

Overview of NRA Human Resource Development Center and NRA Cooperation and Support for IAEA/ANSN

**International Conference on Human Resource Development for
Nuclear Power Programmes:
Building and Sustaining Capacity
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1. Merger of JNES into NRA(1)

NRA(Nuclear Regulation Authority)
Chairman and 4 Commissioners

JNES (Japan Nuclear Energy
Safety Organization)

Mission as a Technical Organization to
support the NRA

Inspection
Analysis and evaluation
etc.

was merged into
the NRA on March 1st, 2014

The Secretariat
to the NRA

*A non-civil service style
Incorporated Administrative Agency*

Annual budget \ 20.1 billion
(FY 2013)

Annual budget \ 37.2 billion
(FY 2013)

The number of staff 498
 Permanent staff 401
 Part-time staff 97
(as of Apr.1, 2013)

The number of staff 545
(as of Sep.4, 2013)

**The number of authorized staff 1,025
(as of March 1, 2014)**

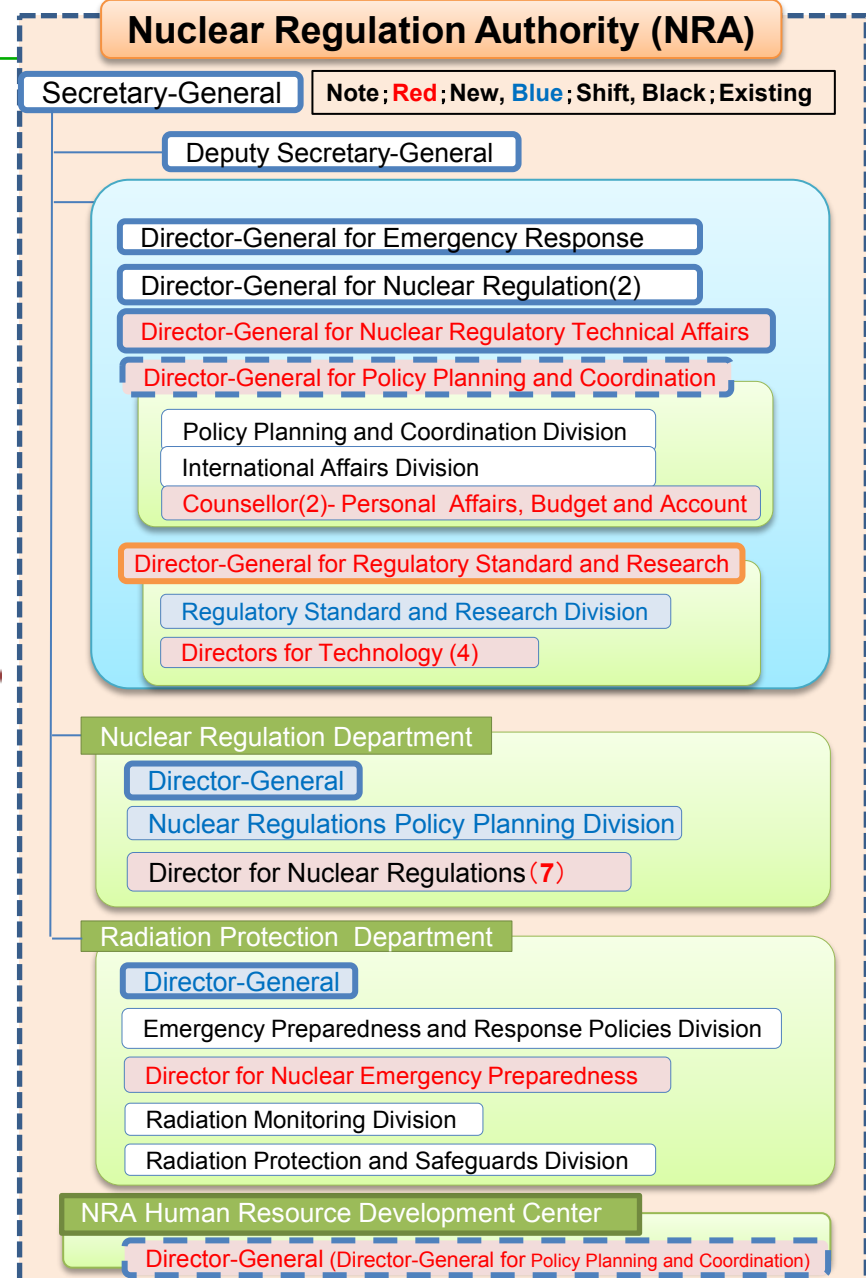
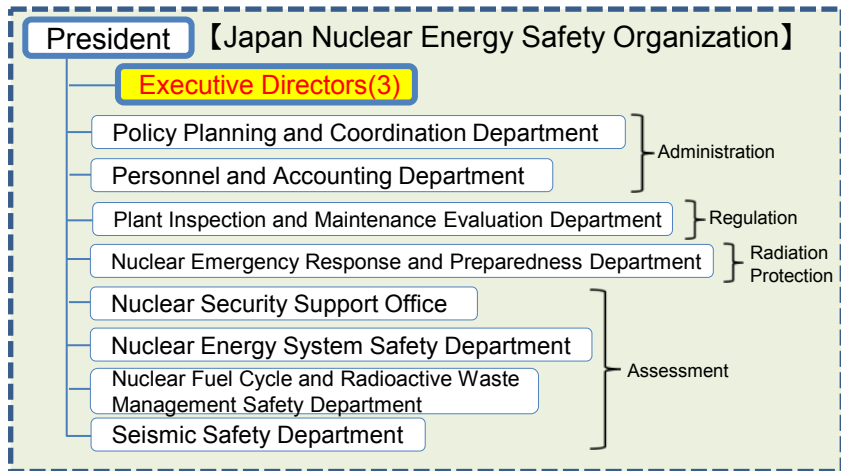
Before

