

# *Leveraging Space for Global Health*

## *Efforts of UNOOSA (Space for Global Health)*

ESA Digital Workshop: Space for Intelligent Health  
3 November 2020

Shirish Ravan  
[shirish.ravan@un.org](mailto:shirish.ravan@un.org)



UNITED NATIONS  
Office for Outer Space Affairs



# Our Work

## Vision

Bringing the benefits of space to humankind.

## Mission Statement

Promote international cooperation in the peaceful uses of outer space to achieve sustainable development goals.



More info: [www.unoosa.org](http://www.unoosa.org)

# A Platform for dialogue

## Committee on the Peaceful Uses of Outer Space

- Established by General Assembly in 1959 to **govern exploration and use of space for the benefit of all humanity**
- Instrumental in the creation of the **five treaties** and **five principles of outer space**, and important to strengthen the international legal regime governing outer space
- Provides a unique platform at a global level to monitor and discuss developments in the space agenda and space technology applications.
- Support efforts at national, regional and global level to **maximize the benefits of the use of space science, technology and applications.**



Two subsidiary bodies: the **Scientific and Technical Subcommittee (STSC)**, and the **Legal Subcommittee (LSC)**, both established in 1961.

# Space for Global Health



2001

the **Action Team on Public Health** (action team 6) was officially created by UNISPACE III

2011-2014

the Action Team 6 Follow-up Initiative (AT6-FUI) held a series of workshops with support of UNOOSA

2015-2018

the STSC expert group on Space and global Health held four meetings

2015

the strengthened space cooperation for global health was one of the seven agreed upon thematic priorities by UNISPACE +50 (TP5)

2017

the **United Nations/World Health Organization/Switzerland Conference on Strengthening Space Cooperation for Global Health** was organized as a flagship conference under the UNISPACE+50 Thematic priority 5

2018

the Committee on the Peaceful Uses of Outer Space, at its sixty-first session held from 20 to 29 June 2018, agreed to introduce a **new item on Space and global health in the agenda of the Scientific and Technical Subcommittee (STSC)**, and also agreed that a **working group**, established under that agenda item, should be convened at the fifty-sixth session of the Subcommittee in 2019



# Working Group on Space and Global Health

Chair: Antoine Geissbühler (Switzerland).

Multi-year workplan for 2019-2022.

- The **Working Group on Space and Global Health** is gathering information from States members and international organizations about their use of space applications for global health to develop concrete recommendations.
- It aims to establish a platform to enhance the sharing of information, best practices, tools and capacity-building resources in the area of space and global health.



In June 2020, the WG held a virtual meeting on Space and Global Health to discuss lessons learned from the COVID-19 pandemic that could be useful for the work of the WG.

<https://www.unoosa.org/oosa/en/ourwork/copuos/stsc/gh/index.html>

# UNOOSA Initiatives

## Contributing to Global Health



A **dedicated Task Force** on Space for Health was established to improve inter-Office coordination in developing concrete response to COVID-19.



**Space 4 Health webinar** was organized to share new and existing initiatives and current best-practices on how to best address this crisis by using space infrastructure



To help bridge the information crisis, **UN-SPIDER** compiled examples of contributions and best practices using space in addressing COVID-19:  
<http://www.un-spider.org/advisory-support/emergency-support/covid-19>



**Developing a dedicated project** on Space 4 Global Health and Well Being to better equip the organization and UN Member States in addressing contemporary and future health-related issues

**UNOOSA helps all countries access the potential of space science and applications and integrate these tools in national policies and practices.**

