



Consultants' Meeting on the Establishment of the International Regulatory Network

09 – 13 February 2009

Vienna, Austria

Summary Report

Executive Summary

1. The consultancy was based on previous initiatives and meetings to establish a Global Nuclear Safety Network including a Regulatory Network as the part of the GNSN devoted to nuclear safety and security regulation co-operation.

- Moscow Conference, Effective Nuclear Regulatory Systems, Jan/Feb 2007
- G8 initiative in 2007 – G8 Summit Papers, Heiligendamm, June 2007
- Consultancy on Status and Trends of Nuclear Safety Networks, Vienna, Aug. 2007
- Technical Meeting on Global Cooperation on Generic Safety Issues for Nuclear Power Plants and Measures for their Resolution, Bonn, Dec. 2007
- Consultancy Meeting on „Generic Safety Issues for Nuclear Power Plants with Light Water Reactors and Measures for their Resolution, Vienna, Sep. 2008
- Consultancy Meeting on the Establishment of the International Regulatory Network (REGNET), Vienna, Oct. 2008
- Technical Meeting on the Establishment of the International Regulatory Network, Vienna, Nov 2008

2. The objective of the Consultancy was to further implement the work plan developed by the TM in Nov 2008 with special focus on Milestone 2: Regulatory Country Profiles and IRRS information platform. To this end the consultancy was structured in the same way as the Summary report of the TM.

- 1 Work plan and time schedule
- 2 RegNet Tasks
 - 2.1 Objectives, principle, rules, steering committee (TM WG 1)
 - 2.2 Content of RegNet (TM WG 3)
 - 2.3 Country Regulatory Profile and contributor's area (TM WG 2)
 - 2.4 Reviews and appraisals and regulatory knowledge base (TM WG 4)
 - 2.5 OEF/OPEX Platform and Generic Safety Issues (TM WG 5)
 - 2.6 IT Infrastructure and Services

3. In the TM summary report for each RegNet task an objective and proposed solution were given. The consultancy reviewed and further developed the proposed solutions in the context of the overall approach and possible IT realisations. On that base the consultancy defined next steps for RegNet implementation. Therefore in this summary report for each RegNet task there are three subheadings:

- Review of proposed solution
- Further development of the proposed solution
- Next steps towards implementation, including responsibilities and schedules

4. The workplan was adapted to the findings of the consultancy. The workplan and time schedule for the next steps have been specified for the period from February 2009 to June 2009. Two main fields for activities have been identified:

- further specification of the designs, templates and contents
- IT development for websites, navigation, libraries, data security.

These activities will start immediately subject to availability of financial and human resources and are expected to be completed prior to the next Consultancy Meeting that should be held in the end of May or in June.

5. The progress made at this Consultancy meeting shall be reported to the participants of TM for information. This CS Summary Report shall be distributed to the contributors to the CS for comment and support for further progress.

List of Contents

1	WORK PLAN AND MILESTONES FOR PROGRAMME IMPLEMENTATION	4
1.1	Overall Work plan.....	4
1.2	Workplan and Schedule	5
2	REGNET TASKS	7
2.1	Objectives, principle, rules, steering committee (TM WG 1).....	7
2.2	Content of RegNet (TM WG 3)	7
2.3	Contributor's Areas and Country Nuclear Regulatory Profiles (TM WG 2).....	7
2.4	Reviews & Appraisals and Regulatory Knowledge Base	8
2.5	OEF/OPEX Platform and Generic Safety Issues (GSI)	9
2.6	IT Infrastructure and Services	11
3	Annexes	13

1 WORK PLAN AND MILESTONES FOR PROGRAMME IMPLEMENTATION

1.1 Overall Work plan

The project remains to be based on the following milestones.

Milestone 1: Support from Member States to start RegNet

The overall objective to strengthen global networking has already found the support of Member States and international organizations through resolutions and other policy papers and budgets. MS will further be kept informed on the progress.

Meetings and personal contacts shall be used to promote the concept and to gain support for the proposed organization and operation of RegNet.

