ARTEMIS
IAEA Integrated Review Service for Radioactive Waste and Spent Nuclear Fuel Management, Decommissioning and Remediation Programmes
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1. INTRODUCTION

For several decades, the International Atomic Energy Agency (IAEA) has been providing Review Services to its Member States in the field of radioactive waste and spent fuel management, decommissioning and remediation of sites contaminated by radioactive materials, radiological protection and control of radionuclide discharges for these areas of activities. Through its access to experts from all of the IAEA Member States, its responsibility for establishing safety standards and technical guidance, the expertise of the technical staff of the Secretariat, its long standing experience organizing different international review missions and the know-how acquired in the implementation of diverse international projects, the IAEA has a unique global perspective on the safety, state of the art, good practices and lessons learnt on all aspects of radioactive waste management, spent fuel, decommissioning and remediation.

The provision of review services by the IAEA is in line with its responsibilities as laid out in its Statute under Article II “…to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world...” and Article III “to establish … standards of safety for protection of health and minimization of danger to life and property, ... and to provide for the application of these standards … at the request of a State, to any of that State's activities in the field of atomic energy”.

Use of independent peer reviews is an important part of technology development, safety demonstration and building confidence. The IAEA has been organizing numerous international peer review missions upon the request of Member States or national organizations within Member States.

With the view to propose a single, well identified service in the field of radioactive waste and spent fuel management, decommissioning and remediation, the IAEA has established the ARTEMIS Integrated Review Service for Radioactive Waste and Spent Nuclear Fuel Management, Decommissioning and Remediation (referred further in the document to as “ARTEMIS review service”). The ARTEMIS reviews may be oriented towards review of the entire national arrangements, including policies, strategies, frameworks (including legal and regulatory systems). They may be also dedicated to a detailed assessment and technical advice on the implementation of specific programmes and project activities, with an emphasis on technology or on safety, or both.

The ARTEMIS review service is a cross-cutting, coordinated activity of the Division of Radiation, Transport and Waste Safety of the Department of Nuclear Safety and Security and the Division of Nuclear Fuel Cycle and Waste Technology of the Department of Nuclear Energy. The ARTEMIS review service is available for all Member States, independently from the specifics of the national profile, hence assuring application of the graded approach.

This guideline is provided to describe the ARTEMIS review service, its organization and performance. Noting, that ARTEMIS is a developing review service, the document will be further updated as needs appear, incorporating the experiences from the reviews.

2. ARTEMIS OBJECTIVES

The objective of the ARTEMIS Peer Review Service is to provide independent expert opinion and advice on radioactive waste and spent nuclear fuel management, management of residues arising from uranium production, environmental remediation and decommissioning, based upon the IAEA safety standards and technical guidance, as well as international good practice.
The specific objective of the peer review is to review the existing national arrangements against applicable IAEA safety standards and international good practice, forming a point of reference for how the requirements are met.

The ARTEMIS review service is designed to be objective, equal and fair review for each Member State. For this reason, it is based on the IAEA Safety Standards, as internationally recognized consensus on what constitutes a high level of safety for protecting people and the environment from harmful effects of ionizing radiation. Near that, ARTEMIS review service takes into account the international good practices.

The ARTEMIS review service is available for government policy and decision makers, regulators, organizations responsible for radioactive waste management, facility operators, other implementing organizations and their technical experts. The ARTEMIS review service is designed to ensure that the outcomes of conducted IAEA Integrated Regulatory Review Services (IRRS) are taken into account when adequate, what is described in detail further in the document.

ARTEMIS review service follows graded approach to ensure, that the review corresponds to the size and scope of national context, the stage of development of the activity or facility being reviewed or the size, potential hazard and complexity of the facility or activity.

3. APPLICATION OF ARTEMIS REVIEW SERVICE

With the ARTEMIS review service, the IAEA provides peer reviews on radioactive waste and spent fuel management, decommissioning and remediation of sites contaminated with radioactive material.

ARTEMIS is designed in a way allowing its application to a variety of needs arising in all the Member States, which may range from high-level national aspects, to focused, technically oriented and specific reviews. The service can be supportive to any organization involved in the radioactive waste and spent nuclear fuel management, decommissioning and environmental remediation.

As such, the scope of the ARTEMIS review service may vary respectively to the needs of the requesting Member State counterpart and can include facilities and activities related to radioactive waste and spent nuclear fuel management, management of residues arising from uranium production, remediation, decommissioning, as well as assessment of radiological impacts to people and the environment from these activities. Depending on the objective of the requested service, the main focus will be either on safety, in which case the review will be primarily based on IAEA safety standards, or on technology, with the review primarily based on international technical guidance and good practices. In either case, technology will always be a component of a safety focused review and safety always a component of a technology focused review.

The ARTEMIS review service applies graded approach. The review is tailored to its scope – context, size, and complexity of the area that is reviewed, which may vary depending on many factors, such as stage of development (maturity) of the institutional framework, activities and facilities, type and origin of waste (nuclear power generation, institutional, etc.).

ARTEMIS review service is also designed to avoid overlapping with the IRRS review service and to avoid undue work overload on the Member States. In this regard, outcomes of IRRS missions are considered and, as appropriate, taken into account, as part of implementation of ARTEMIS review service.
A key component in preparing for ARTEMIS peer review is the self-assessment to be performed by the Member State in advance of the peer review. To assist the self-assessment, the IAEA has prepared questionnaires adapted to different domains and different types of peer reviews within the domain.

4. BENEFITS OF ARTEMIS

Benefits of ARTEMIS review service include:

- Improved organizational performance relating to the issues under review,
- Enhanced safety, optimized operations and reduced costs,
- Improved transparency and confidence of stakeholders, including the public,
- International review and support for national radioactive waste management,
- Assessment of the implementation status in the context of national policies and strategies,
- Additional perspectives made available to strengthen decision making processes,
- Provide recommendations and suggestions for improvement,
- Highlight good practices,
- Shared experience, exchange of information and lessons learnt between Member States and review team experts.

The recipient entity remains fully responsible for all consequential decisions and actions.

5. REVIEW PRINCIPLES & BASIS

5.1 REVIEW PRINCIPLES

The ARTEMIS review service is governed by the following review principles, applied consistently for all users:

- Provided and carried out the review by a review team made up of leading experts from the IAEA Member States, comprising expertise relevant to the scope of requested review (regulators, implementers, etc.);
- Benchmarked to IAEA safety standards, complemented by international good practice;
- Implemented upon clear terms of reference, well-established criteria and well-structured guidelines;
- Organized according to a transparent process;
- Formulated, implemented and concluded in a way that ensures provision of a world class quality service.

Although the ARTEMIS review service is based on the IAEA safety standards, international good practices and consensus, the findings and recommendations are based on the views of the ARTEMIS’ team of experts.

5.2 BASIS FOR REVIEW

The bases for ARTEMIS review service are the IAEA Safety Standards and supporting international documents. In some cases, the review can be supported by other IAEA
documents, such as e.g. IAEA Nuclear Energy Series or other international documents in complement to the safety standards. The detailed references on the documents constituting basis for the reviews are indicated in each respective review domain and topic and described in general below.

5.2.1 Safety Standards
The International Atomic Energy Agency (IAEA) is responsible for the development of international standards for the safety of nuclear facilities and nuclear fuel cycle facilities, including radioactive waste management, as well as for assistance in their application by the Member States.

The IAEA safety standards reflect an international consensus on what constitutes a high level of safety for protecting people and the environment from harmful effects of ionizing radiation. They are issued in the IAEA Safety Standards Series, which has three categories:

- Safety Fundamentals;
- Safety Requirements;
- Safety Guides.

Safety Fundamentals
The Safety Fundamentals SF-1 establishes the fundamental safety objective and principles of protection and safety and provides the basis for the safety requirements.

Safety Requirements
An integrated and consistent set of Safety Requirements establishes the requirements that should be met to ensure the protection of people and the environment, both now and in the future. The requirements are governed by the objective and principles of the Safety Fundamentals. If the requirements are not met, measures should be taken to reach or restore the required level of safety. The format and style of the requirements facilitate their use for the establishment, in a harmonized manner, of a national regulatory framework. The safety requirements use ‘shall’ with statements of associated conditions to be met.

Basis for the ARTEMIS reviews include the following Safety Requirements:

- Governmental, Legal and Regulatory Framework for Safety, GSR Part 1 rev. 1, Vienna (2010);
- Leadership and Management for Safety, GSR Part 2, Vienna (2016);
- Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards, GSR Part 3, Vienna (2014);
- Safety Assessment for Facilities and Activities, GSR Part 4, Vienna (2009);
- Predisposal Management of Radioactive Waste, GSR Part 5, Vienna (2009);
- Decommissioning of Facilities, GSR Part 6, Vienna (2014);
- Disposal of Radioactive Waste, SSR-5, Vienna (2011);

Safety Guides
Safety Guides provide recommendations and guidance on how to comply with the safety requirements, indicating an international consensus that it is necessary to take the measures recommended (or equivalent alternative measures). The Safety Guides present international good practices, and increasingly reflect best practices, to help users striving to achieve high levels of safety. The recommendations provided in Safety Guides are expressed as ‘should’ statements.
Application of Safety Standards by the Member States is delivered through appropriate mechanisms such as training, technical cooperation projects, coordinated research projects and information activities including conferences and workshops, as well as peer reviews. For the purposes of ARTEMIS review service, all the safety guides relating to radioactive waste and spent fuel management constitute the basis for the review, accordingly to its scope.

5.2.2 Technical documents
Additional technical documents can be included in the review basis to supplement the safety standards series. This may vary depending on the review scope and adequate arrangements.