1. Merger of JNES into NRA(2)

After



+



1. Merger of JNES into NRA(3)

Nuclear Regulation Authority (NRA)

Secretary-General

Deputy Secretary-General

Director-General for Emergency Response

Director-General for Nuclear Regulation(2)

Director-General for Nuclear Regulatory Technical Affairs

Director-General for Policy Planning and Coordination

Policy Planning and Coordination Division

International Affairs Division

Counsellor(2)
- Personal Affairs, Budget and Account

Director-General for Regulatory Standard and Research

Regulatory Standard and Research Division

Directors for Technology(4)

Note ; Red ; New, Blue ; Shift, Black ; Existing

Nuclear Regulation Department

Director-General

Nuclear Regulations Policy Planning Division

Director for Nuclear Regulations (7) *

Radiation Protection Department

Director-General

Emergency Preparedness and Response Policies Division

Director for Emergency Preparedness and Response Programs Division

Radiation Monitoring Division

Radiation Protection and Safeguards Division

NRA Human Resource Development Center

Director-General (Director-General for Policy Planning and Coordination)

* Director, Division of Regulation for BWR
 Director, Division of Regulation for PWR
 Director, Division of Regulation for Inspection of Nuclear Reactor Facilities
 Director, Division of Regulation for Advanced Reactors, Research Reactors, and Decommissioning
 Director, Division of Regulation for Nuclear Fuel Facilities and Use of Nuclear Material
 Director, Division of Regulation for Radioactive Waste, Storage and Transport
 Director, Division of Regulation against Earthquake and Tsunami

1. Merger of JNES into NRA(4)

➤ NRA's Core Values and Principles

■ Mission

Our fundamental mission is to protect the general public and the environment through rigorous and reliable regulation of nuclear activities.

■ Guiding Principles for Activities

- Independent Decision Making
- Effective Actions
- Open and Transparent Organization
- Improvement and Commitment
- Emergency Response

1. Merger of JNES into NRA(5)

➤ Human Resource Development Center at NRA

- To achieve the NRA's Mission, the Human Resource Development Center (HRDC) was established at the NRA on the occasion of the merger of JNES into the NRA.
- The purposes of the HRDC establishment were to enhance expertise of the NRA staff and to strengthen human resource development functions with keeping in mind:
 - Lessons learned from the Fukushima Dai-ichi NPP accident and prevention of occurrence of similar accidents;
 - Recommendations offered by the IRRS 2007; and
 - Insights gained from the IAEA's TECDOC 1254, the Action Plan endorsed by the 55th IAEA General Conference, etc.