Milestone 2: Country Nuclear Regulatory Profiles (CNRP) and IRRS Information Platforms

The consultancy developed next steps based on draft websites and templates:

- to establish a prototype for an IRRS platform and other reviews and appraisals
- to establish an integrated and uniform approach to country nuclear regulatory profiles
- to develop the OEF/OPEX and GSI Platforms
- to establish a regulatory knowledge base

To assure proper development involvement of MTPI and MTIT is important.

Milestone 3: Development of the other elements of the network

The proposals for an overall framework and additional elements have further been developed by the consultancy including further work on topical areas, regulatory knowledge portal and information on conferences.

More sophisticated IT tools and administration of user rights shall be implemented, especially for data security.

Milestone 4: Validation and extension of operation of the entire network

Based on the accomplishment of the three steps mentioned above, the whole system can be extended to more sophisticated applications as collaboration on certain documents or projects. The systems should also be systematically extended to protected sites. The framework and items compiled by the TM need to be addressed in this context.

Milestone 5: Maintenance and implementation of the network

After establishment of the network, that is completion of milestones 1-4, continuous operation and improvement has to be established. Overall steering and monitoring will be the task of the Steering Committee.

1.2 Workplan and Schedule

	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09
1. Workplan and Milestones						
1. Consultancy						
2. IT-Development						
2.1. Objectives, principles, rules						
2.2 Content of RegNet						
1. Completion of design of the RegNet entry page						
2. Establishment of RegNet entry page and selected sub pages						
3. Implementation of content for some countries						
4. Test of functionality of the sites						
5. Amendment of further content (IRRS, GSI)						
2.3 Country Nuclear Regulatory Profiles and Contributor's Area						
1. Completion and QA of the template for CNRP						
2. Establishment of a mastercopy for the CCS- and the CNRP-website						
3. Application of the drafted websites and templates for selected countries						
2.4.1 Reviews and Appraisals						
1. Establishment of the IRRS Homepage within RegNet						
2. Completion and QA of the template for country specific IRRS interface page						
3. Implementation of content and test of functionality						
4. Improvement of websites and content						
5. Transfer to EPREV, IPPAS, INSServ						
6. Test for IRRS input from Germany						
7. Request to other countries to complete their IRRS interface page						
2.4.2 Regulatory Knowledge Base						
1. Agreement with IAEA (MTPI)						
2. Review and comparison of technical solutions						
3. Test of preferred solutions						
4. Implementation of the selected solutions						tbd
2.5.1 OEF/OPEX Platform						
1. Review and improvement of the OEF/OPEX Homepage within RegNet						
2. Exchange with OECD-NEA-CNRA-WGOE of content and access to NOEF information						
3. Template for OEF country page						
4. Implementation of content						tbd
2.5.2 Generic Safety Issues						
1. Establishment of the GSI Homepage within RegNet						
2. Implementation of content and test of functionality						
3. Completion and QA of template for country specific GSI interface page						

4. Improvement of websites and content						
	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09
5. Test for input from Germany						
6. Request to other countries to complete an interface page on their specific GSI activities						
2.6.1 IT infrastructure, networks and requirements						
1. Establishment of RegNet operation platform within IAEA server-topology						
2. Offering of webspace for MS without sufficient IT						tbd
3. Compilation of requirements and specifications for contributor areas						
4. Establishment of priority sites						
5. Website design						
6. Establishment of automatism for maintain links on RegNet sites						
7. Design of "service" site for smaller countries						tbd
2.6.2 Inventory of regulatory networks and resources						
1. Determination of required data such as name of the resource, subject area, purpose, contact, website, access: open/restricted)						
2. Process description for collecting and updating data (IAEA staff, INIS officers, contributors liaison officer)						
3. Optimisation of presentation and usability of data						tbd
2.6.3 Special features						tbd
1. Review of content of IAEA meeting database with regard to completeness and actuality (in house meetings, meetings of other international organisations)						
2. Development of features (as downloads) and procedures for improvements						
3. Optimization of presentation and usability						tbd

tbd: to be determined

2 REGNET TASKS

2.1 Objectives, principle, rules (TM WG 1)

Review of proposed solution

The proposed solutions and their implementation prior to installing a Steering Committee are still valid.

