

The Asian Nuclear Safety Network

Overview of the Asian Nuclear Safety Network (ANSN)

June 2011
ANSN Management Team
SSCS-NS, IAEA

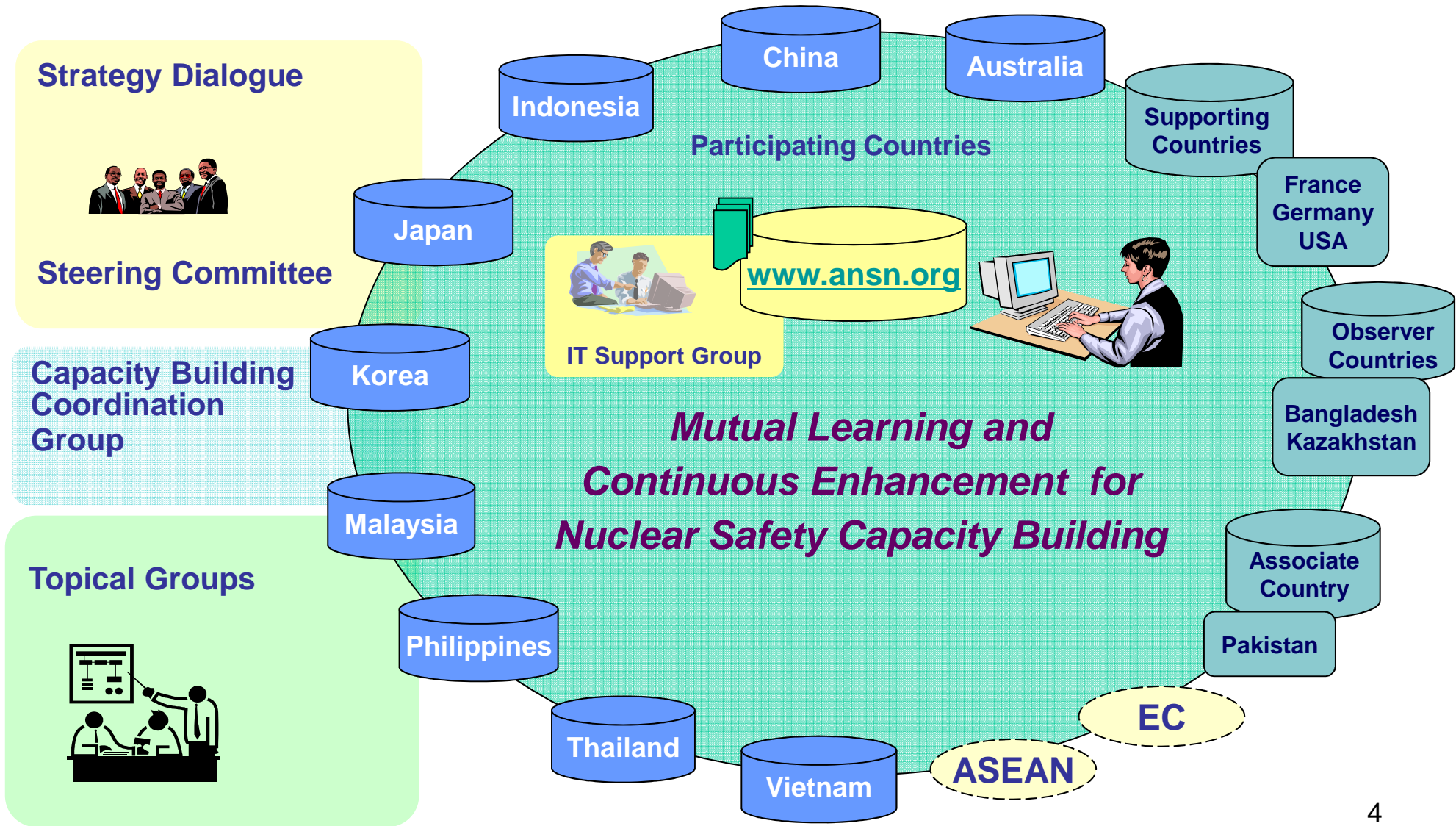
Contents

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Introduction (1): Background and Objectives of ANSN

- There is a strong need of nuclear safety ***Capacity Building in Asia*** to establish robust scientific and technological expertise as well as practical problem solving expertise to support dynamic development of nuclear programmes in the region.
- ***The Asian Nuclear Safety Network (ANSN)*** was launched in 2002 as a strong human and advanced IT network to pool, analyse and share nuclear safety knowledge and practical experience in Asia.
- The ANSN provides a Member States-driven platform with support of the IAEA for facilitating sustainable regional cooperation, coordination and collaboration on continuously improving nuclear safety Capacity Building in Asia to meet challenges of dynamically developing nuclear power programmes.

