Methods and Benefits of Implementing for Organisations/Countries

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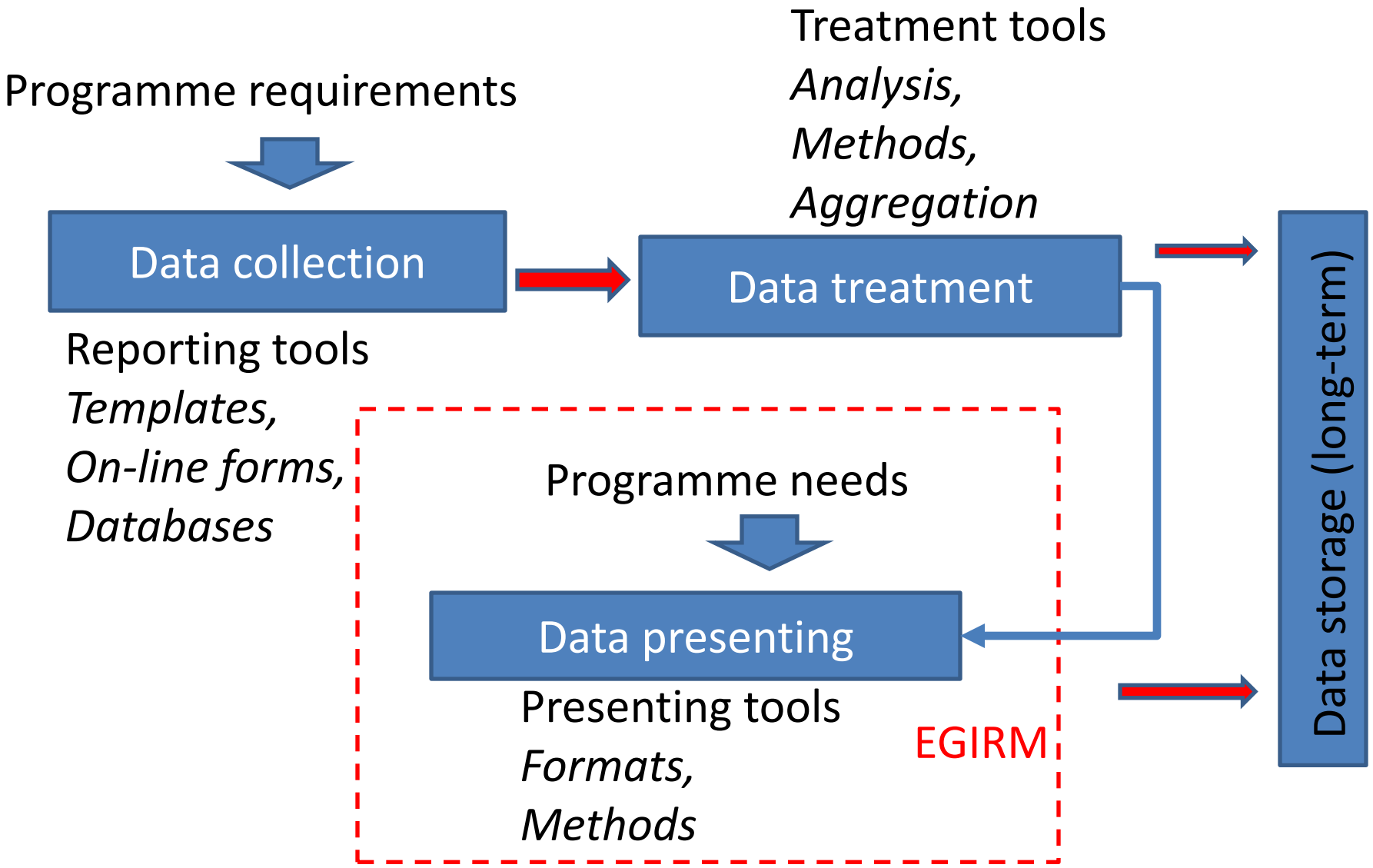
Agenda

- Background
- Why Implement Methodology
- Benefits of Implementation
- Methods of implementation
- Lessons Learned

Background

- Tool for presenting the national spent fuel/radioactive waste (SF/RW) inventory in conjunction with the national strategy for SF/RW management.
- This scheme represents a means to present the combined SF and RW inventory as established by the country strategies for waste management in relation to disposal solutions
- This scheme is also suitable for forecasting future inventory and country strategies

Role of the methodology in data management



The RWMC-50 March 2017

The RWMC decision:

- The RWMC **recommended that member countries include a completed version of the table of national SF/RW inventories in their national reports to improve reporting to different international programmes** (the EGIRM will assist member countries with completing their tables);
- The RWMC **authorised the EGIRM to propose the methodology to the "Status and Trends" project at the next meeting** (June 2017, Paris);
- The RWMC **supported an initiative of the NEA Secretariat to organise a workshop on implementation of the methodology (Autumn 2017) for potential users** – postponed until February 2018.

