

LESSONS LEARNT FROM SPECIFIC EDUCATION AND TRAINING IN RADIATION PROTECTION TO THE SECURITY FORCES AND ARMED FORCES IN ARGENTINA



Cateriano, Miguel; Chahab, Martín; Fernández Moreno, Sonia; López Vietri, Jorge; Menossi, Sergio.

Nuclear Regulatory Authority (ARN)
Av. del Libertador 8250 - C1429BNP
Buenos Aires - Argentina
mchahab@arn.gob.ar

Introduction

Over the last 10 years, the Argentine Nuclear Regulatory Authority (ARN) has trained Argentina's Security and Armed Forces in radiological protection, nuclear safety, safe transport of radioactive material, emergencies and security. This paper contains training-related statistics and specifies the training format as well as the lessons learnt from ARN's Intellectual Capital and Knowledge Management perspective.

Goal

The goal of this paper is to share the Argentine experience in training the Security and Armed Forces in radiological protection and nuclear safety aimed at designing a national program for the creation of competencies in this field.

Training Data

Between 2001 and 2011, ARN has trained 23 professionals from the Security and Armed Forces through two different post-graduate courses, one in Radiation Protection and Safety of Radiation Sources and another one in Nuclear Safety. This figure represents 16% of the total number of Argentine professionals who have completed those courses. During the same period, ARN trained 60 members from the Security and Armed Forces through its annual technical courses on radiological protection. Overall, in the last 10 years, 83 Security and Armed Forces professionals and technicians have been trained by ARN. This accounts for 19% of the total number of professionals and technicians who have been trained by ARN nationwide.



Argentine civilians trained in ARN's postgraduate and technical courses from 2001 through 2011.	Argentine Security and Armed Forces members trained in ARN's postgraduate and technical courses from 2001 through 2011.
437	83 (19%)

Furthermore, Security and Armed Forces members have received education and training on specific topics that are relevant to them. For instance, between 2002 and 2011, ARN has trained over 150 Force members in the field of Safe Transport of Radioactive Material, and between 2008 and 2011, over 200 Force officials have been trained in Radiological and Nuclear Emergency Preparation.

Lessons Learnt

Regarding the specific training offered to Security and Armed Forces, the following lessons may be derived:

On Site Training	It is more effective to conduct specific courses <i>on site</i> , where Force members perform their regular duties related to nuclear activities, rather than in their Headquarters.
Emphasis was laid on operational issues and on hands-on exercises	A special selection of teaching modalities that favor the practical as opposed to the theoretical aspects should prevail. This should be done without disregarding any general aspect.
Sustainability of knowledge over time	Courses should be repeated over time. The "train the trainers" modality should be applied. Radiological protection and nuclear safety should be added as themes to the syllabus of the Force's own independent training programs. E-learning on its part has proven to also be a good practice.

Conclusions

Security and Armed Forces are target groups with clearly distinct characteristics which should be specially considered when creating national training programs on radiological protection and nuclear safety. Their role and specific duties in these areas should also be considered.

Specific programs should be designed with a considerable number of hands-on exercises in mind focused on the expected and typical scenarios in which these groups would normally be involved without overlooking the key aspects of radiological protection and nuclear safety.

The training center should promote the implementation of an adequate mechanism to avoid the loss of knowledge due to the high turnover of the Forces' members.

Efficiency of this tailored training is accomplished as far as to improve the responsiveness and capabilities of the armed forces in their role in the various radiation and nuclear safety related activities, which in turn improves overall safety.