The supplementing IAEA documents include:

- Nuclear Energy Basic Principles, Nuclear Energy Series, NE-BP, Vienna (2008);
- Radioactive Waste Management and Decommissioning Objectives, Nuclear Energy Series, NW-O, Vienna (2011);
- Nuclear Fuel Cycle Objectives, Nuclear Energy Series, NF-O, Vienna (2013);
- Policies and Strategies for Radioactive Waste Management, Nuclear Energy Series, NW-G-1.1, Vienna (2009);
- Policies and Strategies for the Decommissioning of Nuclear and Radiological Facilities, Nuclear Energy Series, NW-G-2.1, (2012);
- Policy and Strategies for Environmental Remediation, Nuclear Energy Series, NW-G-3.1, (2015);
- Nuclear Energy Series Reports (depending on the domain and topic of review),
- TECDOC reports (depending on the domain and topic of review),
- Technical Report Series publications (depending on the domain and topic of review).

5.2.3 Additional documents
Near the Safety Standards Series and Nuclear Energy Series, the following documents can be included into the review basis:

- For the reviews under obligations of art. 14(3) of the EC 2011/70/EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste, the given Directive is included in the basis for the reviews together with the safety standards.
6. STRUCTURE OF ARTEMIS REVIEW SERVICE

6.1 OVERVIEW

ARTEMIS is designed in a way allowing its application to a variety of needs arising in all the Member States, which may range from high-level national aspects to focused, technically oriented and specific reviews. It may cover the entire national arrangements or target specific implementation aspects, with an emphasis on technology, or on safety, or both. The service may be requested for existing or planned national/institutional frameworks, systems, activities and facilities.

As such, ARTEMIS reviews may vary respectively to the needs of the requesting Member State counterpart. The service can be supportive to any organization involved in the radioactive waste and spent nuclear fuel management.

For the above reasons, ARTEMIS review service follows graded approach to ensure, that the review (size of team, duration, etc.) corresponds to the size and scope of national context, or the stage of development of the activity or facility being reviewed (see chapter 7).

The ARTEMIS review service is designed to avoid overlapping with IRRS review service and to avoid undue work overload on the Member States. In this regard, outcomes of IRRS missions will be considered and taken into account, as appropriate, as part of implementation of ARTEMIS review service (see 7.2.7).

The ARTEMIS review service is structured in domains, which illustrate the application of ARTEMIS and topics, which are applicable for reviews. Currently six main domains have been identified and included in the ARTEMIS review service:

- National policy, framework and strategy;

Fig. 1: The structure of the ARTEMIS review service.
- Decommissioning of nuclear facilities;
- Predisposal management of radioactive waste;
- Spent fuel management;
- Disposal, including all types of radioactive waste and spent fuel;
- Remediation of sites contaminated by radioactive material;

Depending on the scope of requested ARTEMIS review, the level of detail in each topic will differ from domain to domain and also between specific ARTEMIS reviews within a domain, as it depends on the purpose and scope of the review requested by the Member State counterpart, and the level of development of the activity or facility. For example, in case of reviews covering the entire national frameworks, all the topics are important for the review and they will aim at getting knowledge and information on the arrangements, which are undertaken on the national level, not into details on particular facilities or activities. In case of specific reviews, dedicated to a facility or activity, it can be illustrated with an example of various requests in the domain of disposal: (1) request for review of surface disposal facility concept; (2) request for review of concept for closure of a surface facility; (3) request for review of safety of borehole disposal design. The first two consider similar type of facility – for surface disposal, though at different stages of its lifetime. Therefore, the information on policy, strategy, inventory and regulatory matters should refer to the given facility and certain phase of its development, for providing national context for its development – the leading topics for such review will be those for concepts, plans and technical solutions, as well as safety. The third example aims at different type of disposal and therefore, the information on framework and inventory will depend from it too.

The guideline is based on the IAEA terminology. Recognizing, that the Member States may implement the solutions in variable ways and use a number of terms, a short glossary of terms used in this guideline is given in Appendix 1.

6.2 REVIEW DOMAINS

6.2.1 National policy, framework and strategy

This domain covers the entire national system for radioactive waste and spent fuel management, for all the recognized waste streams and activities. It includes the national policy, governmental, legal and regulatory framework, as well as the responsibilities for the radioactive waste and spent fuel management, decommissioning and remediation. Establishing a well-structured national policy and framework is a recognized prerequisite for safe and effective radioactive waste and spent nuclear fuel management on all its stages. The policy, responsibilities, as well as legal and regulatory framework should be formulated on the basis of international legal instruments and/or standards, recognizing the State’s ultimate responsibility for safe and long-term management of its radioactive waste, without undue burden to future generations. Following the formulation of a national policy, a national strategy needs to be established for management of radioactive waste and spent fuel over the lifetime of facilities and duration of activities, from decommissioning (if applicable) to disposal with its post-closure phases.

This review domain involves all the review topics in their basic design/outline for overall, high-level national contexts.

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1 Member States use a variety of terms and combined approaches for the concept of policy and strategy, e.g. national plans, national strategies, national programmes, etc. - see glossary in Appendix 1
The domain is applicable for the peer reviews required under the EC 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste. For the Member States requesting reviews to fulfil the obligations resulting from the art.14 (3) of given Directive, a table of reference in Appendix provides leading references in Safety Standards to the EC 2011/70 EURATOM Directive.

6.2.2 Decommissioning

This domain covers all peer reviews requested with a focus on decommissioning. This may address facility-specific or site-specific decommissioning projects, or it may cover broad decommissioning responsibilities on a national scale and associated strategy and plans. As with any other domain covered under ARTEMIS, a review might call for a specific focus on one or another aspect of decommissioning (e.g., cost estimation, radioactive waste management).

Consistent with the review needs of the National counterpart under this domain, all or a customized subset of review topics may be selected and indicated.

6.2.3 Predisposal

This domain covers all administrative and operational predisposal management activities, including: processing (pre-treatment, treatment and conditioning), storage, and on-site transport of waste. Predisposal management activities may include discharges. Reviews conducted under this domain may also address related activities, including waste characterization (e.g. to determine the radiological and physico-chemical properties of the waste and enable decisions on clearance); design and manufacture of waste containers and waste packages; siting, design and construction of predisposal management facilities and activities; safety cases and safety assessments for predisposal management facilities and activities; authorization (e.g. licensing) of predisposal management facilities and activities; commissioning of waste management facilities and activities. Reviews conducted under this domain may address the need for periodic reassessment of predisposal management plans and facilities, and possible needs for upgrading of existing predisposal management facilities. Reviews conducted under this domain may be requested for all or any part of the arrangements in a Member State for the predisposal management of waste and the associated activities or for particular topics related to the predisposal management of waste (e.g. the degradation of waste packages in storage).

Consistent with the review needs of the National counterpart under this domain, all or a customized subset of review topics may be selected and indicated.

6.2.4 SNF management

This domain covers all steps of the spent nuclear fuel lifecycle, from its removal from a reactor core to its disposal as spent nuclear fuel or high-level waste generated from reprocessing activities. The main steps of spent fuel management are storage in wet and dry conditions, transportation, handling and retrieval, reprocessing and recycling, management of damaged spent nuclear fuel, ageing of storage SSCs, etc.

Consistent with the review needs of the National counterpart under this domain, all or a customized subset of review topics may be selected and indicated.
6.2.5 Disposal

This domain covers all facilities and activities related to the disposal of waste. Reviews conducted under this domain may address administrative and operational activities related to the disposal of waste. Reviews conducted under this domain may address any stage in the development and implementation of a strategy or programme for waste disposal, such as the identification of the inventory of wastes for disposal, the development of disposal concepts, the selection of disposal concepts, the siting of disposal facilities, arrangements for interactions with interested parties on waste disposal, disposal facility design, safety cases and safety assessments for disposal facilities; authorization (e.g. licensing) of disposal facilities, disposal facility commissioning, operation, and closure, and arrangements for post-closure institutional control. Reviews conducted under this domain may address the need for periodic reassessment of disposal plans and facilities, and possible needs for upgrading of existing disposal facilities. Reviews under this domain may be requested for all or any part of the arrangements in a Member State for the disposal of waste and related activities, or for particular topics related to the disposal of waste (e.g. aspects of the technical basis for the post-closure safety assessment).

Consistent with the review needs of the National counterpart under this domain, all or a customized subset of review topics may be selected and indicated.

6.2.6 Remediation

This domain covers all peer reviews requested with a focus on remediation. Such a review may cover a specific site, a group of sites, or the entire national remediation needs. This may address legislation and regulatory framework specific to remediation, specific site remediation projects, it may cover the broad remediation responsibilities, and associated strategy and plans for all of a Member States contaminated sites, or it may focus on specific aspects thereof, such as the overall remediation strategy, selection of remediation criteria and reference level and specific techniques and technologies, the assurance of project safety, estimation of overall costs, or the planned interface with the definition of the site endpoint and associated release for future use; and further waste management and associated waste acceptance criteria.

Consistent with the review needs of the National counterpart under this domain, all or a customized subset of review topics may be selected and indicated.
6.3 REVIEW TOPICS

6.3.1 Policy and framework

This topic covers national policy, governmental, legal and regulatory framework, as well as the responsibilities for the radioactive waste and spent fuel management, decommissioning and remediation.

The given review topic in its default outline covers the policy making and entire national framework for radioactive waste and spent fuel management, for all the recognized waste streams and activities and as such, can serve for the purposes of high-level, national system oriented reviews. Nevertheless, it can be also applied accordingly to the needs of other, specific reviews, focusing e.g. on geological disposal or decommissioning, for which the information on policy and framework would aim at providing general information on the national context for the specific domain of the review and therefore, should focus on the given elements under review.

It is acknowledged, that the arrangements for policy making and frameworks can be envisaged through various documents or means (or their combinations) and therefore, may greatly vary in the Member States.

If an IRRS has been conducted for the country, parts of this topic can be simplified and include the conclusions from the IRRS mission report, as appropriate, for regulatory frameworks of radioactive waste management.