Introduction (2): Human and IT networking of ANSN



Structure (1): ANSN Management Structure

Strategy Dialogue meetings

- Policy-making for ANSN



ANSN Steering Committee

- Planning, coordination, monitoring and evaluation of ANSN activities
- Promotion of ANSN



Capacity Building Coordination Group

- Implementation of ANSN activities
- Selection and control of uploaded knowledge

IT Support Group

Topical Groups

Structure (2): Topical Groups: “A Human Network”

Topical Groups:

- *Education and Training*
- *Emergency Preparedness and Response*
- *Governmental and Regulatory Infrastructure*
- *Operational Safety of Nuclear Power Plants*
- *Radioactive Waste Management*
- *Safety Analysis*
- *Safety Management of Research Reactors*
- *Siting*

- Forums composed of specialists
- Identification of regional common needs
- Planning and implementation of workshops and regional training courses
- Implementation of specific activities
- Selection and quality management of information to be shared in the IT network

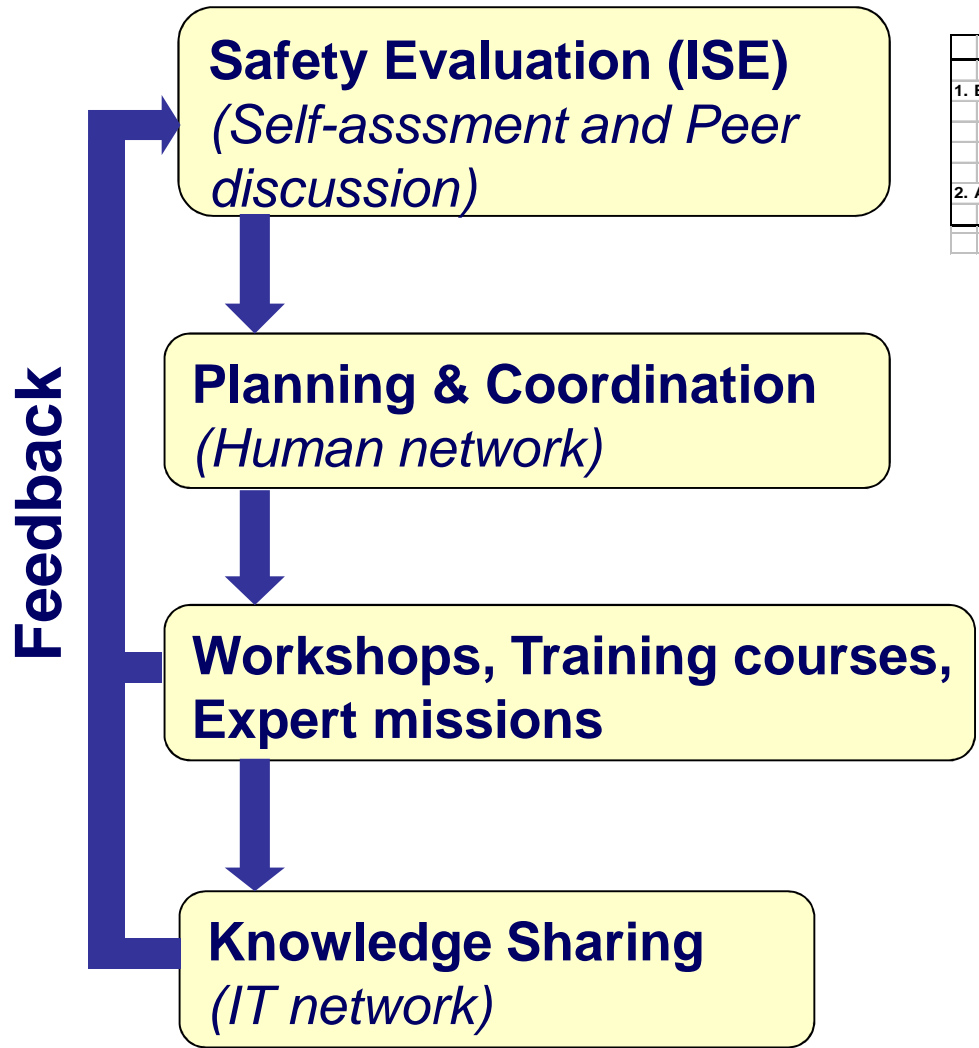


Workshop organized by Topical Group on Siting

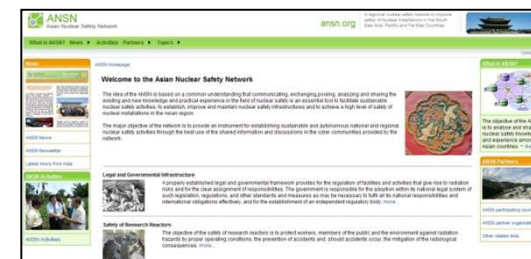


Workshop on Radiation
Emergency Medical Preparedness

Activities (1): ANSN Programme Management Cycle



	Country A	Country B
1. Basic responsibilities		
1. NCA	Yellow	Green
2. Functions and responsibilities	Green	Blue
3. Regulatory and inspection	Blue	Blue
2. Assessment of threats		
	Blue	Blue



Activities (2): Integrated Safety Evaluation (ISE)

Objectives:

- To measure progress and status of Capacity Building of ANSN countries
- To identify gaps to be filled by ANSN activities for continuous improvement

