Remote sensing INdicators for DROught monitoring

Fact Sheet

Project Information

INDRO

Grant agreement ID: 702717

Project website

DOI
10.3030/702717

Project closed

EC signature date
16 March 2016

Start date
1 May 2017

End date
20 August 2019

Funded under
EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions

Total cost
€ 170 121,60

EU contribution
€ 170 121,60

Coordinated by
CENTRO DE INVESTIGACION ECOLOGICA Y APLICACIONES FORESTALES
Spain

Objective

Droughts affect most parts of the world. According to the recent previsions of the Intergovernmental Panel on Climate Change1 (IPCC), more frequent and severe droughts are expected. This observation makes it a priority to improve the existing methods of monitoring droughts and their impact on terrestrial ecosystems. Early warning systems need to be developed. Remote sensing (RS) technologies are well-placed to provide such monitoring. Thanks to RS, droughts can be monitored at large scale and at short time resolution (e.g. daily). The proposed project “INDRO” will focus on the definition of new RS-based indicators able to monitor vegetation status and how it is responding to drought. For example, the RS indicators implemented at

the moment within the European Drought Observatory (EDO) early monitor system are not sensitive to rapid changes in plant photosynthesis since these indicators have no direct link to plant photosynthetic functioning. The project will analyse the relationships between ecophysiological variables, light use activity (LUE) and existing RS indicators calculated with the data from several satellite sensors. This analysis will reveal which sensors, and which spatial and temporal resolutions are best at quantifying drought. A new generation of RS indicators will be developed to give a better description of plant photosynthetic functioning in drought conditions. The project will map these new indicators for southern Europe to identify the areas affected by drought. Overall, the creation of new RS drought indicators, and the better definition of drought events they bring, will help the development of ecological models and early warning systems, and underpin new avenues for the improvement of national and international drought mitigation and adaptation strategies.

Fields of science (EuroSciVoc)

engineering and technology > mechanical engineering > vehicle engineering > aerospace engineering > **satellite technology**

engineering and technology > environmental engineering > **remote sensing**

engineering and technology > electrical engineering, electronic engineering, information engineering > electronic engineering > **sensors**

natural sciences > biological sciences > ecology > **ecosystems**

natural sciences > biological sciences > **botany**

Programme(s)

H2020-EU.1.3. - EXCELLENT SCIENCE - Marie Skłodowska-Curie Actions MAIN PROGRAMME

H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)

MSCA-IF-2015-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF)

Call for proposal

H2020-MSCA-IF-2015

See other projects for this call

Funding Scheme

MSCA-IF-EF-ST - Standard EF

Coordinator

CENTRO DE INVESTIGACION ECOLOGICA Y APLICACIONES FORESTALES

Net EU contribution

€ 170 121,60

Total cost

€ 170 121,60

Address

UNIVERSITAT AUTONOMA DE BARCELONA EDIFICI C
08193 Bellaterra
Spain

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

Contact the organisation Website
Participation in EU R&I programmes
HORIZON collaboration network

Last update: 10 March 2023

Permalink: https://cordis.europa.eu/project/id/702717