Review basis

The corresponding requirements in IAEA Safety Standards include:

SF-1: Principles 1 to 10, with leading principles 2 and 7,
GSR Part 1 rev. 1 – requirements 1, 2, 10, 11, 14, 15, 18, 36
GSR Part 2 – requirements 2 - 5, 9, 13, 14
GSR Part 3
GSR Part 5 – requirements 1 – 4, 6, 10, 13 – 15, 20, 25
GSR Part 6 – requirement 4 – 6,
SSR-5 – requirements 1 – 22, 25, 26
NS-R-5 – section 3


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

Other supporting documents may depend on the implementation status of international legal instruments by the Member State.
6.3.2 **Strategy** - scope, milestones, timeframes and progress indicators

Following the formulation of a national policy, there is a need for establishing a national strategy for management of radioactive waste and spent fuel, possibly with other related strategies (e.g. for decommissioning or remediation). Such strategy should provide implementation measures over the lifetime of facilities and duration of activities, for all relevant elements of the national system, from generation of waste to its disposal (including post-closure phase). The strategy shall provide adequate arrangements for execution of policy rules, including the scope, milestones, progress indicators and timeframes. It shall provide assurance that adequate social and technical solutions are available for addressing transparency, public acceptance and progressing with safe implementation - or are being developed, if adequate.

The given review topic is developed to cover the strategy for implementation of the policy for all the recognized waste streams and activities and as such, can serve for the purposes of high-level, national system oriented reviews. Nevertheless, it can be also applied accordingly to the needs of other, more specific reviews – dedicated to strategies for decommissioning, remediation, spent fuel management, or other domains covered by ARTEMIS and relevant to the requesting National Counterpart.

It is recognised, that the arrangements for strategies can be envisaged through various documents or means (or their combinations) and therefore, may greatly vary in the Member States. It is not uncommon, that several strategy documents concern different elements of the national radioactive waste and spent fuel management (e.g. decommissioning strategy, geological disposal, etc.).

Therefore, for the reviews focused on a specific facility or activity, the information on strategy should concentrate on the given elements under review, providing the existing and/or planned national context.

**Review basis**

The corresponding requirements in IAEA Safety Standards include:

SF-1: Principle 2 and 7

GSR Part 1 rev. 1 – requirements 1, 10, 35, 36

GSR Part 2 – requirements 2 - 5, 9, 13, 14

GSR Part 3

GSR Part 5 – requirements 1 – 4, 8 – 11;

GSR Part 6 – requirements 4, 8

SSR-5 – requirements 1 – 11, 15 – 22, 25, 26;

NS-R-5 – sections 4 - 10


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

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2 see glossary in Appendix 1
Other supporting documents may depend on the Member State’s implementation status of international legal instruments.

6.3.3 Inventory of spent fuel and radioactive waste

The topic covers the review of completeness and adequacy of national inventory of spent fuel and radioactive waste (including legacy waste and future estimates), as well as methodologies of its compilation and update. An established, well recognized national inventory of radioactive waste and spent fuel is a prerequisite for developing both the policy and strategy for waste management. It shall be compiled according to an established national waste classification.

The topic by default covers the entire national inventory of radioactive waste and spent fuel and therefore can be used for the national-level review. In case of tailored, specific reviews, the information on inventory should reflect the considered scope of review, e.g. in case of a review requested for surface disposal – type of waste considered for this type of disposal. In case of more specific reviews, such as concerning decommissioning or in cases where link with radioactive waste management is considered, such as near surface disposal programme or remediation strategy, the topic addresses forecasts of inventory related to the aspect under review.

Review basis

The corresponding requirements in IAEA Safety Standards include:

- SF-1 – principle 2, 7
- GSR Part 1 rev. 1 – requirements 10, 35
- GSR Part 5 – requirements 2, 3, 8, 9
- GSR Part 6 – requirement 4, 12
- SSR-5 – requirements 1, 6
- NS-R-5 – section 4


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

Other supporting documents may depend on the implementation status of international legal instruments by the Member State.

6.3.4 Concepts, plans and technical solutions

The topic covers the concepts, plans and technical solutions that are intended for implementation of spent fuel and radioactive waste management facilities and activities. The preferred options of the Member State shall be determined in its policy for all phases of spent fuel and radioactive waste management.

In its basic outline, the topic covers national planning for all facilities and activities needed to manage the spent fuel and radioactive waste from generation to disposal. Nonetheless, the topic can be oriented towards a focused review within a chosen domain (decommissioning,
predisposal, SNF management, disposal or remediation), e.g. technical solution for reprocessing facility, concept for borehole disposal, decommissioning plan for a facility, etc.

**Review basis**

The corresponding requirements in IAEA Safety Standards include:

SF-1 – principles 2, 7
GSR Part 1 rev. 1 – requirements 1, 10
GSR Part 3 – requirement 9, 13, 15, 19, 21
GSR Part 5 – requirements 2, 3, 10, 11
GSR Part 6 – requirements 8, 10, 11
SSR-5 – requirements 4 – 11, 15 – 22, 26
NS-R-5 – sections 5 – 10


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

Other supporting documents may depend on the Member State’s implementation status of international legal instruments.

**6.3.5 Safety case and safety assessment**

The topic is dedicated for review of the safety case and or safety assessment for management of spent fuel and radioactive waste. All activities or facilities (or both) for spent fuel and radioactive waste management shall be based on and supported with adequate safety demonstration on all stages, as defined in international standards and the national framework.

In its basic outline, the topic addresses reviews of national-level aspects of safety demonstration, for which the actual safety of particular facilities and activities are not reviewed in detail. As other topics, it can be tailored to meet the needs of a review focused on a specific facility or activity in any ARTEMIS domain.

**Review basis**

The corresponding requirements in IAEA Safety Standards include:

SF-1 – principles 1 to 10, with leading principles 2, 3 and 7;
GSR Part 1 rev. 1 – requirement 10
GSR Part 3 – requirement 13, 15, 19, 21
GSR Part 4 – requirements 1 - 24
GSR Part 5 – requirements 1 – 4, 13 - 15
GSR Part 6 – requirements 1 – 3, 8, 10, 11

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3 Member States use a variety of terms and means to cover safety demonstration, including ‘Safety Demonstration’, ‘Safety Case’, ‘Safety Assessment’, ‘Total System Performance’, etc. – see glossary in Appendix 1
6.3.6 Cost estimates and financing

The topic covers the cost estimates for spent fuel and radioactive waste management and its financing. The national arrangements shall assure that adequate and secure funding mechanisms are established and maintained for the purpose of radioactive waste and spent nuclear fuel management. These funding provisions shall take into account the cost estimates based on the national inventory and its estimates on changes. Due diligence has to be paid on basing the cost estimates on the waste inventory, that is well recognized both in terms of volume and type. The topic also includes the cost assessment methods.

The topic is outlined for the national level arrangements, although it can be tailored to specific demands related to the aspect under review within any of ARTEMIS domains.

Review basis

The corresponding requirements in IAEA Safety Standards include:

SF-1 – principle 7
GSR Part 1 rev. 1 – requirements 1 and 10;
GSR Part 3 – requirements 17, 49
GSR Part 5 – requirements 1 – 4, 10, 20
GSR Part 6 – requirement 9
SSR-5 – requirements 1 – 3, 19
NS-R-5 – sections 3, 4


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

Other supporting documents may depend on the Member State’s implementation status of international legal instruments.

6.3.7 Capacity building - Expertise, training and skills

The topic is for reviewing the State’s capacity building for safe and continuous spent fuel and radioactive waste management: expertise, training and skills. Considering the national context of radioactive waste and spent fuel management, the Member State has to ensure, that appropriate expertise is available and provided for all considered activities and facilities in a
continuous manner. This includes continuous training of professionals, as well as enhancing and maintaining of competencies and skills.

The topic is outlined for the national level arrangements, although it can be tailored to specific demands related to the aspect under review within any of ARTEMIS domains.

**Review basis**

The corresponding requirements in IAEA Safety Standards include:

SF-1 – principles 1 – 3;

GSR Part 1 rev. 1 – requirements 1, 2, 10, 11, 14, 15, 18

GSR Part 2 – requirement 9

GSR Part 3 – requirements 2, 4, 21

GSR Part 5 – requirements 1 – 4

GSR Part 6 – requirement 7

SSR-5 – requirements 1 – 3, 19

NS-R-5 – sections 3, 4


European Council 2011/70 EURATOM Directive establishing a Community framework for the responsible and safe management of spent fuel and radioactive waste - for the purposes of peer reviews required under the article 14(3) of this Directive.

Other supporting documents may depend on the Member State’s implementation status of international legal instruments.
7. ORGANIZATION OF THE PEER REVIEW PROCESS

7.1 OVERVIEW OF THE REVIEW PROCESS

This part of the document provides information on the organization and conduction of the peer review process. It is important to highlight, that ARTEMIS reviews are taking graded approach also with regard to their organization, recognizing the size of the matter to be reviewed, what is described further in the guideline (7.2; 7.3).

The process of ARTEMIS review typically consists of four phases:

- preparatory phase,
- the review mission phase,
- reporting the outcomes of the review service,
- a follow-up mission, when appropriate.

A follow-up mission may be proposed and conducted in order to evaluate progress towards recommendations identified in the report.

**Preparatory phase**

Key components of the preparatory phase include:

- Request for review, nomination of the IAEA Coordinator and Deputy Coordinator;
- Preliminary discussions with the Member State counterpart on the scope of review;
- Development of Terms of Reference;
- Development of Reference Material by the Member State, including a self-assessment;
- Recruiting the review team of independent experts and determining the responsibilities;
- Preparation and submittal of the material for review by the Member State counterpart - documents, reports and other;
- Preparatory meeting;
- Preliminary analysis of the submitted documentation, including its completeness and comprehensiveness and preparation of questions for clarification to the Member State counterpart(s).

