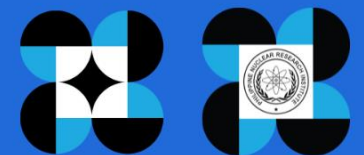


Management of Training Programs (PNRI)

Asian Nuclear Safety Network
Education and Training Topical Group
Regional Workshop on the Management of
Training Systems for Nuclear and Radiation Safety
6-10 November 2023
Manila, Philippines

Ma. Elina Salvacion Kristina V. Ramo
NUCLEAR REGULATORY DIVISION
PHILIPPINE NUCLEAR RESEARCH INSTITUTE

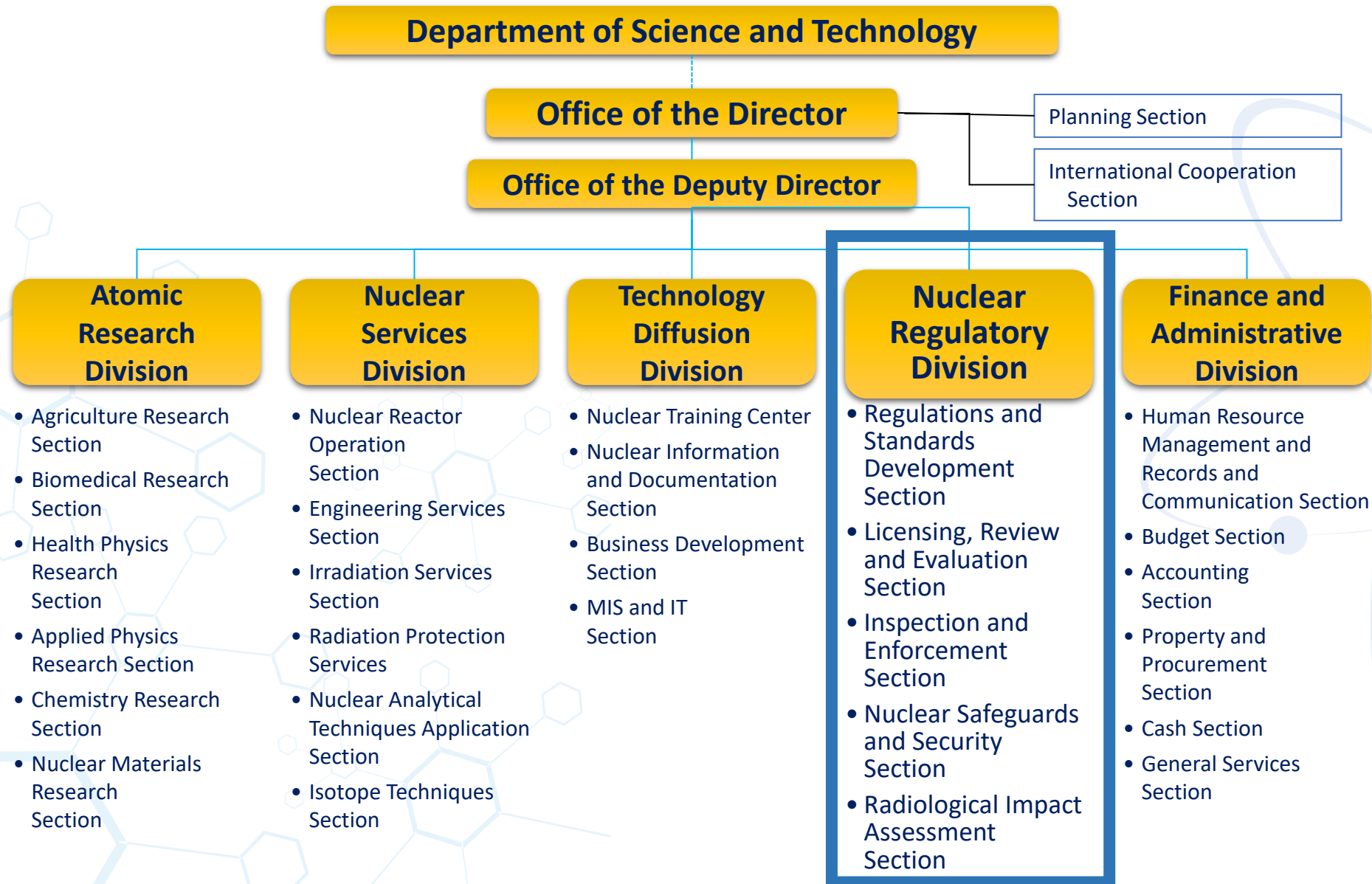


Outline

- I. PNRI-NRD Profile
- II. PNRI-NRD Training Program
- III. Updates to the PNRI-NRD Training Program



