(2)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 4 para 2.8 (d) states that</b> <i>“To be effectively independent from undue influences on its decision making, the regulatory body:</i> ...

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<i>Shall be free from any pressures associated with political circumstances or economic conditions, or pressures from government departments, authorized parties or other organizations.”</i>
S2	<b>Suggestion:</b> The Government should consider ensuring effective independence of DSA in all its regulatory functions with respect to licensees funded by the Ministry of Health and Care Services.

### Changes since the initial IRRS mission

The Norwegian Government has addressed this by incorporating a commitment to effective independence of the regulatory body (DSA) in the 2025 National Policy and Strategy for Safety. Under Goal 1, the strategy affirms that DSA must function as an independent, objective authority, free from undue external pressure, including from government departments and licensees. Furthermore, the Ministry of Health and Care Services (HOD) has initiated a review of the legal framework that provides an important opportunity to ensure that DSA’s independence is clearly defined and legally established in line with international obligations. However, the implementation of these legal provisions to ensure effective independence of DSA in all its regulatory functions with respect to licensees funded by the Ministry of Health and Care Services is still in the planning stage.

### Status of the initial mission finding

**S2 remains open** as the Government has not completely implemented the measure to ensure effective independence of DSA in all its regulatory functions with respect to licensees funded by the Ministry of Health and Care Services.

### New observation(s) made during the follow-up mission

It is a significant achievement that the Government has established a National Strategy for Radiation Protection and Nuclear Safety. Equally important is the strategy’s explicit commitment to maintaining an effective and independent regulatory authority for radiation protection and nuclear safety in Norway.

However, to fully implement this commitment, the Nuclear Energy Act should be updated to include clear provisions that guarantee the effective independence of the DSA’s regulatory functions, in line with the strategic objectives outlined in the strategy. This will become even more critical if Norway decides to pursue a nuclear power program, where DSA as the independent regulator will play a central role in assessing the safety of nuclear facilities during licensing, construction, commissioning and operating phases.

If such a decision is made, the competence and resources of the DSA must be strengthened. Furthermore, the Government should ensure that the DSA remains free from any undue influence, whether arising from political circumstances, economic conditions, government departments, authorized parties, or other organizations.

At a minimum, the regulatory body must be granted effective independence, exercising their legal powers with complete technical, managerial, and decision-making autonomy. Supervision by government or other authorities should be strictly limited to verifying legality, regularity, and accountability, without influencing regulatory decisions on safety matters. Appeals on such decisions are often directed to the courts, not to government bodies. Any undue influence or excessive dependence on supervisory authorities (for example

ministerial departments) undermines institutional credibility, functional independence, and the capacity for autonomous decision-making.

The task assigned to DSA to revise the Nuclear Energy Act (NE Act) provides an important opportunity to clarify the provisions of Section 10, which concerns the competence of the Ministry of Health and Care Services (HOD) to overrule safety decisions made by DSA in appeal cases under Section 57a, introduced in 2018. This issue recently arose in a specific case following an appeal by the Institute for Energy Technology (IFE) to HOD. In its letter to DSA dated 10 November 2023, the Ministry stated that it could overrule all aspects of such cases, including decisions related to safety. This would not be in line with IAEA Safety Standards.

When reviewing the Acts, the Government should provide DSA the authority to establish and adopt regulations under both the Radiation Protection Act (RP Act) and the Nuclear Energy Act. This measure would strengthen the effective independence of DSA in all its regulatory functions, particularly regarding licenses funded by the Ministry of Health and Care Services, and would help avoid any potential conflicts of interest.

### FOLLOW UP MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Ministry of Health and Care Services has claimed to have the legal power to overrule the safety decisions made by DSA in appeal cases, according to section 57 a. This issue was recently raised in a specific case based on the appeal from the Institute of Technology (IFE) to HOD, and in a letter to DSA from HOD on 10 November 2023, where the ministry stated that they could overrule all the aspects of such a case, including decisions related to safety.

(1)

**BASIS: GSR Part 1 Requirement 4 states that** *“The government shall ensure that the regulatory body is effectively independent in its safety related decision making and that it has functional separation from entities having responsibilities or interests that could unduly influence its decision making*

RF1

**Recommendation: The Government should ensure in relevant legislation that DSA is effectively independent in its safety related decision making.**

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA receives funding from the ministries HOD, KLD and MFA. While the necessary resources are provided for some areas, it is not guaranteed that adequate funding is being provided in all areas of regulatory activity. For example, inspection at hospitals was halted for four months starting with August 2018 due to lack of funding. No additional provisions have been made to provide for qualified staff for new activities like the regulatory oversight of the proton therapy facilities currently under construction in Oslo and Bergen.

(1)

**BASIS: GSR Part 1 (Rev 1) Requirement 4 para 2.8 (b) states that** *“To be effectively independent from undue influences on its decision making, the regulatory body:*

*...  
Shall have access to sufficient financial resources for the proper and timely discharge of its assigned responsibilities.”*

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

R3

**Recommendation:** The Government should make provisions to provide DSA with the resources necessary to fulfil its statutory obligation for the regulatory control of all facilities and activities.

### Changes since the initial IRRS mission

Since 2019, the Norwegian Government has significantly increased funding to DSA across all three responsible ministries' budgets: Health and Care Services, Climate and Environment, and Foreign Affairs. These increases have supported expanded responsibilities, including decommissioning of nuclear facilities, enhanced nuclear preparedness, and international cooperation. The 2025 National Policy and Strategy for Safety explicitly commits to ensuring that DSA has sufficient financial and human resources to fulfil its mandate. Budget allocations have increased from NOK 188 million in 2019 to NOK 334 million in 2025, with DSA staff increasing from 115 to 153 full-time equivalents.

The substantial increase in funding and staffing, along with the strategic commitment to resource adequacy, demonstrates strong progress in addressing Recommendation R3. DSA has successfully secured additional funding for emerging needs, increased capacity as to respond to acute situations during decommissioning. The improvements suggest that DSA is now better positioned to fulfil its statutory obligations without resource-related constraints.

However, the sustainability and adequacy of these provisions across all areas of regulatory activity, especially considering expanding responsibilities, is dependent on the future Government decisions. The 2025 National Policy and Strategy for Safety provide adequate justification to the Government for ensuring that DSA has sufficient financial and human resources to fulfil its mandate.

### Status of the initial mission finding

**R3 is closed** as the Government through the 2025 National Policy and Strategy for Safety explicitly commits to ensuring that DSA has sufficient financial and human resources to fulfil its mandate.

## 1.4. RESPONSIBILITY FOR SAFETY AND COMPLIANCE WITH REGULATIONS

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The prime responsibility for safety has been established in the NE Act and PC Act, however not in the RP Act.

(1)

**BASIS: SF-1 Principle 1 states that** *“the prime responsibility for safety must rest with the person or organization responsible for facilities and activities that give arise to radiation risks.”*

(2)

**BASIS: GSR Part 1 (Rev 1) Requirement 6 states that** *“The government shall stipulate that compliance with regulations and requirements established or adopted by the regulatory body does not relieve the person or organization responsible for a facility or an activity of its prime responsibility for safety.”*

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

S3

**Suggestion:** The Government should consider making legal provision that the prime responsibility for safety must rest with the person or organization responsible for facilities and activities covered by the RP Act.

### Changes since the initial IRRS mission

Following the IRRS mission, DSA clarified that the Radiation Protection Act § 5 already establishes the prime responsibility for safety. The provision states that any activity involving radiation sources must be conducted safely, implying that the person or organization responsible for the activity is also responsible for ensuring safety. DSA acknowledged that a mistranslation of the term “forsvarlig” as “justifiable” may have led to confusion during the IRRS mission.

In 2025, DSA sent a letter to the Ministry of Health and Care Services (HOD) explaining its interpretation. HOD responded, agreeing that the Act should be understood to place the prime responsibility for safety on the person or organization responsible for the activity. This interpretation is now also reflected in the 2025 National Policy and Strategy for Safety under Goal 3.

The clarification provided by DSA and the Ministry’s agreement on the interpretation of section 5 of the Radiation Protection Act effectively address the concern raised in S3. The inclusion of this principle in the national strategy further reinforces the legal and policy framework. While the wording in the Act could be more explicit, the combined legal interpretation and strategic commitment provide sufficient assurance that the prime responsibility for safety is recognized and upheld.

### Status of the initial mission finding

**S3 is closed**, based on the clarification of legal interpretation, the Ministry’s confirmation, and the inclusion of the principle of prime responsibility for safety in the 2025 National Policy and Strategy for Safety.

## 1.5. COORDINATION OF AUTHORITIES WITH RESPONSIBILITIES FOR SAFETY WITHIN THE REGULATORY FRAMEWORK

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** While DSA has coordination and liaison with different authorities, this does not cover all authorities that have responsibilities within the regulatory framework for safety, such as transport of radioactive material and biomedical research.

(1)

**BASIS:** GSR Part 1 (Rev 1) Requirement 7 para 2.18 (11) states that “Where several authorities have responsibilities for safety within the regulatory framework for safety, the responsibilities and functions of each authority shall be clearly specified in the relevant legislation. The government shall ensure that there is appropriate coordination of and liaison between the various authorities concerned in areas such as:  
(3) Applications of radiation in medicine, industry and research;  
(11) Safety in the transport of dangerous goods, including nuclear material and radioactive material;

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

*... This coordination and liaison can be achieved by means of memoranda of understanding, appropriate communication and regular meetings. Such coordination assists in achieving consistency and in enabling authorities to benefit from each other's experience."*

S4

**Suggestion: The Government should consider enhancing the coordination and liaison between relevant authorities with regard to transport of radioactive materials and biomedical research.**

### Changes since the initial IRRS mission

The Norwegian Radiation and Nuclear Safety Authority (DSA) has established Memoranda of Understanding (MoUs) with both the Norwegian Directorate for Civil Protection (DSB) and the Norwegian Maritime Authority (NMA) and is currently developing a similar agreement with the Civil Aviation Authority (CAA). These MoUs define the roles and responsibilities of each organization, support coordinated inspections and ensure that all parties promptly notify one another in the event of incidents. In addition, DSA and DSB have jointly updated the national ADR driver training curriculum with regard to specialization for Class 7 radioactive materials. In 2023, a joint workshop on transport security was organized with the participation of DSA, DSB, NMA, and CAA.

Coordination between the Norwegian Radiation and Nuclear Safety Authority (DSA) and the Regional Committees for Medical and Health Research Ethics (REK) is currently handled on a case-by-case basis. A national strategy for medical applications is planned, and in 2026 it is anticipated that DSA will be assigned, in cooperation with relevant health authorities like the Norwegian Directorate of Health (HDIR), Norwegian Institute of Public Health (FHI) and Norwegian Medical Product Agency (DMP), to develop a dedicated sub-strategy. However, it is not clear if this task also is anticipated to be assigned to these other relevant health authorities in their assignment letters. This sub-strategy is intended to strengthen formal collaboration among health authorities and establish Memoranda of Understanding to support that cooperation.

### Status of the initial mission finding

**S4 is closed on the basis of progress made and confidence in effective completion in due time** as Government made significant progress in formalizing inter-agency coordination, with regard to transport of radioactive materials and biomedical research.

#### 1.6 SYSTEM FOR PROTECTIVE ACTIONS TO REDUCE EXISTING OR UNREGULATED RADIATION RISKS

There were no findings in this area in the initial IRRS mission.

#### 1.7 PROVISIONS FOR THE DECOMMISSIONING OF FACILITIES AND THE MANAGEMENT OF RADIOACTIVE WASTE AND OF SPENT FUEL

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** In 2019, the Government tasked DSA to draft a national strategy for spent fuel and radioactive waste, building on an assessment made by DSA in 2016 on the capacity for management of radioactive waste towards 2035. However, there is no national policy and strategy that includes a

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

comprehensive inventory of current and future radioactive waste streams and that addresses decommissioning as well as predisposal spent fuel and radioactive waste management facilities and final disposal solutions, including clear provisions for funding.

(1)	<p><b>BASIS: GSR Part 1 (Rev 1) Requirement 10 states that</b> <i>“The government shall make provision for the safe decommissioning of facilities, the safe management and disposal of radioactive waste arising from facilities and activities, and the safe management of spent fuel.”</i></p>
(2)	<p><b>BASIS: GSR Part 1 (Rev 1) Para 2.28 states that</b> <i>“Decommissioning of facilities and the safe management and disposal of radioactive waste shall constitute essential elements of governmental policy and the corresponding strategy over the lifetime of facilities and the duration of activities. The strategy shall include appropriate interim targets and end states. Radioactive waste generated in facilities and activities necessitates special consideration because of the various organizations concerned and the long timescales that may be involved. The government shall enforce continuity of responsibility between successive authorized parties.”</i></p>
(3)	<p><b>BASIS: GSR Part 5 Requirement 2 states that</b> <i>“To ensure the effective management and control of radioactive waste, the government shall ensure that a national policy and a strategy for radioactive waste management are established. The policy and strategy shall be appropriate for the nature and the amount of the radioactive waste in the State, shall indicate the regulatory control required, and shall consider relevant societal factors. The policy and strategy shall be compatible with the fundamental safety principles and with international instruments, conventions and codes that have been ratified by the State. The national policy and strategy shall form the basis for decision making with respect to the management of radioactive waste.”</i></p>
(4)	<p><b>BASIS: SSR Part 5 Requirement 1 states that</b> <i>“The government is required to establish and maintain an appropriate governmental, legal and regulatory framework for safety within which responsibilities shall be clearly allocated for disposal facilities for radioactive waste to be sited, designed, constructed, operated and closed.”</i></p>
R4	<p><b>Recommendation:</b> The Government should develop and implement a national policy and strategy for spent fuel and radioactive waste management, that reflect national priorities and that can form the basis for long-term decision making with respect to the decommissioning of facilities, management of spent fuel, predisposal waste management and disposal of radioactive waste, including the necessary financial provisions.</p>

### Changes since the initial IRRS mission

Norway has developed and published its first national strategy specifically addressing the secure, safe, and environmentally sound management of radioactive waste, including spent nuclear fuel. The strategy outlines a comprehensive inventory of radioactive waste types and sources, addresses decommissioning and predisposal management, and sets out plans for disposal solutions. It also includes provisions for funding, with estimated costs and responsibilities clearly assigned. The strategy is aligned with international

obligations under the Joint Convention and IAEA safety standards, and it emphasizes a life-cycle approach, stakeholder involvement, and the avoidance of undue burdens on future generations.

### Status of the initial mission finding

**R4 is closed** as the Government developed and is implementing the national policy and strategy for spent fuel and radioactive waste management.

## 1.8. COMPETENCE FOR SAFETY

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** There are no national provisions regarding the building and maintaining of competences of all parties involved in radiation protection and nuclear safety.

(1)	<p><b>BASIS: GSR Part 1 (Rev 1) Requirement 1 para 2.36 states that</b> <i>“The government:</i></p> <p style="padding-left: 40px;"><i>(a) Shall stipulate a necessary level of competence for persons with responsibilities in relation to the safety of facilities and activities;</i></p> <p style="padding-left: 40px;"><i>(b) Shall make provision for adequate arrangements for the regulatory body and its support organizations to build and maintain expertise in the disciplines necessary for discharge of the regulatory body’s responsibilities in relation to safety;</i></p> <p><i>Shall make provision for adequate arrangements for increasing, maintaining and regularly verifying the technical competence of persons working for authorized parties.”</i></p>
R5	<p><b>Recommendation:</b> The Government should establish provisions regarding the building and maintaining of competence of all parties having responsibilities in relation to the safety of facilities and activities, including the strengthening radiation protection training in health education programmes and the formal recognition of medical physicists.</p>

### Changes since the initial IRRS mission

The Norwegian Government has taken steps to address R5 by developing a comprehensive strategy for competence building across all parties responsible for safety. Key developments include:

- Establishment of the Norwegian Nuclear Research Centre (NNRC) in 2023 to enhance national expertise in nuclear physics, chemistry, and radioecology.
- DSA’s development of a Knowledge Management Strategy (2024–2028) and a Strategic Competence Plan (2025–2028), including a human resource plan and training programs.
- Implementation of the IAEA SARCoN methodology for assessing DSA’s competence needs and gaps.
- Launch of new bachelor and master programs in nuclear science and radiation protection at Norwegian universities.
- Initiatives to improve radiation protection training in health education, including plans for a national strategy on medical applications that addresses the need for formal recognition of medical physicists.

DSA has actively engaged with the Norwegian Health Personnel Commission to address the need for building and maintaining competence in radiation protection and nuclear safety.

DSA’s input to the Health Personnel Commission demonstrates a clear understanding of the challenges and a commitment to improving competence in medical radiation use. The recommendations align well with the IRRS findings and IAEA safety standards. However, while the input is comprehensive and well-argued it was not included in the report by the Health Personnel Commission, and its impact depends on whether the Government formally adopts these recommendations and implements them through regulatory changes, education reforms, and recognition schemes. The absence of a formalized education pathway for medical physicists remains a gap. DSA has recommended to the Ministry of Health and Care Services that an assessment of different options for recognising schemes of medical physicist is done, involving also relevant authorities and professional bodies, before it is concluded on which approach would be preferred in Norway.

### Status of the initial mission finding

**R5 remains open** as the absence of a formalized education pathway and recognition scheme for medical physicists remains a gap.