**Review mission phase**

Key components of the review mission phase, as a central activity in the review process, include:

- Entrance meeting with the Member State counterpart;
- Review process, through presentations, discussions, question and answer sessions, breakout sessions focusing on specific topics, facility site visits (if relevant), etc., aiming at verification of material submitted by the Member State counterpart for review and clarification of topics that arise during the review;
- Development of conclusions from the review process, including recommendations, suggestions and, if applicable, good practices;
- Presentation of the review team on the preliminary findings and recommendations in a draft report during an exit meeting, followed by clarifications for factual checking.

**Review report**

After the review mission, the draft report is send to the counterpart for checking of facts. Following comments from the Member State on the preliminary report, the review team and IAEA Coordinator complete the final review report and deliver it to the Member State...
counterpart, completing the review process. Reporting outcomes of the peer review should also include feedback to the IAEA on how to improve the review process.

Upon completion of the ARTEMIS review service it is expected that the Member State will develop an action plan to implement the recommendations and suggestions made during the review. If adequate, a follow-up review may be requested by the Member State counterpart or proposed by the IAEA.

**Self-assessment**

An important component for the ARTEMIS review is the self-assessment. The self-assessment is proposed to the Member State counterpart with the objective to prepare for the review, including compilation of adequate material for review. In order to avoid duplication of work, reference could be made in the self-assessment to other existing documents. In particular it should be recognised in the self-assessment if some of the issues have been covered by a preceding IRRS review. More details on the documentation for the review by the Member State counterpart are given in 7.2.2 and 7.2.5.

**Costs**

Costs associated with the review may be borne by the Member State’s government or the organization requesting the review. ARTEMIS costs include external experts’ fees, travel and local costs for the review team members and under any means do not constitute a benefit to the IAEA. The costs of review will depend on its scope and size and their estimate should be known before completion of the Terms of Reference.

The cost of the peer review is provided through an extra-budgetary contribution by the Member State to the IAEA. The establishment of this extra budgetary contribution to the IAEA undergoes a specific process and the effective work on the review process is initiated as soon as the contribution is received by the IAEA.

Depending on the nature of ARTEMIS review service requested and the eligibility of the Member State, cost of the peer review may be covered partly or in total by the IAEA Technical Cooperation programme or by extra-budgetary resources in the IAEA.
7.2 PREPARATORY PHASE

7.2.1 Objectives

The objectives of the preparatory phase include:

- Request for review, nomination of the IAEA Coordinator and Deputy Coordinator;
- Preliminary discussions with the Member State counterpart on the scope of review;
- Development of the Terms of Reference;
- Recruitment of the review team of independent experts, including Team Leader and Deputy Team Leader;
- Preparatory meeting;
- The self-assessment of the Member State counterpart, if not otherwise decided;
- Development and submission of the Reference Material (by the Member State counterpart);
- Preliminary analysis of the submitted Reference Material by the review team in preparation for the review mission;
- List of questions to the Member State counterpart to clarify and (or) address points for review identified during the pre-analysis;
- Preparation and organization of the review mission with the Member State counterpart.

7.2.2 Terms of Reference

Upon reception of official request for an ARTEMIS review service from a Member State, the IAEA evaluates the request. In some cases, it may be advised to postpone the review service, e.g. due to occurring significant evolution of the national system, such as significant changes in responsibilities or framework. Once the review request is accepted, the IAEA and the Member State counterpart discuss and agree on the scope of the review service and organizational matters that are possible to define at this stage. These arrangements are constituted in the Terms of Reference document (ToR), developed by the IAEA in cooperation with the Member State counterpart.

Typically, the ToR includes subject of the review, background information, the objective and scope of the review, timing for its implementation, Counterpart Team and Review Team, list of documentation to be provided to the Review Team (see section 7.2.5), reporting and deliverables, publication matters and other relevant information (e.g. other organizational arrangements, funding of the mission, contact links, etc.). If the self-assessment of follow-up review is considered, it is recommended to include them in the original request and ToR.

The ToR is tailored to the needs and requirements of each potential Member State counterpart, keeping sufficient flexibility to pursue issues that may arise during the mission.

A generic, exemplary Terms of Reference is given in the Annex 1.

7.2.3 Preparatory meeting

The Team Leader, IAEA Coordinator and the Member State counterpart should hold a preparatory meeting. The purpose of such meeting is to clearly define the scope, work plan and logistical arrangements specific for the given ARTEMIS review service with the Member State counterpart. The meeting can be held either at the IAEA headquarters or at a place mutually agreed between the IAEA and the Member State counterpart.

The preparatory meeting should cover and support the following topics and actions:
• make direct contact with the Liaison Officer from the Member State counterpart and exchange contact details;
• inform the Member State counterpart, including Liaison Officer, how the review process works;
• explain the roles and responsibilities of the review team members and the way they should interact with the Member State counterpart;
• discuss and confirm which topics will be reviewed and the material that the host country needs to provide (i.e. the answers to the self-assessment questionnaires);
• explain the importance of the Member State counterpart providing timely written replies to the questionnaire;
• agree on an outline schedule for the mission and the logistical aspects (including potential visits);
• make a preliminary selection of the host organizations that will participate in the review;
• agree the distribution list of the final ARTEMIS review report at the end of the review; and
• answer questions and address concerns the Member State counterpart may have.

There should be approximately 6 months’ time interval between the preparatory meeting and the review mission. The time interval should be sufficient to enable the host country to complete its preparation for the mission in a timely manner, without undue delay in meeting the objectives of the requested mission. The period of 6 months is recommended based on experience from a variety of conducted reviews.

7.2.4 The review team and Member State counterpart Liaison Officer

A review team consists of high level experts in specific topics relevant for the Review Service, including experts from regulatory bodies, waste management organizations, technical support organizations or others relevant for the scope of review. The review team is supported by IAEA coordinator and, if needed, IAEA deputy coordinator.

Following the graded approach, the review team – its size and composition – is established accordingly to the scope of the review and size of the aspect of the review.

An ARTEMIS Review team, considering the entire review process, composes of:

• ARTEMIS Team Leader and Deputy Team Leader,
• ARTEMIS Review Team Members,
• IAEA Coordinator and Deputy Coordinator,
• IAEA administrative support,
• Observers as appropriate, with agreement of Member State counterpart.

None of the review team experts shall come from the Member State counterpart.

The team and its size are composed adequately to match the size and scope of the review, taking the disciplines to be covered by the review into account. The IAEA will be in a position to determine the required skills of the Review Team after initial discussions with the Member State counterpart on the scope of ARTEMIS review service. Once the scope of requested ARTEMIS review is finalized, the potential team members will be contacted regarding their availability. Typically, the review team may consist of 5 to 10 individuals.
The IAEA will present the proposed team composition to the Member State counterpart for consideration. Team Members will then be recruited and cleared for the mission in accordance with IAEA procedures, ensuring that there is no conflict of interest for any of the review team members for the considered review.

In case of ARTEMIS review services conducted for the purposes of the EU Council Directive 2011/70/EURATOM peer reviews of national programmes and frameworks, majority of experts will come from the EU Member States and the Team Leader shall be from an EU Member State.

Each of the Review Team Members takes important role in the review process and is given specific responsibilities at the beginning of the review process.

Once a service is to be provided, the Member State counterpart appoints a Liaison Officer for the ARTEMIS review service, who will be the point of contact and coordinate the entire review process on the side of Member State.

The basic share of responsibilities is given in Appendix 2.

7.2.5 Reference Material and its preliminary review

Gathering information prior to the review mission is one of the key parts of the preparatory phase. The quality of the entire ARTEMIS review service will depend directly on the quality of submitted documentation - its completeness, accuracy, precision and honesty. This remains also of significant meaning in answering the self-assessment questionnaires, if self-assessment is included in the review.

All documentation appropriate for conduction of the peer review is agreed during the preparatory meeting and (or) in Terms of Reference. The background documentary information for the review, referred to as “reference material”, should be prepared and sent to the IAEA by the Member State counterpart well in advance of the peer review meeting (at least two months in advance). It may comprise of a set of documents, reports, data, and other supporting materials relevant to and depending straight on the scope of the review. If self-assessment is part of the review, the Member State counterpart answers and submits appropriate self-assessment questionnaires for review by the ARTEMIS team as part of the reference material during the preparatory phase. The form of delivering the self-assessment results is kept flexible to the convenience of the Member States and will be agreed individually depending on the scope of review.

The review team makes preliminary analysis of the submitted reference material, with the objective to:

- evaluate adequacy of the documentation submitted for the scope of the review;
- make comments and formulate questions on the submitted documentation by experts, both for clarification and identification of potential points for review;
- further plan the review mission itself (discussions, presentations on topics of interest for the review, visits, etc.).

The Team Leader should communicate together with the Review Team at the earliest opportunity to determine, whether any further requests need to be made to the Member State counterpart for additional information or clarification prior to the mission.

7.2.6 Self-assessment

ARTEMIS review service may include self-assessment prepared by the Member State, what will be agreed between the Agency and the Member State while agreeing upon the scope of the review.
The objectives of the self-assessment are to:

- Allow the requesting Member State counterpart analysis of its radioactive waste management programme for the purposes of the review;
- Contribute to the development of the Reference Material for the review purposes by answering the adequate questionnaire;
- Prior to the mission, to allow the Member State counterpart to identify areas for improvement and to propose measures to address them in the future.

Several self-assessment questionnaires have been developed for the purposes of reviews, noting the respective review basis.

If the self-assessment is included in the scope of ARTEMIS review service, the response to adequate questionnaire(s) constitutes an integral part of Reference Material and should be submitted along with it at least two months before the review mission. As mentioned in the previous section (7.2.5), the documentary form of self-assessment is left to the convenience of the Member State counterpart.

The self-assessment methodology described in this document can be in some cases also used by Member States for their own evaluation. The questionnaires may be also used by the review team as supportive tool during the review mission.