2. Overview of NRA Human Resource Development Center(1)

2.1 Vision

- Development and training of NRA employees
 - ✓ To achieve and maintain nuclear regulation based on a high level of expertise
 - ✓ To abide by the plan over a long period of time
 - ✓ To recognize that such workforce is the most valuable asset of the regulatory body
- Establishment of safety culture
 - ✓ To continuously master specialized knowledge and skills on nuclear safety
 - ✓ To implement constant thorough review of the safety improvement
- Enhancement of international cooperation
 - ✓ Cooperation with foreign nuclear regulatory organizations
 - ✓ Cooperation with emerging nuclear power countries
 - ✓ Special emphasis on sharing lessons learned from the Fukushima Dai-ichi NPP accident

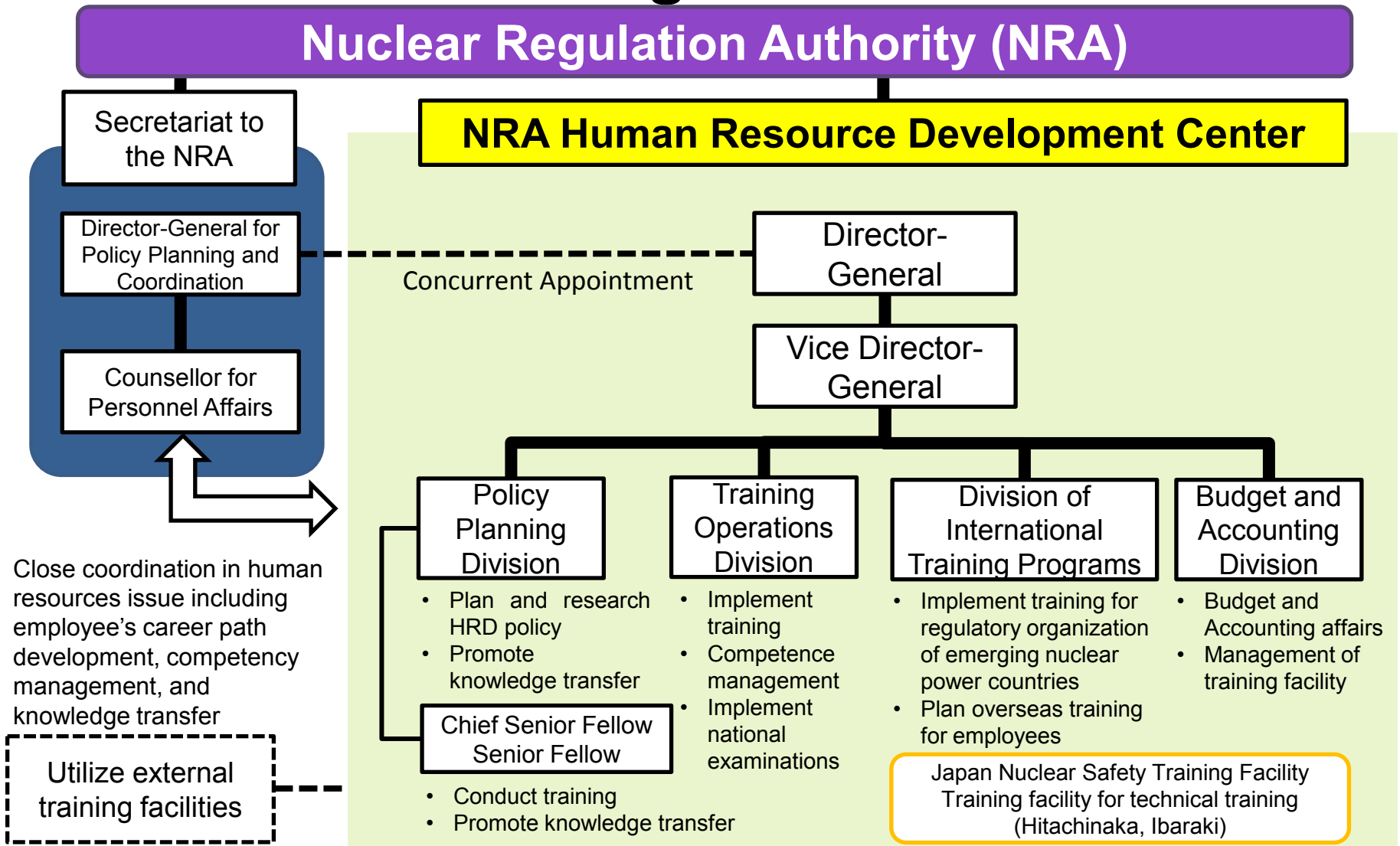
2. Overview of NRA Human Resource Development Center(2)