## 1.9. PROVISION OF TECHNICAL SERVICES

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The Government has not made any provision for DSA to have responsibility to authorize technical services for radiation safety. A system for the authorization, approval and accreditation of dosimetry and calibration services within the regulatory framework is not established. This has been recognized in the ARM and is part of the action plan.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 13 states that</b> <i>“The government shall make provision, where necessary, for technical services in relation to safety, such as services for personal dosimetry, environmental monitoring and the calibration of equipment.”</i>
(2)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 13 para 2.41 states that</b> <i>“Technical services do not necessarily have to be provided by the government. However, if no suitable commercial or non-governmental provider of the necessary technical services is available, the government may have to make provision for the availability of such services. The regulatory body shall authorize technical services that may have significance for safety, as appropriate.”</i>
(3)	<b>BASIS: GSR Part 3 Requirement 20 para 3.73 (c) states that</b> <i>“The regulatory body shall be responsible, as appropriate, for: (c) Authorization or approval of service providers for individual monitoring and calibration services; ...”</i>
(4)	<b>BASIS: GSR Part 3 Requirement 25 para 3.99 states that</b> <i>“Employers, as well as self-employed persons, and registrants and licensees shall be responsible for making arrangements for assessment of the occupational exposure of workers, on the basis of individual monitoring where appropriate, and shall ensure that arrangements are made with authorized or approved dosimetry service providers that operate under a quality management system.”</i>

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

S5

**Suggestion:** The Government should consider making provision for DSA's responsibility to authorize technical services for radiation safety.

### Changes since the initial IRRS mission

DSA proposed revisions to the Radiation Protection Regulations to establish an authorization scheme for providers of personal dosimetry services. The proposal introduces a new provision (§10 a) requiring these services to be accredited under ISO 17025 or to demonstrate equivalent competence before applying for DSA certification. The proposal was submitted to the Ministry of Health and Care Services in March 2025, and a public hearing was launched in June 2025 with a consultation deadline in September.

Following the hearing, DSA submitted its final recommendation to the Ministry. The Ministry is expected to decide on promulgation by mid-2026. These regulatory changes align with the IAEA GSR Part 1 and Part 3 requirements regarding the authorization of technical services.

### Status of the initial mission finding

**S5 is closed on the basis of progress made and confidence in effective completion in due time** as the Government has made significant progress in providing DSA with the responsibility to authorize technical services for radiation safety.

## 2. THE GLOBAL SAFETY REGIME

### 2.1 INTERNATIONAL OBLIGATIONS AND ARRANGEMENTS FOR INTERNATIONAL COOPERATION

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Norway’s system for emergency preparedness and response to nuclear and radiological emergencies doesn’t fully meet the requirements regarding GSR Part 7. Therefore, it would benefit from sharing knowledge and experience and receiving feedback on its existing national safety arrangements by inviting an international peer review service to further increase compliance with the international safety standards.

(1) **BASIS: GSR Part 1 (Rev 1) Requirement 14 states that** *“The government shall fulfil its respective international obligations, participate in the relevant international arrangements, including international peer reviews, and promote international cooperation and assistance to enhance safety globally.”*

(2) **BASIS: GSR Part 1 (Rev 1) Requirement 14 para 3.2 (d)states that** *“The features of the global safety regime include:  
.... International peer reviews of the regulatory control and safety of facilities and activities, and mutual learning by participating States.”*

S6 **Suggestion: The Government should consider inviting an Emergency Preparedness and Response Review (EPREV) Service.**

#### Changes since the initial IRRS mission

DSA informed the Crisis Committee about the EPREV service and its purpose. The Committee agreed that the ongoing revision of the Royal Decree on nuclear emergency preparedness must be completed before initiating an EPREV mission. The Committee intends to consider launching such a mission once the revised national arrangements are fully implemented and operational. The rationale behind this approach is to ensure that any peer review reflects the updated national framework and practices.

#### Status of the initial mission finding

S6 is closed on the basis of progress made and confidence in effective completion in due course as the Committee intends to consider launching such a mission once the revised national arrangements are fully implemented and operational.

### 2.2 SHARING OF OPERATING EXPERIENCE AND REGULATORY EXPERIENCE

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA did not establish processes for systematic analysis and identification of lessons to be learned from operating experience and regulatory experience, including for the dissemination of the lessons learned and for their use by authorized parties, the regulatory body and other relevant authorities.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

This has been recognized in the ARM.

<b>(1)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 15 para 3.4 states that</b> <i>“The regulatory body shall establish and maintain a means for receiving information from other States, regulatory bodies of other States, international organizations and authorized parties, as well as a means for making available to other lessons learned from operating experience and regulatory experience.”</i>
<b>S7</b>	<b>Suggestion: DSA should consider establishing and maintaining means for systematic analysis of events, identification of lessons learned and dissemination of related information to facilitate an effective exchange and use of operating and regulatory experience with the international community.</b>

### Changes since the initial IRRS mission

DSA has begun developing a system for the systematic analysis of events and lessons learned from both operating and regulatory experience. As part of its broader digitalization efforts, a digital module is being prepared and is expected to be implemented together with the inspection module in late 2026. This system will organize data gathered from the annual self-reporting by licensees and duty holders, including incident reports, and will support internal learning, regulatory feedback, and risk-based inspection planning. DSA has also strengthened international cooperation and the exchange of experience through bilateral agreements with various countries including ONR in the UK, the NRC in the United States, and Nordic partners, including recent exchanges focused on decommissioning and spent fuel management.

In addition, DSA is member of IAEA international platforms FINAS and IRSRR for exchanging operating experience related to safety of nuclear fuel and research reactors.

DSA’s planned approach appears to support both internal and external dissemination of lessons learned, aligning with GSR Part 1 Requirement 15.

### Status of the initial mission finding

**S7 remains open** as the system for the systematic analysis of events and lessons learned from both operating and regulatory experience is currently in the early stage of development.

### 3. RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY

#### 3.1 ORGANIZATIONAL STRUCTURE OF THE REGULATORY BODY AND ALLOCATION OF RESOURCES

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA is empowered to employ its staff and distribute resources within the budget provided by the Government. However, DSA’s internal procedures for the allocation of resources do not consider the radiation risks associated with facilities and activities under its regulatory control in a systematic manner.

(1)

**BASIS: GSR Part 1 (Rev 1) Requirement 16 states that** *“The regulatory body shall structure its organization and manage its resources so as to discharge its responsibilities and perform its functions effectively; this shall be accomplished in a manner commensurate with the radiation risks associated with facilities and activities.”*

(2)

**BASIS: GSR Part 1 (Rev 1) Requirement 16 para 4.5 states that** *“The regulatory body has the responsibility for structuring its organization and managing its available resources so as to fulfil its statutory obligations effectively. The regulatory body shall allocate resources commensurate with the radiation risks associated with facilities and activities, in accordance with a graded approach.”*

S8

**Suggestion:** DSA should consider improving the management of its financial resources in a manner commensurate with the radiation risks associated with facilities and activities.

#### Changes since the initial IRRS mission

DSA receives funding through an annual budget allocated by the parliament, based on government proposals submitted via the three ministries: HOD, KLD, and MFA. DSA provides input to the ministries according to risk-based priorities for its work programme for the coming year. DSA’s management system is risk-based, and this approach also applies to the budgeting process. The goals in the budget process are assessed for risk to identify appropriate measures and priorities.

DSA has described its system and how it allocates resources. During the initial mission, the issue stemmed from a lack of sufficient funding by HOD for DSA activities. This situation is currently better as described in recommendation 3. All three responsible ministries now allocate funds appropriately according to DSA’s needs. In addition, DSA has some extrabudgetary programmes from other ministries. Most of these funds are allocated to specific areas and are therefore difficult to reallocate. However, DSA can allocate a smaller portion of the funds according to its needs and its assessment of which activities are more critical or risky. DSA also has the option of reassigning employees to perform tasks in other areas.

Challenges still exist, but they are not as significant as they used to be. The major challenges in the future will be the resource needs of DSA related to the possible start of nuclear power programme in Norway or developments in use of commercial nuclear propulsion vessels. Preparations of regulatory framework for these possible activities may also require DSA resources.

#### Status of the initial mission finding

**S8 is closed** as DSA has the capacity to manage its financial resources commensurate with the radiation risks associated with facilities and activities it regulates.

### 3.2 EFFECTIVE INDEPENDENCE IN THE PERFORMANCE OF REGULATORY FUNCTIONS

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA has an established process to avoid conflicts of interest, however no procedures have been established to ensure independence in performing regulatory tasks of those DSA staff, who participates in research, national quality assurance cooperation, or projects with undertakings or institutions that are or might become authorized parties of DSA. This has been recognized in the ARM and is part of the action plan.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 17 states that</b> <i>“The regulatory body shall perform its functions in a manner that does not compromise its effective independence.”</i>
(2)	<b>BASIS: GSG 12 Para 5.65</b> <i>“The integrated management system of a regulatory body should be described in a set of documents that need to be applied in order for the regulatory body to achieve its goals. This set of documents typically includes the following: A description of the interfaces with interested parties and external organizations.”</i>
S9	<b>Suggestion: DSA should consider establishing procedures for ensuring effective independence in performing regulatory tasks by the staff who are involved in projects connected with authorized parties.</b>

#### Changes since the initial IRRS mission

DSA has strengthened its arrangements to ensure effective independence when acting as both a regulator and, in limited cases, a user of radiation sources or a holder of obligations under relevant legislation. When DSA activities require an authorisation or must fulfil a notification obligation, applications and notifications are sent to the competent ministry and are not processed internally in DSA.

The Public Administration Act outlines the rules regarding conflicts of interest and specifies when a civil servant is disqualified from preparing or deciding a case due to a conflict of interest. DSA applies these rules to all staff. A formal procedure has been integrated into Integrated Management System, known as TQM, specifying the responsibilities of employees, line managers, and the Legal Unit in assessing and managing potential conflicts of interest. Each employee is responsible for assessing their own impartiality. In case of uncertainty, the employee must report to their superior and provide a written self-assessment. The superior should contact the Legal Unit, which will provide a written assessment on the matter.

DSA has introduced a self-declaration form for public procurements. With this form, the employee must assess their own impartiality in every procurement case.

As each employee has the right to hold a secondary job, they must disclose any secondary job. During the recruitment process, candidates must indicate if any secondary job or position could raise doubts about their impartiality.

A newly recruited person from an authorised party is not involved in the administrative decision-making process or inspections related to the authorised party in question until a specified period has passed. The length of this period is based on seniority and similar circumstances.

In addition, DSA has developed a template to support the Legal Unit in conducting impartiality evaluations. This makes the process more efficient and promotes consistency and fairness.

### Status of the initial mission finding

**S9 is closed** as DSA has improved the process and prepared a detailed procedure with additional documents to support it. This process and procedure address all areas where effective independence could be affected.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Providing technical services for authorized parties within the Department of Radiation Protection and Measurement Services could lead to a potential conflict of interest within DSA with regard to its regulatory functions.

(1)

**BASIS: GSR Part 1 (Rev 1) Requirement 17, para. 4.7 states that** *“The regulatory body shall prevent or duly resolve any conflicts of interests or, where this is not possible, shall seek a resolution of conflicts within the governmental and legal framework.”*

S10

**Suggestion: DSA should consider resolving any existing or potential conflict of interest within its organization with regard to the provision of technical services.**

### Changes since the initial IRRS mission

Several changes have been made since the 2019 IRRS mission to resolve potential conflicts of interest within DSA’s organisation regarding the provision of technical services. The Radiation Measurements section has been transferred to the Nuclear Preparedness Department, and DSA no longer provides personal dosimetry services to authorised parties. This was discontinued in 2021. Customers, including DSA, associated with the personal dosimetry service were, by agreement, transferred to Landauer Nordic Holding AB, except for those who declined the transfer and chose other personal dosimetry services.

Other laboratory services in the Radiation Measurements section, such as the Emergency Preparedness Laboratory, the Radon Laboratory, the Optical Laboratory, and the Environmental Laboratories, primarily conduct measurements and analyses as part of established monitoring programmes and research projects, or for emergency preparedness purposes. These laboratories do not offer services to external clients. The only remaining service is calibration, as the Dosimetry Laboratory is designated as a national reference laboratory for the units Gy, Sv, and Bq. The Dosimetry Laboratory is part of the network of Secondary Standard Dosimetry Laboratories and meets calibration needs in Norway for both hospitals and providers of radiation protection monitoring and services. Therefore, the Dosimetry Laboratory has a national responsibility to provide calibration services, which cannot be transferred to another entity. The authorisation process has also been changed, and DSA no longer issues authorisations to its own Dosimetry Laboratory. This is now done by the Ministry of Health and Care Services.

In addition, procedures for maintaining impartiality and preventing conflicts of interest have been improved. Further explanation on this topic is provided under Suggestion 9.

### Status of the initial mission finding

**S10 is closed** as the personal dosimetry service has been discontinued and transferred to an external provider. In addition, other potential conflicts of interest have been addressed and resolved through the implementation of appropriate measures.

### 3.3 STAFFING AND COMPETENCE OF THE REGULATORY BODY

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA has not yet developed a systematic human resource plan that identifies the number and the necessary qualifications and competence of staff needed to carry out its functions and discharge its responsibilities that is fully commensurate with the nature and number of facilities and activities regulated. This has been recognized in the ARM and is part of the action plan.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 18 states that</b> <i>“The regulatory body shall employ a sufficient number of qualified and competent staff, commensurate with the nature and the number of facilities and activities to be regulated, to perform its functions and to discharge its responsibilities.”</i>
(2)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 18 para 4.11 states that</b> <i>“A human resource plan shall be developed that states the number of staff necessary and the essential knowledge, skills and abilities.”</i>
(3)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 18 para 4.12 states that</b> <i>“The human resources plan for the regulatory body shall cover recruitment and, where relevant, rotation of staff in order to obtain staff with appropriate competence and skills and shall include a strategy to compensate for the departure of qualified staff.”</i>
R6	<b>Recommendation:</b> DSA should develop a comprehensive human resource plan including a specific training programme, which is based on an analysis of the necessary competences and skills needed to fulfil its regulatory obligations.

#### Changes since the initial IRRS mission

Based on the documents and explanations given, it is clear that DSA has made significant progress in developing a human resource plan. DSA now has access to much greater resources and is recruiting new employees to increase staffing and competence to meet new challenges and is now in a position to replace those who leave. At the same time, competition for workers with relevant experience has become significantly stronger, which highlights the need for increased focus on training new employees and continuous updating and competence building for all those working at DSA, as pointed out by IAEA in 2019. Since 2020, DSA has implemented two major reorganizations (in 2020 and 2024) and one minor structural adjustment in 2025.

DSA has a comprehensive human resource plan with all necessary elements, including onboarding and mentoring process for newcomers but also considers succession planning. This plan incorporates additionally a Competency Development and Staffing strategy which is linked to the identified competency gaps and other elements.

DSA has mapped the required competencies using the IAEA SARCoN methodology and developed its own effective tool. All functions within DSA are defined through job descriptions that specify the competencies required and the responsibilities associated with each role and position. Competency evaluation is done on

a continuous basis. The individual staff sent the updates after each training to the SARCoN administrator. The competency map is also part of annual personnel evaluation process.

The overall strategy for developing and acquiring competency follows a human resource strategy (for the years 2025 – 2028), based on educating existing personnel, recruitment, and through the use of TSO. The Strategic Competence Plan for DSA, 2025–2028, was finalized in early 2025.

The training is based on gap analysis and consists of relevant IAEA training courses, training from the NORDIC group, and occasionally internal training. The planning of the training is managed to some extent at the departmental level but lacking a formal training plan. Therefore, a general training plan at the organisational level should be developed, and DSA should develop this in a timely manner.

### Status of the initial mission finding

**R6 is closed on the basis of progress made and confidence in effective completion in due time** as a comprehensive competency evaluation has been carried out and incorporated into the human resource plan. Training is provided based on a gap analysis and is planned at the department level. The organization-wide training plan is expected to be completed in due course.

### 3.4 LIAISON WITH ADVISORY BODIES AND SUPPORT ORGANIZATIONS

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA requests external expert support for review and assessment of application for the renewal of IFE authorizations. However, DSA does not have the necessary resources to verify and validate the conclusions of the experts in all areas.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 18 states that</b> <i>“The regulatory body shall employ a sufficient number of qualified and competent staff, commensurate with the nature and the number of facilities and activities to be regulated, to perform its functions and to discharge its responsibilities.”</i>
(2)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 20 para 4.22 states that</b> <i>“The obtaining of advice and assistance does not relieve the regulatory body of its assigned responsibilities. The regulatory body shall have adequate core competence to make informed decisions. In making decisions, the regulatory body shall have the necessary means to assess advice provided by advisory bodies and information submitted by authorized parties and applicants.”</i>
S11	<b>Suggestions: DSA should consider ensuring the necessary means to assess the advice provided by external experts.</b>

### Changes since the initial IRRS mission

The review and assessment procedure was updated to include the review and assessment of technical or other expert professional advice or services. The procedure describes the review and assessment of technical or other expert professional advice or services provided by external experts, external support organisations, or advisory committees. Such advice or services may support DSA in implementing its regulatory functions, organisational development, or regulatory framework development.

When a review and assessment is required, a review leader is appointed to prepare a plan and determine whether external expertise is needed, for example, due to insufficient in-house expertise. The procedure also specifies how to assess suitability, as the DSA must act as an intelligent customer in these cases. DSA must be able to assess the suitability of the external expertise, as it remains responsible for the quality of the assessment.

Identification of the competence and capacity needed to assess and verify technical or other expert professional advice or services is addressed under Recommendation 6. DSA still occasionally encounters difficulties in ensuring the competence to assess the adequacy of expert opinions, but such opinions were commissioned because the relevant expertise is not available internally. The IRRS team therefore considers the issue to be adequately resolved.

### Status of the initial mission finding

**S11 is closed** as the DSA has enhanced its process by introducing formal steps for evaluating the appropriateness of external expertise. The DSA is also strengthening its own competencies in a systematic manner.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA has established an advisory body for nuclear safety and waste management. However, in some other areas, like radiation source applications, DSA does not have an advisory body. This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS: GSR Part 1 (Rev 1) Requirement 20 states that** *“The regulatory body shall obtain technical or other expert professional advice or services as necessary in support of its regulatory functions”*

S12

**Suggestion: DSA should consider expanding the use of advisory bodies in all relevant areas.**

### Changes since the initial IRRS mission

DSA re-established the Advisory Body in 2023 with new Terms of Reference and additional members with new competencies, which now addresses all relevant areas. The Committee operates in accordance with GSR Part 1 (Rev. 1), Requirement 20, and sections 4.18–4.22. Committee members, including the Chair, are appointed by the Director General of DSA. Membership lasts up to three years, with the possibility of reappointment. Members of the Committee are internationally recognised experts and invited based on their individual qualifications and experience. Members typically have technical, regulatory, and knowledge management expertise and experience within the topic areas outlined in the scope above.