7.2.7 Organizational aspects

In preparation for the review mission, the initial agenda is developed together by the IAEA Coordinators, ARTEMIS Team Leaders and the Member State counterpart during the preparatory meeting. Any possible modifications of the mission schedule must be agreed between the IAEA and the Member State counterpart. Based on these arrangements, further organizational matters should be addressed to organize the review mission. An exemplary checklist for the organization of the review service is given in Annex 2.

Incorporation of results from other IAEA review services

In some cases, a Member State counterpart may wish to incorporate the results of self-assessments or final mission reports from other IAEA review services into the ARTEMIS review. This may be relevant for various scopes of ARTEMIS reviews – from entire national frameworks, to facility or activity reviews, if parts or entire scope of requested ARTEMIS were reviewed before or are planned for review under another IAEA review service.

Incorporation of these results (self-assessment and mission reports) varies, depending especially on the requested scope of ARTEMIS review, previous or planned IAEA reviews and their respective scope, as well as time interval and possible changes occurring in between them.

Such a need has been clearly identified for possible incorporation of IRRS (Integrated Regulatory Review Service) results for the purposes of ARTEMIS reviews conducted for the EU Member States, as requested under the Article 14 (3) of European Council Directive 2011/70/EURATOM. The Directive obliges the EU Member States for undertaking regular reviews of their national framework, what involves legal and regulatory aspects.

In case of interest and depending on the Member State organizational arrangements and share of responsibilities, considered scopes and schedules for organization of each review (IRRS and ARTEMIS), as well as incorporation of their results, further details are discussed between the IAEA and Member State counterpart on a bilateral basis.

With clear recognition, that such needs may be notified by all the Member States and for various scopes of ARTEMIS reviews, appropriate consultations on possible options for a given
Member State counterpart and particular case can be held in course of requesting the ARTEMIS review.

**Workspace and information flow**

To ease and facilitate the information flow, including documents for review (Reference Material), the IAEA provides the dedicated ARTEMIS Platform on IAEA GNSSN. This Platform provides a restricted-users area and is organized to facilitate the review process. A restricted space is created for each ARTEMIS peer review, where access can be only driven to the individuals directly involved in the peer review, both on the IAEA side (IAEA Coordinators, the Team Leaders, the Review Team), as well as on the side of the Member State counterpart. The Liaison Officer of the Member State counterpart shall present a list of persons that shall be granted access to the restricted area, once the scope of the review is agreed and the Reference Material is to be compiled and submitted. Any modifications of the access are done on the basis of the written request of the Liaison Officer.

Other means of facilitating communication and exchange of information can be any contemporary means of long-distance communication, including videoconference services.

**7.3 THE REVIEW MISSION PHASE**

Although the scope and objectives of ARTEMIS review service may vary, the review mission is based and conducted on a standardized approach and principles, what is explained in this section.

The tasks are shown sequentially, although depending on the review, there may be a need to vary the order on a case-by-case basis.

**7.3.1 Objectives**

The review mission is the core of the review process. The review team visits the Member State counterpart to obtain additional information and conduct the review based on actual conditions, through meetings and discussions with designated organizations, and, if needed, visits to representative facilities.

The objectives of the review mission phase include:

- Conduction of an initial team meeting;
- Conduction of an entrance meeting with the Member State counterpart;
- The review process, including:
  - confirmation or change of information provided prior to the mission;
  - verification of Reference Material, including the results of self-assessment, if applicable;
  - verification of selected records and other documents, such as: safety assessment related documentation, licenses, reports, etc.;
  - follow-up of topics highlighted from the Reference Material;
  - clarification of topics that arise during the mission.
- Consideration how effectively the Member State counterpart implements in practice the IAEA requirements and guidance;
- Identify where elements of the national programme differ from those of the IAEA safety standards and guidance, taking into account the self-assessment results if appropriate;
• Develop conclusions from the review process, including recommendations, suggestions and, if applicable, good practices;
• Develop the draft report from the ARTEMIS review;
• Present the draft report for fact checking by the Member State counterpart, its further discussion and adjustments, if necessary;
• Checking and discussing the facts about the subject of the review or its part for clarification with the Member State counterpart;
• Conduct of the exit meeting.

7.3.2 Initial team meeting

The team members should meet together before the entrance meeting with the Member State counterpart to discuss the specifics of the mission. It is very important that all review team members have common understanding of the type of information needed and the way of conduction of the review mission. The team leader will brief the team on issues, sensitive areas, priorities, schedule, approach and expectations on his/her part regarding the format and content of the deliverables by the team members. Each Team Member will present a summary of his/her observations derived from the preliminary review of Reference Material.

7.3.3 Entrance meeting

An entrance meeting will be held with the Member State counterpart(s), involving senior officials. During such a meeting, both sides are expected to present their primary objectives for the ARTEMIS review service. The ARTEMIS Team Leader should provide a brief outline of the plan, approach and expectations for the mission, highlighting that it is neither inspection nor audit and shall not be considered as such, but will be conducted as a peer review in cooperation with the Member State counterpart(s).

7.3.4 Discussions with Member State counterpart(s)

The review mission is conducted through discussions with the Member State counterpart, on the basis of the submitted Reference Material. These discussions should always aim at effective and constructive review of topics included in the scope of the ARTEMIS review service towards their compliance with the IAEA Safety Standards, as well as other review basis documents, if applicable. In some cases, and if necessary, the Member State Counterpart may be asked to give presentations on some topics of interest during the review mission. The discussions may be partially conducted during site visits relevant to the review scope.

The outcomes of discussions should be addressed during daily team meetings, as well as adequately summarized and recorded for drafting the mission report. Adequately to the situation, the notes should address:

• a summary of recorded points or observed actions and their source;
• comments on the role and responsibilities and effectiveness of the organization;
• obtained or reviewed documentation;
• comments on the strengths and areas for improvement within the organization, as perceived at the time; and
• a list of issues that should be brought to the attention of other Review Team Members.
When particular matters or strengths become apparent during the discussions, the review team should ensure that they are highlighted. Discussions, if adequate and agreed, may be partially carried out on the sites of involved organizations, as described below.

**Site visits**

In order to support the review process, the Member State counterpart and the IAEA may agree on conduction of supplementary site visits to facilities, which are relevant for the scope of the given ARTEMIS review. This shall be agreed upon establishing the scope of the review and followed with any necessary organizational arrangements prior to the review mission.

The main purpose of each visit is to clarify the received documentary information (Reference Material) and to gather additional information on the practices and activities performed on the given site. The type of information to be gathered depends on the scope of the review.

For the ARTEMIS reviews aimed at the entire national frameworks, visits may be arranged for some facilities or activities. However, as it might impact the mission schedule, such visits should be organized only if it brings an added value to the review.

Prior to the site visit, the Review Team Members should, as far as practicable, aim to:

- gain understanding of the role of the organization;
- identify relevant review topics and appropriate for the given organization;
- become familiar with the topics to be discussed;
- be aware of the issues raised in the review and their relevance to the visited organization.

Team Members may be accompanied by the Member State counterpart to facilitate the meeting and, if needed, to provide translation.

The outcomes of the site visits should be addressed, adequately summarized and recorded for drafting the mission report during daily team meetings. Adequately to the situation, the notes should address:

- summary of points made or actions observed during the visit and their source;
- comments on the role and responsibilities of the organization;
- comments on the effectiveness and reliability of the organization;
- obtained documentation;
- comments on the safety strengths and weaknesses within the organization, as perceived at the time; and
- a list of issues that should be brought to the attention of other team members.

Site visits should be concluded well before the exit meeting to ensure sufficient time for the review team to analyse the results, complete the information and discuss the conclusions.

**7.3.5 Team meetings**

At the end of each mission day, the team should meet and discuss the main findings of the day, including discussions and, if applicable, outcomes of site visits. If the team members are in different places, other communication means should be considered. The style and form of these meetings will be established by the team leader depending on the circumstances.

The following key points should be addressed:
• Summary of the day’s key findings by each member.
• Identification of gaps, overlaps and areas where the information gathered that day is not clear.
• Identification of any inconsistencies between the information gathered that day and information provided earlier.
• Highlighting significant concerns or positive features of the day’s response, especially those that may be relevant to many organizations.
• Elements which need to be brought to the attention of the whole team, especially those that can influence the further part of the review.
• Decision on a strategy to obtain missing information or resolve new issues that do not appear in the existing schedule.
• Determining, whether any of the day’s findings might need to affect the remaining schedule for the mission.
• Briefing on the schedule for the next mission day, to allow the team members to provide input to the key topics that should be addressed.
• Identification of any matters that the team leader needs to refer to the Liaison Officer of the Member State counterpart.
• Briefing on the status of each team member’s written input to the draft ARTEMIS report.

7.3.6 Findings & draft report

As a result of all the findings and conclusions made by the Review Team in the course of discussions during the review mission, the review team may formulate recommendations, suggestions and, if applicable, identify good practices. These are summarized in the draft report, which is presented to the Member State counterpart to check and, if necessary, clarify the facts that are basis for the review.

Recommendations

Recommendations are proposed where aspects relative to the IAEA Safety Requirements and additional supporting documents agreed as basis for review such as other IAEA documents, Conventions, Code of Conduct or other supporting documentation are missing, incomplete, or inadequately implemented. Recommendations should be specific, realistic and designed to result in tangible improvements to Member State counterpart effectiveness. Recommendations should be based on IAEA Safety Requirements, and the basis (i.e. the relevant Requirement) for the recommendation should be clearly documented in the mission report. Recommendations should be formulated in a succinct and self-explanatory way. In the case of peer review in relation to the obligations under the European Council Directive 2011/70/EURATOM to review the national programmes and frameworks, the review and recommendations made should also be based on this Directive.

