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Enabling sustainable uranium production: The Inter-regional Technical Cooperation experience

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Uranium production cycle activities are increasing worldwide, often in countries with little or no previous experience in such activities. Initial efforts in uranium exploration and mining were limited to a few countries, which progressed through a painful learning curve often associated with high socio-economic costs. With time, good practices for the sustainable conduct of operations became well established, but new projects in different regional contexts continue to face challenges.

Moreover, there have been highs and lows in the levels of activities and operations in the uranium industry, which has disrupted the stabilizing of the experiences and lessons learned, into a coherent body of knowledge. This collective experience, assimilated over time, has to be transferred to a new generation of experts, who have to be enabled to use this knowledge effectively in their local contexts in order to increase efficiency and reduce the footprint of the operations. This makes it sustainable and socially acceptable to local communities, as well as in the global context.

IAEA has implemented several projects in the last five years to address gaps in transferring a coherent body of knowledge on sustainable uranium production from a well experienced generation of experts to a new generation facing similar challenges in different geographical, technological, economic and social contexts. These projects focused on enabling the new practitioners in the uranium production industry to avoid the mistakes of the past and to apply good practices established elsewhere, adapted to local needs. The approach was intended to bring considerable cost savings while attracting elevated levels of social acceptance.

These projects were effective in introducing experts from different areas of the uranium production cycle and with different levels of experience to the availability of advanced tools that can make operations more efficient and productive, reduce footprint, increase competencies in control and management and make activities sustainable. Each uranium development project is technically, environmentally and socio-economically different from another, and a one-size-fits-all type of approach is not suitable.

Each person who interacted in one way or another with the project faced a unique challenge which they had to solve through an application of good practices appropriately applied to a new context. Use of informal on-line and social media communications was not intended at the start, but was quickly identified as a valuable tool for enabling the sharing of experiences.

The paper will discuss the lesson learned, key success factors and the results of these past activities in promoting a sustainable uranium production future in over 40 Member States of International Atomic Energy Agency.

Primary author: Mr TULSIDAS, Harikrishnan (IAEA)

Co-author: Mr ZHANG, Jing (IAEA)

Presenter: Mr TULSIDAS, Harikrishnan (IAEA)

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