2.2 Mission

- Design, develop and implement training programs for NRA employees
- Promote knowledge transfer from experienced expert to young staff
- Strengthen international cooperation with other nuclear regulatory organizations
- Implement national examinations and develop nuclear safety experts at large etc.
- Continuously improve training programs by implementing a PDCA cycle

2. Overview of NRA Human Resource Development Center(3)

2.3 Organization



2. Overview of NRA Human Resource Development Center(4)

2.4 NRA Employee Training 2014(1)

Main activities

- **Design and implement comprehensive development and training**
- **Research activities to facilitate HRD strategy development**

Training Plan

To meet diverse training needs for all employees numbering up to about 1,000 people, provision of training programs that covers wide range of and different levels of competences is necessary.

■ Training for new employees

- Provide introductory training programs including basics of nuclear regulation and on-site and off-site training

■ Basic training

- Provide basic training programs to become nuclear safety inspectors and nuclear emergency preparedness officers, including nuclear safety regulation law, outline of safety inspection, nuclear emergency preparedness system etc.

2. Overview of NRA Human Resource Development Center(5)

2.4 NRA Employee Training 2014(2)

■ Training to enhance employee's expertise

- Provide practical training programs on structures and function of nuclear power facilities including simulator training etc., to further improve technical skills of nuclear safety inspectors etc.
- Provide adequate training to enhance the qualification of nuclear regulation office (local office) employees

■ Training for pre-management level employee

- Provide training programs to acquire skills, knowledge, and attitude required for management such as public relations, communications with mass media, etc.

2. Overview of NRA Human Resource Development Center(6)

2.4 NRA Employee Training 2014(3)

- **Training to cultivate internationally competent personnel**
 - Implement training to enhance international communication skills
 - Provide opportunities to participate in nuclear-related training and seminars abroad to develop personnel who can contribute internationally



Lecture



Overseas Training

2. Overview of NRA Human Resource Development Center(7)

2.4 NRA Employee Training 2014(4)

Other Activities

■ Knowledge transfer

- Enhance knowledge transfer from experienced expert to young staff through a knowledge-sharing initiative and on-the-job training etc.

■ Development of training programs and improvement of training facility

- Develop training programs in collaboration with specialized institutions as appropriate
- Improve training equipment/facility including nuclear reactor plant simulator etc. to enable practical training
- Newly develop and improve e-learning programs

■ Enhancement of HRD programs

- Put effort into further enhancement of HRD programs in collaboration with relevant division
- Implement efficient management of individual employee development



Practical training utilizing NRA-HRDC's equipment



Training at an external training institution

2. Overview of NRA Human Resource Development Center(8)

2.5 International Cooperation(1)

Main Activity

- Plan and implement training programs targeting foreign nuclear regulatory organization
- Strengthen cooperation with foreign nuclear regulatory organizations to ensure global nuclear safety
- Provide training programs on regulatory activities targeting especially at emerging nuclear power countries, through appropriate international framework



**Classroom lecture
(Tokyo, JAPAN)**



**Simulated Safety Assessment
(Hanoi, VIETNAM)**

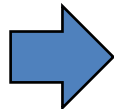
2. Overview of NRA Human Resource Development Center(9)

2.5 International Cooperation(2)

■ Training for Vietnam(1)

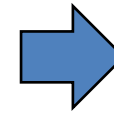
Basic Training

2011 19 trainees
2012 10 trainees



Intensive Training

2011 3 trainees
2012 1 trainees
3 trainees



Simulated Safety Assessment (SSA) Training

2011 1 Seminar in Hanoi
2012 2 Seminars in Hanoi
2013 2 Seminars in Hanoi
2 Trainings in Tokyo



Lectures on the fundamental knowledge



Lectures and exercises of the special subjects like RELAP code, dose analysis and severe accident



