

## Thorium research and development in Turkey

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Turkey has a great potential regarding thorium resources. Thorium exploration activities have been done in the past mainly by state organizations for determining the thorium resources in Turkey. Thorium occurs as complex mineral together with barite, fluorite and rare earth elements (REE). The increase in global demand for REE creates the opportunity for REE production which will also produce thorium as a by-product. The development of nuclear energy program in Turkey provides the stimulus for research and development activities in nuclear technologies. Being aware of this fact, the plan to increase thorium research and development (R&D) activities have been included in the “Action Plan for Decreasing the Import Dependency (2014-2018)” by Ministry of Development and “Strategic Plan (2015-2019)” of Ministry of Energy and Natural Resources (MENR). The 2nd National Workshop on Thorium Fuelled Nuclear Reactors was held by MENR Nuclear Energy Project Implementation Department in Antalya Turkey on 20-22 February 2015. The final declaration of the workshop emphasizes the importance of thorium reserves in Turkey and the necessity for thorium exploration and development activities in order to determine the feasibility of thorium mining and fuel cycle in Turkey. These activities should be conducted together with the development of technologies for separation of these complex minerals and purification of thorium, REE and other minerals to be utilized as commercial products. There are advanced academic research studies on thorium fuel cycle which should be supported by the industry in order to commercialize the results of these studies. Turkey should be integrated to international R&D activities on ADS which is expected to commercialize on medium term. The legislative framework should be developed in order to provide the industrial baseline for nuclear technologies independent from nuclear regulatory activities.

### Mr. Görkem GÜNGÖR

Mr. Görkem GÜNGÖR has obtained his BS degree from Hacettepe University Nuclear Engineering Department in Ankara Turkey in 2002. Until 2012 he has worked in the private sector mainly in machining industry as a sales engineer. In 2012 he joined the Ministry of Energy and Natural Resources Nuclear Energy Project Implementation Department as an Assistant Expert. He has participated to training programs of IAEA on nuclear fuel cycle and radioactive waste management. His thesis subject under the Ministry of Energy and Natural Resources is the Economic Impact of Uranium Mining and Nuclear Fuel Manufacturing in Turkey. He is also a graduate student in Middle East Technical University Department of Earth System Sciences in Ankara Turkey since 2013.