Further development of the proposed solution

Before installing the Steering Committee, further progress of RegNet should be achieved, so that its practical use and benefit can be demonstrated. All actors involved in RegNet should use conferences, meetings and personal contacts to promote RegNet and gain additional support for it.

Next steps towards implementation, including responsibilities and schedules

Major events for promoting RegNet are: the USNRC Regulatory Information Conference (RIC) March 10-12, 2009, meetings of policy making organs of IAEA, program committee meetings for the international regulator conferences, Security Conference 2009, organisational meetings for the CNS and the Review Meeting for the Joint Convention, for NEA meetings.

2.2 Content of RegNet (TM WG 3)

Review of proposed solution

The solution proposed for the top page remains unchanged.

Further development of the proposed solution

The RegNet Entry Page (top page) has been drafted (Annex 2.2.1) to address all contents with high priority. This will cover, in principle, all issues as listed under objectives. This entry page shall be amended when additional content shall be integrated into RegNet.

Next steps towards implementation, including responsibilities and schedules

- 1 Completion of design of the RegNet Entry Page (Annex 2.2.2) and the related subpages as developed in this report. (March 2009)
- 2 Establishment of the websites for the RegNet Entry Page and the related subpages as developed in this report. (April 2009)
- 3 Implementation of content for some Country Nuclear Regulatory Profiles and IRRS. (April 2009)
- 4 Test of the functionality of the three steps. (May 2009)
- 5 Amendment of further content such as other safety and security services with related templates and interface pages. (June 2009)

2.3 Contributor's Areas and Country Nuclear Regulatory Profiles (TM WG 2)

Review of proposed solution

In the RegNet, all contributors IAEA members' states as well as international organisations should be represented by their specific profile following an agreed format. This approach and the related material and guidance are still appropriate.

Further development of proposed solution

The proposed content of the Country Contributor Site (CCS) (see Annex 2.3.1) and Country Nuclear Regulatory Profiles (CNRP) (see Annex 2.3.2) have been translated into website templates. Different approaches for possible organisation of the content can be deduced from the IAEA safety standard GS-R-1, structures for national reports under safety conventions, IAEA databases with country specific contents such as IRS, PRIS, NEWMDB.

Therefore, the proposed annotated template for the CNRP (Annex 2.3.2) makes as much use of GS-R-1 including its current revision (DS 415) and of the available contents of existing databases. To prevent duplication, the existing information used for references or links shall be made available as much as possible and be incorporated into the respective CNRP. Therefore, the template is amended by a list of existing resources and databases at the IAEA.

As proposed by the TM the CCS together with the respective country's interface pages as the CNRP will be hosted by the IAEA and maintained by the authorized national liaison officer in the member states.

For those countries, which do not have sufficient resources, the agency will not only host the CCSs and interface pages such as CNRPs but also webspace that can be used by such member states to upload, maintained and ensure the quality of their contents (Annex 2.6.1).

So far the work on contributor sites was focussed on countries while the work on contribution from international organisations has to be done in close interaction with the respective organisations.

Next steps towards implementation

1. Completion and quality assurance of the template for CNRPs (Annex 2.3.2) including the multi-matrix and the appendix with references to existing information resources (March/April 2009).
2. Establishment of a master-copy for the CCS-website and the CNRP-website with due consideration of additional data security needs (April 2009).
3. Application of the drafted websites and templates for further countries (May 2009).

2.4 Reviews & Appraisals and Regulatory Knowledge Base

2.4.1 Reviews & Appraisals, especially IRRS

Review of proposed solution

The proposed solution for the IRRS proved to be very mature. It could be used directly for the design of the IRRS Homepage within RegNet. Moreover, it can be also applied to other safety and security services, such as EPREV, INSServ, IPPAS, OSART, that are provided by the IAEA at the request of Member States.