Why Implement Methodology

- Understand the landscape of current and potential future of SF/RW
- Provide clarity and common understanding of National inventory
- Help establish a system for accountability
- Management of all waste and flexibility the methodology provides
- Assist in planning for management of variety of waste
  - SF
  - Sealed Sources (DSRS)
  - NORM

Advantages of the table

- SF and RW inventories combined in one table;
- SF origin presented as – “NPP – other reactors”;
- SF/RW inventory data presented in connection with national management strategies and disposal routes;
- SF/RW currently being without management strategy can be presented;
- SF/RW as subject of international service can be presented;
- Correlation between national RW classes and classes of IAEA classification (GSG-1) presented (transfer to GSG-1 performed by countries with NEWMDB matrix);

Benefit of Implementation

- Provides a comprehensive view of spent fuel/radioactive waste (SF/RW) management in a specific country
- The table provides information on the scope and size of tasks and challenges in SF/RW management
- Methodology can be used for compilation and aggregation of data from different countries on different levels
- Populated table for a country can be used for reporting in different international programs
- illustration of the current status of SF/RW management in the country

Benefit of Implementation

- Source of information presented in standardized format
- Reference for analysis of the national inventory
- Inform member countries of current SF/RW management
  - Support proposals for SF/RW strategy on national, region or state level
- Common tool facilitate conversation with International community, experts and public stakeholders

Benefits (I)

For countries:

- The scheme provides comprehensive view of SF/RW management in a country. It could also be added to the national inventory report.
- Can be used for reporting for different international programmes (as required by the Joint Convention [IAEA, 1997] and EC Directive [EU, 2011]).
- Scope and size of tasks in SF/RW management, status in SF/RW management from different points in time – past, present and future; tracking tool for transboundary movement of SF/RW, facilitating identification of uncertainties related to the lack of communication between the parties of an international agreement.
- Compilation/aggregation of data from different countries on different levels; integral form for comparing SF/RW management.

Benefits (I)

For countries:

- The table can be used as:
  - an official source of information presented in a standardised format;
  - a useful tool and reference for analysis of the national situation, implementation for national reporting under the international programmes (Joint Convention, EC Directive, international conferences, symposiums, etc.);
  - an easy way to compare SF/RW management approaches with other countries on different levels (individual, group, region, organisation, global) to develop adequate proposals to government, national strategies and programmes including economic, management, infrastructural planning;
  - a tool for the facilitation of an international dialogue among experts, as well as among stakeholders inside a country.

Benefits (II)

For international programmes:

- The table and methodology are proposed to international organisations (IAEA, EC) as an addition to the GSG-1 tool for better harmonisation and unification of national and international SF/RW inventory data;
- Provide better comparability of inventories and management strategies accepted in different countries; data given in one table can provide a view of the real situation in a country regarding management of all kinds of SF, RW and disused sealed radioactive sources (DSRS);
- Presenting a compilation and aggregation of data from countries on different levels and in different time frames (past, present or future); they can be used to create integral tables presenting the analysis in initiatives such as the Status and Trends project;
- National reports for international programmes and initiatives, the table will provide consistency and unambiguity of national data.

Benefits (III)

For users:

- state decision makers – to have the full picture of SF/RW management in their own country and in others (when needed) in a comparable format;
- national experts (implementer, regulator, researcher, etc.) – to have one authoritative and referable source of information given in a common format;
- international experts – analyze international practices; find the trends, common and specific features of SF/RW management and to specify “best practices”;
- non-technical stakeholders (citizens, communities, local authorities, etc.) – to understand the situation in a country and to have consistent data for the dialogue with implementers.

Methods of implementation

- The table filled manually by authorised country representative and attached to national reports;
- Development of i-form of table – different options of web-tool;
- Integration into existing/planned information management tools:
  - International system – NEWMDB (also currently considered potential joint reporting tool);
  - National system – national Data Bases; information management systems, etc. (will be presented in item 3.4)

Development of i-form of table

Possible options:

- Excel table + instruction how to use. File to be filled in country and sent to requested organization or placed in national profile area;

- Specially designed electronic tool + guide how to use, situated in international organization to be filled on-line. Tool to collect data and semi-automatically produce any compilation for presentation;

- Advanced electronic tool + soft to collect information on-line and make aggregation, attribution of data in requested order; can be implemented nationally or internationally and managed by the international organisation; ability to be integrated in existing information field (DB) is desired; minimal – to be able to exchange with other DB.

Analysis can be done with web-tool

- Summation of volumes from different countries in relevance to given option;
- Quantitative tracking of trends and development in given strategies;
- Tracking the transboundary movement of SF/RW and their current status; search and noting the uncertainties in balance “sent/processed/stored”;
- Extraction and summation/aggregation of RW volumes that is not recalculated into “as disposed” form;
- Search and highlighting the deviations in reports of countries (for several years);
- Analysis of intensity of management strategies implementation;
- Inventorying on different levels, analysis of RW distribution after SF reprocessing.

Potential applications of the web-based tool

- Generation of tables for reports for JC, EC Directive, etc.
- Global (regional, organisational, etc.) review of strategies, disposal decisions, inventories, etc.;
- Summation (integration) of past practices, aggregation;
- Trends analysis;
- SF/RW inventory forecasting on different levels;
- Tracking of SF/RW transboundary movement;
- Visualization of SF/RW inventory and management strategy related data analysis.

Lesson Learned from U.S. Implementation

- Identified areas of improvement of data collection
- Started dialogue with Internal agencies within National program
- Provides status SF/RW management
  - Common understand with decision makers
- Initiated dialogue with National program on methods to identify and collect real-time data
- Knowledge management
- Established efficient and effective baseline