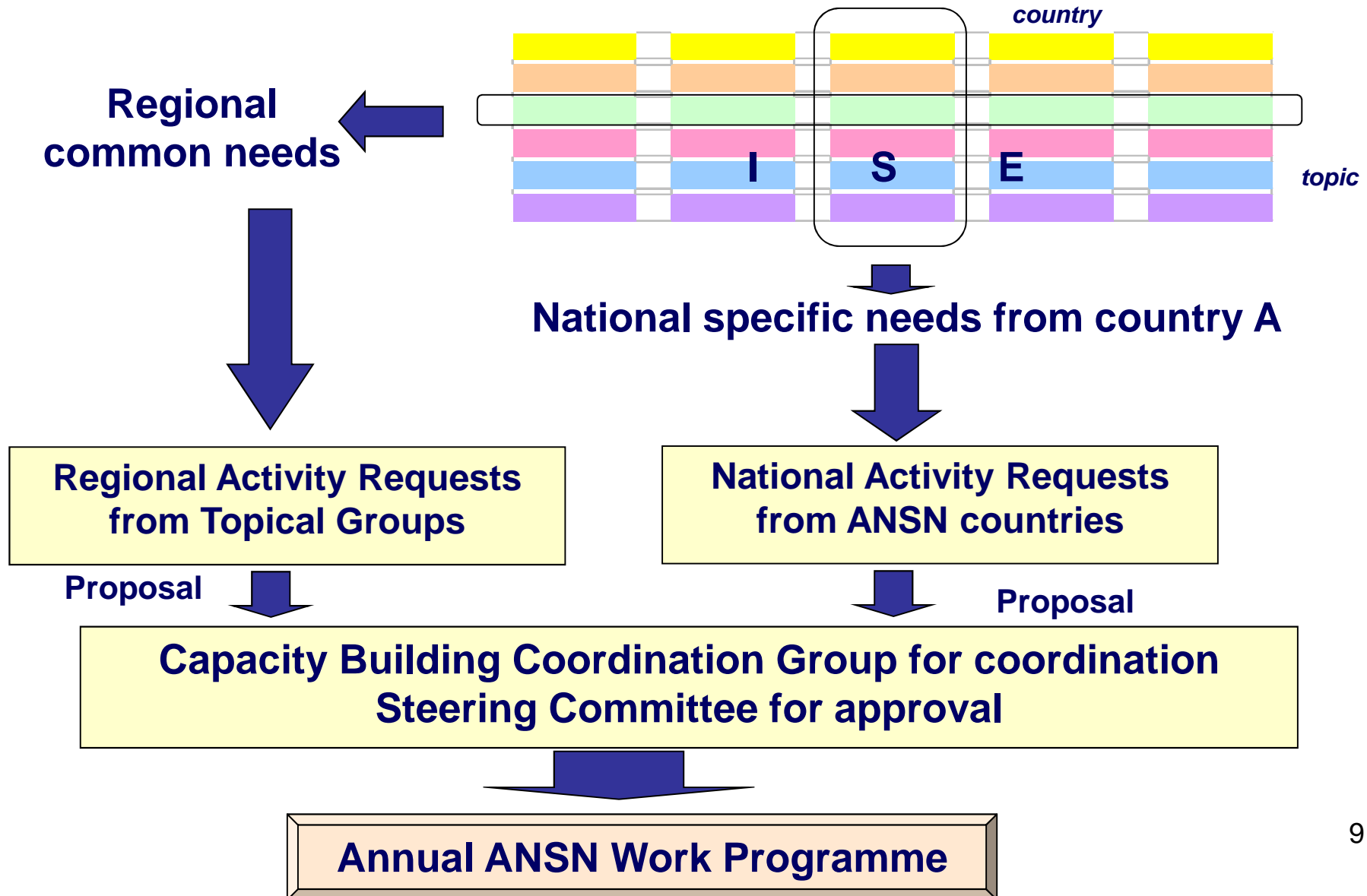
Six topics:

- *Governmental and Regulatory Infrastructure*
- *Safety of Research Reactors*
- *Safety of Nuclear Power Plants*
- *Emergency Preparedness and Response*
- *Radioactive Waste Management*
- *Education and Training*

Methodology:

- Self Assessment by Member States based on IAEA Safety Standards

Activities (3): Planning & Coordination



Activities (4): Implementation of ANSN Activities

- Annually 40-50 workshops, trainings, expert missions
- Regional Activities (examples)
 - Workshop on Evaluation of Decommissioning Waste including Waste Inventory and Characterization (Indonesia, 10-14 May 2010)
 - Workshop on Regulatory Requirements for Site Selection and Evaluation for Nuclear Power Plants (Vietnam, 7-11 June 2010)
 - Training Course on Regulatory Control of Nuclear Power Plants (Rep. of Korea, 26-30 July 2010)
 - Workshop on Radiation Emergency Management for Decision Makers and Technical Supporters (Japan, 28 June -2 July 2010)
 - Workshop on Experience on the Periodic Safety Review for Nuclear Power Plants (China, 1-5 November 2010)
- National Activities (examples)
 - Training Course on Shielding Design and Modelling Related to Reactor Upgrading Activities (Malaysia, 31 May-4 June 2010)
 - Workshop on Review and Assessment of the Licensing Documents for the Construction Permit of Nuclear Power Plants (Indonesia, 30 August-3 September 2010)



IT Platform (1): ANSN Website

In the ANSN website almost 8,000 documents including all materials and information on more than 350 ANSN activities have been pooled for knowledge sharing.

