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A milestones approach to uranium mining and development: an IAEA initiative

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OVERVIEW

Many IAEA Member States without current uranium production activity have expressed interest in uranium mining, in order to meet their or other countries' energy needs.

To introduce or reintroduce uranium mining and processing, a wide range of issues needs to be considered. With the assistance of experts from around the world, the IAEA is preparing a guide setting out a milestones approach to the uranium production cycle. This will assist Member States to take a systematic and measured approach to responsible uranium mining and milling.

The information in the guide will be provided within the context of other IAEA guidance and materials relevant to development of the Uranium Production Cycle, including the IAEA Safety Standards and Safety Guides Series. Although not the emphasis of the guide, the vital importance of appropriate radiation protection, security and non-proliferation safeguards is acknowledged.

In the development of the guide, four generalized stages with associated milestones of preparedness are being considered (subject to amendment):

- Those considering exploration or mining of uranium for the first time, or after many years, but without an identified project.
- Those seeking to initiate/ reinvigorate uranium mining with one or more identified projects.
- Established producers of uranium wishing to enhance existing capacity/capability.
- Historic producers with closed sites in the stage of closure and rehabilitation/remediation or aftercare.

The situation of Member States will be unique, at least in detail. It is also acknowledged that a given Member State may simultaneously be in more than one of these generalized stages. Nevertheless, the report will comment on common threads and good practices, and assist a Member State to identify areas within a stage where they are less prepared, and give advice for a way forward towards a later stage. However, an important consideration with uranium mining and milling is that uranium ore may or may not be present in a particular Member State. Hence, even with excellent work in uranium exploration, with good policies, legislation, regulation and well-trained experts, a Member State may remain in the earliest stage. This is in contrast to the milestones approach for some other purposes, where the opportunity to progress through the various milestones to their successful implementation is more generally applicable, should a Member State choose.

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To date, the following experts from around the world have been directly assisting the IAEA in the preparation of the milestones guide.

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Consultancy Meetings were held in Vienna, Austria on 12–14 December 2016 and 4–7 September 2017. It is intended that a full draft document will be made available for comment to the IAEA's member states during 2018.

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