The Committee provides DSA with strategic and technical advice on the safety of nuclear and radiation facilities and activities on matters referred to them or raised by the Committee. Members of this committee should not see themselves as advocates for the views or interests of their parent organisations or other affiliations. The deliberations of the Committee should be collegiate and constructive, focusing on delivering sound advice to DSA on the matters before the Committee.

DSA considers the broadened remit and the competencies among Committee members to be suited to its current needs.

## **Status of the initial mission finding**

**S12 is closed** as the newly re-established Advisory Body has competencies and provides advice on all relevant areas.

### **3.5 LIAISON BETWEEN THE REGULATORY BODY AND AUTHORIZED PARTIES**

There were no findings in this area in the initial IRRS mission.

### **3.6 STABILITY AND CONSISTENCY OF REGULATORY CONTROL**

There were no findings in this area in the initial IRRS mission.

### **3.7 SAFETY RELATED RECORDS**

There were no findings in this area in the initial IRRS mission.

### **3.8 COMMUNICATION AND CONSULTATION WITH INTERESTED PARTIES**

There were no findings in this area in the initial IRRS mission.

### **3.9 POLICY ISSUES**

#### ***3.9.1 Competence at DSA***

There were no findings in this area in the initial IRRS mission.

#### ***3.9.2 Provision of guidance and advice***

There were no findings in this area in the initial IRRS mission.

## 4. MANAGEMENT OF THE REGULATORY BODY

### 4.1. RESPONSIBILITY AND LEADERSHIP FOR SAFETY

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Though there are two documents for safety culture policy and nuclear security culture policy in AOM, these are not developed by the whole organization. Therefore, there is no common safety policy documentation demonstrating leadership for safety by managers at all levels of DSA. This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS: GSR Part 2 Requirement 2 states that** *“Managers shall demonstrate leadership for safety and commitment to safety.”*

(2)

**BASIS: GSR Part 2 Requirement 3 para 4.2 states that** *“Senior management shall be responsible for establishing safety policy.”*

R7

**Recommendation:** DSA should develop a safety policy document with the individual and organizational values and expectations for safety to be disseminated to the whole organization.

#### Changes since the initial IRRS mission

DSA has taken steps to address Recommendation R7 by developing and implementing a safety policy document that outlines organizational values and expectations for individuals regarding safety. The policy specifies the behaviour and attitudes expected from staff to support a strong safety culture.

Key developments include:

- Review and revision of existing safety and security policies related to the nuclear sector.
- Integration of the updated safety policy into DSA’s Integrated Management System (IMS).
- Dissemination of the safety policy across the organization through internal strategies and communication channels.
- Alignment of the safety policy with IAEA GSR Part 2 and GSR Part 1 requirements, particularly regarding leadership and commitment to safety.

The safety policy is now embedded within DSA’s management system and has been communicated effectively to staff. It reflects a clear commitment to safety at both the individual and organizational levels. The integration into the IMS ensures that the policy is accessible and operationalized across all departments. This demonstrates leadership for safety and fulfils the expectations of GSR Part 2 Requirement 2 and Requirement 3.

#### Status of the initial mission finding

**R7 is closed** as the safety policy has been developed, implemented, and disseminated throughout the organization.

## 4.2. RESPONSIBILITY FOR INTEGRATION OF SAFETY INTO THE MANAGEMENT SYSTEM

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** There are some procedures followed by the different departments of DSA but there are no formalized documented processes. No integrated management system exists in DSA to cover all core and supporting function and to integrate all elements related to safety. This has been recognized in the ARM and is part of the action plan.

(1)	<b>BASIS: GSR Part 1 (Rev 1) Requirement 19 states that</b> <i>“the regulatory body shall establish, implement, and assess and improve a management system that is aligned with its safety goals and contributes to their achievement.”</i>
(2)	<b>BASIS: GSR Part 2 Requirement 3 states that</b> <i>“Senior management shall be responsible for establishing, applying, sustaining and continuously improving a management system to ensure safety.”</i>
R8	<b>Recommendation:</b> DSA should develop, establish, implement, assess and continuously improve a documented integrated management system to ensure safety, using graded approach, in line with IAEA safety standards.

### Changes since the initial IRRS mission

DSA has made substantial progress in developing and implementing a comprehensive Integrated Management System (IMS) aligned with IAEA safety standards, particularly GSR Part 1 Requirement 19 and GSR Part 2 Requirement 3.

Key developments include:

- Completion of the IMS, known as TQM, which now covers all core regulatory functions.
- Modelling of all regulatory processes and functional areas within TQM, including procedures, templates, checklists, and guidelines.
- Establishment of a Quality Handbook (“The DSA Book”) to clarify roles, responsibilities, and terminology.
- Appointment of process owners responsible for maintaining and improving their respective areas.
- Implementation of a governance cycle with monthly process owner forums and biannual management reviews.
- Integration of the authorization process into a digital case management platform, enabling automation, secure data handling, and performance analytics.
- Plans for further automation of processes such as inspections and enforcement in 2026 and beyond.

DSA’s IMS has evolved into a robust, dynamic system that supports continuous improvement and ensures safety across all regulatory activities. The use of digital case management platform enhances transparency, traceability, and efficiency. The IMS reflects a graded approach and is aligned with IAEA requirements. The governance structure and internal ownership mechanisms demonstrate maturity and sustainability.

## **Status of the initial mission finding**

**R8 is closed as the IMS is fully operational, continuously improved.**

### **4.3. THE MANAGEMENT SYSTEM**

There were no findings in this area in the initial IRRS mission.

### **4.4. MANAGEMENT OF RESOURCES**

There were no findings in this area in the initial IRRS mission.

### **4.5. MANAGEMENT OF PROCESSES AND ACTIVITIES**

There were no findings in this area in the initial IRRS mission.

### **4.6. CULTURE FOR SAFETY**

There were no findings in this area in the initial IRRS mission.

### **4.7. MEASUREMENT, ASSESSMENT AND IMPROVEMENT**

There were no findings in this area in the initial IRRS mission.

## 5. AUTHORIZATION

### 5.1 GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

### 5.2 AUTHORIZATION OF RESEARCH REACTORS

There were no findings in this area in the initial IRRS mission.

### 5.3 AUTHORIZATION OF FUEL CYCLE FACILITIES

There were no findings in this area in the initial IRRS mission.

### 5.4 AUTHORIZATION OF RADIOACTIVE WASTE MANAGEMENT FACILITIES

There were no findings in this area in the initial IRRS mission.

### 5.5 AUTHORIZATION OF RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

### 5.6 AUTHORIZATION OF DECOMMISSIONING ACTIVITIES

There were no findings in this area in the initial IRRS mission.

### 5.7 AUTHORIZATION OF TRANSPORT

There were no findings in this area in the initial IRRS mission.

### 5.8 AUTHORIZATION ISSUES FOR OCCUPATIONAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 5.9 AUTHORIZATION ISSUES FOR MEDICAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 5.10 AUTHORIZATION ISSUES FOR PUBLIC EXPOSURE

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA may refuse the import or sale of any consumer product or substance and any item that may involve a risk to health or environment due to radiation. Nevertheless, specific responsibilities and safety requirements to be followed by suppliers are not defined in the regulatory framework. This has been recognized in the ARM.

(1)	<b>BASIS:</b> GSR Part 3 requirement 33 para 3.139 states that <i>“Upon receipt of a request for authorization to provide consumer products to the public, the regulatory body: (a) Shall require the provider of the consumer product to provide documents to demonstrate compliance with the requirements in paras 3.138–3.144;”</i>
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S13	<b>Suggestion:</b> DSA should consider establishing dedicated regulatory guidance that should address, in line with the GSR Part 3, all relevant responsibilities of the providers of consumer products.
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## Changes since the initial IRRS mission

DSA has reviewed the current regulatory framework for consumer products. This review identified potential for improvements enhancing clarity and could be implemented in a future revision of the Radiation Protection Regulations. However, the review has otherwise demonstrated that the Radiation Protection Regulations have the necessary basis to implement the requirements for providers of consumer products in line with GSR Part 3.

DSA has developed new guidance for providers of consumer products which is available on DSA's website. This guidance largely aligns with the requirements of GSR Part 3. Some minor deviations were discussed with DSA representatives during the course of the mission and action was immediately taken to fully align with the GSR part 3 requirement 33 para 3.139. DSA has also established improved internal procedures for the review of applications for manufacture and sale of products with radioactive substances.

## Status of the initial mission finding

**S13 is closed** as new guidance for consumer products aligns with GSR part 3 requirement 33 para 3.139.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Important results have been achieved through the implementation of the Radon strategy, nevertheless, there are identified areas of work, especially activities related to the mitigation in private homes and areas with extreme radon levels which require further efforts.

This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS: GSR Part 3 requirements 50 para 5.20 states that** *“Where activity concentrations of radon that are of concern for public health are identified on the basis of the information gathered as required in para. 5.19(a), the government shall ensure that an action plan is established comprising coordinated actions to reduce activity concentrations of radon in existing buildings and in future buildings....”*

S14

**Suggestion:** DSA should consider continuing the implementation of the Radon strategic programme prioritizing those activities that are addressing the mitigation actions in private homes and the protection strategy in areas with extreme radon levels.

## Changes since the initial IRRS mission

DSA, together with the multisector coordination group established to implement the first national Radon Strategy, were given the task of conducting an evaluation of the strategy. The evaluation was carried out in 2020 and subsequently DSA and the coordination group then were commissioned by the Ministry to develop a new and updated strategy. In addition to the members of the coordination group, relevant stakeholders were invited to give input during the process. The proposal for a new strategy was then developed and submitted to the Ministry of Health and Care Services (HOD) in late December 2021. The renewed efforts include goals to encourage:

- more people to have knowledge about radon, and for one third of the population to measure radon levels in their own homes.

- more people to reduce high radon levels in their own homes, and the number of homes per year where radon measures are implemented has doubled.
- Communities with particularly severe radon problems are identified and followed up.

The new strategy (2025–2029) is due to commence immediately following the mission. However, DSA, in cooperation with other authorities, has already initiated work to follow up on some of the measures outlined in the strategy. A new map of the radon levels in Norway is being developed, and a national inspection campaign in rental homes is currently underway. DSA needs to implement ongoing measures to ensure continued actions associated with the new strategy and future updates to the national Radon strategy.

### Status of the initial mission finding

**S14 is closed** as the Government has approved a new radon strategy that prioritizes those activities that are addressing the mitigation actions in private homes and the protection strategy in areas with extreme radon levels.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The concept of clearance from regulatory control does not exist in the legal and regulatory framework.

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|-----|--|
| (1) | <b>BASIS: GSR Part 3 Requirement 8 states that</b> <i>“The regulatory body shall approve which sources, including materials and objects, within notified practices or authorized practices may be cleared from regulatory control.”</i>  |
| (2) | <b>BASIS: GSR Part 3 para 3.12 states that</b> <i>“The regulatory body shall approve which sources, including materials and objects, within notified or authorized practices may be cleared from regulatory control, using as the basis for such approval the criteria for clearance specified in Schedule I or any clearance levels specified by the regulatory body on the basis of these criteria. By means of this approval, the regulatory body shall ensure that sources that have been cleared from regulatory control do not again become subject to the requirements for notification, registration or licensing unless it so specifies.”</i> |
| (3) | <b>BASIS: GSR Part 5 para 3.8 states that</b> <i>“To facilitate compliance with regulatory requirements, the regulatory body has to do the following:</i><br><ul style="list-style-type: none"> <li>- ... Establish criteria for the clearance of material from regulatory control, in accordance with national policy.”</li> </ul>  |

**R9** **Recommendation:** DSA should introduce and implement the concept of clearance.

### Changes since the initial IRRS mission

The concept of ‘clearance’ is relevant to the Nuclear Energy Act, Radiation Protection Act, and the Pollution Control Act. However, it is not explicitly defined in any of these legislative instruments. Despite this, there are different processes in place in the Norwegian regulatory framework that may be used to implement this concept. In the Norwegian context, this presents a challenge as the different processes have not been harmonised. This has already been acknowledged by DSA.

The Regulations on applying the Pollution Control Act to radioactive pollution and waste contain two appendices. Appendix 1 includes thresholds for what is considered to be radioactive waste in Norway. This is based on a table specifying the total and specific activity applicable for numerous radionuclides. All radioactive waste that falls under the thresholds in Appendix 1 may be treated as non-radioactive waste, and as such this represents a threshold for clearance of materials considered as waste.

At present, there are no lower limits for nuclear substance according to the Nuclear Energy Act. However, it is possible to apply for an exemption from the requirements in the Act. Such an exemption can only be granted by the Ministry of Health and Care Services (HOD). DSA as the highest specialist agency will issue a recommendation to the Ministry, and in a letter of 4 October 2022, DSA asked HOD to consider delegating the authority to issue individual decisions on exemption to DSA.

No regulatory decisions have been made by DSA specifically on clearance for the nuclear facilities. Nonetheless, in guidance meetings, DSA has indicated to operators that, for planning purposes, the thresholds in the appendices to the Pollution Control Regulations should be used. In addition, DSA is preparing guidance to the operators outlining all relevant steps in the process towards a decision of clearance, and the responsibilities of the operator and the regulator, in the Norwegian legal context. This includes guidance on the stages of characterization, sampling and measurements, monitoring and management of the clearance process. This guidance is based on the best available practice internationally and uses guidance from IAEA GSG-18 and OCED NEA. The work is ongoing, and DSA expects to publish the guidance in 2026.

### **Status of the initial mission finding**

**R9 remains open** as work is needed to further define and implement the concept of clearance including the harmonization of the thresholds between the Pollution Control Act and the Nuclear Energy Act.

## 6. REVIEW AND ASSESSMENT

### 6.1 GENERIC ISSUES

There were no findings in this area in the initial IRRS mission.

#### 6.1.1 ORGANIZATION AND TECHNICAL RESOURCES FOR REVIEW AND ASSESSMENT

There were no findings in this area in the initial IRRS mission.

#### 6.1.2 BASES FOR REVIEW AND ASSESSMENT

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Application forms and guidance documents exist but the DSA internal procedures in relation to the process of review and assessment of authorizations, amendments, renewal, suspension or revocation of authorizations are general and not specifically documented.

(1)	<b>BASIS:</b> GSR Part 1 (Rev 1) Para 4.37 states that <i>“Any subsequent amendment, renewal, suspension or revocation of the authorization for a facility or an activity shall be undertaken in accordance with a clearly specified and established procedure and shall make provision for the timely submission of applications for the renewal or amendment of the authorization.”</i>
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S15	<b>Suggestion:</b> DSA should consider strengthening its review and assessment procedure to clarify the aspects that must be considered for different types of authorization, and subsequent amendments, renewal, suspension or revocation of the authorization for all facilities and activities.
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### Changes since the initial IRRS mission

DSA has made substantial improvements to the review and assessment process. This has included improvements to integrated management system (IMS). For instance, the review and assessment procedure has been updated to provide better support for the authorization process and regulatory oversight activities. DSA has created checklists to guide the review and assessment of applications for different activities and facilities. Furthermore, DSA has developed the Sievert tool which facilitates receipt, assessment, approval, amendment, renewal, suspension or revocation of approvals under the Radiation Protection Act and permits under the Pollution Control Act. During the mission DSA presented a number of practical examples where the Sievert tool has been used for the authorization process. The use of Sievert tool is also mentioned in R18.

### Status of the initial mission finding

**S15 is closed** as DSA has strengthened its review and assessment procedure and has clarified the aspects that must be considered for different types of authorization, and subsequent amendments, renewal, suspension or revocation of the authorization for all facilities and activities.

### New observation(s) made during the follow-up mission

The review and assessment of medical exposures is less developed than other areas as it requires access to data on examinations/procedures/treatments and the associated radiation doses. However, the IRRS team was informed that this data is not available for DSA through the Norwegian Patient Registry (NPR). Following a reorganization of Health administration in Norway in 2024, the organization responsible for handling this data is the Norwegian Institute of Public Health (FHI). However, FHI has not provided DSA with concrete plans for when this data will be completed, quality assured and available for DSA for use in regulatory oversight and in the inspection planning of medical facilities.

The most recent comprehensive set of data that is available to DSA is from 2008. At that time, medical exposures contributed the largest proportion of dose received by Norwegian citizens by man-made sources. DSA has reviewed the situation in a neighboring country and has observed that doses due to medical exposures doubled in that country in a 10-year period, so it is expected that the data DSA holds from 2008 is no longer accurate. Since 2020, data has been collected from hospitals by the Norwegian Patient Registry (NPR) at FHI.

A new Recommendation is proposed to address this situation. This addresses a similar observation relevant to the use of this data to support a risk-based inspection programme. This is described in Recommendation 12.

<b>FOLLOW UP MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES</b>	
<b>Observation:</b> DSA does not have up-to-date data on examinations/procedures/treatments and the associated radiation doses.	
<b>(1)</b>	<b>BASIS: GSR Part 1 Requirement 25 states that:</b> <i>The regulatory body shall review and assess relevant information — whether submitted by the authorized party or the vendor, compiled by the regulatory body, or obtained from elsewhere — to determine whether facilities and activities comply with regulatory requirements and the conditions specified in the authorization. This review and assessment of information shall be performed prior to authorization and again over the lifetime of the facility or the duration of the activity, as specified in regulations promulgated by the regulatory body or in the authorization</i>
<b>(2)</b>	<b>BASIS: GSR Part 1; Requirement 29 states that:</b> <i>Graded approach to inspections of facilities and activities Inspections of facilities and activities shall be commensurate with the radiation risks associated with the facility or activity, in accordance with a graded approach.</i>
<b>RF2</b>	<b>Recommendation: The Government should make provisions for DSA to have up-to-date data on examinations/procedures/treatments and the associated radiation doses to enable regulatory oversight and to establish a risk-based inspection programme of medical facilities and activities.</b>

## **6.2 REVIEW AND ASSESSMENT FOR RESEARCH REACTORS**

There were no findings in this area in the initial IRRS mission.

