

## Space and Security Community Activity Implementation Plan 2020-2022

### 1. Executive Summary

Title	Space and Security
Acronym	SSCA
Category	Community Activity
Overview	<p>The Space and Security Community Activity (SSCA) aims at ensuring the wellbeing and security of countries and citizens by exploiting suitable space assets and collateral data.</p> <p>The SSCA intends to:</p> <ul style="list-style-type: none"> <li>• Provide a forum for discussion and organize capacity building initiatives;</li> <li>• Establish and foster cooperation with key entities and stakeholders;</li> <li>• Collect user requirements and needs;</li> <li>• Identify observational and capability gaps to be filled by space assets;</li> <li>• Explore how to take maximum benefit from the usage of very large quantities of heterogeneous data;</li> <li>• Identify, develop and assess innovative applications, services and platforms encompassing the whole data lifecycle;</li> <li>• Contribute to the implementation of relevant projects in the framework of R&amp;I initiatives;</li> <li>• Build synergies with relevant GEO activities.</li> </ul> <p>The SSCA aims at enhancing:</p> <ul style="list-style-type: none"> <li>• The resilience of the society against natural and man-made disasters;</li> <li>• The protection of critical infrastructures;</li> <li>• The efficiency in tasks related to border and maritime surveillance as well as to civil protection and humanitarian aid;</li> <li>• The capacity of relevant stakeholders to achieve the Security relevant Sustainable Development Goals (SDGs).</li> </ul> <p>Furthermore, the SSCA works towards raising awareness and adoption of open data, citizen science, in-situ data and advanced technologies in the Space and Security domain.</p>
Planned Activities	<p>Over the 2020-2022 period, SSCA activities will focus on the consolidation of the Community and on the implementation of initial solutions. The identified key activities for the period are:</p> <ul style="list-style-type: none"> <li>• To grow the SSCA by incorporating new members;</li> <li>• To enhance internal communication within the SSCA and external communication in relevant fora;</li> <li>• To identify and implement user scenarios and potential pilot projects for the SSCA.</li> </ul>
Point of Contact	<p>Mr. Sergio Albani</p> <p><a href="mailto:sergio.albani@satcen.europa.eu">sergio.albani@satcen.europa.eu</a></p> <p>European Union Satellite Centre (SatCen)</p>

## 2. Purpose

### 2.1. Evidence of need for the CA

The entire world is facing challenges that are more diverse and less predictable than before. Areas like urbanization, social movements, political instability and even climate change are challenging the current international state of play in the Security domain. This highly dynamic geopolitical situation raises Security issues all around the world, forcing decision makers to take suitable actions to respond in due time to complex situations. International initiatives - including the United Nations (UN) 2030 Sustainable Development Agenda, the Paris Agreement and the Sendai Framework - are working towards a more sustainable future, with clear targets defined including peace and wellbeing of the population. To support these targets from a Security perspective, Earth Observation (EO) is a recognized key asset that provide relevant and trustable information for the decision making process. In particular, space-based EO is an outstanding mean to support these initiatives at global level.

The Space and Security Community Activity (SSCA) aims at ensuring the wellbeing and security of countries and citizens by exploiting suitable space assets and collateral data.

The SSCA intends to:

- Provide a forum for discussion and organize capacity building initiatives;
- Establish and foster cooperation with key entities and stakeholders;
- Collect user requirements and needs;
- Identify observational and capability gaps to be filled by space assets;
- Explore how to take maximum benefit from the usage of very large quantities of heterogeneous data;
- Identify, develop and assess innovative applications, services and platforms encompassing the whole data lifecycle;
- Contribute to the implementation of relevant projects in the framework of R&I initiatives;
- Build synergies with relevant GEO activities.

The SSCA aims at enhancing:

- The resilience of the society against natural and man-made disasters;
- The protection of critical infrastructures;
- The efficiency in tasks related to border and maritime surveillance as well as to civil protection and humanitarian aid;
- The capacity of relevant stakeholders to achieve the Security relevant Sustainable Development Goals (SDGs).

Through a continuous dialogue with key stakeholders and capacity building initiatives, the SSCA aims at enabling a consistent collection of user requirements and at implementing new technologies and solutions via relevant mechanisms (e.g. EU R&I programmes) and international collaborations (e.g. GEO, ESA, UN). Furthermore, the SSCA works towards raising awareness and adoption of open data, citizen science, in-situ data and advanced technologies in the Space and Security domain.