Suggestions

Reviewers may identify opportunities for improvement not directly related to inadequate conformance with IAEA Safety Requirements, but which should be shared with the host country (e.g. a more efficient way of utilizing staff resources). Suggestions are means of achieving improvements. Suggestions may contribute to improvements of the Member State counterpart(s) but are primarily intended to make their performance more effective or efficient,
to indicate useful expansions of existing programmes and to point out possibly better alternatives to current regulatory, technical or policy activities. In general, suggestions should stimulate the management and staff to consider new or different approaches to technical, regulatory and policy issues that may enhance performance. A suggestion may be proposed in conjunction with a recommendation or may stand on its own, following a background discussion. Each suggestion shall have a basis either in IAEA Safety Requirements, Safety Guides or other relevant IAEA documents or international commitments (e.g., Codes of Conduct, Conventions, etc.). The basis for the suggestion shall be clearly documented in the mission report. Suggestions should be formulated such that they are succinct and self-explanatory.

**Good Practices**

A good practice is identified in recognition of an outstanding organization, arrangement, programme or performance superior to those generally observed elsewhere. A good practice goes beyond the fulfilment of current requirements or expectations. It will be worthy of the attention of other organizations or entities as a model in the general drive for excellence. Good practices shall also reference a basis similar to suggestions, and the basis shall be clearly documented in the mission report.

**7.3.7 Fact checking and discussions on the draft report**

The draft report is prepared by the review team before the exit meeting. Recommendations, suggestions and good practices included in the draft report should be in a reasonably finalized stage. As noted above, the draft report is presented to the Member State counterpart for checking the facts accuracy and additional discussions to clarify any potential misunderstandings. After the Member State counterpart checks the draft report, a discussion should follow to clarify all the facts that may need corrections, especially where they may lead to adjustment of the report content. The objective of discussions is to ensure technical accuracy and common understanding of the report content. This should be done before the exit meeting and finalizing the report, to avoid any misunderstandings of the factual state of the program or its part, as they may influence the outcomes of the review. The clarifications are further taken into account by the review team, while preparing the final mission report.

A copy of the draft report is handled to the Member State counterpart at the end of the review mission.

**7.3.8 Exit meeting**

The review mission finishes with an exit meeting, during which the review team presents the main findings and the draft report, what is followed by a discussion with the key representatives from the Member State counterpart on potential issues that are raised.

The exit briefing will normally be attended by:

- The ARTEMIS review team;
- The Member State counterpart, and
- Representatives from other organizations involved in the review.

The ARTEMIS Team Leader presents the main observations and findings from the review mission. Regardless of the meeting format, it should include a brief description of the mission and its scope, the Review Team, conducted activities and discussions, identified strengths and areas for improvement, as well as other observations that the review team considers important to highlight to the Member State counterpart. As noted earlier, the goal is to provide the
Member State counterpart with a draft report prior to the exit meeting to allow the Member State counterpart sufficient time for revision and comments upon the facts that are included. The team leader should make it clear, that the document is a “preliminary” or “draft report” and will require further review and approval before it is finalized as the final ARTEMIS review report. Nevertheless, every effort should be made to bring the draft report as close to the final shape, as possible.

7.4 REPORTING OUTCOMES OF THE REVIEW MISSION

7.4.1 Objectives

The objective of this phase is to finalize the ARTEMIS review service report by summarising the findings, writing conclusions, recommendations and suggestions and, if applicable, mentioning good practices.

7.4.2 Final report

For an agreed period after the mission, the Member State counterpart may further review and comment on the draft report. The Liaison Officer of the Member State counterpart will collate the comments on the draft report and forward them to the IAEA Coordinator within an agreed time schedule. The comments from the host country should be limited to issues relating to factual correctness of information included in the draft report.

Once the Member State counterpart comments are received, the IAEA Coordinator together with the Team Leaders and the Review Team will assess them and draft the final ARTEMIS review service report. This final report shall be submitted through official channels within two months following reception of comments from the Member State counterpart.

The final review report is the property of the Member State counterpart, for use at its own discretion. However, the IAEA encourages making the reports publicly available. Unless otherwise requested by the Member State counterpart, the IAEA makes final mission reports publicly available three months after the official letter transmitting the final report to the Member State counterpart.

7.4.3 Feedback to IAEA

To improve the review process, it is useful to get feedback from the review team on the review process itself, including the conduct of the mission, and on possible future improvements of the reviews. These comments will be collated by the team leader and forwarded to the senior management of the IAEA departments involved. It would be helpful if the team leader could convene a short team meeting to discuss potential feedback and to consolidate the team’s views.

In addition, the review team should collect information from the Member State counterparts and the experts involved in the review on how useful the standards have been, on gaps and on needs for improvements. Upon completion of the mission, this information is handled to the responsible IAEA officer.

7.5 ACTION PLAN

Upon completion of the ARTEMIS review service, the Member State counterpart should develop an action plan to address the points and areas for improvement that were identified during the review and the self-assessment (if it was included in the scope review). The action plan should address recommendations and suggestions set out in the ARTEMIS review service report. The most appropriate way for preparation of the action plan will be determined by the Member State counterpart, taking into account its existing management schemes and processes. It is advised to consider presentation of the Action Plan to the IAEA, as its implementation is the purpose of the follow-up mission.
7.6 THE FOLLOW-UP REVIEW

A follow-up mission is proposed to Member State counterpart as a continuation of the primary ARTEMIS review.

The follow-up mission can be conducted after the interested Member State counterpart sends an official request to the IAEA, or if it was included in the ToR of the primary review service. Typically, a follow-up of ARTEMIS takes place between 2 to 4 years after its completion, although this remains flexible depending on the actual situation.

7.6.1 Objectives of the follow-up review

The objectives of ARTEMIS review service follow-up mission are:

- To review progress in implementation of recommendations and suggestions resulting from the primary ARTEMIS review service and the improvements made by the Member State counterpart since that time;
- To verify if the improvements made since the primary review are in line with the action plan proposed after the primary Review Service,
- To provide further review in areas where significant changes have occurred since the primary Review Service or in areas, which were subjected to recommendations or suggestions during the Service review mission; and
- In case of self-assessments, revisiting the outcomes of the primary Review Service, based on the new findings, and modification of these outcomes if necessary.

7.6.2 The follow-up review process

The follow-up review adopts the same approach and follows analogical process as the primary review. The Member State counterpart requesting a follow-up review mission should provide adequate (updated) Reference Material to demonstrate the progress and implementation of measures that have been made since the finalization of the primary review report. The Reference Material should be provided at least two months prior to the follow-up mission.

After receiving of a request for a follow-up Service, the team leader and its team members are recruited by the IAEA on the same basis and will have the same roles as previously defined. For continuity reasons it is preferred, if possible, that the team leader and some of the reviewers in the team participated in the primary review mission.

The IAEA and the Member State counterpart will agree on the detailed scope, agenda and schedule for visits related to the follow-up review mission, which duration should not be longer than the primary review.

7.6.3 The follow-up review mission

All follow-up missions include formal opening and exit meetings. The first half-day of the follow-up mission would normally involve presentations of the information contained in the Reference Material.

The review team will meet the Member State counterpart(s) and review the responses to recommendations and suggestions. Information required to reach a judgement will be gathered by:

- review of written material;
- interviews with personnel; and
• direct observation of organization, practices and activities.

Additional written material will be necessary to demonstrate implementation of measures and that progress has been made. The review team will look for evidence to support the self-assessment of recorded progress and will provide further advice as appropriate.

7.6.4 Reporting the follow-up review results

During the follow-up review, team members will record their observations and conclusions on each of the topic being reviewed. The observations to be recorded are:

• actions completed;
• actions in progress;
• further necessary review.

On completion of the follow-up mission, the review team will prepare the Service Follow-up Report, which summarises the team's main observations and conclusions. Before the text is finalised, the Member State counterpart will be given the opportunity of offering comments on accuracy and clarity for fact checking.
APPENDIX I: GLOSSARY

As noted in the definitions and the guideline, the Member States may use various terms interchangeably: envisage policy and strategy statements through a variety of documents (named with various words), and use a variety of terms and means to demonstrate safety (e.g. safety case, safety assessment and analysis, total system performance, safety demonstration, etc.). The applied terminology may also vary in other international legal documents (e.g. Council Directive 2011/70/EURATOM), nonetheless the objectives are maintained.

The terms used in this document follow the terminology used in the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, in the IAEA Safety Standards, the IAEA Nuclear Energy Series and the IAEA Safety Glossary:

Policy

**GSR Part 5:** The national policy on radioactive waste management has to set out the preferred options for radioactive waste management. It has to reflect national priorities and available resources and has to be based on knowledge of the waste to be managed (e.g. knowledge of the inventory and of waste streams) now and in the future. It has to assign responsibilities for various aspects of radioactive waste management, including regulatory overview.

**NW-G-1.1:** Policy - is a set of established goals or requirements for the safe management of spent fuel and radioactive waste; it normally defines national roles and responsibilities. As such, policy is mainly established by the national government; policy may also be codified in the national legislative system.

Safety case

**IAEA Safety Glossary:** A collection of arguments and evidence in support of the safety of a facility or activity.

(i) This will normally include the findings of a safety assessment and a statement of confidence in these findings.

(i) For a repository, the safety case may relate to a given stage of development. In such cases, the safety case should acknowledge the existence of any unresolved issues and should provide guidance for work to resolve these issues in future development stages.

Safety assessment

**IAEA Safety Glossary:** In IAEA publications, assessment should be distinguished from analysis.

Assessment is aimed at providing information that forms the basis of a decision on whether or not something is satisfactory. Various kinds of analysis may be used as tools in doing this. Hence an assessment may include a number of analyses.

1. Assessment of all aspects of a practice that are relevant to protection and safety; for an authorized facility, this includes siting, design and operation of the facility.

2. Analysis to predict the performance of an overall system and its impact, where the performance measure is the radiological impact or some other global measure of the impact on safety.
3. The systematic process that is carried out throughout the design process to ensure that all the relevant safety requirements are met by the proposed (or actual) design. Safety assessment includes, but is not limited to, the formal safety analysis.

