The Global Nuclear Safety and Security Network
GNSSN
The Global Nuclear Safety and Security Network

GNSSN
Why the GNSSN?

- Nuclear safety and security experts are scattered all over the globe
- Each country has different experience, competencies and needs

The GNSSN provides countries, organizations and experts with opportunities to:

- Build Capacity
- Share information and knowledge and improve their management
- Develop Multilateral Cooperation and Coordination
Background

1956 - IAEA Statutes (article III and VIII) - the Agency must support the exchange of information among the Member States.

2002 - Creation of ANSN

2007 - INSAG 21 - Global Nuclear Safety Regime

2008 - G8 Resolution on networking under Global Partnership for Nuclear Safety and Security

2010 - INSC contract with the EC

2011 - Nuclear Safety Action Plan

2012 & 2013 - GC Resolutions supporting networking for Nuclear Safety and Security

2014 - GNSSN Strategy 2020...
The Global Nuclear Safety and Security Network

GNSSN

1. Why the GNSSN?
   - To enhance nuclear safety and security globally
   - To facilitate knowledge exchange and cooperation among countries

2. Background
   - International Atomic Energy Agency (IAEA)
   - Nuclear safety and security

3. GNSSN's Structure
   - Working groups
   - Geographical scope

4. GNSSN Progress
   - Milestones and achievements

5. IAEA
   - International Atomic Energy Agency
   - Promoting nuclear energy for the common good
Working Mechanisms

**Global level**

- Robust Framework of Coordination
- Framework for capacity building, Including E&T
- Support the implementation of the GNSSF

**Regional level**

- Forum for discussing regional strategies
- Sharing of knowledge
- Developing capacities

**National level**

- Harmonization of KM
- National framework for capacity building
- Improving practices
- Share national regulatory information with the international community
GNSSN Governance

Users
- Contributor
- Viewer

GNSSN Steering Committee

GNSSN Executive

GNSSN Governance Board
- GNSSN Coordinators and NNRP NCP*
- GNSSN Advisory Group
- Moderators**
- GNSSN-IAEA Assistant

GNSSN IT Administration Support Group

GNSSN Advisory Group
- Coordination and task implementation
- Develop, implement, and maintain policies and procedures
- Authorize the GNSSN
- Review and report
- Monitor the project implementation
GNSSN Advisory Group

vi the GNSSN Steering Committee and the GNSSN vernance Board on:

- Strategic planning
- Policies and strategies
- Organizational structures
- Implementation procedures
- Monitoring implementation
- Review documents
- Review action plans
- Annual Reports
GNSSN Governance

Users
- Contributor
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GNSSN Steering Committee
- GNSSN Executive

GNSSN Advisory Group
- A steering committee and the GNSSN Executive:
  - Strategic planning
  - Policies and strategies
  - Organisational procedures
  - Implementation procedures
  - Monitoring and implementation
  - Review documents
  - Review action plans
  - Annual reports
GNSSN's Structure

Working Mechanisms

Global level
- Global Framework of Coordination
- Framework for capacity building, including E&T
- Support the implementation of the GNSSF

Regional level
- Focus on regional strategies
- Sharing of knowledge
- Developing capacities

National level
- Harmonization of IMIs
- National frameworks for capacity building
- Supporting practices
- Share national regulatory information with the international community

Geographic Scope

Topical Scope
- Policy/Regulation
- Technology
- Implementation
- Standards
- Security
- Cooperation
Topical Scope

Nuclear Safety Action Plan

- Safety Analysis
- Siting
- Emergency Preparedness and Response
- Leadership and Management
- Operational Safety
- Legislative Framework
- Governmental and Regulatory Infrastructure
- Education and Training
- Capacity Building
- Radiation Protection
- Communication
- Radioactive Waste Management
- Safety Management of Research Reactors
- Interface between Safety and Security (expected)
- Safety Issues of SMRs (expected)
Geographic Scope

Europe: 28
Africa: 33
Middle-East: 22
Asia-Pacific: 15
North America: 2
Latin America: 14
## GNSSN Elements (June 2014)

### Global Networks and Forums

- International Regulatory Network (RegNet)
- Forum for Embarking Countries
- Regulatory Cooperation Forum (RCF)
- WWER Regulators’ Forum
- Forum for Senior Regulators of CANDU Reactors
- Global Safety Assessment Network (GSAN)
- Control of Sources Network
- Education and Training Network in Nuclear Waste and Radiation Safety
- Nuclear Security Information Portal (NUSEC)
- Technical and Scientific Support Organization Forum
- Emergency Preparedness and Response Network
- Forum for Safety and Security of Small Medium Reactors - *upcoming*
- Capacity Building Forum - *upcoming*
- Safety and Security Communication Network - *upcoming*