### 2.2. Actual and/or planned outputs, and geographic scope

The current output of the 2017-2019 period is the engagement of an initial set of partners and the build-up of the SSCA. A planned output for the on-going period is the preparation and submission within relevant R&I programmes of proposals to give birth to a first pilot project with financial funding that allows the development of EO-based products in response to Security user needs.

The SSCA is open worldwide to public national or international stakeholders in the Space and Security domain, and the results are shared accordingly.

### 3. Background and Previous Achievements

The SSCA activities started in November 2015 with the approval of the Community Activity during the GEO Plenary held in Mexico. The 2017-2019 period was dedicated to the engagement of an initial set of partners in response to the identified need of having a community of users making use of Space assets to deal with Security issues.

The SSCA was promoted in a number of open events (e.g. the ESA-SatCen-JRC Big Data from Space Conference, the ESA Living Planet Symposium, the ESA EO Open Science Conference and the SatCen Big Data in Secure Societies Workshop) and in a number of restricted events (e.g. the SatCen Expert User Forum). Thanks to this, key partners such as ESA and IHE were engaged in the SSCA from the beginning, and WFP and EuroGeoSurveys have recently joined the community.

With respect to participation in relevant innovation activities, SatCen is a task leader in the H2020 NextGEOSS project in charge of implementing the Space and Security Innovation Pilot, linking the project outcomes with the SSCA activities, and contributing to the dissemination and communication of the project results. SatCen and EuroGeoSurveys also participate in the H2020 E-SHAPE project, in the Disaster Resilience showcase. E-SHAPE is an unprecedented initiative that brings together decades of public investment in EO and in cloud capabilities into services to the citizens, the industry, the decision-makers and the researches.

In terms of links with other GEO initiatives, SatCen participates in the European GEO HLWG and in the EuroGEO Coordination Group as well as takes part of EuroGEO Action Group for Disaster Resilience.

### 4. Key Activities

Over the 2020-2022 period, the SSCA activities will focus on the consolidation of the Community and on the development of initial solutions.

More in detail, the identified key activities for the period are:

- To grow the SSCA by identifying potential members active in relevant fields and incorporating them.
- To enhance internal communication within the SSCA by:
  - Preparing and disseminating relevant information;
  - Leveraging the institutional role of the EU Satellite Centre to maintain a dialogue with EU Member States and relevant EU entities.
- To enhance external communication in relevant fora by:
  - Writing and publishing a white paper with the SSCA main goals and activities;
  - Participating in the organisation of relevant international events (e.g. the Big Data from Space Conference) or dedicated sessions on Space and Security within them (e.g. inside the ESA Living Planet Symposium).
- To identify and implement user scenarios and a potential pilot project for the SSCA by:
  - Gathering user requirements from Space and Security users and stakeholders;
  - Defining proper user scenarios and engaging with relevant partners;
  - Identifying the appropriate framework for implementing a suitable pilot project.

#### 4.1. Measurable Objectives

In order to measure quantitatively the success of the next period, the following key indicator parameters are considered:

- Number of members affiliated to the SSCA per year;

- Number of SSCA active participants per year;
- Number of initiatives in which more than one SSCA member participates;
- Number of relevant events where SSCA members participate and number of participants.

## 5. Relationship to GEO Engagement Priorities and to other WP activities

The 2030 Agenda for Sustainable Development highlights that *“sustainable development cannot be realized without peace and security; and peace and security will be at risk without sustainable development”*. In this context, the SSCA will support the achievement of those Sustainable Development Goals targets related to Security and for which EO data analysis can contribute.

The support to the achievement of the Sendai Framework goals is also implicit in the SSCA overall concept, since they are topics directly related to the Security of citizens and society.

SatCen participates in the H2020 NextGEOSS project in charge of implementing the Space and Security Innovation Pilot and linking the project outcomes with the SSCA activities; furthermore, NextGEOSS has a direct link with a number of GEO initiatives. Participation in H2020 E-SHAPE project, which will be an outstanding contribution to GEO, also brings associated intrinsic links to GEO Engagement Priorities, such as the Sendai Framework on disaster Risk Reduction and SDG2 and SDG11.

## 6. Governance

The Community Governance trusts on partners’ spontaneous participation and engagement.

Stakeholders follow their respective operational activities and, when a need or an opportunity is identified, it is shared with the SSCA members to look for solutions.

SatCen leads the SSCA and is committed to engage current and new identified partners with the community, and to deal with communication through social networks, conferences and relevant events.