Simulated Safety Assessment

2. Overview of NRA Human Resource Development Center(10)

2.5 International Cooperation(3)

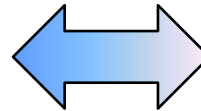
■ Training for Vietnam(2)

Simulated Safety Assessment

Objective:

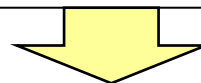
- To understand the plant system/subsystem
- To appreciate the structure of Safety Analysis Report(SAR)
- To have experience of the interaction between regulator and licensee

Role of VARANS Trainees:
Licensee



Role of JNES Trainers:
Regulator

- Study Safety Analysis Report(SAR) of Japanese plant
- Study related Regulatory Guides
- Review the conformity of SAR with Regulatory Guides
- Explain what trainees learned to trainers



Debate on Trainees' explanation

2. Overview of NRA Human Resource Development Center(11)

2.6 National Examination

Main Activity

- Implementation of national examinations to qualify the licensed engineer of reactor and the licensed engineer of nuclear fuel
- Success in the national examination is mandatory to be qualified as a licensed engineer
- Since such qualification is essential for nuclear safety, many people challenge this demanding exam every year to become a qualified specialist
- National Examinations, together with professional graduate school and designated training institutions, also work and contribute to development of nuclear specialists

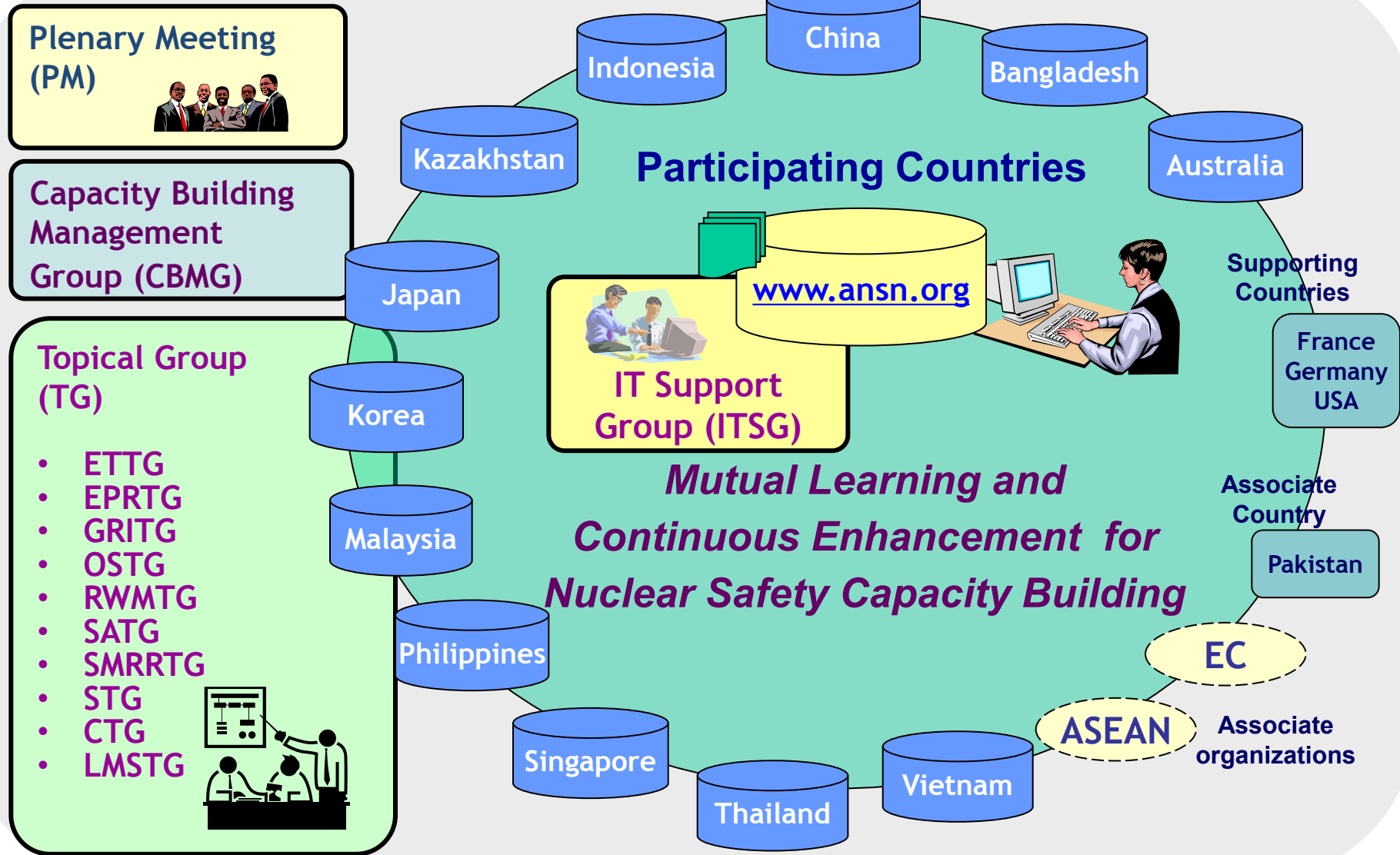
3. NRA Cooperation and Support for IAEA/ANSN(1)

