



Title	<i>Use of archived satellite imagery to enhance the resilience of nations</i>
What?	The project aims to strengthen the capacity of agencies in charge of disaster risk management and development in 6 Member States in Latin America, Africa and Asia on the use of archived satellite imagery to track how land-use changes have modified the spatial and temporal behaviour of floods, forest fires and landslides.
How?	Increase access to imagery, discovery through UN-SPIDER Knowledge Portal, recommended practices, trainings.
Why?	Sustainable development agenda
How much?	USD 450,000 / 1 yr

Title	<i>Use of Archived Satellite Imagery to enhance the resilience of nations</i>
Implementing Section/Programme	United Nations Office for Outer Space Affairs
Participating Government(s)	Global (Latin America, Africa, Asia)
Partners	Private and public sector stakeholders interested in the topic
Duration	One year
Estimated budget	USD450,000
Proposed funding source	Voluntary contributions by Member States as well as by Partners

Summary

UN-SPIDER has been established by the General Assembly of the United Nations to promote the use of space-based information, in particular by developing countries, as a way to reduce the impacts of disasters triggered by natural phenomena which are unfortunately inhibiting sustainable development. Since its establishment at the end of 2006, UN-SPIDER has begun to shape its activities along the lines of three pillars:

- As a gateway to space-based information;
- As a bridge to link the space, the disaster-risk management and the emergency response communities; and
- As a facilitator of capacity building efforts and institutional strengthening.

Responding to the suggestions from the space community regarding the use of archived imagery in prevention, mitigation and preparedness; the proposed project aims to increase the knowledge base and the skills of professionals in Member States in accessing and making use of space-based data to generate information regarding how to use such archived imagery to track how land-use changes have affected the spatial and temporal behaviour of floods, forest fires and landslides.

The proposed project has already been addressed and endorsed by the network of UN-SPIDER Regional Support Offices. Such Offices will contribute to the

project through the provision of case studies. In addition, it is expected to put to use what could be considered a dormant resource.

Objective

The project aims to strengthen the capacity of agencies in charge of disaster risk management and development in 6 Member States in Latin America, Africa and Asia on the use of archived satellite imagery to track how land-use changes have modified the spatial and temporal behaviour of floods, forest fires and landslides. The countries to be supported are those where UN-SPIDER has already conducted technical advisory missions and which have the critical mass of professionals from a variety of government institutions to carry out the analysis and promote the application of the results as a way to reduce the impact of floods, forest fires and landslides.

Activities and Outputs

The activities foreseen include:

- The systematization of existing inventories of satellite imagery available for access on a free basis which have been released by space agencies;
- The setup of a database of such a database within the UN-SPIDER Knowledge Portal for easy discovery of the location of specific imagery by professional from Member States when conducting

the analysis regarding land-use changes in recent decades;

- The elaboration of recommended practices (procedures) regarding how to process such imagery to track land-use changes and subsequent changes in the spatial and temporal behaviour of floods, forest fires and landslides. This will be conducted through applied research to be conducted by consultants and through expert meetings targeting expert from the space and the disaster-risk management communities; and
- Training activities to build critical masses of professional in six Member States on the use of such recommended practices.

Outputs will include the database on archived imagery, algorithms within the UN-SPIDER Knowledge Portal to easily discover specific imagery, recommended practices, case studies in the six countries documenting the analysis conducted, the conclusions obtained through such analysis, and strategies to promote the use of such conclusions in national efforts targeting prevention, mitigation and preparedness.

Topics to be addressed include:

- Satellite imagery inventories;
- Geo-spatial information management;
- Imagery processing;
- Changes in natural hazards associated with land-use changes; and
- Strategies to promote the use of information generated using recommended practices.

Relevance

The project can be framed to contribute to fulfil the recommendations made by the General Assembly of the United Nations concerning the use of space-based information to reduce the impact of disasters of natural origin. In addition, it can be directly linked to Key Priority Area Number 2 of the Hyogo Framework for Action of the International Strategy for Disaster Reduction of the United Nations (2005). Furthermore, it can be linked to global efforts targeting sustainable development (Rio Conferences) in the context of global environmental change.

Proposed Budget

Description	Total
Technical advisory services	200,000
Training activities targeting professionals from developing countries	100,000
Mobilization of experts from international agencies to develop recommended practices	100,000
Miscellaneous	50,000
Project Total	USD450,000