



EC DEVCO

INSC PROGRAM

## TRAINING & TUTORING

### INSC PROJECT - MC.03/10:

Training and Tutoring for experts of the NRAs and their TSOs for developing or strengthening their regulatory and technical capabilities

### LOT 1

Financed by EC INSC Annual Action Program 2010

## ITER/News July 2014

### GENERAL INFORMATION

The consortium made of **ITER-Consult** "Independent Technical Evaluation and review" of Italy; **BNRA** - Bulgarian Nuclear Regulatory Agency; **ISPRA** – Italian Nuclear Regulatory Authority; **JSI** - Jožef Stefan Institute of Slovenia; **NRG** - Nuclear Research & Consultancy Group of The Netherlands; **SCK·CEN** – Studiecentrumvoor Kernenergie of Belgium; **SNSA** – Slovenian Nuclear Safety Administration; **STUK** - Nuclear Regulatory Authority of Finland constitutes the **Project Team** led by ITER-Consult in charge to implement the Project LOT1.

#### **Project wider objective:**

The main objective is the enhancement of capacities of Nuclear Regulatory Authorities (NRA) of the Partner Countries, including their Technical Support Organizations (TSO), in order to allow the NRAs to become reasonably self-sufficient in terms of management and technical capacity.

#### **Specific objectives:**

The specific objectives consist in enhancing the capability of NRA's staff, and of their supporting TSOs, to conduct independent in depth assessment and review of safety cases, to conduct inspections, to issue regulations and guides and to manage the authorization process and related decision making.

These specific objectives are ensured by the programming and implementation of training and tutoring (T&T) activities based on the needs of the partner countries.

#### **Expected results:**

- Training and Tutoring (T&T) of staff of Nuclear Regulatory Authorities including their TSO;



BNRA



SNSA



- Developing a toolkit of training modules on the aspects of Nuclear and Radiation Safety;
- Promoting cooperation of Nuclear Regulatory Authorities between the EU and partner countries by exchange of experience;

**WEBSITE** <http://nuclear.jrc.ec.europa.eu>

*Project duration:* 36 months starting from December 28, 2011.

## MANAGEMENT

The management of the project regarding the external relations, has dealt with the coordination of the interfaces with the EC Project Manager and the cooperation with the partner countries through the beneficiary organizations.

Regarding the internal activity it has dealt with: the coordination of the participating organizations; the coordination of the project tasks and their interfaces; the designing and selection; the planning and schedule for implementation of the T&T activity; the monitoring of the progress of activity and the assessment of the results.

Moreover the project management has been responsible to: prepare and issue reports, monitor the quality of task output, ensure the interface with the T&T Committee, ensure the administrative management of the project, provide support for travel, visa arrangement and logistic of the trainees from the partner countries.

### Some milestones:

- The contract between ITER and the EC was signed on December 28, 2011.
- A pre-inception meeting, among EC PM and the consultants for LOT 1 and LOT 2, took place in Brussels on January 16, 2012.
- The inception meeting took place in Brussels (EC DEVCO) on February 24, 2012
- The first progress meeting was held in Rome on July the 3<sup>rd</sup> 2012
- The list of 12 Training Courses, to be offered to the PCs, with a summary description of the content was defined early at start of the project.
- The list of 6 Tutoring Courses with description of the content to be proposed to the PCs was elaborated early at the start of the project. Contacts established with hosting regulators to organize and implement them
- The complete set of National Training Plan (11 countries initially plus other 4 later) has been elaborated,

- endorsed by the PCs and submitted to the EC Project Manager (EC-PM) as agreed during the Inception Meeting. Continuous updating is ensured.
- A dedicated website was created and made accessible through an EC link. The website is constantly updated in parallel with the organization and implementation of the training and tutoring courses.
- Administrative orders were issued by EC for approval of Non-Key-Experts (about 80 senior experts) from all partners of the project team.
- The Task 1 Report, first issued in September 2012, has been revised in June 2013;
- The second progress meeting was held in Paris on February 14, 2013
- The Task 3 activity has been carried out for each T&T course with drafting of evaluation reports;
- Progress reports have been issued every six months together with financial deliverables,
- The third progress meeting has been held on July 17, 2013 in Brussels;
- It was decided with EC not to hold the fourth Progress Meeting
- It is planned to hold the Final Meeting in October 2014



## IMPLEMENTATION

In the first 30 months of the project duration (36 months) about 95% of the overall project T&T activity has been implemented.