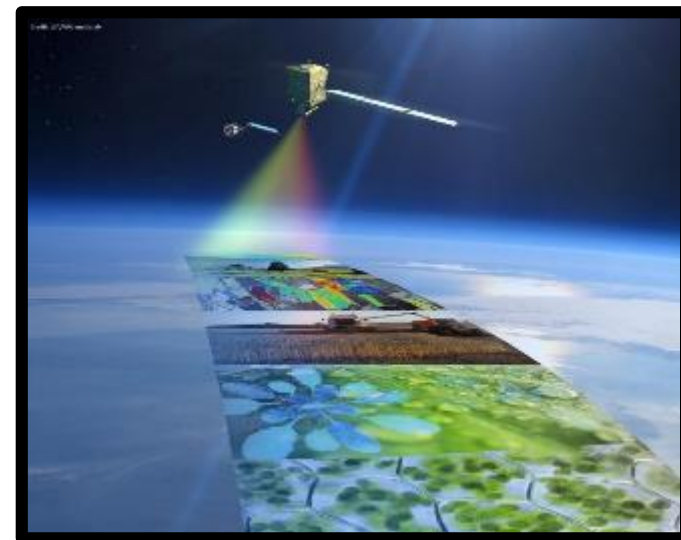
# UNOOSA Initiatives

## Space 4 Health Webinar



UNITED NATIONS  
Office for Outer Space Affairs

- On 14 May 2020, UNOOSA organized a **Space4Health Webinar** dedicated to the use of space infrastructure, its data, applications and services to combat the pandemic of the new coronavirus, as well as to global health challenges now and in the past.
- The Webinar featured 20 representatives from Space Agencies, Private Sector, Universities, Research Institutions, UN Member States and UNOOSA.
- In total, more than 400 people registered for the Webinar.



## OBJECTIVES

- Increase awareness about existing space applications for better health and best practices;
- Explore the role of space in disaster management, particularly for reducing the health impacts of disasters;
- Foster synergies among existing initiatives and practices; and
- Promote networking and global collaboration on space for health.



# Disaster risk reduction UN-SPIDER



UNOOSA's **UN Space-based Information for Disaster Management and Emergency Response (UN-SPIDER)** programme was created in 2006 with the mission to address the limited access developing countries have to specialized technologies that can be essential in the management of disasters and the reducing of disaster risks.



## Knowledge Portal

The UN-SPIDER Knowledge Portal is a web-based tool for information, communication, data and supporting the use of space-based science, technology and data for disaster risk reduction and emergency response



## Fostering Cooperation

UN-SPIDER fosters alliances and creates forums where both space and disaster management communities can meet



## Capacity Building

UN-SPIDER facilitates capacity building and institutional strengthening, including the development of curricula and an e-learning platform (e-SPIDER)

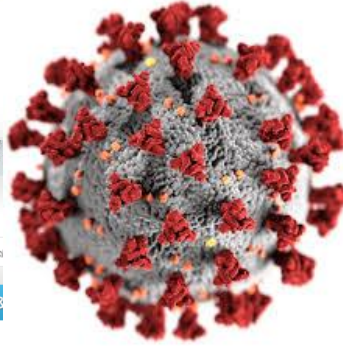


## Technical Advisory Support

UN-SPIDER provides support to countries in assessing national capacity and in evaluating disaster and risk reduction activities, policies and plans



# Facilitating discovery of space applications related to COVID-19



The screenshot shows the UN-SPIDER Knowledge Portal website. The header includes the United Nations Office for Outer Space Affairs logo and the text "UN-SPIDER KNOWLEDGE PORTAL" with the subtitle "Space-based information for Disaster Management and Emergency Response". A navigation bar contains links: Home, Space Application, Risks & Disasters, Links & Resources, Advisory Support, Network, Projects, and News & Events. The main content area is titled "Coronavirus disease (COVID-19)". It features a satellite image of a city with a red overlay indicating a specific area. Text on the page states: "Wed, 11/03/2020 Visit the United Nations Coronavirus Portal for more information about the coronavirus (COVID-19) disease". Below this, it explains that space technologies and geospatial data can support governments in improving situational awareness and responding to the COVID-19 outbreak. It mentions that several institutions have published information products, such as web maps of confirmed infections and deaths, that are making use of the advantages of GIS. Others have used space technologies to track pollution levels across the world, highlighting a drop due to the restrictions imposed as a result of the pandemic. Yet others are using a combination of global navigation satellite systems technologies to map the position of critical infrastructure in geographical areas where there are reported cases. The page also includes a "CONTACT US!" section with a form and a "Stay informed" section with a link to subscribe to the mailing list. At the bottom, there is a search bar and filters for Format and Scope.

UNITED NATIONS  
Office for Outer Space Affairs

## UN-SPIDER KNOWLEDGE PORTAL

Space-based information for Disaster Management and Emergency Response

Home Space Application Risks & Disasters Links & Resources Advisory Support Network Projects News & Events

### Coronavirus disease (COVID-19)

Wed, 11/03/2020  
Visit the United Nations Coronavirus Portal for more information about the coronavirus (COVID-19) disease

Space technologies and geospatial data can support governments in improving situational awareness and responding to the COVID-19 outbreak. Several institutions have published information products, such as web maps of confirmed infections and deaths, that are making use of the advantages of GIS. Others have used space technologies to track pollution levels across the world, highlighting a drop due to the restrictions imposed as a result of the pandemic. Yet others are using a combination of global navigation satellite systems technologies to map the position of critical infrastructure in geographical areas where there are reported cases.