The screenshot displays the ANSN website homepage. At the top left is the ANSN logo and name. To the right is the IAEA logo and name. Below the logos is a navigation bar with links: "What is ANSN?", "News", "Partners", "Topics", "ANSN Activities", "Organisation", "Management System", and "Country Knowledge Base". A secondary navigation bar includes "Contact Us", "Logout", "Change password", and a user greeting: "You are logged in. Welcome, fukadaY".

The main content area is titled "ANSN Homepage" and "Nuclear Safety & Security - IAEA". It features a large heading: "Welcome to the Asian Nuclear Safety Network". Below this, there are two columns of text:

- Left Column:** "The idea of the ANSN is based on a common understanding that communicating, exchanging, pooling, analyzing and sharing the existing and new knowledge and practical experience in the field of nuclear safety is an essential tool to facilitate sustainable nuclear safety activities, to establish, improve and maintain nuclear safety infrastructures and to achieve a high level of safety of nuclear installations in the Asian region."
- Right Column:** "The major objective of the network is to provide an instrument for establishing sustainable and autonomous national and regional nuclear safety activities through the best use of the shared information and discussions in the cyber communities provided by the network."

Below the text are two sections:

- Legal and Governmental Infrastructure:** Includes an image of a document and text: "A properly established legal and governmental framework provides for the regulation of facilities and activities that give rise to radiation risks and for the clear assignment of responsibilities. The government is responsible for the adoption within its national legal system of such legislation, regulations, and other standards and measures as may be necessary to fulfil all its national responsibilities and international obligations effectively, and for the establishment of an independent regulatory body. [more...](#)"
- Safety of Research Reactors:** Includes an image of a reactor and text: "The objective of the safety of research reactors is to protect workers, members of the public and the environment against radiation hazards by proper operating conditions, the prevention of accidents and, should accidents occur, the mitigation of the radiological consequences. [more...](#)"

On the left side of the page, there is a sidebar with several sections:

- News:** Includes "ANSN News", "ANSN Newsletter", and "Latest news from Asia".
- ANSN Topics:** Includes "Governmental and Regulatory Infrastructure", "Safety of Research Reactors", "Safety of Nuclear Power Plants", "Emergency Preparedness and Response", "Radioactive Waste Management", and "Education and Training".

On the right side of the page, there are additional sections:

- What is ANSN?:** Includes a diagram and text: "The objective of the ANSN is to analyse and share nuclear safety knowledge and experience among Asian countries. [More](#)" and "ANSN Vision and Action Plan for its implementation has been developed [More](#)".
- ANSN Partners:** Includes an image of a nuclear facility and text: "ANSN participating countries", "ANSN partner organizations", and "Other related links".

At the bottom of the page, there is a section titled "Safety of Nuclear Power Plants".

IT Platform (2): Knowledge Sharing via. ANSN Website

Education and Training

<Examples>

Emergency Preparedness and Response

Introduction

The establishment of sustainable education and training programmes are fundamental to safety to ensure that proper skills are acquired and that adequate levels of competencies are achieved and maintained.



Introduction

The primary goals of preparedness and response for a nuclear or radiation emergency are: to ensure that arrangements are in place for an effective response at the scene and, as appropriate, at the local, regional, national and international levels, to a nuclear or radiation emergency; to ensure that, for reasonably foreseeable incidents, radiation risks would be minor; for any incidents that do occur, to take practical measures to mitigate any consequences for human life and health and the environment.



Main references:

[Guidance for Regulatory Bodies](#)

IAEA Publications on Training

[Education, Training, & Related Resources](#)

New Knowledge generated through ANSN

- o Workshop on Train the Trainers in Nuclear Safety, Korea, 14
- o Workshop on Training Management and Annual Meeting of
- o Training Course on Regulatory Control of Nuclear Power Pl
- o Consultancy of Asian Nuclear Safety Network (ANSN) new T
- 19 May 2010
- o Basic Professional Training Course on Nuclear Safety, Dae
- o Training Course for the National Nuclear Safety Administrati
- o Third National Basic Professional Training Course in Nucle
- o National Basic Professional Training Course, Dalat, 8-19 N
- o Regional Workshop on Education and Training in Nuclear S
- o Refresher Training Course on Nuclear Safety, Bangkok, Tha

Public Communication (1)

- o Regional workshop on nuclear safety information for decis

Governmental and Regulatory Infrastructure

Introduction

A properly established legal and governmental framework provides for the regulation of facilities and activities that give rise to radiation risks and for the clear assignment of responsibilities. The government is responsible for the adoption within its national legal system of such legislation, regulations, and other standards and measures as may be necessary to fulfil all its national responsibilities and international obligations effectively, and for the establishment of an independent regulatory body.