This activity started soon after the Inception Meeting by developing the National Training Plans of the Partner Countries and continued with the development of detailed training/tutoring programs, their organization, implementation and evaluation.

**Twelve training courses** have been implemented since the beginning for an overall duration of **12 weeks**. Ten of them developed as “dedicated” and two adopted as “existing”.

The training courses included the first “**regional course**” of the EC Project, organized in cooperation

with ANNuR ( Arab Network of Nuclear Regulators) and carried out in Hammamet (Tunisia) in April 2013 with the participation of 26 trainees.



Up to now a total number of **128 trainees** have been involved in the training activity coming from NRA/TSO of the partner countries. (some of them have been involved in more than 1 training course so the total of individual participation in training activity is 135) In the regional course in Hammamet "non-partner countries" members of ANNuR network were included: Libya (3 trainees), Mauritania (3 trainees), Sudan (4 trainees), Tunisia (3 trainees), Yemen (4 trainees). One more session of dedicated training course will be held in September '14 at STUK premises.

**Eight tutoring courses** have been carried out at NRAs/ TSOs headquarters in EU (ISPRA/ITER, SNSA/JSI, STUK, SCK-CEN, BNRA) for an overall duration of 16 months. One tutoring course is still in progress at BNRA and will finish on August '14. Normally two selected staff from the PCs participated in each tutoring course for a total of **17 persons** coming from NRA of Ukraine, Brazil, Vietnam, Mexico, Armenia, Belarus, Jordan, Indonesia, Philippines, Malaysia and Iraq.

A **total of 32 man-month** of tutoring activity has been implemented up to now.

The following **Partner Countries** are benefitting of the T&T activity (In parenthesis the provided trainees) :

- |                  |                     |
|------------------|---------------------|
| 1. Armenia (9)   | 9. Mexico (6)       |
| 2. Belarus (12)  | 10. Morocco (5)     |
| 3. Brazil (10)   | 11. Nigeria (1)     |
| 4. Egypt (11)    | 12. Philippines (6) |
| 5. Indonesia (8) | 13. Tajikistan (0)  |
| 6. Iraq (4)      | 14. Ukraine (7)     |
| 7. Jordan (11)   | 15. Vietnam (13)    |
| 8. Malaysia (8)  |                     |

From the Consultant side **about 94 senior experts** belonging to the organization of our project team

(NRAs, TSOs and research institutes) have contributed to the activity performed.

#### **ITER**

Antonio Madonna, KE  
 Marco Gasparini, KE  
 Giampiero Orsini  
 Rino Caporali  
 Ferruccio Gera  
 Giuseppe Pino  
 Katia Slavcheva  
 Fausto Zambardi  
 Vittorio Lucarelli  
 Miroslav Gregoric  
 Josef Misak  
 Michele Laraia  
 Ivo Tripputi  
 Lorenzo Antola  
 Davide Mazzini  
 Giorgio Trenta  
 Giovanni Pino  
 Nadja Zeleznik  
 Adrianna Nalecz

#### **BNRA**

Latchesar Kostov  
 Nikolay Vlahov  
 Marina Nizamska  
 Alexey Alexiev  
 Krassimir Avdjiev  
 Svetla Kazakova  
 Krassimir Grozdanov  
 Lidia Katzarska  
 Ivan Nedkov Gorinov  
 Radelina Tranteeva  
 Nikolay. Steklov

#### **ISPRA**

Chiara Bolognini  
 Nadia Cipriani  
 Mario Dionisi  
 Marco Gervasi  
 Giuseppe Maresca  
 Carmelina Salierno  
 Sandro Trivelloni  
 Roberto Ranieri  
 Solaria Venga  
 Paolo Zeppa  
 Gabriella Soveny

