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International Atomic Energy Agency

The IAEA International School of Nuclear and Radiological Leadership for Safety

Objective, Concept, and Work to Date

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Shahid Mallick

Head, Programme and Strategy Coordination Section

Office of Nuclear Safety and Security Coordination

Department of Nuclear Safety and Security, IAEA

The Leadership School



- The overarching objective of the School is for **early to midcareer professionals** to develop their safety leadership potential through a better understanding of **what leadership means in practice** in nuclear and radiological working environments with their **inherent complexities and often competing considerations**
- This school is based on **experiential learning** including a **pedagogic progression** through the programme on key learning objectives from GSR Part 2

Inception of the School

- End of 2016 to the beginning of 2017
- The outputs of this phase were:
 - A concept paper with a description of the objectives, expected outcomes, target audience and methodology of the School
 - The establishment of internal coordination
 - Proposals for funding of the project
- Successfully completed
- Necessary basis for preliminary project development



Development Phase

- Early 2017 through to the Fall
- The outputs of this phase were:
 - Consultancy meetings to develop a curriculum for the school
 - A draft programme for a one week pilot school
 - A set of 4 case studies with corresponding Teaching Notes
- Successfully completed
- Basis for the implementation of the Pilot



Case Studies

- 4 Case Studies
 1. Medical Application
 - Misapplication of Radiotherapy treatments
 - Focus on Goal Setting
 2. Nuclear Power Plant
 - Hoisting event in the reactor building during an outage
 - Focus on Values and Attitudes
 3. Emergency Preparedness and Response
 - Release to the environment from a nuclear waste treatment process
 - Focus on Engagement
 4. Summary Case
 - Updating facilities in response to regulatory requirements
 - Focus on All leadership aspects
 - Including an element of Nuclear Security

Review the Case

- Students are
 - Provided the cases weeks in advance
 - Along with GSR Part 2
 - Expected to arrive having read the cases
 - The cases are too long and complex to be read in class
 - 15-20 pages in length
- Short, 10-15 minute, recap presentation given in class prior to group work
- Cases provide
 - Learning objectives – Based on GSR Part 2
 - Setting the Scene – Background information and main actors
 - Description of the Challenge – The story
 - Leadership for Safety Considerations – Things to consider in analysing the case
 - Suggested References – IAEA safety standards and nuclear security guidance
 - Annexes – Provide additional information to add to the realism of the case

Team Discussion

- Students are assigned groups of 4-5 members
 - 45 minutes to analyse and discuss the case in preparation for class discussion
- The analysis and discussion is done in the framework of the Leadership for Safety Considerations as well as the Learning Objectives of each case
 - *What were the main issues or tensions that created problems within the case?*
 - *What could have been done differently?*
 - *Why do you suppose nobody questioned the decision to introduce a third shift from the very beginning and also after problems began to appear?*
 - *What is your analysis of the leadership style and behaviours of Jean-Luc? How effective or ineffective was he in taking charge and mobilizing the crisis management team and generating responses?*

Class Dialogues

- As opposed to a classroom discussion using a rhetoric or Socratic method the School uses more dynamic exercises to help students explore various aspects of the cases and challenge each other
- Example exercises include:
 - Simplified root cause analysis
 - Position play
 - Groups playing characters to analyse motivations, values, etc.
 - Prevention
 - If you were there 1-year before, what would you have changed?
- This meant to move students within groups and see things from different perspective

Wrap-Up and Lessons Learned



- 30 minutes to conclude the session
 - Provide an end to the story
 - Remind students of the Learning Objectives
 - Provide some lessons to be learned
- This is not meant to provide the ‘right answer’
 - Key lessons with respect to leadership for safety our experts identified in drafting the case studies
 - Opportunity for reflection and how students can internalize lessons learned to use them moving forward in their careers

Pilot School

- 1 week in late October 2017 at the University of Nice
- Great deal of interest
 - Over 170 applicants
- 20 applicants selected from a variety of professional backgrounds in the nuclear and radiological field
- Preliminary evaluation shows that, overall, the School was valuable and conceptually sound



Overall lessons

- Coordination and communication amongst facilitators is highly important
- Augment the theory/conceptual portion of the School to provide a common understanding of key concepts
- More learning from experience, practical examples, and role play
- Potential to develop more case studies
- A longer programme would allow for further augmentation of the School including activities such as technical visits and more time for reflection



Next Steps

- The Pilot confirmed the viability & merits of the idea of the school and its future development.

**Phase 1 - completed
Pilot Project
(1 Year)**



**Phase 2 (3 Years) and
Phase 3 (5-10 Years)**



2017 – onwards

Phase 2 (3-4 years)

- Development of a two week School, regional implementation, and train the trainer programme.
 - Further development of the case studies and an enhanced methodology
 - Regional implementation and building of pool of experts
 - Train the trainers packages and seminars
 - A training management system
 - E-learning and online tools
 - Continued outreach and dissemination

Phase 3 (5-10 years)

- Link to capacity building programmes of Member States
 - Develop a consolidated product that can link with and support Member States' national programmes for capacity building in the area of leadership for safety
 - Link to relevant research and university programmes in Member States
 - Overall objectives:
 - Facilitate interregional cooperation
 - Mutual learning
 - Harmonisation of practices



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THANK YOU FOR YOUR ATTENTION