

CONCEPT NOTE

Stakeholder Workshop on Earth observation-based information products for drought risk on a national basis

Organized by

Space Research Institute (NASU-SSAU)

ZFL, University of Bonn

UNU-EHS

UNOOSA / UN-SPIDER

14 to 16 May 2018; Kiev, Ukraine

1. Background

The duration and intensity of droughts have generally increased in several regions of the world. Agriculture is especially affected, triggering direct consequences on food security, health, and the economic situation of a country. Using Ukraine as pilot project country, the project *Earth Observation Based Information Products for Drought Risk Reduction at the National Level (EviDENz)* develops new Earth Observation based methods to monitor direct agricultural loss attributed to drought hazard effects on the economy.

The project has developed workflows which can be used to contribute to the monitoring of the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Therefore, the workflows have been developed in accordance with the *Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction*. The aim is to raise awareness regarding the use of space-based technology for disaster monitoring as recommended in the UNISDR Technical guideline. These workflows will be given global visibility and will be promoted by the UNOOSA /UN-SPIDER.

The workflows developed will contribute to assess the economic effects of **direct crop loss** of a particular drought event for a selected year and region in the agricultural sector of Ukraine. The first segment of the workflows is based on commonly used drought monitoring indices developed by space-technology experts involved in the application of space technologies, and later implemented by the Food and Agriculture Organization (FAO) and UN-SPIDER. These indices are being used to monitor impacts of drought on vegetation at national and regional level. This first segment uses the Enhanced Vegetation Index (EVI).

The second segment of the workflows makes use of in-situ data generated by the agricultural community, in particular ministries of agriculture. These make use of information

on the types of crops, their yield, the market value to agricultural products, population involved in agricultural tasks.

Software and data availability plays a vital role in the ability of countries to monitor the impacts of hazards such as droughts. Therefore freely available data and open software have been used, in combination with complementary in-situ data such as agricultural yield information, population and occupation, to develop the workflows.

The EviDENz workflow is presented as a Recommended Practice in the UN-SPIDER Knowledge Portal. The practice includes explicit, step-by-step instructions to promote accessibility and usage.

2. Objectives and Expected Outcomes of the stakeholder workshop

The objective of the *EviDENz stakeholder workshop* is to make decision makers and technical staff of several institutions of Ukraine aware of the workflows developed by ZFL and UNU-EHS to assess the impacts of droughts on crops, and to make them aware of their location in the UN-SPIDER Knowledge Portal.

The stakeholder workshop will allow participants to take note of the types of information which can be obtained from workflows and will include a dedicated training segment for technical participants.

Through technical presentations and subsequent discussions, the stakeholder workshop will explore ways to incorporate the use of the workflows by the government of Ukraine to report on progress achieved in the implementation of the Sendai framework, and to gather feedback from decision makers and from technical staff on the workflows that were developed, their potential use, and suggestions for improvements.

The training segment of the stakeholder workshop, to be conducted at the National Technical University in Kiev, will be used to train technical staff on the use of the workflows.

3. Participants

The stakeholder workshop is expected to bring together key decision makers and operational technical audience from the agricultural sector, the economic and the disaster risk reduction communities, space agencies, research and technology entities. The list of suggested agencies to take part in the stakeholder workshop include:

Ministry of Agrarian Policy and Food of Ukraine
Institute of Agroecology and Environmental Management
Ministry of Ecology and Natural Resources of Ukraine
Ukrainian Hydrometeorological Centre
State Water Resources Agency of Ukraine

State Emergency Service of Ukraine
National Scientific Center “Institute for Soil Science and Agrochemistry Research named after A.N. Sokolovsky”
The Space Research Institute of National Academy of Science of Ukraine and State Space Agency of Ukraine
The Institute of Water Problems and Land Reclamation NAAN
National Centre of Management and Testing of Space Facilities
ART-Grain LLC
World Data Center for Geoinformatics and Sustainable Development
ZFL University of Bonn, Germany
UNU-EHS
UN-SPIDER

4. Working Language

The working language will be English.

5. Contact

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6. Programme of work

May 14 2018 (stakeholder workshop): National Academy of Sciences of Ukraine

Day / Time	Activity	Remarks
8:30 am - 9:00 am	Registration of participants	
9:00 am - 10:00 am	Welcome (Ukrainian Space Agency)	Welcome Stakeholders and have a round table introduction

Session 1: EVIDENZ project and its workflows		
10:00 am-10:30 am	Overview by UN-SPIDER	Overview of the Evidenz project and introduction to the stakeholder workshop
10:30 am-11:00 am	EVIDENZ workflow - ZFL	Segment of the workflow on the use of space-based vegetation indexes
11:00 am-11:30 am	Coffee break, Group Photo	
11:30 am-12:00 am	EVIDENZ workflow - UNU-EHS	Segment of the workflow on economic effects of droughts with a focus on maize
12:00 am-13:30 pm	Lunch break	
Session 2: Monitoring droughts in Ukraine		
13:30 pm-14:00 pm	Drought monitoring in Ukraine	Presentation on efforts in Ukraine to monitor drought as a weather event and its impacts on hydrologic resources
14:00 am-14:30 am	Droughts impacts in Ukraine – monitoring and reporting	Comments by State Agency involved in reporting on implementation of the Sendai Framework
14:30 am-15:00 am	Use of space technologies in agriculture – NASU-SSAU	Recent advances in the use of space technologies in Ukraine in the agricultural sector
15:00 am-15:30 am	Coffee break	
15:30 pm-17:00 pm	Discussion and introduction to guiding questions	Guiding Questions to be discussed on 2nd day
17:00 pm	End of stakeholder workshop	

May 15 2018 (stakeholder & user workshop): National Academy of Sciences of Ukraine

Day / Time	Activity	Remarks
Session 3: Sendai framework monitoring and reporting		
09:00 am-09:30 am	Sendai Framework targets and reporting – UN-SPIDER	Review of the Sendai Framework targets and reporting mechanism. Review of Target C related to economic losses and the segment dealing with crop losses (sub target C2c)
09:30 am-10:30 am	Discussion	Incorporating new methods to assess and report on crop losses in Ukraine: drought impacts from satellite imagery
10:30 am-11:00 am	Coffee break	
11:00 am-12:00 am	Discussion (continued)	Incorporating EVIDENZ workflows to assess and report on crop losses in Ukraine, next steps: <ul style="list-style-type: none"> • Testing • Implementation
12:00 am-14:00 pm	Lunch break	

Training segment – National Technical University

14:00 pm-15:00 pm	Introduction to the Work-flows - UNSPIDER	Introduction to: <ul style="list-style-type: none"> • Types of data used in the workflows (MODIS composite products); • Additional, in-situ data needed; • Overview of EviDENz Recommended Practice in the UN-SPIDER Knowledge Portal
15:00 pm-17:30 pm	Beginning of training on the use of workflows	
17:30 pm	Wrap up	

May 16 2018 (continuation of training segment) – National Technical University

Day / Time	Activity	Remarks
8:30 am - 12:00 am	Continuation of training	
12:00 am-13:30 pm	Lunch break	
13:30 pm-16:00 pm	Continuation of training	
16:00 pm-17:00 pm	Discussion and wrap up	
17:00 pm	End of stakeholder workshop and training segment	