## **6.3 REVIEW AND ASSESSMENT FOR FUEL CYCLE FACILITIES**

There were no findings in this area in the initial IRRS mission.

## **6.4 REVIEW AND ASSESSMENT FOR WASTE MANAGEMENT FACILITIES**

There were no findings in this area in the initial IRRS mission.

## 6.5 REVIEW AND ASSESSMENT FOR RADIATION SOURCES FACILITIES AND ACTIVITIES

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** Safety assessments for practices involving radiation sources are not always reviewed prior to issuing a licence. Safety assessments are reviewed as part of the inspection programme.

(1)

**BASIS:** GSR Part 1 (Rev 1) Para 4.33 states that *“Prior to the granting of an authorization, the applicant shall be required to submit a safety assessment [9], which shall be reviewed and assessed by the regulatory body in accordance with clearly specified procedures. The extent of the regulatory control applied shall be commensurate with the radiation risks associated with facilities and activities, in accordance with a graded approach.”*

R10

**Recommendation:** DSA should review and assess safety assessments submitted by the applicant in accordance with clearly specified procedures in advance of the issuing of any licence in accordance with a graded approach.

### Changes since the initial IRRS mission

The Radiation Protection Regulations require that undertakings planning to use or handle radiation sources shall prepare a written risk assessment and accompanying emergency plans. At the time of the 2019 review, undertakings were required to confirm that the risk assessments and the emergency plans had been established, but they were not required to be submitted to DSA for many of the categories of radiation sources, activities, and facilities subject to licensing.

In 2024, DSA introduced a new digital case handling system “Sievert tool” for authorizations according to the Radiation Protection (RP) Act. In 2025, authorizations according to the Pollutions Control (PC) Act were added to the system. This system has a portal which allows for secure file transfer for receiving, reviewing and assessing applications for approvals under the RP Act and permits under the PC Act. The applicants are now required to complete a web-based application form and submit all requested documentation, including a safety assessment, in accordance with GSR Part 1 para. 4.33. The safety assessments are documented and submitted by the applicants in the form of a safety report and there are a number of mandatory attachments, including the risk assessment(s) and emergency response plan.

DSA has also issued new guidance on the format and content of the safety report that has to be submitted. The guidance refers to and is based on GSR Part 4 “Safety Assessment for Facilities and Activities” but is adapted to Norwegian regulations and also makes reference to relevant requirements given in the Radiation Protection Regulations, the Internal Control Regulations and the Regulations on Transport of Dangerous Goods by Land. The guidance documents are available from DSA’s web pages. Moreover, DSA has developed safety report templates for the various categories of radiation sources, activities and facilities that are subject to licensing. The application of a graded approach is facilitated by the development of separate guidance documents and templates adapted to each individual category of activities and facilities that are subject to licensing.

DSA has also established a new process in the integrated management system (IMS) for review and assessment of authorisation applications, including new procedures and checklists for the review of safety reports. Consistent with GSR Part 1 para. 4.33, separate checklists have been written for each distinct category of activities and facilities subject to licensing to ensure that the extent of regulatory control applied will be commensurate with the radiation risks associated with the relevant activities and facilities.

Licences granted under the Radiation Protection Act are typically valid for 3 to 10 years depending on the type of facility or activity, after which a renewal of the licence is necessary. A renewal of a licence requires a complete re-application process, and the most recent version of the safety report must be submitted to DSA as part of the renewal application.

### Status of the initial mission finding

**R10 is closed** as DSA undertakes the review and assessment of safety assessments in accordance with clearly specified procedures in advance of the issuing of any licence. This is done in accordance with a graded approach.

## 6.6 REVIEW AND ASSESSMENT FOR DECOMMISSIONING ACTIVITIES

There were no findings in this area in the initial IRRS mission.

## 6.7 REVIEW AND ASSESSMENT FOR TRANSPORT

### RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** No comprehensive dose assessment for transport workers or general public have been made so far.

(1)

**BASIS:** SSR-6 para 308 states that *“The relevant competent authority shall arrange for periodic assessments of the radiation dose to persons due to the transport of radioactive material, to ensure that the system of protection and safety complies with GSR Part 3.”*

(2)

**BASIS:** GSR Part 3 Requirement 3 (2.31) states that *“The regulatory body shall adopt a graded approach to the implementation of the system of protection and safety, such that the application of regulatory requirements is commensurate with the radiation risks associated with the exposure situation.”*

R11

**Recommendation:** DSA should arrange, in accordance with a graded approach, for periodic assessments of the radiation doses to transport workers and members of the public associated with the transport of radioactive material.

### Changes since the initial IRRS mission

In 2024, DSA initiated a project to collect information on the type of packages containing radioactive material that were either consigned, received or transported in Norway. A questionnaire was sent out to 225 companies which had registered activity between 2021 and 2024. The responses received led to the identification of additional companies to receive the questionnaire. A total of 377 companies, were contacted and 295 responses were received. Non-respondents were primarily small companies, whose contribution to transport-related activities was considered negligible at the national level.

Based on the results from the survey, a sample of companies were selected for more detailed dose measurements to estimate the radiation doses to workers and the public. DSA has interviewed two of those companies and observed three of their transports, all involving radiopharmaceuticals. DSA has also received dose records from the drivers’ personal dosimeters and conducted dose assessments using personal dosimeters and finger dosimeters for workers handling packages with radioactive material at an airport terminal.

During the mission DSA provided an advanced draft of the report describing the study mentioned above to estimate radiation doses to transport workers and the members of the public associated with transport of radioactive material. It is planned that the report will be issued during 2026.

Furthermore, DSA has developed new internal procedures for conducting periodic and systematic assessments of the radiation dose to persons due to the transport of radioactive material. The procedures are implemented in DSA’s integrated management system so that future assessments are periodically conducted every 5 years.

### Status of the initial mission finding

**R11 is closed on the basis of progress made and confidence in effective completion in due time** as the assessment of radiation doses is complete and will be published shortly. DSA procedures have been developed to conduct periodic assessments in the future.

### 6.8 REVIEW AND ASSESSMENT FOR OCCUPATIONAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 6.9 REVIEW AND ASSESSMENT FOR MEDICAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 6.10 REVIEW AND ASSESSMENT FOR PUBLIC EXPOSURE

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA is requiring applicants, when relevant, to develop an environmental monitoring programme and it is evaluated before approval by DSA. However, there are no provisions addressing the operator’s responsibilities, in terms of the management and technical requirements applicable for the source and environmental monitoring.

(1)	<p><b>BASIS: GSR Part 3 Requirement 32 para 3.137 states that</b> “<i>Registrants and licensees shall, as appropriate: ....</i></p> <p><i>(e) Report promptly to the regulatory body any significant increase in dose rate or concentrations of radionuclides in the environment that could be attributed to the authorized practice, in accordance with reporting criteria established by the regulatory body.</i></p> <p><i>(g) Verify the adequacy of the assumptions made for the assessment of public exposure and the assessment for radiological environmental impacts.</i>”</p>
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S16	<p><b>Suggestion:</b> DSA should consider specifying the responsibilities of the licensees in the establishment and implementation of the environmental monitoring programme.</p>
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### Changes since the initial IRRS mission

Based on applications, DSA issues permits, under the Pollution Control Act, for activities that may cause radioactive pollution from discharges to water, air or to the soil. The Pollution Control regulations require a permit to include, when appropriate, that the duty holder carry out an environmental monitoring program

that covers all polluting activities and the affected areas. DSA endeavours to implement a graded approach to the need for environmental monitoring, and currently only grants exceptions for hospitals. There are specific requirements for the oil and gas industry in specific regulations.

DSA has developed a checklist for assessment of the environmental monitoring programmes provided by the duty holders as part of their applications. This is based on a comprehensive review of the environmental impact assessment of the polluting activity that is being applied for, requirements, obligations, and experiences from approved programmes from the different duty holders. The checklist addresses different aspects of the environmental monitoring programme and several questions to be addressed, including frequency and sampling. For certain industries, the checklists are aligned with requirements in permits from the Norwegian Environment Agency.

Duty holders are required to report on the results of the environmental monitoring programme to DSA on an annual basis. If there are major changes in their activities, it is their duty to also consider a revision of the environmental monitoring programme. DSA might also impose a higher frequency for new permit holders, that might be adjusted over time.

DSA is in the process of issuing more targeted guidance to five industrial sectors. Guidance for the offshore petroleum industry has already been established, and a consultant has been tasked with preparing advice to DSA on guidance for an environmental monitoring programme for nuclear facilities during decommissioning.

### Status of the initial mission finding

**S16 is closed** as DSA uses the permit system under the Pollution Control Act to specify the responsibilities of licence holders in relation to environmental monitoring programmes.

## 7. INSPECTION

There were no findings in this area in the initial IRRS mission.

### 7.1 GENERIC ISSUES

#### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA has an inspection strategy. However, it is not used to establish overall long-term inspection programme for DSA. This has been recognized in the ARM and is part of the action plan.

(1) **BASIS: GSR Part 1 (Rev 1) Requirement 29 § 4.50 states that** *“The regulatory body shall develop and implement a programme of inspection of facilities and activities, to confirm compliance with regulatory requirements and with any conditions specified in the authorization. In this programme, it shall specify the types of regulatory inspection (including scheduled inspections and unannounced inspections) and shall stipulate the frequency of inspections and the areas and programmes to be inspected, in accordance with a graded approach.”*

(2) **BASIS: GSR Part 1 (Rev 1) Paragraph 4.52 states that** *“Regulatory inspections shall cover all areas of responsibility of the regulatory body, and the regulatory body shall have the authority to carry out independent inspections. Provision shall be made for free access by regulatory inspectors to any facility or activity, at any time, within the constraints of ensuring operational safety at all times and other constraints associated with the potential for harmful consequences. These inspections may include, within reason, unannounced*

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<i>inspections. The manner, extent and frequency of inspections shall be in accordance with a graded approach.”</i>
(3)	<p><b>BASIS: GSR Part 1 (Rev 1) Paragraph 4.53 states that</b> <i>“In conducting inspections, the regulatory body shall consider a number of aspects, including:</i></p> <ul style="list-style-type: none"> <li><i>– Structures, systems and components and materials important to safety;</i></li> <li><i>– Management systems;</i></li> <li><i>– Operational activities and procedures;</i></li> <li><i>– Records of operational activities and results of monitoring;</i></li> <li><i>– Liaison with contractors and other service providers;</i></li> <li><i>– Competence of staff;</i></li> <li><i>– Safety culture;</i></li> <li><i>– Liaison with the relevant organization for joint inspections, where necessary.”</i></li> </ul>
R12	<p><b>Recommendation:</b> <b>DSA should develop, implement, review and continuously improve the inspection process including establishing a long-term programme of inspection according to criteria for selection of facilities and activities to be inspected consistent with a graded approach.</b></p>

### Changes since the initial IRRS mission

DSA has prepared long-term (10 years) inspection plans for the nuclear and non-nuclear licence holders across all regulations managed by DSA. These plans are revised annually and aim to use resources effectively and in a risk-based approach. The inspection program also responds to any incidents that occur. DSA has not yet finalised the inspection procedure for nuclear facilities as part of the IMS. This is expected to be completed in 2026.

The inspection programme for the facilities licensed under the Nuclear Energy Act takes into account the inherent risk at each site. Inspections are thematic and focus on a number of relevant areas such as radiation protection, operational limits, control of modifications, and ageing management. Each of the areas are judged in terms of risk on a scale from 0-4 and the duration of each inspection can range from a couple of days to multiple weeks.

The inspection programme for the activities licensed under the Radiation Protection Act assesses the licence holder’s risk. This considers the guidance provided by IAEA Technical Reports Series No. 1002 “Notification, Authorization, Inspection and Enforcement for the Safety and Security of Radiation Sources” but also takes into account DSA’s own assessment of risk, which is judged as being high, medium, or low. DSA is planning to trial performing some shorter inspections in the medical field in an effort to be more efficient.

The inspection programme associated with medical exposures is less developed than other areas as it requires access to data on the frequency of examinations/procedures and the associated radiation doses. Up-to-date data is not available; the most recent comprehensive set of data is from 2008 and not expected to reflect the current situation. There are no concrete plans for when this data will be provided to DSA. A new Recommendation is proposed to address this situation (RF2).

## Status of the initial mission finding

**R12 is closed on the basis of progress made and confidence in effective completion in due time** as DSA has implemented an inspection programme which utilizes 10-year inspection plans that are informed by risk-based criteria to apply a graded approach and is expected to finalize the inspection procedure for nuclear facilities in 2026.

### 7.2 INSPECTION OF RESEARCH REACTORS

There were no findings in this area in the initial IRRS mission.

### 7.3 INSPECTION OF FUEL CYCLE FACILITIES

There were no findings in this area in the initial IRRS mission.

### 7.4 INSPECTION OF WASTE MANAGEMENT FACILITIES

There were no findings in this area in the initial IRRS mission.

### 7.5 INSPECTION OF RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

### 7.6 INSPECTION OF DECOMMISSIONING ACTIVITIES

There were no findings in this area in the initial IRRS mission.

### 7.7 INSPECTION OF TRANSPORT

There were no findings in this area in the initial IRRS mission.

### 7.8 INSPECTION OF OCCUPATIONAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 7.9 INSPECTION OF MEDICAL EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 7.10 INSPECTION OF PUBLIC EXPOSURE

There were no findings in this area in the initial IRRS mission.

## 8. ENFORCEMENT

### 8.1 ENFORCEMENT POLICY AND PROCESS

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA has a procedure for responding to non-compliance. However, this does not establish criteria for corrective actions, including enforcing the cessation of activities or the shutting down of a facility. The procedure also does not establish criteria for DSA to take corrective actions if there is imminent likelihood of safety significant events. This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS: GSR Part 1 (Rev 1) Para 4.58 states that** *“The regulatory body shall establish criteria for corrective actions, including enforcing the cessation of activities or the*

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<i>shutting down of a facility where necessary. On-site inspectors, if any, shall be authorized to take corrective action if there is an imminent likelihood of safety significant events.”</i>
<b>R13</b>	<b>Recommendation:</b> DSA should develop and implement an enforcement policy that fulfils all requirements associated with enforcement mentioned in IAEA GSR Part 1 (Rev 1).

### Changes since the initial IRRS mission

DSA has developed and implemented an enforcement policy, which has been approved and implemented into the DSA management system (TQM). The enforcement policy includes a graded approach and clearly defines roles and authorities. On-site inspectors are authorized to take corrective action if there is an imminent likelihood of safety-significant events. The policy also includes principles for the use of enforcement and criteria for determining the choice of corrective actions. Criteria for corrective actions if there is an imminent likelihood of safety significant events are established. Regulations on administrative fines pursuant to the Nuclear Energy Act and the Radiation Protection Act are enacted and will enter into force on 1<sup>st</sup> January 2026. DSA has also prepared a proposal for a regulation on administrative fines pursuant to the Pollution Control Act, also expected to enter into force on 1<sup>st</sup> January 2026.

### Status of the initial mission finding

**R13 is closed** as the enforcement policy is in place.

## 8.2 ENFORCEMENT IMPLEMENTATIONS

There were no findings in this area in the initial IRRS mission.

## 9. REGULATIONS AND GUIDES

### 9.1. GENERIC ISSUES

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** DSA’s procedure for the development of regulations and guides specifies a five-year programme and an annual plan. However, this programme and plan have yet to be implemented across the whole organization. Improvements of the regulatory framework are identified in several sections of this report.

<b>(1)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 32 states that</b> <i>“The regulatory body shall establish or adopt regulations and guides to specify the principles, requirements and associated criteria for safety upon which its regulatory judgements, decisions and actions are based.”</i>
<b>(2)</b>	<b>BASIS: GSR Part 1 (Rev 1) Requirement 33 states that</b> <i>“Regulations and guides shall be reviewed and revised as necessary to keep them up to date, with due consideration of relevant international safety standards and technical standards and of relevant experience gained.”</i>

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

R14

**Recommendation:** DSA should take actions for the further development, review and revision of regulations and guides to ensure that the regulatory framework is comprehensive.

### Changes since the initial IRRS mission

In Norway, only the Government and the relevant Ministry currently has the authority to promulgate and enact regulations within the area of DSA's responsibilities. Since the mission in 2019, DSA has drafted several new regulations (including on administrative fines) in addition to amendments to a significant number of existing regulations. DSA has proposed that the Government formalizes the periodic review of the legal framework (in particular regulations) through DSA's instructions from the Ministries.

On 2nd July 2025, the Norwegian Government published a national policy and strategy for safety (R1). Under goal 2, the policy states amongst other things, that Norway will periodically review the legal framework amongst others based on knowledge acquired from the international framework.

In March 2024, DSA established a legal unit that collects input from the departments of needed changes in the regulations and that will (together with the relevant department) be responsible for the periodic review of the different regulations. In line with established practice, DSA will continue to assist the Ministry in drafting relevant amendments and if necessary new regulations.

DSA has a general duty to provide guidance. Also, DSA (through the responsible department and section) provides individual guidance upon request. Based on this activity DSA sees relevant areas where guidance is the most needed, that again can be input for prioritization in the department and section of guidance publications.

Each department in DSA is responsible for ensuring that guidance documents are prepared and published as needed (within its area of responsibility), and that they are kept up to date and reviewed and revised as needed. Each department is also responsible for the longer-term planning and prioritization of needed guidance. The department is, as a part of this process, responsible for consulting other departments of DSA (and sections) that might be affected or have relevant input and, when relevant, request support and review from the legal unit.