The resources are in-kind contributions from the different members and reuse of results from external projects that might be relevant to the SSCA.

## 7. Data Policy

The data generated by the SSCA will be available for access through GEOSS following the Data Sharing and Management Principles, always in compliance with the classification information rules of each dataset.

## 8. Tables

### 8.1. Individual Participants

Table A -- Individual Participants in the GEO Work Programme Activity						
First Name	Last Name	Organization	GEO Member / PO Affiliation	Primary Role	Secondary Role	Email Address
Sergio	Albani	EU SatCen: European Union Satellite Centre	EU SatCen: European Union Satellite Centre	Lead or Co-lead		<a href="mailto:sergio.albani@satcen.europa.eu">sergio.albani@satcen.europa.eu</a>
Jerome	Bequignon	ESA: European Space Agency	ESA: European Space Agency	Member / Participant		<a href="mailto:jerome.bequignon@esa.int">jerome.bequignon@esa.int</a>
Uta	When De Montalvo	IHE: IHE Delft Institute for Water Education	IHE: IHE Delft Institute for Water Education	Member / Participant		<a href="mailto:u.wehn@unesco-ihe.org">u.wehn@unesco-ihe.org</a>
Rogério	Bonifacio	WFP: World Food Programme	WFP: World Food Programme	Member / Participant		<a href="mailto:rogerio.bonifacio@wfp.org">rogerio.bonifacio@wfp.org</a>
Gerardo	Herrera	EuroGeoSurveys	EGS: EuroGeoSurveys	Member / Participant		<a href="mailto:g.herrera@igme.es">g.herrera@igme.es</a>

### 8.2. Contributions

Table B -- Contributions to the GEO Work Programme Activity				
Contributing Organization	GEO Member / PO Affiliation	Type of Organization	Type of Contribution	Estimated Value of the Contribution
EU SatCen: European Union Satellite Centre	EU SatCen: European Union Satellite Centre	Lead or Co-lead	In-kind Labour	
ESA: European Space Agency	ESA: European Space Agency	Member / Participant	In-kind Labour	
IHE: IHE Delft Institute for Water Education	IHE: IHE Delft Institute for Water Education	Member / Participant	In-kind Labour	
World Food Programme	WFP: World Food Programme	Member / Participant	In-kind Labour	
EuroGeoSurveys	EGS: EuroGeoSurveys	Member / Participant	In-kind Labour	

### 8.3. Task Structure

<b>Table C -- Task (or Work Package) Structure of the GEO Work Programme Activity</b>				
<b>Task Name</b>	<b>Task Description</b>	<b>Names of Task Leads</b>	<b>Task Starting Year</b>	<b>Year of Planned Task Completion</b>
SSCA Growth	To grow the SSCA by identifying potential members active in relevant fields and incorporating them.	Sergio Albani	2019	2022
Internal Communication	To enhance internal communication within the SSCA by: 1) Preparing and disseminating relevant information; 2) Leveraging the institutional role of the EU Satellite Centre to maintain a dialogue with EU Member States and relevant EU entities.	Sergio Albani	2019	2022
External Communication	To enhance external communication in relevant fora by: 1) Writing and publishing a white paper with the SSCA main goals and activities; 2) Participating in the organisation of relevant international events or dedicated sessions on Space and Security within them.	Sergio Albani	2019	2022
SSCA Pilot Project	To identify and implement user scenarios and potential pilot projects for the CA by: 1) Gathering user requirements from Space and Security users and stakeholders; 2) Defining proper user scenarios and engaging with relevant partners; 3) Identifying the appropriate framework for implementing a suitable pilot project.	Sergio Albani	2019	2022

### 8.4. Deliverables

<b>Table D -- Planned Deliverables and Milestones of the GEO Work Programme Activity</b>				
<b>Task Name (from Table C)</b>	<b>Name of Deliverable or Milestone</b>	<b>Description of the Deliverable or Milestone</b>	<b>Year of Planned Completion</b>	<b>Current Status</b>
SSCA Growth	Community Members	Contact List	2022	In progress
Internal Communication	Mailing List	Mailing List	2020	In progress
External Communication	SSCA White Paper	Open document on SSCA objectives	2020	Not yet started

External Communication	Events	Organization of events for dissemination, engagement and communication	2020	Not yet started
SSCA Pilot Project	Pilot Project	Project deliverables	2022	In progress (looking for funding)