#### **SCK-CEN**

Johan Camps  
 Tanja Perko  
 Catrinel Turcanu  
 Geert Olyslaegers  
 Philippe Antoine  
 Anne Laure Lebacqz  
 Klaas Van Der Meer  
 Luc Holmstock  
 Nijs Robby

#### **JSI**

Matjaž Leskovar  
 Andrej Prošek  
 Andrija Volkanovski  
 Rado Istenič  
 Igor Jenčič  
 Matjaž Koželj  
 Tomaž Skobe  
 Marko Čepin  
 Leon Cizelj  
 Ivo Kljenak  
 Andrej Trkov  
 Marjan Kromar  
 Igor Lengar  
 Borut Smodiš  
 Luka Snoj  
 Ivan Vrbanic  
 Ivica Basic  
 Mitja Kožuh  
 Matjaz Stepišnik

#### **STUK**

Janne Nevalainen  
 Kirsi Alm-Lyzt  
 Ilari Aro  
 Hannele Aaltonen  
 Marc Cederberg  
 Ari Julin  
 Lasse Kuosa  
 Tapani Virolainen  
 Risto Sairanen  
 Anne Weltner  
 Martti Vilpas  
 Risto Isaksson

#### **SNSA**

Milorad Dusic  
 Helena Janžekovič  
 Michel Cindro  
 Andreja Peršič  
 Darja Slokan-Dušič  
 Marjan Tkavc  
 Andrej Stritar  
 Igor Grlicarev  
 Cimeša Siniša  
 Djordje Vojnovič  
 Matjaž Podjavoršek  
 Tomaž Nemec  
 Lovinčič Davor  
 Andrej Striotar  
 Andreja Persic

#### **NRG**

K. Ackerman  
 Johannes L. Brinkman

HAVE ACQUIRED

**KNOWLEDGE WITH**

**HONORS**

Place Date Duration	Training Course on: "NPP siting regulatory requirements and licensing"
<b>ITER</b> Rome 1W July 2012	Mr. Gagik Manoyan (ANRA) <b>ARMENIA</b> Ms. Tatyana Bosenko (Gosatomnadzor) <b>BELARUS</b> Mr. Anatolii Dolotov (SNRIU) <b>UKRAINE</b> Ms. Soheir El-Hemamy (NRA) <b>EGYPT</b> Mr. Muath Saadeh (JNRC) <b>JORDAN</b> Ms. Thi Dung Bui (VARANS) <b>VIETNAM</b> Mr. Manh Nguyen Tien (VARANS) <b>VIETNAM</b> Ms. Noraini Razali (AELB) <b>MALAYSIA</b> Mr. Pablo Ruiz López (CNSNS) <b>MEXICO</b> Ms. Patrícia Almeida (CNEN) <b>BRAZIL</b> Mr. Carl M. Nohay (PNRI) <b>PHILIPPINES</b>



Place Date Duration	Training Course on: "Safety and regulation of nuclear power plants - Regulatory project management for a new build"
<b>STUK</b> Helsinki 1W	Mr. Vladimir Pryazhko (Gosatomnadzor) <b>BELARUS</b> Mr. Zaitsau Siarhei (Gosatomnadzor)

September 2012	<b>BELARUS</b> Mr. Duong Quoc Hung (VARANS) <b>VIETNAM</b> Mr. Nam HaiLuu (VARANS) <b>VIETNAM</b> Mr. Pham Thanh Trung (VARANS) <b>VIETNAM</b>
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Place Date Duration	Training Course on: "Safety evaluation for Radioactive Waste"
<b>ITER</b> Rome 1W Sept. 2012	Ms. Nelli Aghajanyan (ANRA) <b>ARMENIA</b> Mr. Karen Haroyan (ANRA) <b>ARMENIA</b> Mr. Nikolai Mikhailov (Gosatomnadzor) <b>BELARUS</b> Ms. Iryna Forostenko (SNRIU) <b>UKRAINE</b> Mr. Tenglyu Lin (AELB) <b>MALAYSIA</b> Mr. Lai TienThinh (VARANS) <b>VIETNAM</b> Mr. Mohamed Abdel Geleel (NCNSRC) <b>EGYPT</b> Ms. S. Parente de Jesus (CNEN) <b>BRAZIL</b> Mr. N. José Ruperti Júnior (CNEN) <b>BRAZIL</b> Ms. M. R. Mundo (PNRI) <b>PHILIPPINES</b> Ms. X. Nohpal Jiménez (CNSNS) <b>MEXICO</b> Mr. R. Fabian Ortega (CNSNS) <b>MEXICO</b>





