SARIS
Self-Assessment of Regulatory Infrastructure for Safety

IRIS
Integrated Review of Infrastructure for Safety

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IAEA
International Atomic Energy Agency
Self Assessment for Regulatory Infrastructure for Safety

SARIS

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SARIS Model for the IAEA Methodology

- Based on a three tier approach.
- Can be used and adopted for implementation by any organization at any stage of maturity (from newly established to mature organizations)
- Collection of data and information is done when answering questions
SARIS Methodology

• First Level Criteria ---- for a regulatory body
  • Primary requirement for a regulatory body: Legal, Governmental and Regulatory framework for safety
    • GSR Part-1 represents the first or fundamental level of internationally accepted criteria for self-assessing the adequacy and effectiveness of a regulatory infrastructure

• Second Level Criteria
  • Other IAEA safety standards: GS-R-3, GSR Part 3, etc.
  • The core of second level criteria reflects safety standards in more depth at the management system and culture that must be taken into account by a maturing regulatory body
SARIS Methodology

• Third Level Criteria

• Other excellence, management and quality system models that have been developed internationally (such ISO), regionally (such as EFQM) and nationally

• These models offer the third level ‘quality’ criteria against which an organisation's progress can be assessed. Such criteria might cover areas like leadership, policy and strategy, processes, partnerships and resources.
SARIS Methodology

• Preconditions
  • Senior management commitment
  • Adequate resources for the whole cycle of the self-assessment project
  • Staff should be trained and ready
  • Self-assessment performed in a frank and honest manner and in a blame free environment, including the review of the conclusions
SARIS Methodology

Undertaking a Self-Assessment – the Phases

1. Preparation
2. Answering
3. Analysis
4. Action Plan
5. Follow Up
SARIS Methodology

- **Preparation Phase**
  - Conducted by a team led by a project manager. This Project Management Team (PMT) monitors the whole self assessment process.
    - Identifying the scope the self assessment which would be agreed by senior management of the organization (question-sets selected accordingly)
    - Increasing awareness about self-assessment across the organization
    - Selecting and training the Respondent Team and Analysis Team
    - Establishing a self-assessment plan, endorsed by senior management, for the proper organisation and implementation of the self-assessment (resources, schedules, responsibilities…)

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SARIS Methodology

• **Answering Phase**
  • Organizing the already selected **Respondent Team (RT)**.
  • Involves as many regulatory staff as practically possible, including senior managers from cross-functional areas within the organization
  • Providing descriptive responses
  • Responding phase requires the compilation of up-to-date documentation and materials in support of the responses
  • This phase (except for implementation of the action plan) takes relatively longer time in the self-assessment undertaking
SARIS Methodology

• Analysis Phase
  • Requires an independent review of the answers by an Analysis Team (AT).
  • Members of the AT should not include any from the Respondent Team (RT) and should not be exposed to influence by the RT or PMT teams.
  • The expected outcome is a documented comparison of answers relative to the relevant IAEA safety standards (Criteria for SARIS)
  • To clearly describe and explain identified weaknesses in the regulatory infrastructure and regulatory body performance and the respective strengths, as well as opportunities and threats.
  • Recommendations is developed, will be the basis to develop the action plan
SARIS Methodology

• **Action Plan Phase**
  - The main inputs are the results of the analysis phase (i.e., the recommendations)
  - In the process of preparing an action plan, the PMT will:
    - Based on recommendations of the AT, identify actions to be implemented for improvement of performance and priority
    - Assign responsible persons for each action
    - Set realistic timescales for each action in the Action Plan.

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SARIS Methodology

Implementation and Follow Up

- Senior management is responsible for the implementation of the action plan.
- This phase should include detailed and transparent communication of results, conclusions and the proposed action plan to staff and stakeholders, for their commitment and motivation to implement the plan.
Objective and Features of SARIS

- SARIS methodology and software have been developed to support State’s routine and regular self-evaluation of national regulatory infrastructure for nuclear and radiation safety in terms of compatibility with the IAEA safety standards.
- All of the SARIS question-sets are derived from relevant IAEA safety Standards and international undertakings.
- The question-sets include core and thematic modules.
The SARIS software

Structured to support the SARIS Methodology

Question-sets are selected according to the actual need (e.g., IRRS Scope)

The report generated by SARIS is freely editable and is the basis of the Advance Reference Material (ARM) for IRRS and other IAEA review programmes

Self-Assessment Variants

IRIS Variant
The IRIS variant is for countries embarking on a nuclear power programme when establishing their safety infrastructure for nuclear power. The question-sets are based on SSG-16.