### Regional Safety Networks

- Arab Network of Nuclear Regulators (ANNuR)
- Asian Nuclear Safety Network (ANSN)
- Forum of Nuclear Regulatory Bodies in Africa (FNRBA)
- Ibero-American Forum of Radiological and Nuclear Regulatory Agencies (FORO)
- [Liaison with regional networks external to the IAEA (e.g. ENSREG, WENRA)]

### Member States Area

Each Member State has its own National Nuclear Regulatory Portal (NNRP) serving as an interface to the national web-based knowledge platforms.
GNSSN's Structure

Working Mechanisms

Global level
- Global Framework of Coordination
- Framework for capacity building, including E&T
- Support the implementation of the GNSSF

Regional level
- Forum for discussing regional strategies
- Sharing of knowledge
- Developing capacities

National level
- Harmonization of NGSs
- National framework for capacity building
- Supporting practices
- Share national regulatory information with the international community

Geographic Scope

Topical Scope
The Global Nuclear Safety and Security Network

GNSSN

1. Why the GNSSN?
2. Background
3. GNSSN's Structure
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5. Geographic Scope

IAEA
International Atomic Energy Agency
Atoms for Peace
GNSSN Progress

2013/2014

- Promote RegNet
- Develop NNRPs
- Invite Nuclear Security
- Liaison with European networks – ENSREG, WENRA, ETSON

Regional Networks

- Liaison with other external Safety and Security Networks (ENSREG, ETSON, WENRA, HERC)

New Global Networks

SMR Network
- Coordination of Global Coordinating Group on SMR
- Database of SMR projects
- Regional workshops

Capacity Building
- Developing training materials
- Regional training workshops

Emergency Preparedness and Response
- Emergency Response Coordination
- Exchange of information

National Nuclear Regulatory Portals
NNRPs
- Online service on NNP issues
- Exchange of information and experiences
- Coordination of national regulatory frameworks
- Exchange of best practices

Nuclear Safety and Safeguards
- Exchange of information
- Coordination of national and international efforts
- International cooperation

- Capacity building
- Exchange of information
- Coordination of national regulatory frameworks
- Exchange of best practices

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2013/2014

- Promote RegNet
- Develop NNRPs
- Invite Nuclear Security
- Liaison with European networks – ENSREG, WENRA, ETSON
New Global Networks

SMR Network
- New SMR network, coming in 2014
- Outcome of INPRO Dialog Forum
- Independent of INPRO
- Safety guidance on SMR
- Assist embarking regulators
- Sharing of information on SMR technologies
- International cooperation
- IAEA Safety Standards and Guides

Emergency Preparedness and Response Network
- Requested By National Competent Authorities Coordinating Group
- Includes Thematic Sub-networks
  - Emergency planners
  - Medical Communities
  - First responders etc.
- Includes Regional networks
  - Competent Authorities common regional collaborative workspace
- CS in April 2014 - Launch expected by July 2014

Capacity Building Forum
- Coming in 2014
- Form of Reference discussed
- Protocol INPRO Capacity Building Methodology
- Historic Support in Nuclear safety (Innovated Nuclear Safety, Capacity Building, Management Tools)
- Harmonization of activities in the instruments of specific building
- Regional Network will take lead in the implementation of harmonization

Nuclear Safety and Security Communication
First CS on 3-5 Sept. 2014
Expected to cover:
- General aspects - Com. and consultation with interested parties (GSR Part 1, Req 1 and 36; GS-R-3, Req 3.5 and 5.26 and DS460)
- Communication & New Nuclear Power Programme / Siting
- EPR Communication (EPR-Public Communications 2012)
- Waste management (GSR Part 5, Req 5.1)
- Security aspects / Communication vs. Confidentiality
- Existing exposure situation (e.g. Radon) - DS421
- Nuclear Safety and Security Outreach

GNSSN Network on Management Systems
- Management Standards (ISAG 6.1)
- “Management System for Facilities and Activities”
- Permanent mission safety culture
- Improved regulatory processes
- Harmonization of management systems
- First oversea meeting, 2014
- Expected to be online Q1 2015
SMR Network

- New SMR network, coming in 2014
- Outcome of INPRO Dialog Forum
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- Assist embarking regulators
- Sharing of information on SMR technologies
- International cooperation
- IAEA Safety Standards and Guides
Emergency Preparedness and Response Network

• Requested By National Competent Authorities Coordinating Group

• Includes Thematic Sub-networks
  ▪ Emergency planers
  ▪ Medical Communities
  ▪ First responders etc.