3.1 Overview of ANSN(1)

- **EBP-Asia was launched in 1997 as Extra-budgetary Program on the Safety of Nuclear Installation in the South East Asia, Pacific and Far East Countries.**
- **ANSN, Asia Nuclear Safety Network, became fully operational in 2004 as the Phase-2 activities of the EBP-Asia.**
- **ANSN includes an advanced IT network for pooling, analysing and disseminating safety knowledge and practical experiences in Asia as well as a strong human network and the 10 Topical Groups which plan and implement activities on specific subjects which cover all key topics regarding nuclear safety infrastructure.**
- **Capacity Building focused since 2009 for Bangladesh, Indonesia, Kazakhstan, Malaysia, Philippines, Singapore, Thailand and Vietnam.**
- **ANSN member states include 11 participating countries, 3 supporting countries, 1 associate country and 2 associate organizations.**

3. NRA Cooperation and Support for IAEA/ANSN(2)

3.1 Overview of ANSN(2)



3. NRA Cooperation and Support for IAEA/ANSN(3)

3.2 Vision and Operational Strategy for ANSN

■ Vision

- **A strong human and IT network for achieving a high level of nuclear safety in Asia**

■ Mission

- **Nuclear safety capacity building**
- **Sustainable regional cooperation**

■ Focused Planning & Implementation

- **Self-initiative**
- **Strong human & IT network**
- **Practical knowledge & experience**
- **Best use of existing resources**

3. NRA Cooperation and Support for IAEA/ANSN(4)

3.3 Contribution of NRA(JNES) to ANSN

- **Participated in Phase-1(1997-2003) as one of 6 supporting countries.**
- **First Chairman of ANSN Steering Committee in 2004-2010 of Phase-2.**
- **Capacity Building Management Group(CBMG) Chairman(2010-present)**
- **2 TGs Chairmen(EPRTG,RWMTG)**
- **Promoting Self-Assessment Program with providing web tools**

Thank you for your attention

Overview of NRA Training Facility(1/3)

NRA Training Facility in Hitachinaka City



Location: Hitachinaka City,
Ibaraki Prefecture
(130 km north from Tokyo)
Completion: Mar. 14, 2008
Opening: Apr. 23, 2008

Site area: 3,700m²
Building 1
two-story: 2,000m²
Building 2
one-story: 500m²

Compact Simulator Training Course



Compact Simulators



Multi-Screen

Overview of NRA Training Facility(2/3)

Training Course utilizing Major Equipment Model



MSIV Switching Operation

Electric, I&C Systems Training Course



Water Loop Test Facility



Major Component Cutaway Models



Metal Clad Switchgear

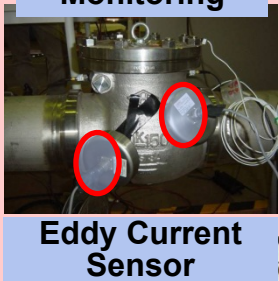
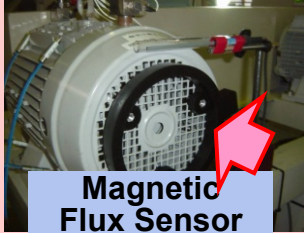