Main references:

[Handbook on Nuclear Law](#)

[Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety](#)

Safety Standards

[IAEA Safety Standards on Legal and Governmental Infrastructure](#)

New Knowledge generated through ANSN

- o Annual meeting of the Governmental and regulatory infrastructure topical group - GRITG , Tokyo, Japan, 27-30 October 20
- o Workshop on Governmental and Regulatory Infrastructure for Nuclear Safety, Shenzhen, China, 29 June-1 July 2009
- o International Conference on the Challenges faced by Technical and Scientific Support Organizations in Enhancing Nucle
- o Workshop on Quality Management Systems for Nuclear Regulatory Bodies, Beijing, China, 21-25 November 2005
- o National Training Course on the Supervision of TRIGA Research Reactor, Malacca, 19-30 July 2004
- o Workshop on Risk Informed Regulatory Inspections, Beijing, China, 3-6 November 2003
- o Workshop on Inspectors Training, Beijing, 23-27 September 2002

references:

[Emergency Conventions](#)

[Preparedness and Response for a Nuclear or Radiological Emergency Safety Requirements](#)

Standards

[Safety Standards on Emergency Preparedness & Response](#)

Selected IAEA training material:

[Training in Emergency Preparedness](#)

New Knowledge generated through ANSN

- o Workshop on Infrastructures needed for off-site and on-site emergency preparedness and response activ
- o 1st Meeting of the ANSN Topical Group on Emergency Preparedness and Response, Manila, Philippines,
- o Workshop on Emergency Response Off-site Liaison with On-site, Manila, Philippines, 27-29 July 2009
- o PREV Mission to assess the national emergency preparedness infrastructure, Kuala Lumpur, Malaysia,
- o Workshop on Methods and Procedures for Nuclear or Radiological Emergency Response and Observatio
- o Workshop on Preparedness & Response for a Nuclear or Radiological Emergency, Bangkok, Thailand, 22
- o National Radiological Emergency Seminar and Exercise, Selangor, 3-5 December 2007
- o Regional Workshop on Incident Reporting System (IRS) / International Nuclear Event Scale (INES) Criteria
- o Regional Workshop Specialized in Exercises, Jakarta, Indonesia, 12-15 June 2007
- o Symposium on Awareness Enhancement and Confidence Building on Emergency Medical Preparedness

IT Platform (3): Knowledge Sharing via. ANSN Website (cont.)

<Examples>

ANSN-10011

Workshop on Training Management and Annual Meeting of ETTG, Korea, 9-13 August 2010

IAEA Officer:
Mr Sang Ryeol Park, NSN
Expert:

No.	Title
1	Summary Report to be uploaded
2	Agenda
3	Participant's list
4	Commemorative group picture
Monday 09 August 2010	
5	Revised Generic Action Plan: feeding back the Discussion at #2 Strategy Dialogue (K. Tomita, Japan)
6	ANSN Steering Committee update
7	ETTg Activities 2010
8	Mid Term Activities 1
Thursday 12 August 2010	
9	Country Presentation on Management of Training - China
10	Country Presentation on Management of Training - Indonesia
11	Country Presentation on Management of Training - Japan
12	Country Presentation on Management of Training - Korea
13	Country Presentation on Management of Training - Malaysia
14	Country Presentation on Management of Training - Philippines
15	Country Presentation on Management of Training - Thailand
16	Country Presentation on Management of Training - Vietnam



ANSN-10012ws

Workshop on National Intervention Levels, Taking Urgent Protective Actions and Protection of Workers, Jakarta, Indonesia, 10 - 12 May 2010

IAEA Officer:
Mr. Peter Zombori, NS-IEC
Expert:
Mr. Masahiro Fukumoto (Japan), Mr. Seihiro Itoya (Japan)

No.	Title	Document(s)
1	Summary Report	
2	Agenda	
3	Participants	
4	Commemorative group picture	
Monday 10 May 2010		
5	Purpose and Scope of the Workshop (P. Zombori)	
6	Goals of Emergency Preparedness and Response (P. Zombori)	
7	International Response Criteria for Interventions and Actions (P. Zombori)	
8	National Intervention Levels in Japan for Nuclear Disaster Response (S. Itoya)	
9	Activities for radiation protection of workers at the JCO criticality accident (M. Fukamoto)	
10	National Intervention Levels in Australia (S. Solomon, Australia)	
Tuesday 11 May 2010		
11	National Intervention Level for UPA and Protection of Workers in Indonesia (D. Sumargo, Indonesia)	
12	National Intervention Levels in Malaysia (H. Mohd-Ali, H. Idris, Malaysia)	
13	National Intervention Levels in the Philippines (C. Nohay, Philippines)	
14	National Intervention Levels in Thailand (K. Saiyut, Thailand)	
15	Overview on Infrastructure of Nuclear and Radiological Emergency Preparedness & Response (B. Vuong-Thu, Vietnam)	
Wednesday 12 May 2010		
16	Comparison of generic intervention levels (GIL) and emergency workers guidance (EWG) (S. Itoya)	
17	Application of the Intervention Levels (Case Study: The Chernobyl Field Exercise) (P. Zombori)	

Public Communication: ANSN Newsletter

ANSN Newsletter is published biweekly and has almost 1,000 external subscribers.

<Examples>

ANSN Newsletter

In order to increase the outreach of the ANSN, a newsletter is published on a bi-weekly basis since March 2005 to more than 800 subscribers.

The newsletter provides an overview of recent technical activities carried out and those planned.

Sign-up for the ANSN Newsletter

If you wish to receive directly the ANSN Newsletter by e-mail as soon as it is published, please send your e-mail organization or company to:

Mr. Yasukazu Fukuda
E-mail: y.fukuda@iaea.org

Do not hesitate to use the above address to send any comments or suggestions related to the Newsletter.

The following ANSN newsletter has been published.



