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SATELLITE SERVICES FOR WATER PROBLEMS IN JORDAN: SPACEFORMED STUDY RESULTS

Abstract

This paper presents the results of the roadmap study commissioned to Kosmonauta.net in the framework of the “Space for Mediterranean (SpaceForMed)” initiative jointly supported by the European Investment Bank (EIB) and the European Space Agency (ESA). The five-month study focused on exploring sustainable service opportunities that utilise the benefits of space assets in water management applications in the Hashemite Kingdom of Jordan.

According to the most recent reports by the United Nations, Jordan is the second most water scarce country in the world. The annual renewable freshwater resources per capita amount to 133.7 cubic meters, in comparison to 6000 cubic meters on average globally. Water resources decline further due to the high population growth, the refugee influx from Iraq and Syria, climate change and water/environmental pollution.

So far, satellite services in water management have been seldom utilised in Jordan; with the majority of projects conducted by local universities. The potential offered by this medium has recently been demonstrated to government officials in a NASA led study with promising outcomes.

To carry out the requested work, Kosmonauta.net relied on the work of Arabic-speaking experts trained in Middle Eastern studies to support fieldwork in Jordan as a way to reduce the language and cultural barriers. Early results of the study identified five areas where integrated satellite applications utilising e.g. Earth Observation and Global Navigation Satellite Systems could be implemented with significant socio-economic results in the short term.

At the time that the paper was submitted the project was still in progress, with an expected completion date around mid-March 2015.