The United Nations Office for Outer Space Affairs, through its UN-SPIDER programme, has created this COVID-19 emergency response overview page to facilitate the discovery of examples of contributions of space technologies to addressing COVID-19 that are being published by government agencies, international and regional organizations, academia, civil society and the private sector. To find out more about the efforts of UNOOSA in advancing the use of space-based solutions for global health, [please visit this web page](#).

To support users in finding relevant content, the list below can be filtered by keywords as well as format of the resource. The list does not seek to be exhaustive, nor to recommend particular sources, but to provide a selection of examples of how space technologies and the space community support response efforts to COVID-19.

UNOOSA will host a [webinar on Space4Health](#) on 14 May at 10am and 4pm Vienna, Austria time (UTC+2).

If you are using space technologies for responding to the COVID-19 pandemic and would like your work to be included on this page, [please use this form](#) to submit details.

Format  
- Any -

Scope  
- Any -

Search

Apply  
Reset filters

- **UN-SPIDER Knowledge Portal** provides regular updates and background information space-based applications, data sources, tools, workflows etc. to support disaster management
- Currently **74 examples** of space technologies and the space community responding to the **COVID-19 pandemic**
- Option to filter by scope, e.g. “situational awareness”, “risk assessments” ...

➤ [un-spider.org/advisory-support/emergency-support/covid-19](https://un-spider.org/advisory-support/emergency-support/covid-19)

# UN-SPIDER Technical Advisory Mission Lao PDR



## Health Ministry is important stakeholder of Disaster Management

Lao PDR developed **District Health Information System (DHIS)** contains geographical data

Ministry of Health has partnerships with international community (UNFPA, WHO, UNICEF, Red Cross and Red Crescent Society, Oslo University, and the Asian Development Bank and the World Banks)

**Knowhow on Space-based technologies is needed to improve portals and systems like DHIS**

UN-SPIDER TECHNICAL ADVISORY MISSION to Lao PDR



**UN-SPIDER Team with Minister of Health, Lao PDR**



# Disasters amid Covid-19 outbreak

## – Crisis within Crisis



Source New York Times

**Typhoon Goni:** Philippines year's most powerful storm on 1 November

---

**Evacuating people is more difficult because of Covid-19**

**Current situation demands much precise information on early warning, underlying risks and preparedness for emergency response.**

This requires not just space, but integrating space technologies with 4<sup>th</sup> Industrial Revolution Technologies

# Upcoming Conference



## United Nations International Conference on Space-based Technologies for Disaster Risk Reduction - **"Lessons learned during the unprecedented pandemic situation"**

24-25 November 2020 (virtual)

<https://un-spider.org/news-and-events/events/un-international-conference-beijing-2020>

- To address the challenges posed by the Covid-19 outbreak to the disaster management community
- To share experiences of how space-based technologies were effectively employed to better mitigate disasters during the challenges posed by the pandemic situation

**Registration Deadline:**  
Sunday, November 15, 2020





# MOOC on Geospatial Applications for Disaster Risk Management



20 SESSIONS, 18 SPEAKERS AND 12 ORGANIZATIONS



**Over 31,500  
enrolled from  
139 countries**

Launched on  
**International Day for  
Disaster Reduction**  
(13 October 2020)

- 20 Sessions
- 18 Speakers
- 12 Organisations



**MOOC on Space  
for Intelligent  
health!**



**Massive Open Online Course (MOOC)**  
**Geospatial Applications for  
Disaster Risk Management**

Organized by



United Nations Office for Outer  
Space Affairs (UNOOSA)  
Vienna International Centre  
P.O. Box 500



Centre for Space Science & Technology Education  
in Asia and the Pacific (CSSTEAP)  
Indian Institute of Remote Sensing (IIRS), ISRO  
IIRS Campus, 4-Kalidas Road

<https://un-spider.org/news-and-events/events/mooc-geospatial-applications-disaster-risk-management>



## **Space for Health** initiative of UNOOSA

- Helps building a community among space and non-space actors in the health sector
- Helps Member States access the potential of space science and applications and integrate these tools in national policies and practices



# Thank you

shirish.ravan@un.org

*Acknowledgement: Markus Woltran, UNOOSA*

For the latest information on UNOOSA,  
follow our social media:



@UNOOSA



@UNOOSA  
@SDiPippo\_OOSA



@UNOOSA