The relation between these services needs further clarification: horizontal (IRRS) or vertical (such as EPREV).

By the proposed solution RegNet can provide more specific information e.g. regarding already performed services or information for interested countries and bodies.

Further development of the proposed solution

A structure of the IRRS Homepage within RegNet was developed in close exchange with the respective IAEA staff (Annex 2.4.1.1 a & b).

The IRRS Homepage within RegNet also serves as an entry page for the country interface pages which give details about already performed or scheduled IRRS. The country specific IRRS websites will be maintained by the respective member state.

This website design was also discussed for other services and resulted in respective drafts for EPREV, INSServ, IPPAS, and OSART Homepages within RegNet (Annexes 2.4.1.2 – 5).

In addition a RegNet website was drafted as top site above all the IAEA services related to regulatory activities.

Next steps towards implementation

1. Establishment of the IRRS Homepage within RegNet (April 2009)
2. Completion and quality assurance of a template for the country specific IRRS interface page (April 2009)
3. Implementation of content and test of functionality (April 2009)
4. Improvements of website and content (May 2009)
5. Application of the established model to EPREV, INSServ, IPPAS etc with due consideration of additional data security needs (May 2009)
6. Test of the IRRS input from Germany (May 2009)
7. Invitation for other countries to complete an interface page for their specific IRRS activities (June 2009)

2.4.2 Regulatory knowledge base

Review of proposed solution

The proposed solution was confirmed in many cases and should be implemented as soon as possible. Currently the download of the IAEA safety standards has to be done document by document. The nomenclature is not self explaining and not related to the numbering system of the safety standards.

Further development of the proposed solution

For the series of IAEA publications an organisation of the related documents in structured files is proposed. The document names shall be in accordance with the respective numbering system. A download facility shall be made available, so that (authorized) Member state representatives can download such series for offline use within their own IT systems.

It is suggested to provide the information also in a fixed table format (e.g. csv-format) which can be downloaded and filtered for specific purpose.

Other sources for regulatory knowledge, especially tacit knowledge has to be properly included at the later stage.

Next steps towards implementation, including responsibilities and schedules

1. Review and comparison of technical solutions for organising and downloading regulatory knowledge base documents (April 2009)
2. Tests of preferred solutions (June 2009)
3. Implementation of the selected solutions (Sep 2009)

2.5 OEF/OPEX Platform and Generic Safety Issues (GSI)

The solution proposed by the TM was to integrate OEF/OPEX with GSI. Due to differences in the proposed structures for websites content it is better to establish two separated websites.

2.5.1 OEF/OPEX Platform

Review of proposed solution

The proposed solution is still valid and can be implemented. The content ongoing work at the OECD-NEA (NOEF – report) can be used. Most of the discussion of OEF/OPEX was focussed on nuclear facilities especially nuclear power plants. This approach has to be broadened for the OEF Homepage within RegNet, the IAEA interface page as well as for the national interface pages.

Further development of the proposed solution

An OEF/OPEX Homepage within RegNet has been drafted (see Summary Report TM Nov.2008). So far not all relevant information from IAEA and OECD-NEA have been addressed.

The template for the national OEF-system (see Summary Report TM Nov.2008) so far is focused on events reporting at nuclear power plants.

Next steps towards implementation, including responsibilities and schedules

1. Review and improvement of the OEF/OPEX Homepage within RegNet including screening of additional information sources (April 2009)
2. Exchange with OECD-NEA-CNRA-WGOE on possible exchange of format and content and access to NOEF information (March/April 2009)
3. Template for OEF country contributor page (April 2009)
4. Implementation of content (tbd)

2.5.2 Generic Safety Issues

Review of proposed solution

The proposed solution for the Generic Safety Issues (GSI) part proved to be very mature and could be used for the design of the GSI Homepage within RegNet.