Three-phase Induction Motor

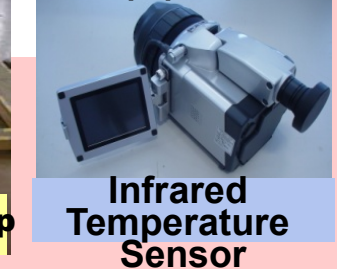
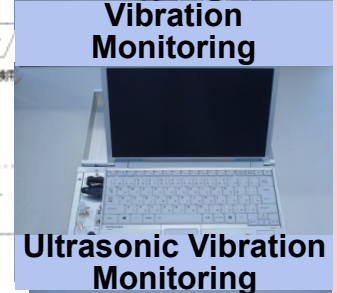
Overview of NRA Training Facility(3/3)

Equipment Condition Monitoring Systems Training Course

Monitoring Equipment



Monitoring/Measurement Equipment



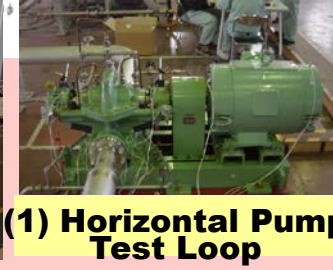
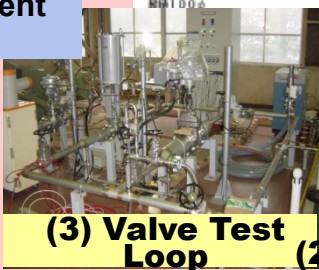
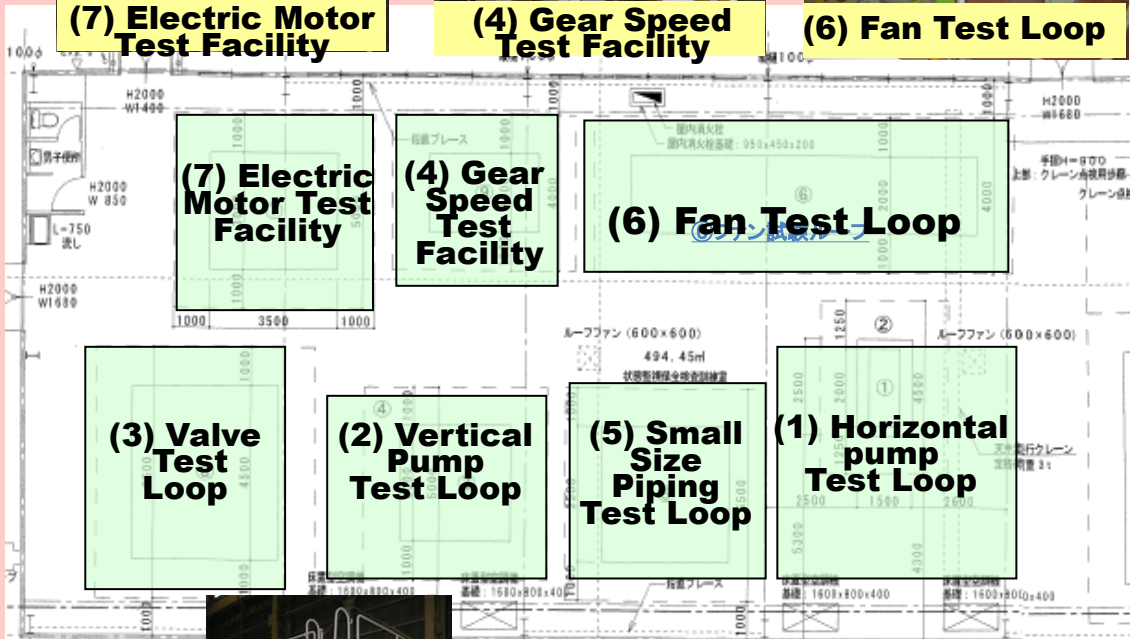
(7) Electric Motor Test Facility



(4) Gear Speed Test Facility



(6) Fan Test Loop



Training Participation

	Number of Participants in 2013
Training for new employees	111
Basic Training	173
Training to enhance employee's expertise	366
Training for pre-management level employee	60
Training to cultivate internationally competent personnel	142