

EO4SECURITY

SATELLITE DATA FOR INVESTIGATION
OF ENVIRONMENTAL CRIMES
AND CRIMES AGAINST HUMANITY

13 MAY 2021

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Background

Organizations responsible for the detecting, investigating and countering environmental crime and crimes against humanity are routinely contending with limited information collection capability and a lack of awareness of leading edge information processing and data analytics tools. Many technical developments that could address current constraints are not systematically made available to stakeholders within these organizations. This is exacerbated by the fact that few stakeholders have the resources or technical competence to make effective and appropriate use of these new developments. At the same time, these types of threat are evolving and expanding, incorporating new technologies that enable enhanced networking and exchange and exploiting situations of limited governance. Environmental crimes are characterised by impact on the natural environment (pollution, wildlife, biodiversity, ecological balance) and consequences for human beings (life expectancy, food chain, disease...). Crimes against humanity include gravest crimes of concern to the international community: genocide, war crimes, and the crime of aggression. (Rome statute of the International Criminal Court, art.7).

A combination of developments over the last 5 years is creating significant opportunity for satellite based Earth Observation to become an increasingly important tool for stakeholders engaged in countering environmental crime and crimes against humanity. Examples include the increasing availability of diverse satellite data

collection platforms (ensuring a wider range of datasets and more persistent updates), innovative AI based approaches (to extract and generate information from this increasingly large dataset) enhanced processing capabilities, platforms and analytics tools (enabling more complex analysis and intelligence to be generated by fusing diverse data and information from a wider range of sources).

The European Space Agency has been investigating and testing these new capabilities in order to understand how to achieve a more systematic embedding of EO derived information within investigative practices for environmental crime and crimes against humanity, in particular to improve the characterization of the diverse activities of organizations and persons involved in illegal activities and enable the EO derived information to be better leveraged within the intelligence models constructed by investigation teams.

This workshop will consider the various prototype capabilities currently being developed and tested to both:

- build the awareness and understanding of stakeholders working to prevent environmental crime and crimes against humanity
- consolidate feedback from this stakeholder community on priority additional developments to be addressed and approaches to ensure effective and optimized integration of these new developments within the enhanced working practices and information analysis protocols which these stakeholders must follow.

Objectives

The primary objectives of the workshop are as follows:

- promote awareness of state of the art capabilities linked to the collection and exploitation of satellite derived information and its integration into investigative practices and intelligence model elaboration
- identify priority interests from the law enforcement community with respect to wider use of these capabilities
- discuss issues to be addressed in order to achieve more widespread utilization of these capabilities within the law enforcement and wider security community working to counter environmental crime and crimes against humanity

Proposed Approach

The workshop will be organized as a virtual meeting with a limited number of invited participants. It is intended to include both key members of the law enforcement community as well as Civil Society Organizations developing roles and competencies that are increasingly supporting this community.

The workshop will be structured as a series of sessions addressing specific aspects of investigating and countering environmental crime and crimes against humanity including:

- Reliable and comprehensive detection of the activities of interest
- Building up the context underpinning these activities (eg planning/preparation, movement of assets, subsequent actions of entities of interest, etc)
- Supporting the identification, collection and verification of conventional information (eg witness statements, open source information)

Each session will consider possible technical contributions from satellite derived information and state of the art data fusion and analytics, characterize the resulting impacts and benefits to be demonstrated to support operational utilization and identify issues to be addressed in moving towards more operational use of these capabilities.