• Includes Regional networks
  • Competent Authorities common regional collaborative workspace

• CS in April 2014 - Launch expected by July 2014
Capacity Building Forum

- Coming in 2014
- Term of Reference drafted
- Based on IAEA Capacity Building Methodology
- Harmonization of activities in the four elements of capacity building
- Regional Networks will take lead in the implementation of the activities
Nuclear Safety and Security Communication

First CS on 3-5 Sept. 2014

Expected to cover:

• General aspects - Com. and consultation with interested parties (GSR Part 1, Req 1 and 36; GS-R-3, Req 3.6 and 5.26 and DS460)
• Communication & New Nuclear Power Programme / Siting
• EPR Communication (EPR-Public Communications 2012)
• Waste management (GSR Part 5, Req. 5.1)
• Security aspects / Communication vs. Confidentiality
• Existing exposure situation (e.g. Radon) – DS421
• Nuclear Safety and Security Outreach
GNSSN Network on Management Systems

- IAEA Safety Standards Series No. GS-R-3: “Management System for Facilities and Activities”
  - Promote and maintain Safety Culture
  - Improve regulatory processes
  - Harmonization of management systems
- First Consultancy meeting will take place in 2014
- Expected to be online Q2, 2015
New Global Networks

SMR Network
- New SMR network, coming in 2014
- Outcome of INPRO Dialog Forum
- Independent of INPRO
- Safety guidance on SMR
- Assist embarking regulators
- Sharing of information on SMR technologies
- International cooperation
- IAIA Safety Standards and Guides

Capacity Building Forum
- Coming in 2014
- Form of Reference clarified
- Protocol/OSCAR (Capacity Building Model/Methodology)
- History: Support to nuclear safety
- (Enhanced Nuclear Safety Capacity Building, Management Plan)
- Harmonisation of activities in the framework of nuclear building
- Regional Networks will take lead in the implementation of harmonisation

Emergency Preparedness and Response Network
- Requested by National Competent Authorities Coordinating Group
- Includes Thematic Sub-networks
  - Emergency planners
  - Medical Communities
  - First responders etc.
- Includes Regional networks
  - Competent Authorities common regional collaborative workspace
- CS in April 2014 - Launch expected by July 2014

Nuclear Safety and Security Communication
First CS on 3-5 Sept. 2014
- Expected to cover:
  - General aspects - Com. and consultation with interested parties (GSR Part 1, Req 1 and 36; GSR R-3, Req 3.2 and 5.26 and DS460)
  - Communication & New Nuclear Power Programme / Siting
  - EPR Communication (EPR-Public Communications 2012)
  - Waste management (GSR Part 5, Req 5.1)
  - Security aspects / Communication vs. Confidentiality
  - Existing exposure situation (e.g. Radon) - DS421
  - Nuclear Safety and Security Outreach

GNSSN Network on Management Systems
- Management Standards Series No. 4 (GSR 36)
  - “Management System for the Establishment and Activities”
- Promenad and Human Safety Culture
- Improved regulatory processes
- Harmonization of Management Systems
- First Ongoing meeting, will take place in 2014
- Expected to be online Q3, 2015
Regional Networks

**ANSN (Asian Nuclear Safety Network)**
- Established in 2002
- Objectives:
  - Strengthen and harmonization of the radiation protection, nuclear safety, and security regulatory infrastructure and framework among the members of ANSN
  - ANSN will serve as an effective and efficient internationally recognized forum for the exchange of regulatory information and practices among the nuclear regulatory bodies in Asia

**ANNuR (Arab Network of Nuclear Regulators)**
- Established in 2010
- Objectives:
  - Establish a cooperative forum among Arab Regulators and International Nuclear Regulators
  - Improve the effectiveness of regulatory framework and support in the field of nuclear safety and security
  - Improve the capacity of nuclear safety and support in the field of nuclear safety and security

**Forum FNRBA (Forum for Nuclear Regulations of Black Sea States)**
- Established in 2009
- Objectives:
  - Strengthening and harmonization of the radiation protection, nuclear safety, and security regulatory infrastructure and framework among the members of FNRBA
  - FNRBA will act as an effective and efficient internationally recognized forum for the exchange of regulatory information and practices among the nuclear regulatory bodies in Africa
- Member Countries: Algeria, Angola, Benin, Botswana, Burkina Faso, Cameroon, Chad, Central African, Democratic Republic, Congo, Cote d' Ivoire, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Madagascar, Malawi, Mauritania, Mozambique, Namibia, Nigeria, Reunion, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Togo, Uganda, Zambia
- Implementation Framework:
  - The promotion of the Safety Regulatory Programme (SERP) implemented with financial support from European Commission, Korea, and USA, as well as AEA cooperation