ANSN Newsletter Issue No.118

- Regional Conference on 21st Century Capacity Building and Virtual TSO in Asia

Issue Date: 15 November 2010



ANSN Newsletter Issue No.117

- 12th Meeting of Steering Committee
- 3rd Meeting of Capacity Building Coordination Group (CBCG)

Issue Date: 01 November 2010



ANSN Newsletter Issue NO.116

- Annual Meeting of the Topical Group on Education and Training (E&TTG) and Workshop Training
- Training Course on Regulatory Control of Nuclear Power Plants

Issue Date: 15 October 2010



ANSN Newsletter Issue No.115

- Round Table Discussion on Nuclear Safety Knowledge Networking

Issue Date: 01 October 2010



Special Issue: 100th Anniversary of ANSN Newsletter

A Message from the IAEA



T. Taniguchi, IAEA Deputy Director General, Head of the Department of Nuclear Safety and Security

On this important occasion of the 100th Anniversary of the ANSN Newsletter, I am pleased to convey my sincere congratulations to all ANSN Newsletter readers. The first ANSN Newsletter was issued in March 2005. Since then, significant achievements have been made to help the ANSN countries develop and improve their nuclear safety infrastructure and capacity

trends and issues, such as the ambitious introduction of new nuclear power plants, the rapid expansion of existing nuclear power programmes and the wider use of radioactive sources highlight the need for continued and improved international cooperation and coordination. The increasing multinational nature of today's nuclear business underscores this need. In this context, the establishment of adequate nuclear safety capacity building and infrastructure is particularly important and cannot be ignored: ANSN will be expected to play an essential role in this effort.

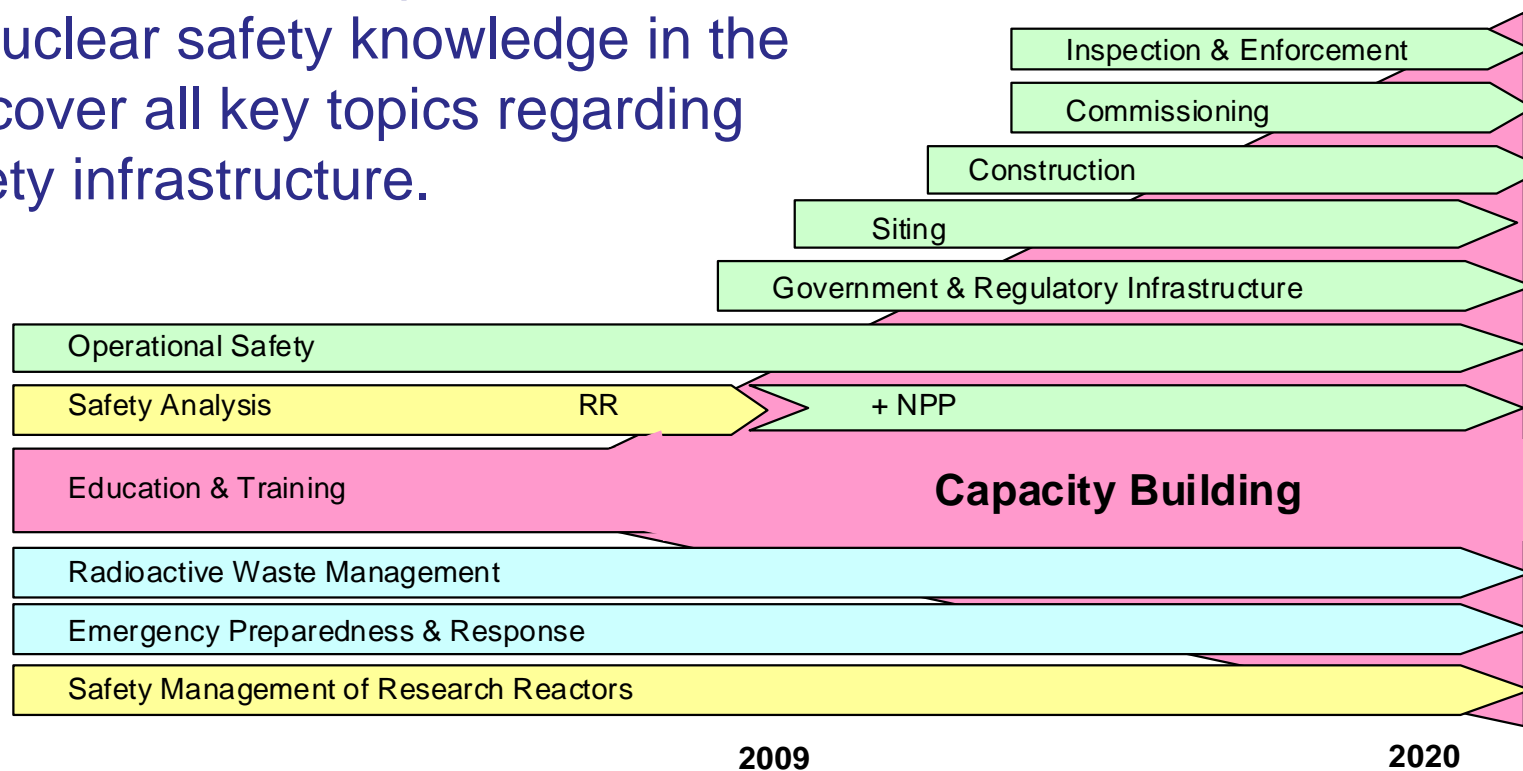
Through consideration of the global trends, three key issues and challenges have been identified for ANSN: (1) continuing international cooperation and emerging coordination for new and expanding nuclear power programmes, (2) capacity building for sustainable nuclear safety and (3) strengthening of global and regional networking activities.

