

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Integrated Applications End-to-End Solutions (1)

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SPACE ASSETS FOR DEMINING ASSISTANCE

Abstract

Populations emerging from armed conflicts often remain threatened by landmines and Explosive Remnants of War. The international Mine Action community is concerned with the relief of this threat. The Space Assets for Demining Assistance (SADA) is a project that aims to improve the socio-economic impact of Land Release activities in Mine Action. SADA is an Integrated Applications Promotion (IAP) project from the European Space Agency (ESA). It has been initially proposed by the International Astronautical Federation (IAF). SADA has a broad scope, covering activities such as risk and impact analysis, planning, resource management, field operations and reporting. In three parallel feasibility studies the related needs of the Mine Action community have been evaluated and the possible contribution of space assets has been identified. Support services are now being designed and their fieldability and economic viability will be assessed.

The overall purpose of SADA is to prove the added value, viability and sustainability of an integrated set of services supporting Land Release in Mine Action. Land Release in Mine Action is the process where the demining community identifies, surveys and prioritizes suspected hazardous areas for ever closer investigation, clears mines and releases land to the local population. SADA aims to cost-effectively integrate Earth Observation data, GNSS navigation and SatCom technologies with existing Mine Action tools and procedures, as well as with novel aerial survey technologies. The compatibility with existing user habits, budget and appropriateness of the technologies are important conditions for success.

To ensure the activity is genuinely user driven, the Geneva International Centre for Humanitarian Demining (GICHD) plays an important role as ESA's external advisor. ESA is furthermore supported by the Swiss Foundation of Mine Action (FSD). FSD has provided a shared user needs baseline to the three

study teams. Last but not least, the study teams interact closely with their pre-existing contacts in the Mine Action community.

So far it has been demonstrated that Earth Observation data, Satellite Communication and Navigation indeed provide added value in Mine Action. E.g. Earth Observation data improves the mapping of socio-economic impact, to help set priorities, and characterization of the environment of a hazardous area, to select the most appropriate tools. Satellite Navigation supports non-technical surveys. Satellite Communication helps to integrate field data and reporting with international data bases. A proof of concept is therefore planned as the next step.