THE PNRI STRUCTURE



NRD STRUCTURE AND NUMBER OF PERSONNEL

Nuclear Regulatory Division (2)

Regulations
and Standards
Development
Section (5)

Licensing,
Review and
Evaluation
Section (8)

Inspection and
Enforcement
Section (8)

Radiological
Impact
Assessment
Section (6)

Nuclear
Safeguards and
Security
Section (4)



FUNCTIONS OF NRD

Core Regulatory Functions:

- Development of standards, regulations, and guides
- Licensing, review, and evaluation of license applications
- Regulatory inspections and enforcement
- Planning and implementation of research activities in support of regulatory activities including planning of response to radiological emergencies
- Nuclear security and safeguards

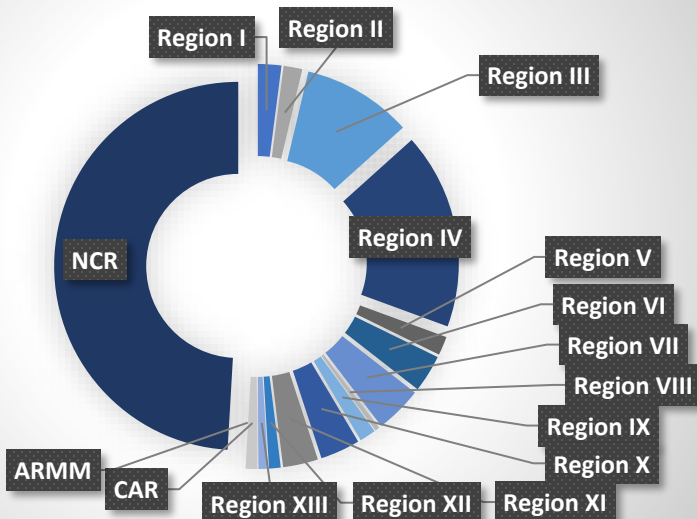


LICENSEES' PROFILE

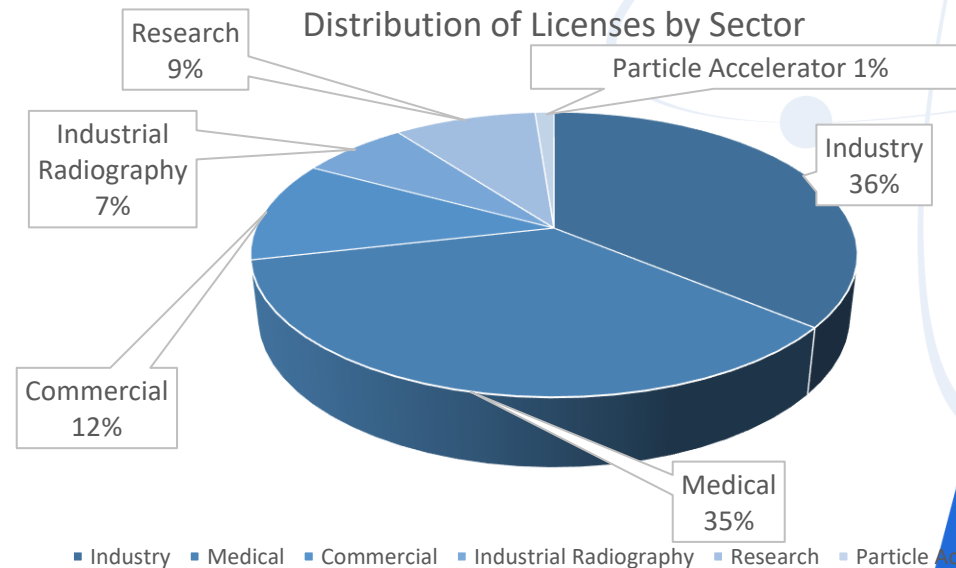
As of December 2022

TYPE OF LICENSE	NUMBER OF LICENSEES
Industry (Y)	179
Medical (M)	176
Commercial (C)	57
Industrial Radiography (I)	34
Research (R)	45
Medical Cyclotron (PA)	6
	497

Distribution of License by Region



Distribution of Licenses by Sector



PNRI Internal Regulatory Control Program

- Establishes the rules for authorization of PNRI radiation facilities and laboratories through PNRI Office Order No. 005 Series of 2023
- Authorization is given through the NRD Division Chief
 - PNRI Research laboratories
 - PRR-I facility including SATER
 - Multi-purpose Irradiation Facility
 - PNRI SSDL Facility