Liaison with other external Safety and Security Networks (ENSREG, ETSON, WENRA, HERCA)
ANSN
Asian Nuclear Safety Network

Established in 2002

- From 1998 to 2002, ANSN was implemented as an EBP-Asia

Objectives

- Strong human and IT network to pool, analyse and share nuclear safety knowledge and experience.
- Sustainable regional cooperation, coordination and collaboration to continuously improve nuclear safety.
- Strong need of capacity building to support dynamic development of nuclear programmes in the region.
Forum FNRBA

Established in 2009

Objectives

- Strengthening and harmonisation of the radiation protection, nuclear safety and security regulatory infrastructure and framework among the members of FNRBA; and
- The FNRBA to act as an effective and efficient internationally recognized forum for the exchange of regulatory experiences and practices among the nuclear regulatory bodies in Africa.

Member Countries (33)

- Algeria, Angola, Benin, Botswana, Burkina Faso, Cameroon, Chad, Cote D’Ivoire, DR Congo, Egypt, Ethiopia, Gabon, Ghana, Kenya, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Namibia, Niger, Nigeria, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zimbabwe

Implementation Framework

- The project is an Extra Budgetary Programme (EBP) implemented with financial support from European Commission, Korea and U.S.A. as well as IAEA regular budget
ANNuR
Arab Network of Nuclear Regulators

Established in 2010

Objectives
- Facilitate the cooperation between Arab, regional and International nuclear bodies;
- Capacity building system to share knowledge and experience between regulators in Arab countries;
- Enhancement of nuclear safety infrastructures in Arab countries;
- Provide regulatory insights to nuclear safety issues specific to Arab countries.

Member Countries (22)
- Bahrain, Egypt, Iraq, Jordan, KSA, Kuwait, Lebanon, Libya, Mauritania, Morocco, Palestine, Sudan, Syria, Tunisia, Yemen, Algeria, Comoros, Djibuti, Oman, Qatar, Somalia, UAE.

Implementation Framework
- The project is an Extra Budgetary Programme (EBP) implemented with financial support from European Commission, Korea and U.S.A. as well as IAEA regular budget

Practical Arrangements signed between ANNuR and the IAEA in April 2014
Regional Networks

**ANSN**
Asian Nuclear Safety Network
- Established in 2002
- From 1998 to 2002, ANSN was implemented as an EURATOM project.
- Objectives:
  - Strengthen national nuclear safety knowledge and experience.
  - Establish a regional cooperative network to improve nuclear safety knowledge and experience.
  - Strengthen national nuclear safety knowledge and experience.
  - Strong need for capacity building to support dynamic development of nuclear programs.

**ANNR**
Arab Network of Nuclear Regulators
- Established in 2010
- Objectives:
  - Establish a regional cooperative network to support nuclear safety.
  - Strengthen national nuclear safety knowledge and experience.
  - Improve national nuclear safety knowledge and experience.
  - Improved national nuclear safety knowledge and experience.
  - Strengthen nuclear safety knowledge and experience.

**Forum FNRBA**
- Established in 2009
- Objectives:
  - Strengthening and harmonization of the radiation protection, nuclear safety, and security regulatory infrastructure and framework among the members of FNRBA and its regional and international partners.
  - The FNRBA aims at an effective and efficient internationally recognized forum for the exchange of regulatory experiences and practices among the regulatory bodies in Africa.

**Member Countries**
- Algeria, Angola, Benin, Botswana, Burkina Faso, Cameroon, Chad, Congo (Brazzaville), DR Congo, Egypt, Equatorial Guinea, Ethiopia, Ghana, Kenya, Libya, Madagascar, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Senegal, South Africa, Sudan, Tanzania, Tunisia, Uganda, Zimbabwe.

**Implementation Framework**
- The region has a functional Regional Programme (FRP) implemented with financial support from European Commission, Korea, and USA, as well as IAEA regional office.