Following the 2019 review, DSA performed a mapping of all references to this finding in the report. Based on this mapping, the responsible departments provided an update on status and/or action plan. Furthermore, DSA is currently planning a new review to ensure that the regulatory framework is comprehensive. DSA is planning and preparing for a gap analysis of the existing Norwegian regulatory framework. DSA will as part of this process compare the relevant IAEA requirements with the existing Norwegian regulatory framework and develop an action plan to address the gaps identified. The plan will incorporate prioritization based on a graded approach.

During the interview, DSA noted that the latest guidance documents had recently been approved and reported that nearly five draft guidance documents were under preparation or revision.

### Status of the initial mission finding

**R14 is closed on the basis of progress made and confidence in effective completion in due time** as a significant number of regulations and guides have been published and arrangements are in place to work towards ensuring the regulatory framework is comprehensive.

## 9.2. REGULATIONS AND GUIDES FOR RESEARCH REACTORS

There were no findings in this area in the initial IRRS mission.

## 9.3. REGULATIONS AND GUIDES FOR FUEL CYCLE FACILITIES

There were no findings in this area in the initial IRRS mission.

## 9.4. REGULATIONS AND GUIDES FOR WASTE MANAGEMENT FACILITIES

There were no findings in this area in the initial IRRS mission.

## 9.5. REGULATIONS AND GUIDES FOR RADIATION SOURCES FACILITIES AND ACTIVITIES

There were no findings in this area in the initial IRRS mission.

## 9.6. REGULATIONS AND GUIDES FOR DECOMMISSIONING ACTIVITIES

There were no findings in this area in the initial IRRS mission.

## 9.7. REGULATIONS AND GUIDES FOR TRANSPORT

There were no findings in this area in the initial IRRS mission.

## 9.8. REGULATIONS AND GUIDES FOR OCCUPATIONAL EXPOSURE

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observations:** The dose limit for the lens of the eye for young people within the Regulations Concerning Organization, Management and Employee Participation is currently 50 mSv/year.

The regulatory framework does not require workers to provide employers information regarding their past or current work with radiation with other employers. There is no requirement for the authorized party to obtain previous occupational exposure histories of workers. There are also no explicit requirements within the regulatory framework which stipulate the hierarchy of preventive measures to minimize the reliance on administrative controls and personal protective equipment, and to not offer benefits as substitutes for measures for protection and safety. This has been recognized in the ARM.

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|-----|--|
| (1) | <b>BASIS: GSR Part 3 Requirement 12 para 3.26 states that</b> “ <i>The government or the regulatory body shall establish and the regulatory body shall enforce compliance with the dose limits specified in Schedule III for occupational exposures and public exposures in planned exposure situations.</i> ”   |
| (2) | <b>BASIS: GSR Part 3 Schedule III.2 (b) states that</b> “ <i>For occupational exposure of apprentices of 16 to 18 years of age who are being trained for employment involving radiation and for exposure of students of age 16 to 18 who use sources in the course of their studies, the dose limits are: (b) An equivalent dose to the lens of the eye of 20 mSv in a year; ...</i> ” |
| (3) | <b>BASIS: GSR Part 3 Requirement 22 para 3.83 (d) states that</b> “ <i>Workers shall provide to the employer, registrant or licensee such information on their past and present work that is relevant for ensuring effective and comprehensive protection and safety for</i>   |

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

	<i>themselves and others.”</i>
(4)	<b>BASIS: GSR Part 3 Requirement 23 paras 3.87(a) and (c) state that</b> <i>“As part of the cooperation between parties, the registrant or licensee responsible for the source or for the exposure as appropriate: (a) Shall obtain from the employers, including self-employed persons, the previous occupational exposure history of workers as specified in para. 3.103, and any other necessary information; ... (c) Shall provide both the worker and the employer with the relevant exposure records.”</i>
(5)	<b>BASIS: GSR Part 3 Requirement 24 para 3.93 states that</b> <i>“Employers, registrants and licensees shall minimize the need to rely on administrative controls and personal protective equipment for protection and safety by providing well engineered controls and satisfactory working conditions, in accordance with the following hierarchy of preventive measures: (1) Engineered controls; (2) Administrative controls; (3) Personal protective equipment.”</i>
(6)	<b>BASIS: GSR Part 3 Requirement 27 para 3.111 states that</b> <i>“The conditions of service of workers shall be independent of whether they are or could be subject to occupational exposure. Special compensatory arrangements, or preferential consideration with respect to salary, special insurance coverage, working hours, length of vacation, additional holidays or retirement benefits, shall neither be granted nor be used as substitutes for measures for protection and safety in accordance with the requirements of these Standards.”</i>
R15	<b>Recommendation: DSA, in coordination with other authorities, should harmonize its regulatory framework with all requirements of IAEA GSR Part 3 for the protection and safety of workers in planned exposure situations.</b>

### Changes since the initial IRRS mission

The Norwegian regulatory framework meets the requirement of GSR Part 3 related to this dose limit, but currently there is a lack of consistency between the Regulations regarding Organization, Management and Employee Participation, Section 12-7, and the Regulations concerning Action and Limit Values, Section 4-1, letter d. The Norwegian Labour Inspection Authority (NLIA) is the regulatory body for both the latter regulations. DSA has notified the NLIA about the inconsistency. During interviews, DSA reported that the NLIA has indicated it will look into this matter and plan to revise the limit for the equivalent dose to the lens of the eye for young people aged between 16 and 18 years in the Regulations regarding Organization, Management and Employee Participation, Section 12-7, in order to resolve the inconsistency.

There is a requirement in the Norwegian regulations that workers shall contribute to the monitoring of dose, but there is currently no explicit requirement that they shall provide information on their past work. There is a planned meeting between NLIA and DSA to address this issue.

The Radiation Protection Regulations implicitly requires that technical safety systems (engineered controls) shall be used when necessary, in order to ensure that radiation doses and the risk of incidents are as low as practically achievable. The Regulations concerning Organization, Management and Employee Participation

does explicitly require employers to minimize the reliance on personal protective equipment. However, DSA recognizes that the Radiation Protection Regulations should preferably also include an explicit requirement stipulating the hierarchy of preventive measures to minimize the reliance on administrative controls and personal protective equipment. DSA is therefore planning to introduce a requirement of this type when revising the Radiation Protection Regulations. This work has not yet commenced.

Offering benefits as substitutes for protection and safety is not permitted in Norway and would be considered a breach of Acts and Regulations. Thus, DSA has not yet concluded whether a regulatory change related to this issue is warranted, but DSA will consider this in coordination with the Norwegian Labour Inspection Authority as part of the ongoing follow-up of R15.

### Status of the initial mission finding

**R15 remains** open as the harmonization of regulations with GSR Part 3 is not complete, although some work has been done in coordination with the NLIA.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The provisions for occupational exposure to ionizing radiation, within the Radiation Protection Regulations apply to aircrew. However, the estimated doses are not being reported to DSA. This has been recognized in the ARM.

(1)	<b>BASIS: GSR Part 3 Requirement 52 para 5.31 states that</b> <i>“Where such assessment is deemed to be warranted, the regulatory body or other relevant authority shall establish a framework which shall include a reference level of dose and a methodology for the assessment and recording of doses received by aircrew from occupational exposure to cosmic radiation.”</i>
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S17	<b>Suggestion: DSA should consider implementing provisions to ensure the assessment and recording of doses received by aircrew from occupational exposure to cosmic radiation.</b>
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### Changes since the initial IRRS mission

As noted in the 2019 Report, the Radiation Protection Regulations apply to occupational exposure to aircrew from cosmic radiation as there are exposures occurring from elevated levels of natural ionizing radiation that have been caused by human activity. Cosmic radiation exposure of aircrew is mentioned as an example of such activity. Accordingly, employers shall ensure that individual doses are assessed for exposed workers in category B who may receive an effective dose above 1 mSv per year. Moreover, companies assessing individual radiation exposure of workers shall at least annually report dose data to the national dose register at the Norwegian Radiation and Nuclear Safety Authority.

To date, air operators have not reported doses to the national dose register. However, DSA has implemented options to enable doses to aircrew to be provided for the mandatory parameters required for the register.

DSA has held meetings with representatives of the Civil Aviation Authority (CAA) and it is agreed that the dose limits and dose monitoring requirements apply to aircrew. The two authorities are developing a MoU which will cover assessment and recording of doses received by aircrew from occupational exposure to cosmic radiation. It is proposed in the MoU draft that CAA will provide lists of Norwegian air operators as

well as operators’ contact information to DSA, and that the authorities will cooperate in ensuring that air operators assess and report doses as required by the regulations under the Radiation Protection Act and the Working Environment Act.

DSA expects to finalise the MoU with the CAA before the end of 2025, and to contact air operators in 2026. It is expected that operators should start reporting doses to aircrew by 2027.

**Status of the initial mission finding**

**S17 is closed** as DSA has considered the suggestion and when signed the MoU it is expected to facilitate the implementation of actions to address the suggestion.

**9.9. REGULATIONS AND GUIDES FOR MEDICAL EXPOSURE**

**2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES**

<p><b>Observation:</b> The government has not provided for the establishment of:</p> <ul style="list-style-type: none"> <li>(a) dose constraints for exposures of comforters and carers and for volunteers participating in biomedical research;</li> <li>(b) criteria and guidelines for the release of patients who have undergone therapeutic radiological procedures.</li> </ul> <p>This has been recognized in the ARM and is part of the action plan.</p>	
(1)	<p><b>BASIS: GSR Part 3 Requirement 34 para 3.149 (a) states that</b> <i>“The government shall ensure that, as a result of consultation between the health authority, relevant professional bodies and the regulatory body, the following are established: Dose constraints, to enable the requirements of paras 3.173 and 3.174, respectively, to be fulfilled for:</i></p> <ul style="list-style-type: none"> <li><i>(i) Exposures of carers and comforters;</i></li> <li><i>(ii) Exposures due to diagnostic investigations of volunteers participating in a programme of biomedical research.”</i></li> </ul>
(2)	<p><b>BASIS: GSR Part 3 Requirement 34 para 3.149 (b) states that</b> <i>“The government shall ensure that, as a result of consultation between the health authority, relevant professional bodies and the regulatory body, the following are established: Criteria and guidelines for the release of patients who have undergone therapeutic radiological procedures using unsealed sources or patients who still retain implanted sealed sources.”</i></p>
R16	<p><b>Recommendation:</b> The Government should ensure that, as a result of consultation between the HOD, relevant professional bodies and DSA, the following are established:</p> <ul style="list-style-type: none"> <li><b>a) Dose constraints for exposures of carers and comforters and volunteers participating in a programme of biomedical research.</b></li> <li><b>b) Criteria and guidelines for the release of patients who have undergone therapeutic radiological procedures.</b></li> </ul>

## Changes since the initial IRRS mission

In 2021, DSA submitted to HOD an initial proposal for revisions to the Radiation Protection Act and Radiation Protection Regulations. At the Ministry's request, this was revised in March 2025 to contain only the proposals for revision that were IRRS-related. In June 2025, at the Ministry's request, DSA initiated a public hearing on the proposal. Following the public hearing, DSA has prepared its final recommendation which has been submitted to the Ministry.

The proposal aims to make a number of changes to legally establish dose constraints for carers and comforters. The dose constraints must be justified and set based on criteria such as the caregiver's age and exposure situation. These constraints will be set by the hospitals and clinics.

The proposal also aims to establish dose constraints for volunteers participating in a programme of biomedical research. The dose constraint should be set by the regional ethics committee (REK) when the justification of the exposures associated with the research is assessed as part of the approval of the research. DSA will consider whether the guidelines to REK need to be updated.

The proposal also intends to establish dose criteria for household members of patients who have undergone therapeutic radiological procedures using unsealed sources, as well as patients who still retain implanted sealed sources.

## Status of the initial mission finding

**R16 is closed on the basis of progress made and confidence in effective completion in due time** as a proposal to amend the Radiation Protection Regulations establishing dose constraints, and criteria and guidelines for the release of patients were drafted by DSA and is waiting to be enacted by 1 July 2026.

## RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** While DoH has published some guidelines to assist with the individual justification of medical exposures, a single set of national referral criteria covering all medical imaging procedures including the provision of information on radiation dose and associated risks is not available in Norway. This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS: GSR Part 3 Requirement 37 para 3.158 states that** *“Relevant national or international referral guidelines shall be taken into account for the justification of the medical exposure of an individual patient in a radiological procedure.”*

(2)

**BASIS: SSG 46 Requirement 37 para 2.59 states that** *“National or international referral guidelines should be used as an important tool in the application of the process of justification of medical exposure for an individual patient. The health authority should support the relevant professional bodies in developing and implementing evidence-based referral guidelines (see also para. 2.65).”*

R17

**Recommendation:** The Government should ensure that the relevant authorities, in cooperation with relevant professional bodies, adopt a national set of referral guidelines for the justification of medical exposure for an individual patient in a radiological procedure.

## Changes since the initial IRRS mission

As noted in the 2019 report, there had previously been efforts to adopt a single set of national referral criteria covering all radiological procedures. This was part of a proposal for a national strategy to promote more appropriate and evidence-based use of radiological services by addressing issues such as overuse, regional variation, and insufficient decision support for referrers. However, this strategy had not been adopted or implemented.

In 2023 HOD tasked the regional health authorities (Regionalt helseforetak or RHF) with identifying concrete measures to address the previously identified challenges. The RHF delivered a comprehensive report in March 2025. The report outlines six prioritized national measures to reduce low value imaging, including the development of national referral guidelines and their implementation in clinical decision support systems.

The 2025 National Policy and Strategy for Radiation Protection and Nuclear Safety recognizes the importance of national referral guidelines and acknowledges that this should be achieved through coordination and cooperation between national health authorities. The national policy and strategy also states that there are plans to develop a national strategy for the medical use of radiation. This is considered a key element to ensure necessary coordination and collaboration between health authorities and also ensure that radiation protection aspects are addressed in national health policy strategies and report, the healthcare system and clinical practice. Based on the observation that there is still work to be done in the area of medical exposure, and that many of the findings from 2019 on the governmental level are still open, the development of such a national strategy is considered to be an important action to address and improve quality and safety in medical applications.

A national set of referral guidelines for the justification of medical exposure for an individual patient in a radiological procedure has not yet been prepared. There are no specific plans for undertaking the future work required to publish the referral guidelines. The IRRS team was told that the RHF is willing to take on the development of such guidelines. In addition, DSA has received a provisional assignment letter from HOD where it is addressed that DSA shall assist the RHF with the follow up of the RHF-report in general. However, it is noted that there is no concrete plan to formally involve the health authorities in this development.

## Status of the initial mission finding

**R17 is open** as a national set of referral guidelines for the justification of medical exposure for an individual patient in a radiological procedure has not yet been prepared.

### 9.10. REGULATIONS AND GUIDES FOR PUBLIC EXPOSURE

There were no findings in this area in the initial IRRS mission.

### 10. EMERGENCY PREPAREDNESS AND RESPONSE – REGULATORY ASPECTS

#### 10.1 AUTHORITY AND RESPONSIBILITIES FOR REGULATING ON-SITE EPR OF OPERATING ORGANIZATIONS

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** It was observed that for the industrial, medical or research activities under the RP Act, DSA does not evaluate the EPR arrangements of the applicant during the authorization process, because

the applicant does not have to submit with the application for authorization an emergency response plan, only to acknowledge that the plan exists. This implies that for these facilities and activities DSA doesn't have arrangements in place for the approval of the emergency response plan of the authorized parties.	
(1)	<b>BASIS: GSR Part 7 Requirement 23 para 6.19 states that</b> <i>“The operating organization of a facility or for an activity in category I, II, III or IV shall prepare an emergency plan. This emergency plan shall be coordinated with those of all other bodies that have responsibilities in a nuclear or radiological emergency, including public authorities, and shall be submitted to the regulatory body for approval.”</i>
R18	<b>Recommendation: DSA should ensure that arrangements are in place so that applicants under the RP Act submit the emergency response plans to the regulatory body for the approval or renewal of a licence.</b>

### Changes since the initial IRRS mission

DSA has developed a new case-handling system (Sievert tool) and has established a revised process for the review and assessment of applications for approval under the RP Act and Permits under the PC Act. This includes updated procedures and checklists for the review of safety reports and emergency plans. A general procedure for the assessment of emergency plans has been implemented, and specific checklists have been prepared for different categories of facilities and activities to support a risk-based graded approach.

It is now mandatory for applicants to submit emergency plans as part of their licence applications under the Radiation Protection Act. These plans are reviewed by DSA before the issuance of licences for all licensed practices under the RP Act.

The evidence provided indicates that DSA has established a structured and consistent approach aligned with Requirement 23 of GSR Part 7.

### Status of the initial mission finding

**R18 is closed** as DSA has put in place arrangements ensuring that emergency plans are submitted and reviewed by the regulatory authority as part of the authorization process.

### 10.2 REGULATIONS AND GUIDES ON ON-SITE EPR OF OPERATING ORGANIZATIONS

There were no findings in this area in the initial IRRS mission.

### 10.3 VERIFYING THE ADEQUACY OF ON-SITE EPR OF OPERATING ORGANIZATIONS

There were no findings in this area in the initial IRRS mission.

### 10.4 ROLES OF THE RB IN A NUCLEAR OR RADIOLOGICAL EMERGENCY

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** The IRRS Team was informed that the outsourcing of information and communication technologies and services has entailed periods of non-conformity to the requirements related to DSA role as National Warning Point with 24/7 availability as required by the Convention on Early Warning. No arrangements are in place to ensure assistance in an emergency response situation, in particular in complex situations where vital decision support systems may fail. This has been recognized in the ARM.

(1)	<b>BASIS: GSR Part 7 Requirement 2 para 4.8 states that</b> <i>“The government shall ensure that response organizations, operating organizations and the regulatory body have the necessary human, financial and other resources, in view of their expected roles and responsibilities and the assessed hazards, to prepare for and to deal with both radiological and non-radiological consequences of a nuclear or radiological emergency, whether the emergency occurs within or beyond national borders.”</i>
R19	<b>Recommendation: The Government should put in place arrangements to ensure that assistance and support for the information and communication technologies are available to respond to an emergency situation.</b>

### Changes since the initial IRRS mission

DSA reported that a contract was signed in 2023 with Norsk Helsenett SF (NHN), ensuring that NHN provides 24/7 support to DSA in its role as the National Warning Point under the Convention on Early Notification. The IRRS Team was informed that the contract includes a dedicated support contact number during working hours and a 24/7 emergency support line outside normal working hours. When activated, the emergency customer support line provides an appropriate response based on the priority of the request.