Capacity Building

The international nuclear community has continued its focus on capacity building for sustainable nuclear safety. Capacity building is much broader than traditional education and

Vision and Strategy (1): ANSN Vision 2020

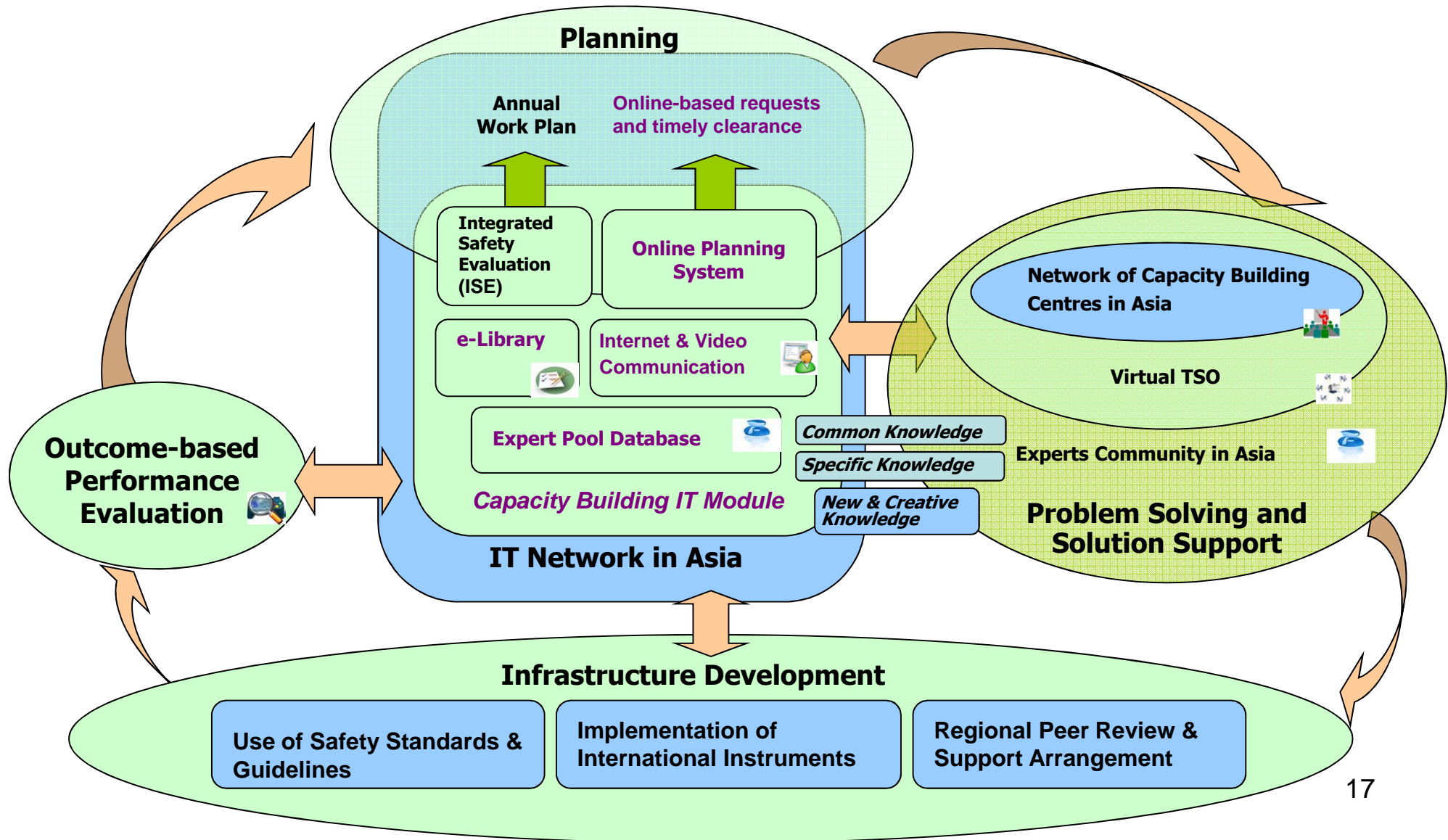
- In 2009, the ANSN entered a new era of cooperative work agreeing at the Vice-ministerial level strategy dialogue on the **ANSN Vision 2020** focusing on **Regional Capacity Building**.
- The ANSN will be a strong human and advanced IT network to acquire, create, and share nuclear safety knowledge in the region and cover all key topics regarding nuclear safety infrastructure.



Vision and Strategy (2): Generic Action Plan

- In 2010, the ANSN renewed a high-level commitment to achieving the ANSN Vision 2020 at the strategy dialogue and agreed to the **Generic Action Plan** for Establishing the **Regional Capacity Building System in Asia** as a road map to implement the Vision 2020.
- The Generic Action Plan proposes to establish a dynamic and interactive system for enhancing the Regional Capacity Building through facilitating face-to-face cooperative activities and interactive use of state-of-the-art IT technology.
- The Regional Capacity Building System focuses on Problem Solving and Solution Support through sharing practical and customised knowledge.