SARIS Variant
These question sets are for comprehensive assessment of the national framework for nuclear and radiation safety. These are also used by countries preparing to receive an IAEA IRRS mission.
Conclusions on SARIS

- Self-assessment should be planned and conducted based on a realistic schedule and should be adequately resourced.
- SARIS is compatible with IRRS guideline, and should be used in preparation for, and during the conduct of, an IRRS mission.
- For embarking countries, an IRIS Self-assessment should be also conducted to address issues related to NPP programme.
- Thorough preparation and training of the Project Management Team, Respondent Team, Analysis Team are strongly recommended.
- Self-assessment is much more than answering a set of questions; it is a learning and investigation process, which generates and supports improvement initiatives.
Integrated Review of Infrastructure for Safety

IRIS
Self-Assessment against SSG 16

Safety Guide SSG 16 constitutes a “road-map” for the progressive application of IAEA safety standards according to 20 Elements through 200 actions.
Self-Assessment against SSG 16 |2

20 Safety Elements, divided in phase 1, 2 and 3

- Relevant requirements are listed
- Actions (‘should’ statements) are numbered
- Additional text provides
  - rationale for the should statements
  - guidance on how to get prepared and how to reach this statements

<table>
<thead>
<tr>
<th>Safety Elements</th>
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<tbody>
<tr>
<td>National Policy and Strategy for Safety</td>
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<tr>
<td>Global safety regime</td>
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<tr>
<td>Legal framework</td>
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<tr>
<td>Regulatory framework</td>
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<td>Transparency and openness</td>
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<td>Funding and financing</td>
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<td>External expert support</td>
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<tr>
<td>Provision of technical services</td>
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<td>Leadership and management for safety</td>
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<tr>
<td>Human resources development</td>
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<tr>
<td>Safety qualification of industrial organizations</td>
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<tr>
<td>Technical infrastructure reliability</td>
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<tr>
<td>Design safety</td>
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</tbody>
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Phase 1: decision  
Phase 2: call for tenders  
Phase 3: commissioning  
Operation
Self-Assessment against SSG 16

To facilitate the use and implementation of SSG 16, upon Member States’ request, it has been decided to develop a self-assessment mechanism

– **IRIS**, Integrated Review of Infrastructure for Safety
Self-Assessment against SSG 16

IRIS is based on 20 question-sets

Question-sets based on 200 SSG-16 Actions
For each action, a primary question and, to develop some aspects of the answer, subsidiaries

- **Primary question**
  - Has the Government recognized the need for an effectively independent and competent Regulatory Body, and considered the appropriate position of the Regulatory Body in the State’s Governmental and legal framework for safety?

- **Subsidiary question**
  - What are the role and responsibilities going to be assigned to the future regulatory body?
Pre-conditions

The Government

• should commit itself to complete the self-assessment in accordance to an agreed scope
• should ensure that SA is performed at a meaningful stage in the NPP so that benefits from the SA can be expected
• should ensure coordination arrangements to be established and implemented between organizations taking part in the SA
Pre-conditions

The **Senior Management** of the involved organizations should commit itself to:

- allocate adequate resources for completion of the SA
- encourage staff to perform the SA in a frank and honest manner and in a blame free environment
- consider the SA conclusions in a frank and transparent way in a no-blame culture
- fully implement the subsequent actions
The lifecycle of an IRIS self-assessment comprises 5 different steps:

1. Preparation
2. Answering
3. Analysis
4. Action Plan
5. Follow Up

- Can be repeated to measure regularly the progresses made to establish the infrastructure for safety.
IRIS – Methodology

Preparation

1. Preparation

Constitution of a Project Organisation
(coordination, management, Respondents and Analysts)
Preparation of a National Plan
Training concerned persons

To prepare and organise the whole assessment project
Preparation: project management structure

**Coordination Group (CG)**
- Project Manager (PM)

**Project Management Team (PMT)**
- Local Project Manager (LPM)
  - Local Project Management Team (LPMT)
    - Organisation 1
    - Organisation 2
    - Organisation 3

**Operational Team**
- Senior representatives of all involved organizations
- Senior managers, specialists and technical staff
IRIS – Methodology |6

Developed by the Project Management Team under the authority of the Coordination Group

– Based on the Analysis Report
– Addressing all recommendations made during the analysis phase
– Addressing priorities, timelines and responsibilities
Senior management of every organization are responsible for the action plan implementation and follow-up.

Coordination Group should regularly follow-up the action plan.
IRIS - Software

IRIS is a module of Self-Assessment Tool, part of SARIS
  - Self-Assessment of Regulatory Infrastructure for Safety

IRIS will address the Specificities of self-assessment against SSG 16 (multiple involved organisations, phases).
  - It will possible to select:
    - Phase(s)
    - Organisation(s)

IRIS module is embedded in the SARIS Software
IRRS – SARIS/IRIS

**Full scope is recommended**
Covers all existing facilities and activities

SARIS self-assessment scope: tailored accordingly

**If embarking Countries**
Scope may be extended to Safety Infrastructure for NPP

IRIS self-assessment scope: Encompassing all IRRS Safety Module - Relevant phase(s) and relevant organisations (RB and Government)

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Conclusions on IRIS

- SSG-16 provides guidance to apply progressively the IAEA Safety Standards in the development of a Nuclear Power Programme
- Self-Assessment is time and resource consuming but there are many motivations to use IRIS-self-assessment
- IRIS is developed to facilitate a self-assessment of national safety infrastructure
- IRIS Software is now available on the IAEA website
- The agency may assist to use the IRIS methodology and Software
Thank you for your kind attention!