

CONCEPT NOTE

UN-SPIDER Bonn International Conference (virtual)

Space-based Solutions for Disaster Management in Africa: Networks and Information Technologies in times of crisis.

Organized by

United Nations Office for Outer Space Affairs (UNOOSA) / UN-SPIDER

and

Centre for Remote Sensing of Land Surfaces (ZFL), University of Bonn

16 to 18 November 2021

1. Background

Natural and man-made disasters continue to cause tremendous damage to societies around the world. While the COVID-19 pandemic continues to impact all countries around the world, the effects of climate change on hydrometeorological and other hazards cannot be ignored. The trend of very intense forest fires that took place in 2019 in Australia, Brazil and the United States continued this year in Greece, Turkey, and other countries; and regions of Germany saw the impacts of unprecedented floods and debris flows that triggered massive losses. In contrast, regions in Southwestern Canada and the north-western segment of the United States experienced a very severe heatwave.

On the positive side, the visualization of the geographical evolution of the COVID-19 pandemic in countries around the world using GIS and web-based dashboards, the wider reach of communication technologies, and the increasing availability of information technologies opened an opportunity for an increased use of space-based solutions in these times of crises. Furthermore, regional and international collaborative efforts have led to the implementation of data and information platforms the Africa Regional Data Cube, Digital Earth Africa and Africa Risk Capacity; and the Copernicus GLOFAS, GDO and GWIS services.

To facilitate the use of these opportunities, there is a need to strengthen virtual networks or partnerships to ensure that staff in civil protection agencies and other actors involved in disaster management activities at all levels can take advantage of such solutions effectively. Networks and partnerships can facilitate access to space-based data and improve ways to harness the power of space-based information. Over the years, the UN-SPIDER programme of the Office for Outer Space Affairs of the United Nations (UNOOSA) has been building a community of practice and in 2020, there

was a recommendation for the formalization of that community of practice as a network or partnership.

This International Conference will address novel solutions developed by the space community, ways in which disaster management agencies are implementing space-based solutions and will allow UN-SPIDER to strengthen its network of African stakeholders for an improved use of space technologies for disaster management.

2. Objectives and expected outcomes

The International Conference aims to contribute to an increased use of space-based solutions in African countries to respond to challenges posed by natural hazards in times of crisis such as the ones triggered by climate change and the COVID-19 pandemic. More specifically, the conference aims to:

- Showcase recent advances and identify challenges to the use of space-based information, big data approaches and information technologies in disaster management in Africa.
- Present and provide a hands-on experience of space-based applications through tutorials on technical solutions ranging from standalone desktop packages to cloud computing environments that facilitate the access to and use of space-based data and information products for disaster management.
- Contribute to the efforts of UN-SPIDER to strengthen its network of stakeholders in Africa.

The outcomes, results and key recommendations of this International Conference will be published as a technical report and will be incorporated into the UN-SPIDER plan of work for the coming years.

3. Conference Sessions

The International Conference will include technical presentations, discussions, and hand-on sessions on the use of new web-based and cloud-based tools. The first session of the conference will serve to set the context and highlight:

- Challenges introduced by climate change when confronting risks and disasters triggered by hydrometeorological hazards.
- Examples of the use of novel space technology applications to confront natural hazards.
- Examples of novel information technologies in Africa.

The second session of the conference will be dedicated to the compilation of experiences on the use of space-based solutions in countries, and to provide hands-on examples of cloud-based solutions to generate actionable space-based information.

The third session will be dedicated to the UN-SPIDER network of African stakeholders and to the exchange of experiences on the role of networks to strengthen institutional capacities, individual skills and to carry out collective efforts in disaster management efforts in Africa.

4. Participants

The International Conference is expected to bring together around 80 to 120 participants from national, regional, and international organizations, academia, and the private sector.

The Office for Outer Space Affairs is committed to achieving 50/50 gender balance in its programs and ensuring a balanced representation from different perspectives. Women are encouraged to apply.

Participants will include:

- Decision-makers from government agencies (space agencies, remote sensing centres, civil protection / civil defence agencies, ministries of environment, etc.)
- High-ranking officers from regional and international organizations involved
- Experts from the space and remote sensing community who focus their efforts on environmental monitoring, disaster risk management or emergency response activities, particularly in the context of climate-related extreme events
- UNOOSA/UN-SPIDER National Focal Points
- Experts from the UNOOSA/UN-SPIDER Network of Regional Support Offices
- Experts from the UN-affiliated Regional Centres for Space Science and Technology Education, and other national, regional, and international Centres of Excellence
- Researchers involved in the use of Earth observation in areas related to climate change, environmental management, sustainable development, disaster-risk reduction and emergency response efforts
- Representatives of the private sector (space and Earth observation, disaster management, environment, etc)

5. Language

The working language of the International Conference will be English. No simultaneous translation will be provided.

6. Dates the International Conference

The International Conference will be held from 16 to 18 November 2021. Given the remaining constraints related to COVID-19, the conference will be conducted in a virtual fashion. All selected participants will receive information with logistical details.

7. Deadline for Submission of Applications

Applications to participate in this Conference can be submitted to the Organizing Team. The completed application form should be submitted to the points of contact below by email no later than 10 November 2021.

8. Point of contact

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