Place Date Duration	Training Course on: "Safety evaluation for Decommissioning"
<b>ITER</b> Rome 1W Sept. 2012	Ms. Nelli Aghajanyan (ANRA) <b>ARMENIA</b> Mr. Karen Haroyan (ANRA) <b>ARMENIA</b> Mr. Nikolai Mikhailov (Gosatomnadzor) <b>BELARUS</b> Ms. Iryna Forostenko (SNRIU) <b>UKRAINE</b> Mr. Tenglyu Lin (AELB) <b>MALAYSIA</b> Mr. Lai TienThinh (VARANS) <b>VIETNAM</b> Mr. Mohamed Abdel Geleel (NCNSRC) <b>EGYPT</b> Ms. S. Parente de Jesus (CNEN) <b>BRAZIL</b> Mr. N. José Ruperti Júnior (CNEN) <b>BRAZIL</b> Ms. M. R. Mundo (PNRI) <b>PHILIPPINES</b> Ms. X. Nohpal Jiménez (CNSNS) <b>MEXICO</b> Mr. R. Fabian Ortega (CNSNS) <b>MEXICO</b>



Place Date Duration	Training Course on: "Design safety and safety evaluation for NPP – SAR"
<b>SNSA &amp; JSI</b> Ljubljana	Mr. Levon Hovhannisyan (ANRA) <b>ARMENIA</b> Mr. Aliaksandr Prykhodzka (Gosatomnadzor) <b>BELARUS</b>

1W November 2012	Ms. Sviatlana Kachan (BNTU) <b>BELARUS</b> Mr. K. Zapisotskyi (SNRIU) <b>UKRAINE</b> Mr. Iurii Chepurnyi (SNRIU) <b>UKRAINE</b> Mr. Ridha Roslan (AELB) <b>MALAYSIA</b> Ms. Thi Loan Nguyen (VARANS) <b>VIETNAM</b> Mr. Ahmed Sayed Ahmed Khedr (NCNSRC) <b>EGYPT</b> Mr. M. Darwish Saadeh (JNRC) <b>JORDAN</b> Mr. Richard Brandão Vital (CNEN) <b>BRAZIL</b> Mr. J. Pinheiro Fiho (CNEN) <b>BRAZIL</b> Mr. Luis A. Domínguez (CNSNS) <b>MEXICO</b> Mr. Abdul Qohhar Prasetyo (BAPETEN) <b>INDONESIA</b>
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Place Date Duration	Training Course on: "Radiation Protection and regulatory emergency preparedness"
<b>SCK-CEN</b> Mol 1W March 2013	Ms. Lusine Poghosyan (NRSC) <b>ARMENIA</b> Ms. Liudmila Vasileuskaya (Gosatomnadzor) <b>BELARUS</b> Ms. Nataliya Bizhko (SNRIU) <b>UKRAINE</b> Mr. Nik Mohd Faiz Khairudiin (AELB) <b>MALAYSIA</b> Mr. Nabil Dahbi (CNESTEN) <b>MOROCCO</b> Mr. Duong Hong Nhat (VARANS) <b>VIETNAM</b> Mr. Abou Bakr Ramadan Ahmed (ENRRA) <b>EGYPT</b> Mr. Amer Ghugeh (JNRC) <b>JORDAN</b> Mr. EssaKhalaf Alkhalaylah (JNRC) <b>JORDAN</b> Ms. Laura Alice Ribeiro (CNEN) <b>BRAZIL</b> Mr. Richard Brandão Vital (CNEN) <b>BRAZIL</b> Ms. Cecilia de Vera (PNRI) <b>PHILIPPINES</b> Mr. Edgar Christian Arriola (CNSNS) <b>MEXICO</b> Ms. Dwi Angestiningasih (BAPETEN) <b>INDONESIA</b>