Confirm with analysis: Safety analysis is often used interchangeably with safety assessment. However, when the distinction is important, safety analysis should be used for the study of safety, and safety assessment for the evaluation of safety — for example, evaluation of the magnitude of hazards, evaluation of the performance of safety measures and judgement of their adequacy, or quantification of the overall radiological impact or safety of a facility or activity.

Strategy

**GSR Part 5:** The national strategy for radioactive waste management has to outline arrangements for ensuring the implementation of the national policy. It has to provide for the coordination of responsibilities. It has to be compatible with other related strategies such as strategies for nuclear safety and for radiation protection.

**NW-G-1.1:** Strategy - is the means for achieving the goals and requirements set out in the national policy for the safe management of spent fuel and radioactive waste. Strategy is normally established by the relevant waste owner or operator, either a governmental agency or a private entity. The national policy may be elaborated in several different strategies. The individual strategies may address different types of waste (e.g. reactor waste, decommissioning waste, institutional waste, etc.) or waste belonging to different owners.

The line separating policy from strategy is not always sharp and sometimes it is not clear whether an issue should be taken up in terms of a policy or strategy. For example, some policy makers might only place the requirement for the safe management of radioactive waste into policy, and then rely upon strategy makers to decide on the method for achieving this. Other policy makers might include a requirement for a particular management method directly into national policy. Some countries may not distinguish between the two concepts and, instead, have a national plan which is, in fact, a combined policy and strategy.
# APPENDIX II: TABLE OF REFERENCE BETWEEN SAFETY STANDARDS AND EC 2011/70/EURATOM DIRECTIVE, AS REQUIRED FOR THE REVIEWS UNDER ARTICLE 14(3) OF THIS DIRECTIVE

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<td>Preamble (38)</td>
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<td>Preamble (39)</td>
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<tr>
<td>Topic</td>
<td>Safety Standards</td>
<td>Directive</td>
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<td>NS-R-5 – sections 3, 4</td>
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</table>
APPENDIX III: RESPONSIBILITIES OF REVIEW TEAM MEMBERS

Team Leader

Team Leader is appointed promptly after receiving of the official request for ARTEMIS review service. The Team Leader shall have a full understanding of the scope of the proposed service, particularly the specific issues that the Member State counterpart wishes to include.

The responsibilities of the Team Leader are:

- Together with IAEA Coordinator, serving as ARTEMIS review service liaisons with the Member State counterpart and external stakeholders during the mission;
- Together with IAEA Coordinator, coordinating the external interaction related to the conduct of ARTEMIS review service;
- Organization and conduction of preparatory phase, i.e. identifying appropriate team members based on the established work plan in conjunction with the IAEA Coordinator;
- Determining the division of responsibilities between the Team Leader and Deputy Team Leader;
- Assigning tasks and responsibilities to review team members;
- Leading the ARTEMIS review mission, including supervising the review, ensuring schedules are met and providing leadership in the resolution of issues that may arise;
- Leading the initial team meeting, entrance and exit meetings;
- Ensuring that the review team works in a consistent and cohesive manner;
- Communicating with review team members on a regular basis prior to and during the mission, in order to ensure that review team members are adequately prepared and informed;
- Ensuring that the objectives of ARTEMIS review service are met;
- Providing guidelines for the conduct of the daily team meetings;
- Coordinating with the Member State counterpart and the IAEA Coordinator to prepare public information needed during the mission;
- Presenting the findings of the review at the exit meeting, including recommendations, suggestions and, if applicable, good practices;
- Conferring on appropriate changes to the draft report in consultation with the Review Team members, based on comments received from the Member State counterpart.

Deputy Team Leader

The ARTEMIS Deputy Team Leader is primarily responsible for:

- Conducting daily team coordination meetings;
- Sharing leadership responsibilities with the Team Leader, especially with the daily coaching of the team;
- Assisting the IAEA Coordinator with preparation of the draft ARTEMIS review service report;
- Assisting the Team Leader with the initial team meeting, entrance meeting and exit meeting;
Undertaking roles as assigned by the ARTEMIS Team Leader.

**IAEA Coordinator**

The IAEA Coordinator is primarily responsible for:

- Serving as official IAEA liaison with the Member State counterpart through the entire requested ARTEMIS Review Service;
- Assuring IAEA representation at meetings with government officials related to the ARTEMIS Review Service;
- Preparing a briefing for the Member State counterpart on the ARTEMIS Review Process, including providing a copy of this document;
- After consulting with appropriate IAEA technical officers, determining the scope and terms of reference of the ARTEMIS Review Service, paying due regard to the IAEA action plan for the country (if the country receives IAEA assistance);
- Requesting completion of the Reference Material with the self-assessment questionnaires (if applicable), by the Member State counterpart(s), and ensuring their receipt by IAEA in a timely manner (at least two months prior to the ARTEMIS review mission);
- Developing the detailed work plan for the ARTEMIS Review Service, especially the review mission;
- Based on the established work plan and in conjunction with the ARTEMIS Team Leader, identifying appropriate team members;
- Recommending assignment of tasks and responsibilities to the team members to the ARTEMIS Team Leader;
- Managing resources, such as financial arrangements for the review team, coordinating travel for the review team members and ensuring the provision of special equipment and logistics, if required;
- Interacting and coordinating with appropriate IAEA Sections or Divisions, including input that might be applicable to the Review;
- If other duties allow, participating as a full team member in the ARTEMIS Review Service;
- Providing guidance to the ARTEMIS Team Leader and ARTEMIS Deputy Team Leader to support ensuring that the objectives of the ARTEMIS Review Service are met;
- Assisting the ARTEMIS Team Leader and the Member State counterpart to prepare public information relating to the mission;
- Collating the draft report of the ARTEMIS Review Service with assistance of the ARTEMIS Deputy Team Leader, based on the contributions from the review team members, determining publication and confidentiality frames for the report;
- Preparing the draft report based on the draft report and comments received from the Member State counterpart and team members;
- Submitting the draft report to the Member State counterpart for comments following IAEA approval;
- Finalizing the report based on the comments received from the Member State counterpart(s);
- Issuing the final report to the host country following IAEA approval and through the TCRP manager if necessary.
In preparation for the review mission, **the IAEA Coordinator** will:

- Confirm and finalise all resource related arrangements for the mission, including the funding source;
- Confirm dates for the mission with the Member State counterpart Liaison Officer, taking due account of any holidays, national vacation periods, week structure and working hours;
- Confirm that appropriate travel arrangements have been made by the Review Team, ensuring that all arrive in the host country with sufficient time to attend an adequate team briefing prior to meetings with the host country representatives;
- Ensure necessary security clearance for the Review Team, if needed, based on IAEA procedures.

**IAEA Deputy Coordinator**

The IAEA Deputy Coordinator is primarily responsible for:

- Providing support to the IAEA Coordinator;
- Providing expertise and support to the review team members with regard to application of IAEA safety standards and IAEA review process;
- Assisting the IAEA Coordinator in preparation of the mission report;
- Serving as a team reviewer as assigned by the ARTEMIS Team Leader.

**Member State counterpart Liaison Officer**

Although the Member State counterpart Liaison Officer is not a review team member, has a key role in the effective coordination of the mission, which especially includes:

- Arranging logistics, administration, scheduling and documentation;
- ensuring the Reference Material, including answered service questionnaires (if applicable), is returned to the IAEA at least two-months prior to the review mission;
- Being the main contact and focal point with the ARTEMIS Team Leader and IAEA Coordinator in the preparatory phase and during the mission;
- Being the conduit between the ARTEMIS Review Team and the Member State counterpart;
- Assisting in Member State counterpart staff to gather understanding of what the mission involves;
- Attending team meetings throughout the mission; and
- Being available throughout the review process, including the mission.

In preparation for the review mission, **the Liaison Officer of Member State counterpart** will:

- Make necessary hotel reservations;
- Make arrangements for adequate working space for the team, including printers, paper, computer projector if available, audio-visual equipment;
- Make arrangements for the resources to hold the review mission meetings, especially the entrance and exit meeting;
- Make arrangements for communication between the Review Team members and their base organizations (especially the IAEA), and between Member State counterparts involved in the review;
• Arrange local transportation;
• Make arrangements for interpreters and technical escorts, if required;
• Ensure supporting the team’s personal safety and security in the host country; and
• Make necessary arrangements for any site visits, including entry to the facilities, clearance and any required training.

*The Review Team Members*

In course of the ARTEMIS review, *the Review Team Members* will:

• Familiarise themselves with the provided Reference Material, prepare its analysis and potential questions for clarifications to the Member State counterpart;

• Individually, present a summary of observations derived from the Reference Material at the initial team meeting;

• Participate in the initial team meetings, entrance and exit review mission meetings;

• Give priority to the actions that are necessary to assist them in fulfilling their agreed personal responsibilities, including a detailed review of those parts of the Reference Material, for which they have accepted special responsibility;

• Jointly reviewing with the team all observations, conclusions, recommendations, suggestions and good practices;

• Providing input to the preliminary report daily, as requested by the Team Leader;

• Reviewing the completed preliminary report, contributing to its finalization;

• Maintaining appropriate confidentiality of sensitive information in accordance with their confidentiality agreement;

• Provide comments to the IAEA on the ARTEMIS process after completion of the mission;

• Undertake necessary organizational arrangements to prepare for the mission, including:
  - Obtain a visa, if needed;
  - Ensure having a laptop computer with appropriate electrical adapter, as well as word processing, presentation and any other necessary tool, or inform the Team Leader if this is not possible;
  - Undergo the IAEA courses for Basic Security in the Field and Advanced Security in the Field;
  - Ensure receiving the required immunisations in time; and
  - Make travel arrangements and provide details upon them to the Liaison Officer from the Member State counterpart and the IAEA Coordinator.
REFERENCES
The references are subjected to update, depending on the validity status of documents and development of the guideline.


