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The FORO Project on Safety Culture in Organizations, Facilities and Activities With Sources of Ionizing Radiation

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Synopsis

The aim of this paper is to present the Ibero-American Forum of Nuclear and Radiological Regulatory Authorities' (FORO) Project on Safety Culture in organizations, facilities and activities with sources of ionizing radiation developed by experts from the Regulatory Authorities of Argentina, Brazil, Chile, Cuba, Spain, Mexico, Peru and Uruguay, under the scientific coordination of the International Atomic Energy Agency (IAEA).

Taking into account that Safety Culture problems have been widely recognized as one of the major contributors to many radiological events, several international and regional initiatives are being carried out to foster and develop a strong Safety Culture. One of these initiatives is the two-year project sponsored by the FORO with the purpose to prepare a document to allow its member states understanding, promoting and achieving a higher level of Safety Culture.
Safety approaches have had similar developments in almost all sectors of the industry and services with associated risks. Usually the occurrence of accidents or disasters has marked the beginning and the transition to higher stages, because they revealed expiration, failure or vulnerability of the philosophies, concepts and methods to address safety, existing at that time, leading to its renewal and to qualitatively better approaches.

In general, it can be considered that approaches to safety have gone through three phases. A first phase, characterized by a focus on technology to guarantee safety. Later, it was more relevant the contribution of individual human error during operation, leading to the human factors phase. Finally and after the analysis of some accidents occurred during the 80´s decade, a new vision leads to the next and most recent phase of safety approaches, the organizational phase. It is in the latter where the Safety Culture is framed.
Several international documents and events have recognized the contribution of problems of Safety Culture in the occurrence of radiation events. Widespread and intense efforts have been undertaken to develop the theme of Safety Culture in nuclear and other sectors such as oil, aerospace, civil aviation and the health sector. The assimilation and the practical incorporation of the concept of Safety Culture in organizations carrying out activities with radiation sources has expanded considerably.

The FORO document on Safety Culture has been written in Spanish and is available free of charge at the FORO website. The document covers theoretical approaches and practical guidance on Safety Culture, adapted to the environment in which radiological activities are carried out. Some innovative elements are introduced in this document like a Safety Culture concept which considers that the radiological protection culture and the security culture are inextricable linked.

Several existing approaches and criteria in other risky sectors or activities were reviewed and analyzed. As result of this work, 10 Basic Elements of Safety Culture were established:
1) Priority of safety
2) Visible leadership and commitment of top management with safety
3) Timely identification and proper solution of safety problems

4) Permanent focus on safety
5) Responsibility, involvement and individual behavior in respect to safety
6) Effective communication on safety
7) Free reports on safety concerns
8) Fair treatment for individual behaviors in respect to safety
9) Continuous organizational learning about safety
10) Environment of trust and partnership on safety.

These 10 Basic Elements are interrelated and they all must be present to achieve a strong safety culture. The 10 Basic Elements provide a conceptual framework to orient the actions and efforts for promotion and development and also for the evaluation, progress and monitoring.

The document also includes proposals for Safety Culture evaluation, Safety Culture indicators and provides a conceptual framework for internal Safety Culture in the Regulatory Authorities. This document can be a valuable tool to reach and maintain a strong Safety Culture for organizations and institutions in the Iberoamerican region and all over the world.

Country or International Agency

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