The NHN is a governmental organization responsible for providing support to health authorities with emergencies functions, ensuring sustainability and effectiveness to the support of DSA.

The IRRS team considers that reliable arrangements have been established for technical support to DSA’s information and communication systems essential for its emergency functions.

### Status of the initial mission finding

**R19 is closed** based on the nature, scope and adequacy of the contracted services with NHN.

## 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** No formal procedures or systematic arrangements are in place for general practitioners and medical emergency staff to be made aware of the symptoms of radiation exposure in patients and notification procedures, in routine situations.

(1)	<b>BASIS: GSR Part 7 Requirement 12 para 5.63 states that</b> <i>“Arrangements shall be made for medical personnel, both general practitioners and emergency medical staff, to be made aware of the clinical symptoms of radiation exposure, and of the appropriate notification procedures and other emergency response actions to be taken if a nuclear or radiological emergency arises or is suspected.”</i>
S18	<b>Suggestion: DSA should consider ensuring that arrangements are in place so that medical personnel, both general practitioners and medical emergency staff, are made aware of the clinical symptoms of radiation exposure and notification procedures to be taken.</b>

### Changes since the initial IRRS mission

In 2024, the Norwegian National Unit of CBRNE Medicine, together with DSA and the Norwegian Directorate of Health, issued an updated guide for general practitioners on suspected acute radiation injuries.

In January 2025, the Norwegian National Unit of CBRNE Medicine translated the EU CBRNE competence-building packages (MELODY) for first responders. Additionally, in March 2025, the revision of the “Handbook for the First Responders Management of CBRN incidents and events” was finalised, with publication planned for 2025.

The IRRS Team was informed that the Norwegian National Unit of CBRNE Medicine organized under the Ministry of Health published information on this subject on their dedicated webpage to medical personnel and offers refresher courses by the medical reference centre on a yearly basis.

The actions taken represent significant progress to ensure that medical personnel are aware of the clinical symptoms of radiation exposure and procedures for notification, as required by GSR Part 7.

**Status of the initial mission finding**

**S18 is closed** as arrangements are in place to ensure the dissemination of relevant information to medical personnel.

**2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES**

**Observation:** Some of the existing requirements for emergency preparedness and response are not fully in compliance with the requirements of IAEA safety standards GSR Part 7; for example: no protection strategy aligned with the standard; no criteria for the termination of an emergency; no designation of “Helpers”; no clear criteria for the designation and just-in-time training of “Emergency Workers”; no established process for sharing the lessons taken by the on-site training drills and exercises for facilities and activities (other than the nuclear facilities) with DSA; no emergency planning zones aligned with the standard. This has been partially recognized in the ARM.

(1)	<b>BASIS: GSR Part 7 Requirement 5 states that</b> <i>“The government shall ensure that protection strategies are developed, justified and optimized at the preparedness stage for taking protective actions and other response actions effectively in a nuclear or radiological emergency.”</i>
(2)	<b>BASIS: GSR Part 7 Requirement 18 states that</b> <i>“The government shall ensure that arrangements are in place and are implemented for the termination of a nuclear or radiological emergency, with account taken of the need for the resumption of social and economic activity.”</i>
(3)	<b>BASIS: GSR Part 7 Requirement 11 states that</b> <i>“The government shall ensure that arrangements are in place to protect emergency workers and to protect helpers in a nuclear or radiological emergency.”</i>
(4)	<b>BASIS: GSR Part 7 Requirement 11 para 5.52 (b) states that</b> <i>“Providing emergency workers not designated in advance and helpers in an emergency immediately before the conduct of their specified duties with instructions on how to perform the duties under emergency conditions, (‘just in time’ training);”</i>

(5)	<b>BASIS: GSR Part 7 Requirement 25 para 6.30 states that</b> <i>“The exercises shall be systematically evaluated, and some exercises shall be evaluated by the regulatory body. Programmes shall be subject to review and revision in the light of experience gained.”</i>
(6)	<b>BASIS: GSR Part 7 Requirement 9 para 5.38 (a) states that</b> <i>“The specification of off-site emergency planning zones and emergency planning distances for which arrangements shall be made at the preparedness stage for taking protective actions and other response actions effectively.”</i>
R20	<b>Recommendation: The Government should revise the legislation and regulations on emergency preparedness and response to ensure consistency with the IAEA Safety Standards GSR Part 7.</b>

### Changes since the initial IRRS mission

The Action Plan foresees the consideration of this recommendation as part of an ongoing legal review addressing potential regulatory improvements. Identified issues include the need to update definitions (e.g., Emergency workers and Helpers), internal procedures, and emergency planning provisions.

Related to the GSR Part 7 Requirement 5, the current versions of the Royal Decree on Nuclear Accident Preparedness and Crisis Committee Plans (updated in 2025), already address elements of a protection strategy.

Related to the GSR Part 7 Requirement 18, updates have been made to the Crisis Committee’s plan and related documents in 2024. These include the introduction of a description of the different phases of a nuclear incident aligned with IAEA guidance and provisions on emergency termination. The IRRS Team was also informed that an expansion of the arrangements for termination will be proposed for the next draft, by the end of 2025, beginning of 2026.

Related to the GSR Part 7 Requirement 11 and Requirement 11 para 5.52(b), Norway has guidelines for first responders in place, and if a radiological and nuclear emergency occurs first responders are the primary asset to intervene and manage the situation. Nevertheless, there still a lack of formal arrangements, including arrangements for “just in time training”, to protect emergency workers and helpers. As per GRS Part 7 an emergency worker is a person having specified duties as a worker in response, and a helper is a member of the public who willingly and voluntarily helps in the response to a nuclear or radiological emergency, as defined in GSR Part 7.

Related to the GSR Part 7 Requirement 25 para 6.30, the IRRS team acknowledges the existence of a general methodology developed by DSB (The Norwegian Directorate for Civil Protection) to evaluate all types of exercises and was informed that new guidelines were developed by DSA in 2025 to sharing the lessons within DSA and with the licensees.

Related to the GSR Part 7 Requirement 9 para 5.38, the IRRS Team was informed that based on a graded approach the establishment of Emergency Planning Zones (EPZ) and precautionary action zone (PAZ) is a requirement from DSA for EPC II and V facilities. An example of this requirement was presented to the IRRS Team in DSA’s publication “Guidance for applications for licenses under the Nuclear Energy Act for visits by naval nuclear-powered vessels to Norwegian territorial waters and ports”, from 2021. Also, IFE and NND have established EPZ in their emergency response plans for the research reactors.

The IRRS team acknowledges the progress made and the planned actions. The updates to national emergency arrangements demonstrate a clear commitment to improving consistency with GSR Part 7.

However, full implementation is still ongoing, and several critical elements including designation of helpers and emergency workers and “just in time training” for emergency workers not designated in advance, require further regulatory development.

### **Status of the initial mission finding**

**R20 remains open** pending completion of the planned regulatory updates and confirmation that revised legislation, and arrangements fully meet the requirements of GSR Part 7 to protect emergency workers and helpers.

## 11. INTERFACE WITH NUCLEAR SECURITY

### 11.1 LEGAL BASIS

2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES	
<p><b>Observation:</b> The legal and regulatory framework does not include specific provisions regarding interfaces between nuclear security and safety, including a system of accounting for and control of nuclear materials.</p>	
(1)	<p><b>BASIS: GSR Part 1 (Rev 1) Requirement 12</b> that <i>“The government shall ensure that, within the governmental and legal framework, adequate infrastructural arrangements are established for interfaces of safety with arrangements for nuclear security and with the State system of accounting for, and control of, nuclear material.”</i></p>
(2)	<p><b>BASIS: SSR-5 Requirement 23</b> states that <i>“Consideration of the State system of accounting for, and control of, nuclear material In the design and operation of disposal facilities subject to agreements on accounting for, and control of, nuclear material, consideration shall be given to ensuring that safety is not compromised by the measures required under the system of accounting for, and control of, nuclear material.”</i></p>
(3)	<p><b>BASIS: SSR-5 Requirement 24</b> states that <i>“Measures shall be implemented to ensure an integrated approach to safety measures and nuclear security measures in the disposal of radioactive waste.”</i></p>
(4)	<p><b>BASIS: GSR Part 5 Requirement 5</b> states that <i>“Requirements in respect of security measures shall be implemented to ensure an integrated approach to safety and security in the predisposal management of radioactive waste.”</i></p>
(5)	<p><b>BASIS: GSR Part 5 Requirement 21</b> states <i>“System of accounting for and control of nuclear material for facilities subject to agreements on nuclear material accounting, in the design and operation of predisposal radioactive waste management facilities the system of accounting for and control of nuclear material shall be implemented in such a way as not to compromise the safety of the facility.”</i></p>
R21	<p><b>Recommendation:</b> The Government should revise the legal framework to ensure that the interface between safety and security is addressed for all facilities and activities and to establish a clear distinction between safety and security.</p>

#### Changes since the initial IRRS mission

DSA and the Government have taken significant steps to address the interface between nuclear safety and nuclear security across all facilities and activities. Key developments include:

- The National Policy and Strategy for Radiation Protection and Nuclear Safety, published on 2 July 2025, includes Goal 10, which explicitly addresses the interface between safety, security, and safeguards.

- The strategy commits to ensuring that safety is not compromised by security measures and vice versa, and that both are integrated in a coherent and coordinated manner.
- The legal framework is under review to ensure that the interface is clearly defined and that responsibilities are allocated appropriately.
- DSA has developed internal procedures and guidance documents that reflect the need for coordination between safety and security, particularly in licensing, inspections, and emergency preparedness.
- The interface is also addressed in the licensing process for nuclear-powered vessel visits and in the decommissioning of nuclear facilities, where both safety and security aspects are considered jointly.

The Government and DSA have demonstrated a clear commitment to integrating safety and security considerations. The inclusion of this interface in the national strategy and the ongoing legal review are strong indicators of progress. The approach reflects international best practices and aligns with IAEA safety standards, including GSR Part 1, SSR-5, and GSR Part 5.

### Status of the initial mission finding

**R21 is closed on the basis of progress made and confidence in effective completion in due time**, as the legal framework is being revised and the interface is embedded in strategic and operational processes.

## 11.2 REGULATORY OVERSIGHT ACTIVITIES

### 2019 MISSION RECOMMENDATIONS, SUGGESTIONS AND GOOD PRACTICES

**Observation:** There is no documented process available in DSA’s management system to formalize how the safety and security measures are reviewed and assessed in an integrated manner. This has been recognized in the ARM and is part of the action plan.

(1)

**BASIS:** GSR Part 1 Requirement 22 para 4.26 states that *“The regulatory process shall be a formal process that is based on specified policies, principles and associated criteria, and that follows specified procedures as established in the management system.”*

S19

**Suggestion:** DSA should consider developing a formal process to establish how the safety and security measures are reviewed and assessed in an integrated manner.

### Changes since the initial IRRS mission

A formal procedure titled “Review and Assessment with Annexes A–D” has been developed and integrated into DSA’s management system, providing structured steps, templates, and verification mechanisms to support an integrated review of safety, security, and safeguards. The procedure requires that, when appointing reviewers, the Section Leader evaluates whether proposed safety, security, or safeguards measures may affect other areas and involves the appropriate personnel as needed. This development directly addresses the previously identified gap in the IRRS mission regarding the absence of a documented process for conducting integrated reviews.

### Status of the initial mission finding

**S19 is closed** as a formal process to establish how the safety and security measures are reviewed and assessed in an integrated manner is in place and used.

### **11.3 INTERFACE AMONG AUTHORITIES**

There were no findings in this area in the initial IRRS mission.

**APPENDIX I – RECOMMENDATIONS (R) AND SUGGESTIONS (S) FROM THE PREVIOUS  
IRRS MISSION THAT REMAIN OPEN**

<b>Module</b>	<b>Section</b>	<b>R/S</b>	<b>Recommendations/Suggestions</b>
<b>1</b>	<b>1.3</b>	S2	The Government should consider to ensure effective <b>independence of DSA</b> in all its regulatory functions with respect to licensees funded by the Ministry of Health and Care Services.
<b>1</b>	<b>1.8</b>	R5	The Government should establish provisions regarding the <b>building and maintaining of competence of all parties having responsibilities in relation to the safety of facilities and activities</b> , including the strengthening radiation protection training in health education programmes and the formal <b>recognition of medical physicists</b> .
<b>2</b>	<b>2.2</b>	S7	DSA should consider establishing and maintaining means for <b>systematic analysis of events, identification of lessons learned</b> and dissemination of related information to facilitate an effective exchange and use of operating and regulatory experience with the international community.
<b>5</b>	<b>5.10</b>	R9	DSA should introduce and implement the <b>concept of clearance</b> .
<b>9</b>	<b>9.8</b>	R15	DSA, in coordination with other authorities, should harmonize its regulatory framework with all requirements of <b>IAEA GSR Part 3 for the protection and safety of workers in planned exposure situations</b> .
<b>9</b>	<b>9.9</b>	R17	The Government should ensure that the relevant authorities, in cooperation with relevant professional bodies, adopt a national set of <b>referral guidelines for the justification of medical exposure for an individual patient</b> in a radiological procedure.
<b>10</b>	<b>10.4</b>	R20	The Government should revise the legislation and regulations on <b>emergency preparedness</b> and response to ensure consistency with the IAEA Safety Standards <b>GSR Part 7</b> .

**APPENDIX II - RECOMMENDATIONS (RF), SUGGESTIONS (SF) AND GOOD PRACTICES (GPF) FROM THE 2025 IRRS FOLLOW UP MISSION**

<b>Module</b>	<b>Section</b>	<b>RF/SF/GPF</b>	<b>Recommendation, Suggestion or Good Practice</b>
<b>1</b>	<b>1.3</b>	<b>RF1</b>	The Government should ensure in relevant legislation that DSA is effectively independent in its safety related decision making.
<b>6</b>	<b>6.1.2</b>	<b>RF2</b>	The Government should make provisions for DSA to have up-to-date data on examinations/procedures/treatments and the associated radiation doses to enable regulatory oversight and a risk-based inspection programme of medical facilities and activities.

### APPENDIX III – LIST OF PARTICIPANTS

<b>INTERNATIONAL EXPERTS</b>		
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**GROUP PHOTO**



## APPENDIX IV – LIST OF COUNTERPARTS

	IRRS EXPERTS	Lead Counterpart	Support Staff
<b>1.</b>	<b>LEGISLATIVE AND GOVERNMENTAL RESPONSIBILITIES</b>		
	Cantemir Ciurea (ROM) Gabriel Soare (IAEA)	Kristin Elise Frogg Victoria M Sevenoaks	Annette Andersen Anne Marie Frøvig Cathrine Bøgestub Eva G. Friberg Håvar Sollund Ingeborg E. Nakken Ingeborg Mork-Knutsen Joe Moussa Lise Mygland Marie Louise Elger Wiik Sara Skodbo Sarah Wethal Tonje Skjong Trude D.Jørgensen Yngvild Sauge
<b>2.</b>	<b>GLOBAL NUCLEAR SAFETY REGIME</b>		
	Cantemir Ciurea (ROM) Gabriel Soare (IAEA)	Kjetil Longva Ingeborg Mork-Knutsen	Ole Stian Bockelie Fredrik Espegren Øyvind Gjølme Selnæs
<b>3.</b>	<b>RESPONSIBILITIES AND FUNCTIONS OF THE REGULATORY BODY</b>		
	Matjaz Podjavorsek (SLO)	Kristin Elise Frogg	Anne Marie Frøvig

	<b>IRRS EXPERTS</b>	<b>Lead Counterpart</b>	<b>Support Staff</b>
	Joao Oliveira Martins (POR)	Victoria M. Sevenoaks	Cathrine Bøgestub Christine Hareide Giedrius Paskevicius Håvar Sollund Lasse Udjus Luca Piciaccia Marie Louise Elger Wiik Sara Skodbo Tonje Skjong Torbjørn Gäfvert Unn Refseth
<b>4.</b>	<b>MANAGEMENT SYSTEM OF THE REGULATORY BODY</b>		
	Cantemir Ciurea (ROM) Gabriel Soare (IAEA)	Per Strand Kristin Elise Frogg	Luca Piciaccia Lasse Udjus
<b>5.</b>	<b>AUTHORIZATION</b>		
	Andrew McCormick (AUS) Marcela Medici (ARG)	Håvar Sollund Ingeborg Mork-Knutsen	Bård Olsen Dorthe Henden Clark Kine Berget Maria Larsson Nora Knutsen Tonje Skjong

	IRRS EXPERTS	Lead Counterpart	Support Staff
			Victoria M. Sevenoaks
<b>6.</b>	<b>REVIEW AND ASSESSMENT</b>		
	Andrew McCormick (AUS) Marcela Medici (ARG)	Håvar Sollund Ingeborg Mork-Knutsen	Annette Andersen Elin Ohlin Giedrius Paskevicius Ida W. Ormberg Joe Moussa Kine Berget Ole Stian Bockelie S. Wethal Tonje Skjong
<b>7.</b>	<b>INSPECTION</b>		
	Andrew McCormick (AUS) Marcela Medici (ARG)	Ingeborg Mork-Knutsen	Ole Stian Bockelie Elin Ohlin
<b>8.</b>	<b>ENFORCEMENT</b>		
	Andrew McCormick (AUS) Marcela Medici (ARG)	Victoria M. Sevenoaks	Dorthe Henden Clark Ingeborg E. Nakken
<b>9.</b>	<b>REGULATIONS AND GUIDES</b>		
	Andrew McCormick (AUS) Marcela Medici (ARG)	Kristin Frogg Victoria M. Sevenoaks	Annette Andersen Bård Olsen Eva G. Friberg Håvar Sollund