Vision and Strategy (3): Regional Capacity Building System in Asia



Vision and Strategy (4): National Action Plans

- The ANSN has confirmed the necessity of preparing ***National Action Plans*** for implementing the Generic Action Plan, in particular expanding National Education & Training Centres to ***National Capacity Building Centres*** and implementing them for establishing a ***Network of National Capacity Building Centres*** and eventually ***the Regional Capacity Building System***.
- The ANSN will further promote regional cooperative activities in collaboration with the IAEA to support development and implementation of National Action Plans for responding to national specific needs of Capacity Building for nuclear power programmes (namely, ***Peer Review and Support Arrangement (PReSA)***), complementing the Topical Group activities, in cooperation with the Regulatory Cooperation Forum (RCF) as appropriate.

Vision and Strategy (5): Collaboration between ANSN and IAEA

- A coordination meeting among representatives of ANSN and the IAEA was organized from 23-25 February 2011, Vienna with the aim of establishing a close collaboration on the basis of **the IAEA Specific Safety Guide SSG-16: *Establishing the Safety Infrastructure for a Nuclear Power Programme*** (former DS 424).
- The concept of **Peer Review and Support Arrangement (PReSA)** was defined as *a systematic approach to support capacity building and infrastructure development of ANSN news entrant countries, sequentially for self-assessment, peer review and regional and national activities for filling the gaps identified, in collaboration between ANSN, IAEA and RCF.*
- It was agreed to organize a **Regional Workshop to facilitate the understanding and application of SSG-16**, 4-15 July 2011, Vienna.

Vision and Strategy (6): Enhancing Global and Regional Networking

Global Network

Global Nuclear Safety and Security Network (GNSN)

•A set of existing networks and information resources, i.e. internationally accessible information and data sources

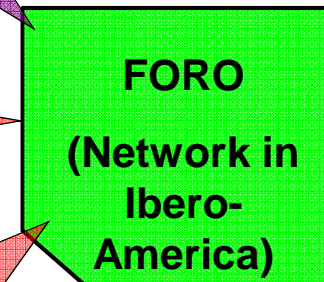
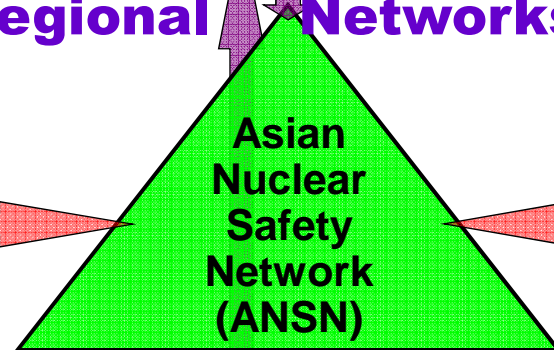
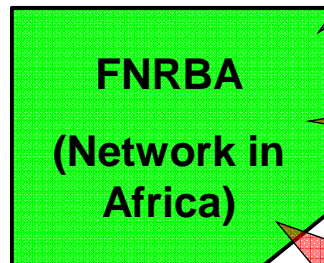
RegNet

•Sharing regulatory knowledge, practices and information

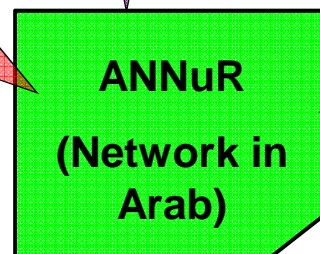
Regional Networks

•Network of Network

•Network of Network



•Expanding and Strengthening Human and IT Networks for developing regional capacity building system, well adapted with the regionally unique situation and culture



•Strengthening Inter-regional Human and IT Networks for sharing knowledge and practical experience²⁰

Vision and Strategy (7): Enhancing Global and Regional Networking (cont.)

- Cooperation between ANSN and the global and regional nuclear safety networks (i.e. GNSSN, FORO, FNRBA, ANNuR and ETSON) is mutually beneficial for enhancing Capacity Building internationally, regionally and nationally, by strengthening human as well as IT networking.
- The ANSN provided opportunities to initiating cooperation among networks.
 - Round Table Discussion on the ANSN Activities, 15 September 2009, VIC, Vienna
 - Round Table Discussion on Nuclear Safety Networking, 21 September 2010, VIC, Vienna
 - Regional Conference on 21st Century Capacity Building and Virtual TSO in Asia, 29 October 2010, Tokyo, Japan

Conclusion

- **There is a strong need of Capacity Building and Infrastructure Development in Asia to establish robust scientific and technological expertise to support dynamic development of nuclear programmes in the region.**
- **The ANSN has provided an effective model of regional networking by implementing Regional Capacity Building System as an integrated approach for achieving and sustaining high levels of nuclear safety in the region.**
- **The ANSN will further take a leading role in providing a platform for dynamic and interactive knowledge networking in the region and beyond, in cooperation with the global and other regional networks (e.g. GNSSN, FORO, FNRBA, ANNuR and ETSON) and with the Regulatory Cooperation Forum (RCF) as appropriate.**