Further development of the proposed solution

A structure of the GSI Homepage within RegNet was developed (Annex 2.5.2.1). The related extended description was also presented (Annex 2.5.2.3).

The GSI Homepage within RegNet also serves as an entry page for the country interface pages. The country specific GSI websites will be maintained by the respective member state. In this regard the following materials have been developed:

- The structure of the national GSI interface page as extracted from theA extended description for the GSI Homepage within RegNet (Chapter “Elements of a GSI programme “: Annex 2.5.2.2)
- the detailed description for the German interface page (Annex 2.5.2.4)
- the matrix for GSI and respective treatment by member states (Annex 2.5.2.5)
- a test of functionality by Germany

Next steps towards implementation

1. Establishment of the GSI Homepage within RegNet (March 2009)
2. Implementation of content and test of functionality (April 2009)
3. Completion and quality assurance of a template for the country specific GSI interface page (April 2009)
4. Improvement of website and content (May 2009)
5. Test for input from Germany (May 2009)

6. Request to other countries to complete an interface page for their specific GSI activities (June 2009)

2.6 IT Infrastructure and Services

2.6.1 IT infrastructure, networks and requirements

Review of proposed solution

In the TM Summary a stepwise approach was proposed: RegNet Website and related subpages for priority areas. The consultancy confirmed this approach.

Also the items of the further material and guidance remain valid especially regarding data security needs.

Further development of the proposed solution

The step wise approach should be based on the following overall structure:

- GNSN Website
- RegNet Website
- Homepages within the RegNet for individual applications also hosted by IAEA
- Websites of national and international contributors

The current understanding of this structure and related content is shown in Annex 2.2.1.

RegNet is based on the concept that the structure and content of national and international contributors are decided completely by the owners of the respective sites. The intended function of RegNet is to support interested users to find regulatory information made available by the contributors by a uniform approach to contents, navigation and search.

To this end the RegNet website – hosted by the IAEA - should offer interface pages with annotations regarding expected input. The specific information from the contributor can be found and offered a hyperlink to the respective website of the contributor. The dynamic modularized approach to the design and updating of RegNet Websites has been discussed and is shown in Annex 2.6.2.

Therefore the RegNet website will consist of the RegNet Entry Page with sites for each contributor (CCS). Each CCS is a website (Annex 2.3.1 and 2.3.2) with

- summary information on the country's radiation and nuclear facilities and activities (middle column)
- navigation with main headings and roll down menus for more detailed access (left column with links to interface pages)
- Hyperlinks to more general information on the country or the organisation (information resources and networks) and its governmental and regulatory system.

This content shall be hosted by the IAEA. The CCSs and interface pages are maintained by respective "liaison officers" nominated by the contributor. Only the liaison officers (or their deputies) are authorized to modify content of the contributors.

For those countries, which do not have sufficient resources, the agency will not only host the CCSs and interface pages such as CNRPs but also webspace that can be used by such member states to upload, maintain and ensure the quality of their contents (Annex 2.6.1).

The content to be provided by the IAEA is partially available on existing websites such as:

- IAEA Homepage: <http://www.iaea.org/About/index.html> (managed by MTPI (content) and MTIT (IT)) including entry to departments (our work such as <http://www.iaea.org/OurWork/SS/index.html> for Department for Nuclear Safety and the Security)
- Homepages for Departments such as <http://www-ns.iaea.org/> with subsites
 - o Technical Areas
 - o Safety Standards
 - o Conventions
 - o Reviews & Appraisals
 - o Special Projects
 - o Safety Publications
 - o Training
 - o Meetings
- Homepages for special areas such as
 - o <https://irs.iaea.org/> for IRS (protected)
 - o <http://nucleus.iaea.org/NUCLEUS/nucleus/Content/index.jsp> for NUCLEUS
 - o <http://tc.iaea.org/tcweb/default.asp> for Technical Co-operation

Beyond that there are websites hosted by IAEA but outside of MTIT responsibility such as

- <http://www.casat-iaea.org/> Centre for advanced assessment tools (CASAT).