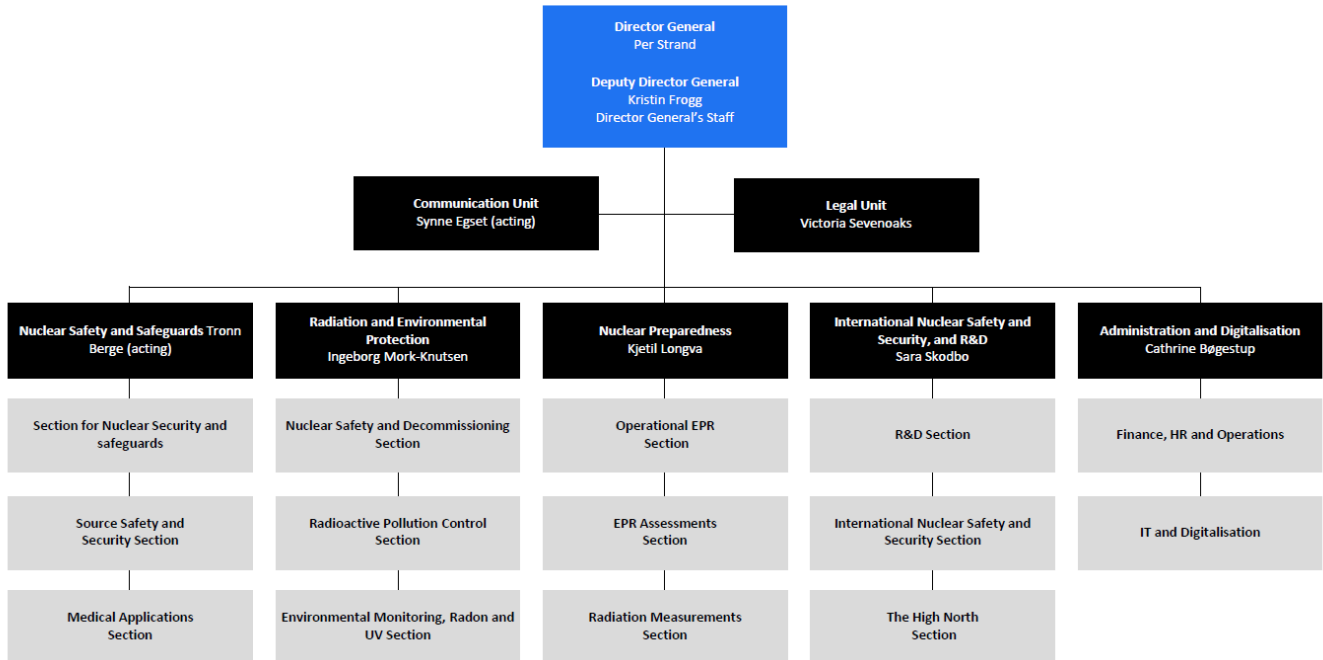
	IRRS EXPERTS	Lead Counterpart	Support Staff
			Joe Moussa Sarah Wethal Tonje Skjong Trude D. Jørgensen
<b>10.</b>	<b>EMERGENCY PREPAREDNESS AND RESPONSE</b>		
	Joao Oliveira Martins (POR)	Kjetil Longva	Øyvind Gjølme Selnæs Per Inge Ohrstrand Kristina Dørum Jørgen Trømborg
<b>11.</b>	<b>INTERFACE WITH NUCLEAR SECURITY</b>		
	Cantemir Ciurea (ROM) Gabriel Soare (IAEA)	Madeleine Barbru Victoria M. Sevenoaks	Tonje Sekse Yngvild Sauge

## APPENDIX V – MISSION PROGRAMME

Time	MON	TUE	WED	THU	FRI	SAT	SUN	MON	
9:00-10:00	Arrival of Team Members	Entrance Meeting	Interviews	TM write Report TL and DTL review introductory part	Discussion Counterpart/Expert		Social Event	Exit Meeting	
10:00-11:00									
11:00-12:30		Interviews			<b>Draft text to TL</b>	Finalisation		<b>Written comments by the Host</b>	
12:30-13:30		Lunch	Lunch	Lunch	Lunch	Lunch		Lunch	
13:30-14:00									
14:00-15:00	Initial IRRS Team Briefing (Attended by the LO)	Interviews	Interviews	Cross-reading	Submission of the <b>Draft to the Host</b>	Team meeting to discuss and resolve Host comments	Departure of IRRS Team Members		
15:00-16:00				Secretariat edits the report				Host reads Draft and prepares written	TL finalises the presentation
16:00-17:00			<b>Written preliminary findings delivered</b>	Preliminary Draft Report Ready	Discussion of Executive Summary	<b>Presenting the final Draft of the Report to the Host</b>			
17:00-18:00		Daily Team Meeting	Daily Team Meeting: <b>Discussion of findings</b>	Daily Team Meeting	Team discusses the Mission and provides IAEA with feedback	Finalisation of the Report			
18:00-20:00		Dinner	Dinner	Dinner	Dinner	Dinner		Dinner	
20:00		Writing of the report	Secretariat edits Report. TM write Report	TM Read Draft					



## APPENDIX VI – ORGANIZATIONAL CHART



## APPENDIX VII – COUNTERPART’S REFERENCE MATERIAL USED FOR THE REVIEW

### COUNTERPART’S REFERENCE MATERIAL USED FOR THE REVIEW

#### Module 1

Reference	Title
R1-1	Letter of Allocation/Tildelingsbrev (in Norwegian)
R1-2	Links to the documentation in Norwegian: Norges første nasjonale strategi for strålevern og atomsikkerhet - regjeringen.no
R1-3	Policy and Strategy for Safety and supporting reader’s guide (in English)
R2-1	Nuclear Energy Act: <a href="#">Lov om atomenergivirksomhet [atomenergiloven] - Lovdata</a> (translated version: <a href="#">Act no 28 concerning Nuclear Energy Activities.pdf</a> )
R2-2	Regulation on impact assessment § 6 and attachment I: <a href="#">Forskrift om konsekvensutredninger - Lovdata</a>
R2-3	National policy and strategy for spent fuel and radioactive waste management: <a href="#">Strategi for trygg, sikker og forsvarlig håndtering av radioaktivt avfall i Norge - regjeringen.no</a>
R2-4	Guidance on planning the clean-up of the Norwegian nuclear program: <a href="#">Veileder 15 Veileder for planlegging av opprydning etter de norske atomanleggene.pdf</a>
R2-5	Study program for the establishment of nuclear power plants <a href="#">Utredningsprogram for etablering av kjernekraftverk - regjeringen.no</a>
S1-1	Letter to the Ministry of Health from DSA dated 31 <sup>st</sup> March 2025
S1-2	Letter from the Ministry of Health to DSA of 7 <sup>th</sup> April 2025
S1-3	Letter to the Ministry of Health from DSA of 22 <sup>nd</sup> May 2025
S1-4/ S2-1	National Policy and Strategy for Safety <a href="#">Norges forpliktelse og strategi for strålevern og atomsikkerhet.pdf</a>
R3-1	Record of additional funding for decommissioning and waste sector; record of agreements re: charging fees to Ministry of Defence
R3-2	Allocation letters (Tildelingsbrev) for 2024 and 2025
R3-3	Document describing ROS Analysis
S3-1	Letter to the Ministry of Health from DSA dated 31 <sup>st</sup> March 2025
S3-2	Letter from the Ministry of Health to DSA of 7 <sup>th</sup> April 2025
S4-1	Memorandum of Understanding between DSB and DSA
S4-2	Curriculum for specialization course class 7 - <a href="#">Læreplan ADR kompetansebevis</a>
S4-3	Joint statement by DSB and DSA on the interpretation of ADR 8.5 S11
S4-4	Agenda - Workshop and technical visit - transport security, 30 January – 1 February 2023
S4-5	Memorandum of Understanding between NMA and DSA
S4-6	Draft Memorandum of Understanding between CAA and DSA
R4-1	The national strategy for safe, secure and environmentally sound management of radioactive waste <a href="#">Strategi for trygg, sikker og forsvarlig håndtering av radioaktivt avfall i Norge</a>
R4-2	Government White Paper (Stortingmelding) on Safe decommissioning of Norwegian nuclear facilities and management of nuclear waste <a href="#">Meld. St. 8 (2020–2021)</a>

Reference	Title
R4-3	Copy of the action plan sent Ministry of Climate and Environment on 1 April 2025 ( in Norwegian )
R5-1	Notat fagmøte HOD – IRRS medisin dated 26.04.24
R5-2	Notat HOD IRRS medisin sept 2021 dated 22.10.21
R5-4	Helsepersonellkommissjonen NOU 2023:4 «Tid for handling»
R5-5	Referat fagmøte DSA HOD dated 04.12.23
R5-6	Møte spesialisthelsetjenesten_HOD, PDF not dated, from 04.12.23
R5-7	Internal note on update on status and future work on TSO
R5-8	DSA Report on Setting up a National Technical and Scientific Support Organization for Nuclear Safety and Security (March 2024)
R5-9	DSA Kunnskapsstrategi (Knowledge strategy), 2024 – 2028.
S5-1	Cover letter to the Ministry dated 12 <sup>th</sup> March 2025
S5-2	Hearing note (Not dated, in line with practice, but it is an attachment to the cover letter)
S5-3	Suggestion for regulation change (Not dated, in line with practice, but it is an attachment to the cover letter)
S5-4	Order from the Ministry of Health and Care Services dated 2 <sup>nd</sup> June 2025
S5-5	Cover letter for the public hearing on amendments to the Radiation Protection Regulation, dated 5 <sup>th</sup> June 2025
S5-6	Hearing note dated 5 <sup>th</sup> June 2025
S5-7	List of consultant bodies (Not dated, in line with practice, but it is an attachment to the cover letter)
S5-8	Instruction on a programme for mapping of soil contamination at IFEs areas at Kjeller and Halden Reversal decision: instruction for mapping and action plan for Nitelva and Sogna.

## Module 2

Reference	Title
S6-1	Minutes from Crisis Committee meeting 28th of February 2025.
S7-1	Arrangement between DSA and US NRC for the Exchange of Technical Information and Cooperation in Nuclear Matters
S7-2	Memorandum of Understanding on the Exchange of Information and Cooperation in the Safety Regulation of Nuclear Energy Use for Peaceful Purposes between DSA and ONR

## Module 3

Reference	Title
S8-1	Procedure for budget process in DSA
S8-2	Tentative budget proposal <a href="#">Prop. 146 S (2024–2025) – Foreløpig utgave</a>
S8-3	Risk assessment of strategic goals in DSA's business strategy
S9-1	Application to the Ministry of Health and Care Services, dated 16.12.2024.
S9-2	Decision from the Ministry of Health and Care Services, dated 19.12.2024.
S9-3	Notification to the Ministry of Health and Care Services, dated 30.06.2025.
S9-4	Procedure for conflict-of-interest assessment.
S9-5	Declaration Form for Assessing Impartiality in Public Procurement Processes.
S9-6	Model document for impartiality assessments.

Reference	Title
S9-7	Notice of disposal and export of DSA's personal dosimetry readers, and request for feedback
S9-8	Contract of employment
	Side jobs/additional roles outside work, Onboarding, Recruitment from authorized parties
S10-1	20/01573-11 Nedleggelse av persondosimetritjenesten ved DSA- viktig informasjon til kundene om overføring og reservasjonsrett (Closure of the personal dosimetry service at DSA - important information for customers about transfer and reservation rights)
S10-2	20/01573-15 Orientering om nedleggelsen av DSA persondosimetritjeneste (Information about the closure of the DSA personal dosimetry service)
S10-3	Avtale mellom Justervesenet og DSA (Agreement between Justervesenet and DSA)
S10-4	Upartiskhet og konfidensialitet, Dok. 00229 (Impartiality and confidentiality)
S10-5	Erklæring om upartiskhet, uavhengighet og integritet, sign. avdelingsdirektør, Dok. 00480 (Declaration of impartiality, independence and integrity, signed by the department director)
S10-6	Policy concerning quality of work, D00003
S10-7	Personalreglement, DSA (Personnel regulations)
S10-8	Retningslinjer for ansattes plikt til å registrere verv og økonomiske interesser (Guidelines for employees' obligation to register positions and financial interests)
S10-9	24/02635-6 Godkjenning Dosimetrilaboratoriet (u.off.) (Approval Dosimetry Laboratory)
S10-10	Ethical guidelines for the civil service
R6-1	Strategisk kompetanseplan (Strategic competence plan)
R6-2	Skjema DSA funksjoner og fagområder (Form DSA functions and disciplines)
R6-3	Introduksjonskurs i strålevern – juni 2025.pdf (DSA introduction course)
R6-4	Deltakere på introduksjonskurs i strålevern (participants in introduction course in radiation protection)
R6-5	Introduksjonsprogram for nyansatte i DSA (introduction programme for new employees)
R6-6	Registrering Av Opplæring i ADR (Training registration)
R6-7	Human Resource Plan for the Nuclear Security and Safeguards Section
R6-8	SARCoN Diagram for Nuclear Security and Safeguards Section
S11-1	DSA Review and Assessment Procedure
S11-2	Assessment Report
S11-3	Checklist
S11-4	Review and assessment plan
S12-1	General information about the Committee, Terms of Reference, membership information and minutes are published on DSA's website. <a href="#">The Advisory Committee on Nuclear and Radiation Safety - DSA</a>
S12-2	Paper from AdCom Chair to Directors' Group meeting 15 August 2024
S12-3	Minutes, Directors' Group meeting 15 August 2024

#### Module 4

Reference	Title
R7-1	DSA Safety Policy
R8-1	The DSA book (quality handbook of DSA)
R8-2	Links to DSA Management System TQM

#### Module 5

Reference	Title
S13-1	Guidance for manufacturer and sellers of products with radioactive substances, including consumer products: <a href="#">Produksjon og salg av produkter med radioaktive stoffer - DSA</a>
S13-2	Guidelines for writing a safety report. DSA-hefte no. 9. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2024
S13-3	Template for Safety Report for license according to Section 9, letter j
S13-4	Checklist for review of application for license according to Section 9, letter j
S14-1	Strategi for å redusere radoneksponeringen i Norge 2025-2029. Andre nasjonale radonstrategi (Strategy for reducing radon exposure in Norway 2025-2029. Second national radon strategy) (published, 26th September 2025) <a href="#">Strategi for å redusere radoneksponeringen i Norge 2025–2029 - regjeringen.no</a>
S14-2	Implementering av ny radonstrategi – bestilling til DSA (Implementation of new radon strategy – order to DSA), letter from Ministry of Health and Care Services (exempted from public disclosure)
S14-3	Evaluering av nasjonal radonstrategi 2009-2020 (Evaluation of the national radon strategy 2009 – 2020) (DSA-rapport 11-2020)
R9-1	References to the Nuclear Energy Act and Pollution Control Act under Recommendation 2.

#### Module 6

Reference	Title
S15-1	<a href="#">Review and assessment procedure</a>
S15-2	<a href="#">Annex E The guidelines for review and assessment of RR and FCF</a>
S15-3	<a href="#">Annex F Checklists templates</a>
S15-4	Notat om Prosjekt etablering av nasjonalt system for overvåking av medisinsk strålebruk med NPR som nøkkelregister (Note on Project establishment of a national system for monitoring medical radiation use with NPR as key register)
S15-5	Notat om etablering av nasjonalt system for overvåking av medisinsk strålebruk med NPR som nøkkelregister (NPR-prosjektet), 2021 og Notat om styringsdata innen bildediagnostikk – NPR som nøkkelregister (2024) Memorandum on the establishment of a national system for monitoring medical radiation use with NPR as the key register (NPR project), 2021 and Memorandum on management data within diagnostic imaging – NPR as the key register (2024)
R10-1	Guidelines for writing a safety report. DSA-hefte no. 9. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2024
R10-2	Guidelines for writing a safety report for medical use of X-ray and MRI equipment. DSA-hefte no. 10. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2025

Reference	Title
R10-3	Guidelines for writing a safety report for radiotherapy. DSA-hefte no. 11. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2025
R10-4	MAL for sikkerhetsrapport – Omsetning og utleie (template for safety report – Sales and rentals)
R10-5	MAL for sikkerhetsrapport CBCT (template for safety report – CBCT)
R10-6	Mal for sikkerhetsrapport - Industriell radiografi (template for safety report – industrial radiography)
R10-7	Sjekkliste sikkerhetsrapport - Omsetning og utleie (checklist for safety report – sales and rentals)
R10-8	Sjekkliste mal sikkerhetsrapport – CBCT (checklist for safety report – CBCT)
R10-9	Sjekkliste sikkerhetsrapport - Industriell radiografi (checklist for safety report – industrial radiography)
R11-1	Letter and questionnaire sent out to the industry.
R11-2	DRAFT Kartlegging av transport av radioaktivt materiale og stråledoser
R11-3	Dose assessment sheets
R11-4	Procedures for periodic assessment of doses from transport of radioactive material
S16-1	M300 - Guidelines for environmental monitoring of petroleum industry at sea, Retningslinjer for miljøovervåking av petroleumsvirksomheten til havs, <a href="http://miljodirektoratet.no">Miljøovervåking av petroleumsvirksomheten til havs - miljodirektoratet.no</a>
S16-2	23_0297-1 Tillatelse TU23-13 Heggvin Alun
S16-3	23_02975-12 Overvåkingsprogram for vann - Heggvin Alun (Water monitoring programme for Heggvin Alun)
S16-4	23_04001-13 Tillatelse TU24-16 Boliden Odda AS
S16-5	23_04001-14 Overvåkingsprogram Boliden Odda AS (monitoring programme for Boliden Odda AS)
S16-6	17_00476-3 Tillatelse TU17-08 Follobanen17_00476-7 Miljøovervåkingsplan Follobanen Environmental monitoring programme for Follobanen
S16-7	Sjekkliste miljøovervåking (Check list environmental monitoring)