<b>Place Date Duration</b>	Regional Training Course on: <b>“Legal &amp; regulatory framework, regulatory role and functions, licensing process and basic safety requirements for NPP”</b>
<b>ANNuR</b> Hammamet 1W April 2013	<p>Elsayeda Salem Hanafy (ENRRA) <b>EGYPT</b></p> <p>Wesam Zakaria Awwad Ibrahim (ENRRA) <b>EGYPT</b></p> <p>Moussa Othman (ENRRA) <b>EGYPT</b></p> <p>Mohamed Ahmed (ENRRA) <b>EGYPT</b></p> <p>Mustafa Ali Ben Ghzail (LNRO) <b>LYBIA</b></p> <p>Tofigh Mhamed Masaud (LNRO) <b>LYBIA</b></p> <p>Mahmoud AboubakerLaga (LNRO) <b>LYBIA</b></p> <p>Mohamed Lafdhal (ARSN) <b>MAURITANIA</b></p> <p>Ishagh Moussa (ARSN) <b>MAURITANIA</b></p> <p>Mohammed Mahmoud Elmounji (ARSN) <b>MAURITANIA</b></p> <p>Ali Hussein Jawad (Min. Sc. Tech.) <b>IRAQ</b></p> <p>Aseel Naim Abu-Al-Jadayel (Min. Elect.) <b>JORDAN</b></p> <p>Anas Zuhair Kokash (JAEC) <b>JORDAN</b></p> <p>Kamal Mohammad (JAEC) <b>JORDAN</b></p> <p>Awatif Elaydaros Salih (Min. Water Res. And Elect.) <b>SUDAN</b></p> <p>Mubarak Al-Motasam Mustafa (Min. Water Res. and Elect.) <b>SUDAN</b></p> <p>Abdalla Siddig Abdallah (SNRRA) <b>SUDAN</b></p> <p>Abdelgadir Eltayeb Abdelgadir (SNRRA) <b>SUDAN</b></p> <p>Riahi Adel (CNSTN) <b>TUNISIA</b></p> <p>Dridi Walid (CNSTN) <b>TUNISIA</b></p> <p>Mohamed Ben Abdallah (CNSTN) <b>TUNISIA</b></p> <p>Basheer Mansour Abdulmoiz (NAEC) <b>YEMEN</b></p> <p>Wleed M. Shamsan (NAEC) <b>YEMEN</b></p> <p>Samah Mohammed Al-Akwaa (NAEC) <b>YEMEN</b></p> <p>Abdulmoin Al-Asbahi (NAEC) <b>YEMEN</b></p>

	Nassiba Mazar (CNESTEN) <b>Morocco</b>
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<b>Place Date Duration</b>	Training Course on: <b>“Review and inspection of I&amp;C systems”</b>
<b>STUK</b> Helsinki 1W April2013	<p>Mr. Levon Hovhanissyan (ANRA) <b>ARMENIA</b></p> <p>Mr. Pham Thanh Trung (VARANS) <b>VIETNAM</b></p> <p>Mr. Truong Cong Thang (VARANS) <b>VIETNAM</b></p> <p>Mr. Joao Lima do Nascimento (CNEN) <b>BRAZIL</b></p>



