ZFL of University of Bonn and UN-SPIDER: Joining forces to enhance the use of space-based information in Africa

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UN-SPIDER: Mission statement

„Ensure that all countries have access to and develop the capacity to use all types of space-based information to support the full disaster management cycle.“

University of Bonn
Rheinische Friedrich-Wilhelms-Universität

34,000 students
545 professors
2 nobel laureates
371 buildings incl. 2 castles
University of Bonn - established in 1818

Heine  Nietzsche  Marx  Schurz  Christian IX  Adenauer  Benedict  Thiele-Eich

ZFL - established in 2001

Center for Remote Sensing of Land Surfaces
Interdisciplinary Research Center for Earth Observation and Spatial Analysis
EvIDENz Project – A model for cooperation

A: Schematic representation of EvIDENz elements

**SFDRR**
„Priorities for Action“ Goal and targets

**SDGs**
Goals, targets, indicators

**UNFCCC**
Measures/Goals of NAPAs

**National Needs**
- Capacities; Risk knowledge; Losses and damages; benefits/costs

**UN-SPIDER**
International Conventions and Initiatives

**EvIDENz**
Drought hazard indicators

**Development of Information products:**
1. People affected per 100,000
2. Direct economic loss agricultural sector in relation to Gross Domestic Product
3. Drought hazard monitoring, extend, intensity and frequency
4. Agricultural exposure and social Vulnerability
5. Risk of yield and income loss
6. Recommendations for risk reduction and adaptation

**Satellite Sensors**
- Sentinel 1 & 2
- AVHRR
- MODIS
- Processing chains: Hazard, Exposure

**Socio-economic**
- Statistics (incl. Agriculture)
- Census data, ADP*

**Method:**
Vulnerability and Risk assessment

* Agricultural dependent population

**Quality**
Transferability

**EvIDENz**
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**UNU**
EvIDENz Project – A model for cooperation
SPEAR Project

Space-based Earth Observation Applications for Emergency Response and Disaster Risk Reduction

University of Bonn & UN-SPIDER


Funded by DLR

SPEAR aims to understand needs, develop solutions and strengthen national capacities in using space-based information for disaster monitoring and prevention in Africa in line with international and regional frameworks.
Awareness Raising & Outreach

- Elaboration and dissemination of awareness raising material (flyers, Newsletters, brochures).
- Organization of International Conferences in Bonn and Regional Expert Meetings in Africa.
- Participation in events organized by partners including DLR, UNISDR, UN-SPIDER Regional Support Offices, CEOS, Space Agencies, etc.
EO based methods, tools and applications

- Development of Earth observation tools in close collaboration with partners in Germany, Europe, and Africa.
- Development of toolboxes for risk assessment, early warning, disaster response, and recovery.
- Enhanced use of products such as DEM, GUF and GHSL.
- Cloud-based computing solutions.
Technical Advisory Support

- Conduction of Technical Advisory and Institutional Strengthening Missions to countries in Africa.
- Conduction of training activities.
- Institutionalizing the use of space-based information in disaster management activities.
Knowledge Management

- Enhancing the UN-SPIDER Knowledge Portal.
- Design and implementation of an e-learning environment.
- Guidelines for use of new tools and methods.
Strategy & Partnerships

- Enhancing the role of the UN-SPIDER Regional Support Offices and National Focal Points.
- Coordinating activities of GP-STAR and contributing to IN-MHEWS.
- Widening cooperation among German, European, African institutions.
Thank you

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