#### Module 7

Reference	Title
R12-1	Notater til etatsstyringsmøter og fagmøter med HOD om NPR (Notes for agency management meetings and professional meetings with HOD on NPR)
R12-2	Bakgrunnsnotat med 2 vedlegg for møte med HOD 23.06.2025 (Background note with 2 attachments for meeting with HOD 23.06.2025)
R12-3	Saksfremlegg prosjektgruppe tilsyn LM xx.xx.25 til ledermøte - ble vedtatt av DSA (Presentation of the inspection project group to the DSA management meeting)
R12-4	Tilsynsprogram - atomanleggene v1 (Inspection programme for nuclear facilities)
R12-5	10 års tilsynsprogram – DSA (DSA's 10 year inspection programme)
R12-6	List of inspections – nuclear facilities

#### Module 8

Reference	Title
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R13-1	Enforcement policy (Norwegian version is as of 23.05.2025 uploaded to TQM, translated)
R14-1	Overview of published guides since IRRS mission 2019 (including links to the publication) and folder with the pdf versions of the guides
R14-2	Overview of guides planned for publication
R14-3	Reference to R14 in the mission report DSA responsible action plan and status
R14-4	Approval of publications (Godkjenning av publikasjoner)
R14-5	Enforcement/administrative fines according to the NE Act and RP Act
R14-6	Suggestion for regulation of enforcement/administrative fines PC Act
R14-7	Proposal for regulation of dose constraint, release criteria and personal dosimetry services
R14-8	Municipality emergency response system
R14-9	Svalbard Environmental Act
R14-10	Note of 22 of April 2025 on the status for DSAs effort/attempt to include RP Act in the legislative basis for the offshore Health, Safety and Environment Regulations
R14-11	Proposal for the NE Act to be included in legislative basis for the Internal Control Regulations- Letter from the Ministry of Health to the Ministry of Labour and Social Inclusion dated 19th of December 2023
R14-12	Utkast til veiledning til kommunene for innsigelsesmyndighet (Draft guidance to municipalities for objection authority)
R14-13	Regulations - Overview of work in progress and planned work
R14-14	Commissioning letter from the Ministry of Health and Care Services dated 10th April 2025

## Module 9

Reference	Title
R15 -1	<a href="#">Regulations on Radiation Protection and Use of Radiation (Radiation Protection Regulations), Section 32</a>
R15-2	<a href="#">Regulations concerning Action and Limit Values, Section 4-1</a>
R15-3	<a href="#">Regulations concerning Organisation, Management and Employee Participation, Section 15-1</a>
R15-4	<a href="#">Regulations concerning the performance of work, use of work equipment and related technical requirements - Chapter 15. Ionising radiation - Lovdata</a>
R15-5	<a href="#">Act on Radiation Protection and Use of Radiation (Radiation Protection Act), Section 8</a>
R15-6	<a href="#">Act relating to the working environment, working hours and employment protection, etc. (Working Environment Act), Section 4-1</a>
S17-1	Draft Memorandum of Understanding between CAA and DSA
S17-2	Haldorsen T, Reitan JB, Tveten U. Cancer incidence among Norwegian airline pilots. Scand J Work Environ Health 2000;26(2):106-111.
S17-3	Haldorsen T, Reitan JB, Tveten U. Cancer Incidence among Norwegian Airline Crew. Natural Ionizing Radiation and Health, Proc. from the Norwegian Academy of Science and Letters, Oslo 6-7 June 2001
S17-4	Haldorsen T, Reitan JB, Tveten U. Cancer incidence among Norwegian airline cabin attendants. Int J Epidem 2001;30:830-832

Reference	Title
R16-1	Proposal for regulation of dose constraint, release criteria and personal dosimetry services
R16-2	Order from the Ministry of Health and Care Services dated 2nd of June 2025
R16-3	Cover letter for the public hearing on amendments to the Radiation Protection Regulation, dated 5th of June 2025.
R16-4	Hearing note dated 5th of June 2025.
R16-5	List of consultant bodies (Not dated, in line with practice, but it is an attachment to the cover letter)
R17-1	«Tiltak for å redusere overforbruk og uønska variasjon i radiologitenester i Noreg» oversendt til HOD 27.03.25 (spesielt tiltak 4 og vedlegg 11.5) (Measures to reduce overuse and unwanted variation in radiology services in Norway" submitted to HOD 27.03.25 (especially measure 4 and appendix 11.5))
R17-2	Bakgrunnsnotat fra fagmøte mellom HOD og DSA 09.04.25 (Background note from professional meeting between HOD and DSA 09.04.25)
R17-3	Strategi for rasjonell bruk av bildediagnostikk (Strategy for the rational use of diagnostic imaging) dated 01.02.19
R17-4	DSAs evaluation of the RHF-report dated 15.05.2025
R17-5	Bakgrunnsnotat med 2 vedlegg fra møte mellom HOD og DSA 23.06.2025 (Background note from professional meeting between HOD and DSA 23.06.2025)

#### Module 10

Reference	Title
R18-1	Guidelines for writing a safety report. DSA-hefte no. 9. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2024
R18-2	Guidelines for writing a safety report for medical use of X-ray and MRI equipment. DSA-hefte no. 10. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2025
R18-3	Guidelines for writing a safety report for radiotherapy. DSA-hefte no. 11. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2025
R18-4	Guidance for industrial radiography. Guideline No. 1. Østerås: Norwegian Radiation Protection Authority, 2017
R18-5	Guidance for use of medical X-ray and MR equipment. Guideline No. 5. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2023
R18-6	Guidance for nuclear medicine. Guideline No. 10. Østerås: Norwegian Radiation and Nuclear Safety Authority, 2020
R18-7	Prosedyre - Vurdering av beredskapsplan ved behandling av søknad om godkjenning etter strålevernforskriften § 9 (Procedure - Assessment of emergency response plan when processing an application for approval under the Radiation Protection Regulations, Section 9)
R18-8	Sjekkliste sikkerhetsrapport - Industriell radiografi (Safety report checklist – industrial radiography)
R18-9	Sjekkliste av sikkerhetsrapport – stråleterapi (Safety report checklist – radiotherapy)
R18-10	Sjekkliste av sikkerhetsrapport – Nukleærmedisin (Safety report checklist – nuclear medicine)
R19-1	Samarbeidsavtale med NHN (K: sikre godkjenning fra NHN ved deling eksternt) Contract with NHN (for external sharing)

Reference	Title
S18-1	StrålevernHefte 14 (1998) Pasientbehandling ved strålingsulykker (DSA, 1998) DSA booklet on Patient treatment in radiation accidents
S18-2	Håndbok for nødetatene Farlige stoffer – CBRNE (DSB, 2016) (Handbook for emergency services Hazardous substances)
S18-3	Nasjonalt faglig retningslinje for håndtering av CBRNE-hendelser med personskade (Hdir, 2017) (National professional guideline for handling CBRNE incidents with personal injury)
S18-4	Stråleskade – veiledning til leger ved mistanke om akutt stråleskade (Hdir, DSA, 2024) Radiation injury – guidance for doctors when acute radiation injury is suspected (Heath Directorate and DSA, 2024)
S18-5	EU MELODY Norwegian translation (National Unit for CBRNE Medicine)
R20-1	National CBRNE strategy (2016)
R20-2	Stråleverninfo 1:14. Statens strålevern 2014.
R20-3	Strålevernsrapport 2018:10. Statens strålevern 2014.
R20-4	Royal Decree of the 23 <sup>rd</sup> August 2013: Nuclear Preparedness- National and Regional Organization.
R20-5	Nuclear Emergency Plan for the Crisis Committee (Kriseutvalget for atomberedskap (2024) <a href="#">Atomberedskap i Norge - DSA</a>
R20-6	Direktoratet for samfunnssikkerhet og beredskap. Metodehefte: Evaluering av øvelser. (Directorate for Civil Protection and Emergency Preparedness. Method booklet: Evaluation of exercises), 2018.
R20-7	Teknisk dokument 20 (2021) Konsekvensvurderinger for scenarioer knyttet til anløp av reaktordrevne fartøy til Grøtsund. (Technical document 20 (2021) Impact assessments for scenarios related to calls by reactor-powered vessels to Grøtsund.)
R20-8	DSA Hefte nr. 4 (2021) Veileder for søknader om konsesjon etter atomenergilooven for anløp av militære reaktordrevne fartøy til norske farvann og havner (Guide for applications for a licence under the Nuclear Energy Act for calls by military reactor-powered vessels to Norwegian waters and ports)

#### Module 11

Reference	Title
R21-1	National Strategy for Radiation Protection and Nuclear Safety.
S19-1	Procedure with document-ID 302-3: Review and assessment
S19-2	Procedure with document-ID 1491-1: Coordination across the three Ss

## APPENDIX VIII – IAEA REFERENCE MATERIAL USED FOR THE REVIEW

*This list has to be verified for each mission and adjusted according to scope of the mission.*

<b>1. INTERNATIONAL ATOMIC ENERGY AGENCY - Fundamental Safety Principles, No SF-1, IAEA, Vienna (2006)</b>
<b>2. INTERNATIONAL ATOMIC ENERGY AGENCY - Governmental, Legal and Regulatory Framework for Safety, General Safety Requirements Part 1, No GSR Part 1 (Rev. 1), IAEA, Vienna (2016)</b>
<b>3. INTERNATIONAL ATOMIC ENERGY AGENCY – Leadership and Management for Safety, General Safety Requirements Part 2, No GSR Part 2, IAEA, Vienna (2016)</b>
<b>4. INTERNATIONAL ATOMIC ENERGY AGENCY - Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, General Safety Requirements Part 3, No GSR Part 3, IAEA, Vienna (2014).</b>
<b>5. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety assessment for facilities and activities, General Safety Requirements Part 4, No GSR Part 4 (Rev. 1), IAEA, Vienna (2016)</b>
<b>6. INTERNATIONAL ATOMIC ENERGY AGENCY - Predisposal Management of Radioactive Waste, General Safety Requirements Part 5, No GSR Part 5, IAEA, Vienna (2009)</b>
<b>7. INTERNATIONAL ATOMIC ENERGY AGENCY - Decommissioning of Facilities, General Safety Requirements No GSR Part 6, IAEA, Vienna (2014)</b>
<b>8. INTERNATIONAL ATOMIC ENERGY AGENCY - Preparedness and Response for Nuclear or Radiological Emergency, General Safety Requirements No GSR Part 7, IAEA, Vienna (2015)</b>
<b>9. INTERNATIONAL ATOMIC ENERGY AGENCY - Site Evaluation for Nuclear Installations, Specific Safety Requirements No SSR-1, IAEA, Vienna (2003)</b>
<b>10. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Nuclear Power Plants: Design, Specific Safety Requirements No SSR-2/1 (Rev. 1), IAEA, Vienna (2016)</b>
<b>11. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Nuclear Power Plants: Commissioning and Operation, Specific Safety Requirements No SSR-2/2 (Rev. 1), IAEA, Vienna (2016)</b>
<b>12. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Research Reactors, Specific Safety Requirements No SSR-3, IAEA, Vienna (2016)</b>
<b>13. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Nuclear Fuel Cycle Facilities, Specific Safety Requirements No SSR-4, IAEA, Vienna (2017)</b>
<b>14. INTERNATIONAL ATOMIC ENERGY AGENCY - Disposal of Radioactive Waste, Specific Safety Requirements No SSR-5, IAEA, Vienna (2011)</b>
<b>15. INTERNATIONAL ATOMIC ENERGY AGENCY - Regulations for the Safe Transport of Radioactive Material, 2018 Edition, Specific Safety Requirements No SSR-6 (Rev. 1), IAEA, Vienna (2018)</b>
<b>16. INTERNATIONAL ATOMIC ENERGY AGENCY - Classification of Radioactive Waste, General Safety Guide No GSG-1, IAEA, Vienna (2009)</b>
<b>17. INTERNATIONAL ATOMIC ENERGY AGENCY - Criteria for use in Preparedness and Response for a Nuclear or Radiological Emergency, General Safety Guide No GSG-2, IAEA, Vienna 2011)</b>
<b>18. INTERNATIONAL ATOMIC ENERGY AGENCY - Communication and Consultation with Interested Parties by the Regulatory Body, General Safety Guide No GSG-6, IAEA, Vienna (2017)</b>
<b>19. INTERNATIONAL ATOMIC ENERGY AGENCY - Occupational Radiation Protection, Safety Guide No GSG-7, IAEA, Vienna (2018)</b>

<b>20. INTERNATIONAL ATOMIC ENERGY AGENCY - Regulatory Control of Radioactive Discharges to the Environment, Safety Guide No GSG-9, IAEA, Vienna (2018)</b>
<b>21. INTERNATIONAL ATOMIC ENERGY AGENCY - Organization, Management and Staffing of the Regulatory Body for Safety, General Safety Guide No GSG-12, IAEA, Vienna (2018)</b>
<b>22. INTERNATIONAL ATOMIC ENERGY AGENCY - Functions and Processes of the Regulatory Body for Safety, General Safety Guide No GSG-13, IAEA, Vienna (2018)</b>
<b>23. INTERNATIONAL ATOMIC ENERGY AGENCY Leadership, Management and Culture for Safety in Radioactive Waste Management, Safety Guide No GSG-16, IAEA, Vienna (2022)</b>
<b>24. INTERNATIONAL ATOMIC ENERGY AGENCY - Arrangements for Preparedness for a Nuclear or Radiological Emergency, Safety Guide No GS-G-2.1, IAEA, Vienna (2007)</b>
<b>25. INTERNATIONAL ATOMIC ENERGY AGENCY - Modifications to Nuclear Power Plants, Safety Guide No SSG-71, IAEA, Vienna (2022)</b>
<b>26. INTERNATIONAL ATOMIC ENERGY AGENCY - Recruitment, Qualification and Training of Personnel for Nuclear Power Plants, Safety Guide No NS-G-2.8, IAEA, Vienna (2002)</b>
<b>27. INTERNATIONAL ATOMIC ENERGY AGENCY - Environmental and Source Monitoring for Purposes of Radiation Protection, Safety Guide No RS-G-1.8, IAEA, Vienna (2005)</b>
<b>28. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Radiation Generators and Sealed Radioactive Sources, Safety Guide No RS-G-1.10, IAEA, Vienna (2008)</b>
<b>29. INTERNATIONAL ATOMIC ENERGY AGENCY - Borehole Disposal Facilities for Radioactive Waste, Safety Guide No SSG-1, IAEA, Vienna (2009)</b>
<b>30. INTERNATIONAL ATOMIC ENERGY AGENCY - Deterministic Safety Analysis for Nuclear Power Plants, Specific Safety Guides No SSG-2, IAEA, Vienna (2010)</b>
<b>31. INTERNATIONAL ATOMIC ENERGY AGENCY - Development and Application of Level 1 Probabilistic Safety Assessment for Nuclear Power Plants, Specific Safety Guide No SSG-3, IAEA, Vienna (2010)</b>
<b>32. INTERNATIONAL ATOMIC ENERGY AGENCY - Development and Application of Level 2 Probabilistic Safety Assessment for Nuclear Power Plants, Specific Safety Guide No SSG-4, IAEA, Vienna (2010)</b>
<b>33. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Conversion Facilities and Uranium Enrichment Facilities, Specific Safety Guide No SSG-5, IAEA, Vienna (2010)</b>
<b>34. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Uranium Fuel Fabrication Facilities Specific Safety Guide No SSG-6, IAEA, Vienna (2010)</b>
<b>35. INTERNATIONAL ATOMIC ENERGY AGENCY - Safety of Uranium and Plutonium Mixed Oxide Fuel Fabrication Facilities, Specific Safety Guide No SSG-7, IAEA, Vienna (2010)</b>
<b>36. INTERNATIONAL ATOMIC ENERGY AGENCY - Licensing Process for Nuclear Installations, Specific Safety Guide No SSG-12, IAEA, Vienna (2010)</b>
<b>37. INTERNATIONAL ATOMIC ENERGY AGENCY - Geological Disposal Facilities for Radioactive Waste Specific Safety Guide No SSG-14, IAEA, Vienna (2011)</b>
<b>38. INTERNATIONAL ATOMIC ENERGY AGENCY - Storage of Spent Nuclear Fuel, Safety Guide No SSG-15 (Rev. 1), IAEA, Vienna (2020)</b>
<b>39. INTERNATIONAL ATOMIC ENERGY AGENCY - Periodic Safety Review for Nuclear Power Plants, Safety Guide No SSG-25, IAEA, Vienna (2013)</b>
<b>40. INTERNATIONAL ATOMIC ENERGY AGENCY - Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material Specific Safety Guide (2018 Edition) No SSG-26 (Rev.1), IAEA, Vienna (2022)</b>

<b>41. INTERNATIONAL ATOMIC ENERGY AGENCY - Commissioning for Nuclear Power Plants, Safety Guide No SSG-28, IAEA, Vienna (2014)</b>
<b>42. INTERNATIONAL ATOMIC ENERGY AGENCY - Predisposal Management of Radioactive Waste from Nuclear Power Plants and Research Reactors, Safety Guide No SSG-40, IAEA, Vienna (2016)</b>
<b>43. INTERNATIONAL ATOMIC ENERGY AGENCY - Predisposal Management of Radioactive Waste from Nuclear Fuel Cycle Facilities, Safety Guide No SSG-41, IAEA, Vienna (2016)</b>
<b>44. INTERNATIONAL ATOMIC ENERGY AGENCY - Management of Waste from the Use of Radioactive Material in Medicine, Industry, Agriculture, Research and Education, Safety Guide No SSG-45, IAEA, Vienna (2019)</b>
<b>45. INTERNATIONAL ATOMIC ENERGY AGENCY - Radiation Protection and Safety in Medical Uses of Ionizing Radiation, Safety Guide No SSG-46, IAEA, Vienna (2018)</b>
<b>46. INTERNATIONAL ATOMIC ENERGY AGENCY - Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities, Safety Guide No SSG-47, IAEA, Vienna (2018)</b>
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