<b>Place Date Duration</b>	Training Course on: <b>“Requirements and safety evaluation of PSA for NPP”</b>
<b>SNSA &amp; JSI</b> Ljubljana 1W May 2013	<p>Mr. Gurgen Kanetsyan (NRSC) <b>ARMENIA</b></p> <p>Mr. Philip Speransky (Gosatomnadzor) <b>BELARUS</b></p> <p>Mr. Konstantin Zapisotskyi (SNRIU) <b>UKRAINE</b></p> <p>Ms. Thi Loan Nguyen (VARANS) <b>VIETNAM</b></p> <p>Mr. A.Sayed Ahmed Khedr (ENRRA) <b>EGYPT</b></p> <p>Mr. Morad Hamad (JNRC) <b>JORDAN</b></p> <p>Ms. S. Maria Orlandi Gibelli (CNEN) <b>BRAZIL</b></p> <p>Mr. Marcos . Eduardo Nunes (CNEN) <b>BRAZIL</b></p> <p>Ms. Iris Juarez (CNSNS) <b>MEXICO</b></p> <p>Mr. Eko H. Riyadi (BAPETEN) <b>INDONESIA</b></p> <p>Ms. Maryem El Kiram (Ministry of EMWE) <b>MOROCCO</b></p> <p>Mr. Abdellaziz Hajjani (Ministry of EMWE) <b>MOROCCO</b></p>



Place Date Duration	Training Course on: "Safety evaluation of SAR and oversight for RR"
<b>SNSA &amp; JSI</b> Ljubljana 1W September 2013	<p>Ms. I. Vityaz (GOSATOMNADZOR) <b>BELARUS</b></p> <p>Mr. K. Zapisotskyi (SNRIU) <b>UKRAINE</b></p> <p>Mr. H. Tu Nguyen (VARANS) <b>VIETNAM</b></p> <p>Mr. Ashraf Kamoon (ENRRA) <b>EGYPT</b></p> <p>Mr. Hassan El Sayed Gomaa (ENRRA) <b>EGYPT</b></p> <p>Ms. W. Sarmita (BAPETEN) <b>INDONESIA</b></p> <p>Mr. Imron Rusmanatmojo (BAPETEN) <b>INDONESIA</b></p> <p>Mr. Abdelali Chtata (CNESTEN) <b>MOROCCO</b></p> <p>Ms. Nur Shazwani Zainal Abidin (AELB) <b>MALAYSIA</b></p> <p>Mr. J. M. Marquez (PNRI) <b>PHILIPPINES</b></p> <p>Mr. M. Jamil Al Bqoor (JNRC) <b>JORDAN</b></p> <p>Mr. M. Alslman (JNRC) <b>JORDAN</b></p> <p>Mr. Mustafa Karam Al-Fawadi (Ministry of Env. - RPC) <b>IRAQ</b></p> <p>Ms. Alyaa Al-Haddad (Ministry of Env.RPC) <b>IRAQ</b></p>



Place Date Duration	Training Course on: "Regulatory Inspections (oversight) for NPP"

Place Date Duration	Training Course on: "Public Communication"
<b>BNRA</b> Sofia 1 W June 2014	<p>Mr. Andranik Hakobyan (ANRA) <b>ARMENIA</b></p> <p>Mr. Rizal Palapa (BAPETEN) <b>INDONESIA</b></p> <p>Mr. Bhakti Dwi Yoga (BAPETEN) <b>INDONESIA</b></p> <p>Ms. Ita Edemanwan Bassey (NNRA) <b>NIGERIA</b></p> <p>Mr. Ahmed Ali Salih Al-Sammaraee (Ministry of Env.– RPC) <b>IRAQ</b></p> <p>Mr. Muhammad Abu-Hamdeh (JNRC) <b>JORDAN</b></p> <p>Ms. Serene Ihsan Mukattash (JNRC) <b>JORDAN</b></p> <p>Ms. Nur Adlina Elias (AELB) <b>MALAYSIA</b></p> <p>Ms. Noraishah Pungut (AELB) <b>MALAYSIA</b></p> <p>Mr. Paulo Adriano da Silva (CNEN) <b>BRAZIL</b></p> <p>Mr. Aliaksandr Prykhodzka (Gosatomnadzor) <b>BELARUS</b></p> <p>Mr. Aliaksei Bylinski (Gosatomnadzor) <b>BELARUS</b></p> <p>Mr. Van Hung Luong (VARANS) <b>VIETNAM</b></p> <p>Mr. Victor Shulyak (SNRIU) <b>UKRAINE</b></p>