PNRI-NRD Training Program

- **First created through the INSC Project PH 3.01/09 (PH/RA/01) which was a technical assistance project aimed at improving the legal framework for nuclear safety and strengthening capabilities of the regulatory authority of the Philippines**
- **Applied past knowledge gained through IAEA trainings on Systematic Approach to Training and Gap Analysis**
- **Based on the anticipation that the Philippines will be embarking on an NP program**
- **First cycle planned for 2016 - 2021**



PNRI-NRD Training Program

ANALYSIS	DEVELOPMENT	DESIGN
<p>Identified Current and Future Tasks for each section</p> <p>Conducted Gap Analysis through modified SARCON Tool</p>	<p>Identified training needs and objectives based on analysis results</p> <p>Identify staff groups for training according to tasks and level of competence</p>	<p>Identified Existing Training Possibilities</p> <ul style="list-style-type: none">- through courses at the PNRI Nuclear Training Center- University courses within the Philippines- trainings through international cooperation and projects (IAEA, INSC, JAEA)



PNRI-NRD Training Program

IMPLEMENTATION	EVALUATION
<p>Not formally implemented but used as a guide for sections to implement individual training plans for staff</p>	<p>Identified Effectiveness Indicators</p>



PNRI-NRD Training Program

Current NRD tasks

- Development of regulations and standards
- Licensing, review and evaluation
- Inspection and enforcement
- Nuclear safeguards and security
- Radiological impact assessment and emergency preparedness

Future tasks

- Siting criteria and review of siting applications
- Waste management and waste repositories
- Environmental impact assessment for NPP and repositories
- NPP regulations relevant for design review



PNRI-NRD Training Program

Objective

to identify the training needs of the NRD and to enhance the competences and capabilities by appropriate training to NRD staff.



PNRI-NRD Training Program

Existing Training Possibilities

Table 8. PNRI existing Radiation Safety Courses and relevant trainees

Existing PNRI - Radiation Safety Courses	Target groups
Radiation Safety Course - Sealed Sources in Industrial Devices (RSC-ID)	For staff members involved or who will be involved in the use of Category 3 and 4 radioactive sources in fixed and portable industrial devices, <u>e.g.</u> level gauges, conveyor gauges, spinning pipe gauges, thickness/fill-level gauges, moisture-density gauges and static eliminators
Radiation Safety Course – Industrial Radiography (RSC-IR)	For staff members involved or who will be involved in the use of gamma radiography on-site and in shielded enclosures
Radiation Safety Course – Commercial Sale Involving Radioactive Materials and Low Activity Sources (RSC-CL)	For staff members involved or who will be involved in the acquisition and possession of RAM and devices containing RAM intended for commercial sale and distribution; and those involved in the use of Category 5 radioactive sources, <u>e.g.</u> Ni-63 in ECD, XRF analyzers, calibration/standard sources used in research and education
Radiation Safety Refresher Course (RSRC)	For staff members involved in the use of radioactive sources in medical/ industrial field who need refresher training in radiation safety
Radiation Safety Course –Medical Use of Radioisotopes (RSC-MR)	For staff members involved or who will be involved in the use radioisotopes in the medical field <u>e.g.</u> nuclear medicine, teletherapy, brachytherapy, blood/ tissue irradiators, <u>e.g.</u> nuclear physicians, biological scientists, medical and radiological technologists, and nuclear pharmacists



PNRI-NRD Training Program

Proposed Training Plan for 2016 - 2018

AREA	STAFF	MODE	DURATION
LICENSING MANAGEMENT, BASIC SAFETY CONCEPTS AND DECISION MAKING		Workshop	1 week
SAFETY REVIEW AND ASSESSMENT INCLUDING PROCESSES AND PROCEDURES (SITE APPROVAL & CONSTRUCTION)			1 week
RADIOLOGICAL ENVIRONMENTAL IMPACT ANALYSIS		Workshop	1 week
REGULATORY OVERSIGHT DURING SITING AND CONSTRUCTION PHASE		Workshop	1 week

Additional Recommendations

to develop and implement a general training course for nuclear regulators

to develop specific training for inspectors and reviewers.