Next steps towards implementation, including responsibilities and schedules

1. GNSN and RegNet operation can be performed on different platforms established within this IAEA server-topology. For practical reasons (sign in, security, management of accession rights) the content should be made available on as few servers as possible.
2. To support MS without sufficient IT infrastructure web space shall be offered for national content, collaboration and discussion fora.
3. Requirements and specifications for the contributor areas including additional special IAEA sites will be compiled under the respective website for the content.
4. Priority sites are:
 - a. GNSN/RegNet websites as portals including GNSN/RegNet resources and networks, download area for IAEA standards and reports, meeting database (with filters) and download function (RTF tables or excel spreadsheets) including a comprehensive access to existing IAEA databases.
 - b. Entry for the national contributors
 - c. Country Nuclear Regulatory Profiles
 - d. Reviews & Appraisals with IRRS as a leading site
 - e. OEF/OPEX site
 - f. Generic Safety Issues
5. The design of each website follows the three column design as practiced on many IAEA websites. Special features such as roll down menus, search the site, links to documents and/or libraries, discussion or feedback fora, protected sites are shown and explained on the respective drafts. Additional features such as filters for listings of standards, documents or meetings would be helpful.
6. The links on the RegNet Sites should regularly automatically be tested and updated when necessary. The liaison persons for the contributor's areas shall be informed accordingly.
7. The "service" site for smaller countries shall be designed in close exchange with IAEA experts familiar with the needs of such countries.

2.6.2 Inventory of regulatory networks and resources

Review of proposed solution

This issue was discussed mainly in the context of the GNSN. Solutions to comply with the specific needs of RegNet have to be developed. Reference has been made to the existing “energy handbook” and compilations prepared for earlier meetings on networks and resources (G8 NSSG Consultancy Meeting in August 2007).

Further development of the proposed solution

An overall directory of RegNet networks and resources shall be developed starting from existing databases and mechanisms.

Next steps towards implementation, including responsibilities and schedules

1. Determination of required data such as name of the resource, subject area, purpose, contact, website, access: open/restricted) (March 2009)
2. Process description for collecting and updating data (IAEA staff, INIS officers, contributors liaison officer) (May 2009)
3. Optimisation of presentation and usability of data (tbd)

2.6.3 Special features

Review of proposed solution

This issue was discussed mainly in the context of GNSN and RegNet. IAEA is operating a meeting databank. Content and presentation can further be developed. A possibility to download listings would be helpful.

Further development of the proposed solution

1. Review of content of IAEA meeting database with regard to completeness and actuality (in house meetings, meetings of other international organisations)
2. Development of features (as downloads) and procedures for improvements

Next steps towards implementation, including responsibilities and schedules

1. Determination of required data such as name of the resource, subject area, purpose, contact, website, access: open/restricted) (April 2009)
2. Process description for collecting and updating data (IAEA staff, INIS officers, contributors liaison officer) (June 2009)
3. Optimisation of presentation and usability of data (tbd)

3 ANNEXES

2.2.1 Overall RegNet GNSN View

2.2.2 RegNet Website Level 1-4

2.3.1 RegNet Contributor Country Site Structure

2.3.2 RegNet CNRP Structure

2.4.1.1a IRRS Homepage within RegNet

2.4.1.1b Template IRRS Interface Page

2.4.1.2 EPREV Homepage within RegNet

2.4.1.3 INSServ Homepage within RegNet

2.4.1.4 IPPAS Homepage within RegNet

2.4.1.5 OSART Homepage within RegNet

- 2.5.2.1 GSI Homepage within RegNet
- 2.5.2.2 Structure of the national GSI interface page
- 2.5.2.3 Text GSI RegNet Homepage
- 2.5.2.4 Text German GSI Interface
- 2.5.2.5 GSI matrix

- 2.6.1 IAEA IT Infrastructure Douchev-Schachner
- 2.6.2 RegNet dynamic design Suman