+ Liaison with other external Safety and Security Networks (ENSREG, ETSON, WENRA, HERCA)
National Nuclear Regulatory Portals NNRPs

Collaboration on National Level:
- Serve as interfaces between national stakeholders and GNSSN community
- Ensure visibility and promote networking among national stakeholders
- Help increase transparency
- Communicate to the international community on national achievements and current status of nuclear safety infrastructure
- Help harmonize national approaches to knowledge management

30 National Contact Points for NNRPs already nominated:
- Europe: Belarus, Bosnia, Bulgaria, Finland, France, Greece, Cyprus, Germany, Hungary, Latvia, Macedonia, Romania, Russia, Slovenia, Serbia, Spain, Turkey, Ukraine.
- Asia-Pacific: Thailand, Tajikistan, Australia.
- North America: Canada, USA
- Middle-East: Iran.
- South America: Chile, Uruguay.
30 National Contact Points for NNRPs already nominated:

- **Europe**: Belarus, Bosnia, Bulgaria, Finland, France, Greece, Cyprus, Germany, Hungary, Latvia, Macedonia, Romania, Russia, Slovenia, Serbia, Spain, Turkey, Ukraine.
- **Asia-Pacific**: Thailand, Tajikistan, Australia.
- **Africa**: Niger, Senegal, Kenya, Ghana.
- **North America**: Canada, USA
- **Middle-East**: Iran.
- **South America**: Chile, Uruguay.
NNRPs support to GNSSN mission

- Broaden collaboration and enhance knowledge transfer
- Promote national capability and knowledge internationally
- Support the national safety and security infrastructure development
- Help harmonize national approaches to knowledge management
Suggested Structure of National Safety and Security Networks

- All national stakeholders are invited to participate. External collaborators can also be invited to participate.

- Submitting and discussing individual inter-organ projects and activities

- Managing the day-to-day operation

- National Committee
- Secretariat
- National Contact Point
- Thematic Area 1
- Thematic Area X
GNSSN Progress

2013/2014

• Promote RegNet
• Develop NNRPs
• Invite Nuclear Society
• Liaison with European networks – ENSREG, WENRA, ETSON

Regional Networks

Regional Nuclear Information Networks (RNINs)

• Regional Nuclear Information Network (RNIN)

National Nuclear Regulatory Portals (NNRPs)

• National Nuclear Regulatory Portal (NNRP)

New Global Networks

SMR Network

• SMR Network

Capacity Building Program

• Capacity Building Program

Emergency Preparedness and Response Network

• Emergency Preparedness and Response Network

Nuclear Safety and Security Communications Network (NSSCN)

• Nuclear Safety and Security Communications Network (NSSCN)

National Nuclear Regulatory Portals (NNRPs)

Online national-level NNRPs

• Online national-level NNRPs

Communications of institutional members to the national authorities and stakeholders

Strengthening inter-agency cooperation in crisis management
IAEA Strategic Approach on GNSSN 2014-2020

- Chap 1: Goals and Principles
- Chap 2: Governance Plan
- Chap 3: Communication Outreach Plan

Evaluation Mechanisms
to be defined in 2014

Knowledge management tools

Other Challenges
- Safety and Security Interface
- Interconnection between Networks
- Promotion of GNSSN

...the new logo
Elements of GNSSN Strategic Approach

- Supporting IAEA major program 3
- GNSSN Strategic Goals
- Operations
- Implementation Mechanisms
- Evaluation and monitoring
- Outreach and Communication
IAEA Strategic Approach on GNSSN 2014-2020

- Chap 1: Goals and Principles
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Evaluation Mechanisms to be defined in 2014

Knowledge management tools

Other Challenges

including:
- Safety and Security Interface
- Interconnection between Networks
- Promotion of GNSSN
Evaluation and Performance

Part of the IAEA “Strategic Approach on the Global Nuclear Safety and Security Network”

- Need to identify the performance of the GNSSN portfolio
- Need to identify the impact of the programme on the individual and organizational level

- Develop Evaluation Mechanisms:
  - First Consultancy Q3 2014
  - Evaluation and Performance Assessment Tool
    - In Relation to the Capacity Building Activities
    - First consultancy Q4 2014

The Evaluation Mechanisms will include 3 levels:
(1) Evaluation - Performance of each network,
(2) Review - at GNSSN level,
(3) Independent assessment - involving external reviewer.
IAEA Strategic Approach on GNSSN 2014-2020

• Chap 1: Goals and Principles
• Chap 2: Governance Plan
• Chap 3: Communication Outreach Plan

Evaluation Mechanisms
to be defined in 2014

Knowledge management tools

Other Challenges

including:
• Safety and Security Interface
• Interconnection between Networks
• Promotion of GNSSN
Knowledge Management

- Develop a knowledge map
  - internal and external repositories of information sources
- Develop a knowledge management methodology
  - GS-R-3
  - Safety Report “Managing Regulatory Body Competence”

- Further develop the NNRP
  - support the overall process more effective Knowledge management
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Evaluation Mechanisms
to be defined in 2014

Knowledge management tools

Other Challenges

including:
- Safety and Security Interface
- Interconnection between Networks
- Promotion of GNSSN

...the new logo
including:

- Safety and Security Interface
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IAEA
International Atomic Energy Agency
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