Metadata form of Silva Fennica

This form is designed for writing the elements of metadata, which are used in the description of research materials such as data and codes. The form is based on the work done in the Work Group "Description of research materials" under the Finnish Open Science Coordination.

Item	Description	Responsible
Name of the data / code	Drought and vegetation dynamics in dryland of arganeraie biosphere reserve in Morocco: toward understanding of the impact of environmental shocks on the Agro-sylvo-pastoral system	Author
Author & ORCID	Brahim Meskour1* Adnane Labbaci1,2, Moussa Ait El Kadi1, Oualid Hakam4, Victor Ongoma4, Mohammed Hssaisoune1,3,4, Abdellaali Tairi1, Mohammed El Hafyani1,5, Lhoussaine Bouchaou1,4	Author
Authors' affiliation(s)	1Applied Geology and Geo-Environment Laboratory, Faculty of Sciences, Ibn Zohr University, Agadir, 80035, Morocco 2Geosciences and Geo-Environment Laboratory, Faculty of Sciences, Ibn Zohr University, Agadir, 80035, Morocco 3Faculty of Applied Sciences, Ibn Zohr University, B.O. 6146 Azrou District, 86153, Ait Melloul, Morocco 4Mohammed VI Polytechnic University, International Water Research Institute, Ben Guerir, 43150, Morocco 5National Institute for Scientific and Technological Research in Water, City of Innovation Souss Massa, Ibn Zohr University, Agadir, 80000, Morocco	Author
Owner of the material	Applied Geology and Geo-Environment Laboratory, Faculty of Sciences, Ibn Zohr University, Agadir, Morocco	Author
Publisher	The actor who has the right to publish the metadata, materials and/or description of the materials. This may be an archive, a repository or a research organisation. Give the ROR of the organisation if available.	Author
Funder	This work received financial support through the partners of the Joint Call of the Co-fund ERA-NETs SUSFOOD2 (Grant N° 727,473) and FOSC (Grant N° 862,555). This paper presents part of the outputs of the MedAgriFood Resilience project. This paper presents part of the outputs of the DIONYSUS project supported and funded under Horizon 2020, the European Union's Framework Programme for Research and Innovation in the Mediterranean Areas (PRIMA-S1). The first author thanks the CNRST through the "PhD-Associate Scholarship – PASS" Program.	Author
Description	This dataset involves the analysis of land cover/land use changes in the GIAHS site of Morocco from 1995 to 2020 using satellite data. It employs a Random Forest machine learning approach to classify land cover types and assess their relationship with meteorological drought indices (SPEI) and NDVI. The data aims to understand vegetation, barren land, and rangeland dynamics in response to climatic changes.	Author

Methods	Trend analyses, drought detection using Standardized Precipitation and evapotraspiration Index (SPEI), and land-use mapping using Landsat imagery.	Author
Variables	LCLU classes (Agriculture, Barre Land, Woodland, Build up), NDVI, SPEI-12, SPEI-6	Author
Author keywords	Drought, GIAHS, ecosystem resilience, Morocco.	Author
Vocabulary keywords (community standard)	Land Use land cover, Vegetation Index, Drought Monitoring, Machine Learning, Climate Impact	Author
Discipline	Remote Sensing, Climatology, Degradation	Archive/Repository/Publisher
Type of material	Research data including GPS field observations, satellite imagery from Landsat 5 TM and Landsat 8 OLI (https://earthexplorer.usgs.gov/), and meteorological data. The study also includes analytical (https://github.com/brahimmeskour/GEE-code-classification-.git) for land cover classification and change detection using the Random Forest algorithm, processed on the Google Earth Engine platform. Field mission data was utilized for ground truthing and validation of remote sensing classification.	Author
Language	English (Eng)	Author
Time range covered	1995-01-01 to 2020-12-31	Author
Geographic region	The GIAHS site Agro-silvo-pastoral system of the Argan tree in the Ait Souab - Ait Mansour region is in the Southeast of Agadir in the Souss Massa region (Coordinates: the longitude 8°15'00" W and 9°30'00" W, and the latitude of 28°15'00" N and 30°00'00" N	Author
Version		Author
File format(s)	PDF	Author
Availability of the materials (open, embargo, registration, limited, registration required)	The materials are open access	Author
Justification for access restrictions	If the material is not open, justify why the access is restricted/not allowed.	Author
Licence	Open access software	Author
Connections with other research materials	The dataset supports the manuscript submitted to Silva Fennica	Author
Access to the connected research materials		Author
Codes only: hardware/software requirements for running the code	Google Earth Engine (cloud-based platform), browser-based access; no local installation required. Dataset in CSV/GeoTIFF format. Scripts in JavaScript.	Author
Connections to other products of research		Author
Personal data	No personal or sensitive data included	Author

Confidential or secret data	No	Author
Publication date	Date of publication in an archive or repository.	Archive/Repository/Publisher
Preservation policy	The dataset will be preserved permanently github (https://github.com/brahimmeskour/GEE-code-classification-.git)	Author
Permanent identifier (PID)	Unambiguous, permanent identifier of the material. The identifier may be DOI, URN or accession number.	Archive/Repository/Publisher