ANNEX 1: GENERIC OUTLINE OF THE TERMS OF REFERENCE

The Terms of Reference of the ARTEMIS Review of …..

Subject of the Review
Specification of the task(s) to be assessed

Objective of the Review
Identification of review goal(s)

Background
Background information on the task(s) to be reviewed (historical overview, current situation, context within the national system)

Scope of the Review
Description of approach to be applied during the review in the context of national system regarding the task (elaboration of review objectives), in particular:

• issues to be assessed
• matters to be respected
• approaches to be applied

Counterpart team
Team composition, responsible manager, secretary/coordinator (liaison for communications with the IAEA)

Review team
Team composition, scientific secretary (-ies)

Organizational arrangements
Working language, responsibilities of secretaries/coordinators, confidentiality and publication arrangements

Background and supporting materials - reference material
The list of materials to be provided to the review team by the host

Reporting and Deliverables
Draft report, presentation of main findings, observations and advice to the host at the end of the review mission, final report

Mission timing
Time schedule including terms for:

• delivery of official request for the Review
• final version of ToR approved at the technical level
• selection of experts (IAEA in consultation with Member State counterpart)
• delivery of Reference Material and supporting materials for review to the IAEA
• questions / comments for clarification from the expert team to the host
• delivery of self-assessment results (if self-assessment is included)
• Review meeting
• draft Review report sent to host for factual check
• final Review report forwarded by the IAEA to the host
• follow-up (if included)

Funding of the mission
Way of funding the mission and rough cost estimate

Contact links
The IAEA
Host

ANNEX to the Terms of Reference: List of Relevant International References
## ANNEX 2: SERVICE ORGANIZATIONAL CHECKLIST FOR THE REVIEW

### PREPARATORY PHASE

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
</table>
| 1. Receive request from the Member State counterpart or identify IAEA requirement:  
  • for information relating to services  
  • to conduct a peer-review mission | Member State counterpart or IAEA |
| 2. Prepare briefing for Member State counterpart on review process, including a copy of this document | IAEA |
| 3. If review is to proceed, appoint IAEA Coordinator and Deputy Coordinator, Team Leader and, if needed, Deputy Team Leader | IAEA |
| 4. Assemble background information within one month including:  
  • previous IAEA missions and projects;  
  • country radiation and waste safety profile  
  • country nuclear safety profile (if appropriate)  
  • relevant local customs and culture, such as public holidays, religious customs, business practices (e.g. working hours and work week). | IAEA |
| 5. Hold a preparatory meeting to define the scope of the review, including the mission schedule; exchange documentation and propose and provisionally agree with Member State counterpart | IAEA, Team Leader and Liaison Officer |
| 6. Identify potential review team members:  
  • considering scope of review  
  • identify appropriate experts but do not recruit yet | IAEA, Team Leader |
<p>| 7. Recruit the review team members and clear them for the mission in accordance with IAEA procedures, at least three months prior to the mission. | IAEA |</p>
<table>
<thead>
<tr>
<th>TASK</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Request completion of the service questionnaire, as well as any other relevant documentation. Aim to obtain completed questionnaires from the Member State counterpart at least two months before commencement of evaluation mission.</td>
<td>IAEA, Team Leader and Liaison Officer</td>
</tr>
<tr>
<td>9. Review pre-mission information and ask for clarification.</td>
<td>Team Leader, Review Team</td>
</tr>
<tr>
<td>10. Provide the review team members with background information and the host country’s completed service questionnaire, six to eight weeks prior to the mission</td>
<td>IAEA, Liaison Officer</td>
</tr>
<tr>
<td>11. Assign tasks to review team members.</td>
<td>Team Leader</td>
</tr>
<tr>
<td>12. Finalise the review mission schedule with names.</td>
<td>IAEA, Team Leader, Liaison Officer</td>
</tr>
</tbody>
</table>

**REVIEW MISSION PHASE**

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirm and co-ordinate preparations for the mission:</td>
<td>All (see bracketed responsibilities)</td>
</tr>
<tr>
<td>1. - dates (IAEA and Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- travel arrangements to host country (IAEA)</td>
<td></td>
</tr>
<tr>
<td>- finance (IAEA)</td>
<td></td>
</tr>
<tr>
<td>- visas (team leader and team members)</td>
<td></td>
</tr>
<tr>
<td>- security (IAEA)</td>
<td></td>
</tr>
<tr>
<td>- collate of available host country information (IAEA)</td>
<td></td>
</tr>
<tr>
<td>- medical, at least four weeks prior to mission (team members)</td>
<td></td>
</tr>
<tr>
<td>- complete the reference material (Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- hotel arrangements (Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- local transport (Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- working facilities for evaluation team (Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- arrangements for site visits, if needed (Liaison Officer)</td>
<td></td>
</tr>
<tr>
<td>- communication arrangements, if needed (IAEA, Liaison Officer)</td>
<td></td>
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<tr>
<td>- translators and escorts, if needed (Liaison Officer)</td>
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<tr>
<td>- clearance and/or training for facility entry (Liaison Officer)</td>
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<tr>
<td></td>
<td>Review team preparation for the mission:</td>
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<td>----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2.</td>
<td>• review the general background material</td>
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<tr>
<td></td>
<td>• review information (including the response to self-assessment questionnaire from the Member State</td>
</tr>
<tr>
<td></td>
<td>counterpart) specific to own responsibilities</td>
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<td></td>
<td>• obtain visa, if needed</td>
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<td>• arrange to bring a laptop computer or inform the team leader if this is not possible</td>
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<td></td>
<td>• have any required immunisations.</td>
</tr>
<tr>
<td>3.</td>
<td>Hold team in-briefing (in the host country)</td>
</tr>
<tr>
<td>4.</td>
<td>Hold an entrance meeting</td>
</tr>
<tr>
<td>5.</td>
<td>Hold introductory and information meeting:</td>
</tr>
<tr>
<td></td>
<td>• confirm mission schedule and details of the meetings</td>
</tr>
<tr>
<td></td>
<td>• presentations by the team and representatives from the host country</td>
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<tr>
<td></td>
<td>• obtain outstanding documents that are relevant to the evaluation</td>
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<tr>
<td>6.</td>
<td>Gain information, verify and follow up (visits to organizations and facilities, as determined in mission</td>
</tr>
<tr>
<td></td>
<td>schedule)</td>
</tr>
<tr>
<td></td>
<td>• verify in-situ veracity of information; amend and supplement</td>
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<tr>
<td>7.</td>
<td>Hold team meetings:</td>
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<td></td>
<td>• daily meetings</td>
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<td></td>
<td>• meetings for evaluation of collected information and report drafting</td>
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<td></td>
<td>• meeting to formulate team feedback to IAEA</td>
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<tr>
<td>8.</td>
<td>Hold exit meeting</td>
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### REPORTING PHASE

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESPONSIBILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prepare outline of draft report, including background material, before commencing evaluation mission</td>
<td>Team Leader</td>
</tr>
<tr>
<td>2. Prepare draft report and provide it to host country prior or at the exit meeting.</td>
<td>Team Leader (with assistance of team members)</td>
</tr>
<tr>
<td>3. Complete draft report and provide it to host country for fact-checking, within two weeks of exit meeting</td>
<td>Team Leader and Team Members with support of IAEA</td>
</tr>
<tr>
<td>4. Collect comments from all participating organizations in host country</td>
<td>Liaison Officer</td>
</tr>
<tr>
<td>5. Collate comments from host country and send to team leader, within three weeks of receipt of draft report from IAEA.</td>
<td>Liaison Officer</td>
</tr>
<tr>
<td>6. Consider comments from host country and IAEA staff and, in consultation with team members, complete final report, within two weeks of receipt of comments from host country.</td>
<td>Team Leader and Team Members with support of IAEA</td>
</tr>
<tr>
<td>8. Distribute final report, within eight weeks from date of exit meeting with host country.</td>
<td>IAEA</td>
</tr>
<tr>
<td>9. Incorporate appropriate recommendations into country’s Action Plan.</td>
<td>National Counterpart</td>
</tr>
</tbody>
</table>

### FOLLOW-UP PHASE

<table>
<thead>
<tr>
<th>TASK</th>
<th>RESPONSIBILITY</th>
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</thead>
<tbody>
<tr>
<td>1. Member State counterpart requests a follow-up evaluation mission</td>
<td>Member State counterpart through official channels</td>
</tr>
<tr>
<td>2. Member State provides Reference Material, at least two months prior to the mission</td>
<td>Liaison Officer</td>
</tr>
<tr>
<td>3. Team leader assigned</td>
<td>IAEA</td>
</tr>
<tr>
<td>4. Team members recruited</td>
<td>IAEA</td>
</tr>
<tr>
<td>5. Development and agreement of the scope, agenda and schedule for visits related to the follow-up evaluation mission</td>
<td>Team Leader, IAEA and Liaison Officer</td>
</tr>
<tr>
<td>6. Hold the evaluation open meeting</td>
<td>Team and Member State counterpart representatives</td>
</tr>
<tr>
<td>TASK</td>
<td>RESPONSIBILITY</td>
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<tr>
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</tr>
<tr>
<td>7. Carry out visits and update findings</td>
<td>Team and Member State counterpart representatives</td>
</tr>
<tr>
<td>8. Hold daily team meetings to record events and discuss progress</td>
<td>Team</td>
</tr>
<tr>
<td>9. Hold the evaluation closing meeting</td>
<td>Team and Member State counterpart representatives</td>
</tr>
<tr>
<td>10. Write the follow-up evaluation mission report</td>
<td>Team Leader (with support from team members)</td>
</tr>
<tr>
<td>11. Review and comment on draft report</td>
<td>Liaison Officer</td>
</tr>
<tr>
<td>12. Incorporate final comments and distribute final report to the Member State Counterpart</td>
<td>Team Leader</td>
</tr>
</tbody>
</table>