

Topics (T)

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THE SPACE AGENCY AS THE FOCAL POINT FOR PROVIDING SPACE-BASED CLIMATE INTELLIGENCE FOR DECISION MAKERS – THE ISA CASE STUDY

Abstract

As space-based intelligence transforms from a complementary source of data to a primary source of data on Climate Security, so does the space agency's role transform into that of a primary agent, which provides tailored solutions to decision makers. This paper seeks to discuss and elaborate this process, drawing examples from the actions taken by the Israel Space Agency (ISA). The first step in performing this new role by the space agency should be mapping the needs and capacities of key stakeholders and decision makers on climate and environmental intelligence, whether Government, Academia or private industry. ISA is in continuous dialogue with these stakeholders, to ensure it maintains an overview of such needs and capacities. It does so by, inter alia, performing outreach events and conducting surveys of the industry and ecosystem. A possible way to assess the efficacy of space-based solutions in climate and environmental intelligence is performing pilots with selected bodies. ISA does so using data obtained from the satellite "VENS" (developed jointly with CNES) in pilots with diverse governmental bodies such as the Ministry of Agriculture or Israel Railways. Those are complemented through joint researches with international partners. Once the space agency's relationship with key stakeholders evolves, and solutions are better matched with needs, it may be beneficial to standardize the provision of space-based tools and solutions nationally. In this regard, ISA plans to construct and operate the ISDC (Israel Space Data Center), as a way of streamlining space-based data and intelligence to decision makers in Government as well as the entire space community. Finally, as new and emerging technologies in computing become readily available, it is envisioned that tools would also become more A.I. driven, in order to transform raw data into customer-tailored solutions. For example, an energy-related customer would be fitted with data on gas emissions, while an agriculture-related customer would be fitted with the same data, but one that reflects crop yields. Simply put – personalized space-based solutions for each customer. Space agencies should act as the main driver of the entire abovementioned process. As the central body leading space policy, they are uniquely positioned to map and connect the national space ecosystem, leverage international partnerships, operate a space data center, and provide tailored space-based solutions on climate intelligence, among others. ISA is taking efforts in recent years to follow this path, hoping to serve as a valuable case study for evaluating its results.