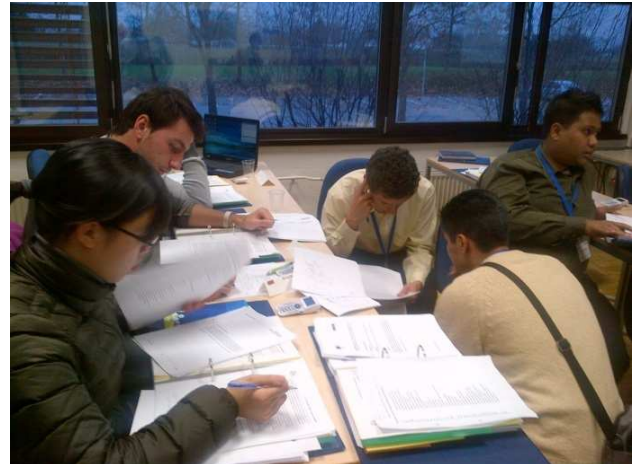


Place Date Duration	Training Course on: "Public Communication"
<b>ITER-Consult</b> Rome 1 W June 2014	<p>Ms. Nari Nersisyan (ANRA) <b>ARMENIA</b></p> <p>Mr. Vitaly Novitsky (Gosatomnadzor) <b>BELARUS</b></p> <p>Mr. Aleh Sobaleu (Gosatomnadzor) <b>BELARUS</b></p> <p>Ms. Giang Do Thi Huong (VARANS) <b>VIETNAM</b></p> <p>Mr. Mohamed Badr (NRRRA) <b>EGYPT</b></p> <p>Mr. Tri Djamiko (BAPETEN) <b>INDONESIA</b></p> <p>Ms. Grace Carlos (PNRI) <b>PHILIPPINES</b></p> <p>Ms. Joan Tugo (PNRI) <b>PHILLIPPINES</b></p> <p>Mr. Taras Kozulko (SNRIU) <b>UKRAINE</b></p>

<b>Place</b> <b>Date</b> <b>Duration</b>	Tutoring Course on: "Inspection and regulatory project management for a new build"
<b>STUK</b> Helsinki /1M Sept- Oct. 2012	Mr. Zaitsau Siarhei (Gosatomnadzor) <b>BELARUS</b> Mr. Duong Quoc Hung (VARANS) <b>VIETNAM</b>



<b>SNSA</b> Ljubljana/2M Nov. - Jan. 2013	Mr. Paulo Adriano da Silva (CNEN) <b>BRAZIL</b> Mr. L. Antonio Domínguez (CNSNS) <b>MEXICO</b>
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<b>Place</b> <b>Date</b> <b>Duration</b>	Tutoring Course on: "Regulatory licensing and oversight of RW & decommissioning activities of NPP and other NF"
<b>ISPRA &amp; ITER</b> Rome/2M Oct.-Nov. 2012	Ms. Iryna Forostenko (SNRIU) <b>UKRAINE</b> Ms. Xaman Nohpal Jiménez (CNSNS) <b>MEXICO</b>

<b>Place</b> <b>Date</b> <b>Duration</b>	Tutoring Course on: "Radiation protection and regulatory emergency"
<b>SCK-CEN</b> Mol /2M March - May '13	Mr. Amer Ghugeh (JNRC) <b>JORDAN</b> Ms. Lusine Poghosyan (NRSC) <b>ARMENIA</b>



<b>Place</b> <b>Date</b> <b>Duration</b>	Tutoring Course on: "Regulatory review and oversight of NPP during operation"
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<b>Place</b> <b>Date</b> <b>Duration</b>	Tutoring Course on: "Objective, requirements, methodology & regulatory use of PSA"
<b>SNSA&amp; JSI</b> Ljubljana/2M May – July '13	Mr. Morad Hamad (JNRC) <b>JORDAN</b> Ms. Thi Loan Nguyen (VARANS) <b>VIETNAM</b>