PNRI-NRD Training Program

Example Implementation: Licensing, Review, and Evaluation Section

Staff Position	Training Activities	Tasks	Available Training
Entry/ Junior	a. Basic Training in Radiation Safety	Secretarial tasks	RSC-ID, CRT
	b. Shadowing and mentoring, observation during inspections	Evaluation of Simple applications	
Intermediate	Specialized Training in Radiation and Safety, Training on Nuclear Safety, Training on Legal and Regulatory Framework, Train the Trainers Training, On-the-Job training	Evaluation of Simple and Complex applications Team Lead for pre-licensing inspections Membership in special regulatory activities	BPTC, PGEC, INSC Trainings, FTC, ITC
Senior	Leadership and Management Trainings	Team Lead for Facility License Applications Team or Project Lead for special regulatory activities	INSC and IAEA trainings



PNRI-NRD Training Program

Effectiveness Indicators

Effectiveness indicators	Tools for measuring EI
Improved level of task performance	Individual self-assessment performance rating (training assessment rating/evaluation), (job performance rating)
Improved quality	Customer satisfaction (according to QMS)
Time effectiveness	Deadlines keeping (according to functional objectives of the section)
Errors decrease	Preventive action/corrective action undertaken as per commitment date
Enhanced capacity to perform new task(s)	Percent involvement in other regulatory tasks



Updating the NRD Training Program

Recent developments:

- the Philippines embarks on a nuclear power program (Executive Order 164, 2022)
- pending bill for the creation of an independent nuclear regulatory body garners support in legislative branch

Strategies:

- Re-constitution of NRD HRDCA Committee
- leadership emphasis on human resource development and training
- formalize implementation of training program through official documentation



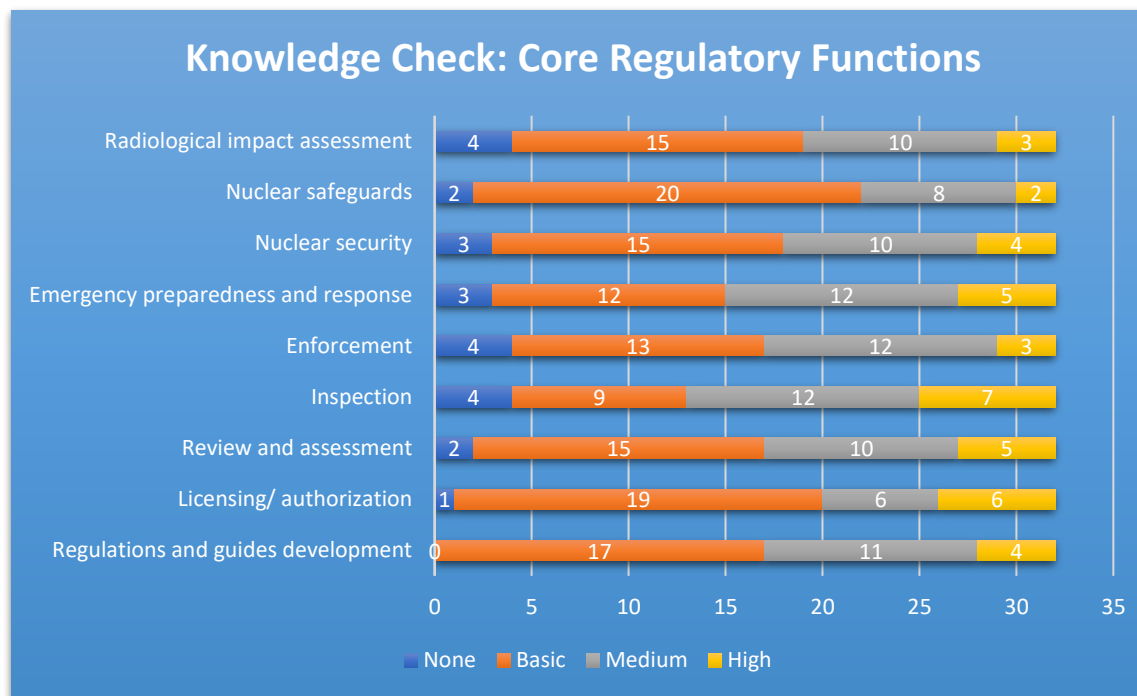
Updating the NRD Training Program

Current Activities:

- Creating NRD Staff profile
- Updating of profiles in the Competency Assessment Application Tool (CAAT) of PNRI

Planned Activities:

- Preparing the human resource development plan and training plan for current and future regulatory needs using templates from ANSN ETTG Workshop and US DOE Workshop
- Preparing individual training plans for NRD staff



Maraming Salamat!
Thank you!