<b>Place Date Duration</b>	Tutoring Course on: "Regulatory licensing and oversight of RW & decommissioning activities of NPP and other NF"
<b>ISPRA &amp; ITER</b> Rome/2M June – July '13	Mr. Nikolai Mikhailov (Gosatomnadzor) <b>BELARUS</b> Mr. Halim Abdul Rahman (AELB) <b>MALAYSIA</b>



<b>Place Date Duration</b>	Tutoring Course on: "Regulatory Inspections (oversight) for NPP"
<b>BNRA</b> Sofia/2M June - August '14	Mr. Aliaksei Bylinski (Gosatomnadzor) <b>BELARUS</b>  Mr. Victor Shulyak (SNRIU) <b>UKRAINE</b>



<b>Place Date Duration</b>	Tutoring Course on: "Safety evaluation of SAR and oversight for RR"
<b>SNSA &amp; JSI</b> Ljubljana/2M September - October '13	Mr. Imron Tarsono Rusmanatmojo BAPETEN <b>INDONESIA</b>  Mr. John Mina Marquez PNRI <b>PHILIPPINES</b>  Mr. Mustafa Karam Raheemah Al- Fawadi MERPC <b>IRAQ</b>



## ACHIEVING EFFECTIVENESS

The constant relation of the Consultant with the PC's to identify the needs, to collect their requests, to provide prompt communication about the planned T&T courses and contents, to select the trainees and consider their needs has shown to be a key aspect for the successful implementation of the project.

The second important factor is the extensive experience of our project team having the possibility to rely on a significant number of NRA-TSO organizations and in particular on 4 Regulators contributing not only to the training but primarily to the tutoring activity having the unique know-how and responsibility on regulatory licensing and inspections.

The feedback from Task 2 & Task 3 (assessment of courses results, final questionnaire, remarks and opinions collected from the trainees) confirms that:

- A) *Regarding organization and implementation:*
- T&T courses for staff of NRA need to be developed mainly in a dedicated approach: it is

- hard to find trainings on the market meeting the specific needs of NRA and TSO;
- The training activity needs to be conducted by senior lecturers with long experience in NRA and TSO activity in particular for lectures on regulatory licensing and inspection activity;
  - The T&T activity needs to maintain continuous focus on the role and responsibilities of the NRA paying attention to the organization, technical review and internal process of NRA;
  - It is important to have in the project team sufficient human resources (and facilities) as Regulators and TSO to face the T&T needs and offer the best contents and services<sup>1</sup>;
  - It is useful to complement, whenever possible, training with tutoring.



*B) Regarding the conduct of training, the importance of:*

- Setting clearly goal and objective for T&T,
- Ensuring sufficient background and basic competence of the trainees,
- Adopting methods of delivery combining effectively content and process,
- Promoting continuous interaction with the trainees,
- Presenting and analyzing case studies,
- Promoting discussion and multilateral communication,
- Creating a positive atmosphere in which also the trainees take the responsibility for the training outcomes,
- Creation of working sub-groups for practical application,

<sup>1</sup> ITER management expresses sincere acknowledgments to the project team partners (NRAs and TSOs) and to their experts for the excellent competence, availability and dedication. Thanks also to the Partner Countries for their effective cooperation. All that has allowed us to achieve the shown results.

- Performing the final evaluation at the end of the T&T courses,
- Feeding back the identified improvements,
- Complementing training with site visits.

The technical final questionnaires (40 - 60 questions submitted to the trainees at the end of each course) have provided indication of correct answers ranging as average between 70 and 89 per cent with constant increase in effectiveness.



The EU visibility has been constantly ensured in all performed T&T activity promoting and disseminating the EU legal framework for nuclear and radiation safety and presenting and discussing the EU safety objectives, requirements approaches and practices for regulatory and technical support functions. It is desirable to have a feedback from the beneficiaries in the medium term on the effective contribution of the provided T&T activity to fulfill their need for capacity building.

**Legenda:**

ANNuR = Arab Network of Nuclear Regulators  
 NRA = Nuclear Regulatory Authority  
 TSO = Technical Support Organization  
 T&T = Training & Tutoring  
 PC's = Partner Countries  
 INSC = Instrument Nuclear Safety Cooperation  
 EC PM = EC Project Manager

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