

FACCE-MACSUR

Identification of grassland datasets

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Introduction

In the MACSUR project, there are several grassland models in use that were designed for and adjusted with data from different climatic regions. To be able to run these models for a wide geographical range, there is a need to validate and calibrate them on the same basis. Therefore, a high-quality dataset is needed, which includes a wide range of climatic conditions, management systems and other variables.

Methods

The aim of this web-based search was to find out which research institutes in Europe are or were running long-term grassland experiments and may contribute their data in addition to those already available to WP L2 (e.g. datasets by INRA, France, and ART Agroscope Reckenholz Tänikon, Switzerland). Variables asked for in addition to grass yield were weather data on a daily basis such as precipitation, aboveground temperature and solar radiation. Information on the soil like the texture, the grassland type and on the site as well as a concise description of the management was also requested. The target for the choice of variables was to get enough input for the most detailed grassland model, which is ought to be the reference model.

Results

Through this search 23 grassland related institutes from eleven countries were found and contacted, where 12 of them responded to the request. Nine institutes from cooler (e.g. Finland) and warmer regions (e.g. Israel) are now willing to provide their experimental data. One contributor is even planning to join the project bringing its own grassland model. These new grassland datasets cover in addition to already available ones (Fig. 1) a wide range of climatic regions for a substantiated calibration and validation of the models.

Data supplied by the institutes have been checked for internal consistency and cast into a common format. The data have been passed on to WP L2 (Model intercomparison on climate change in relation to livestock and grassland).

Tab. 1: Contacted institutes that suitable grassland datasets.

Institute	Country	Duration	Characteristics
Lehr- und Forschungszentrum (IFZ) Raumberg-Gumpenstein	Austria	since 2002	27 sites; different climates/altitude levels (within Austria)
University of Bayreuth	Germany		datasets from 8-10 sites/countries
Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF)	Germany		
MTT Agrifood Research	Finland	up to 20 years	several sites (in Finland)
Agricultural Research Organisation (ARO)	Israel	6 years	
Università degli Studi di Sassari	Italy	5 years	
Wageningen UR	Netherlands	5 years	two data sets
Instytut Technologiczno-Przyrodniczy w Falentach	Poland	20 years	including grazing
Rothamsted Research	UK	since 1960	data sets with different levels for fertilizer and pH

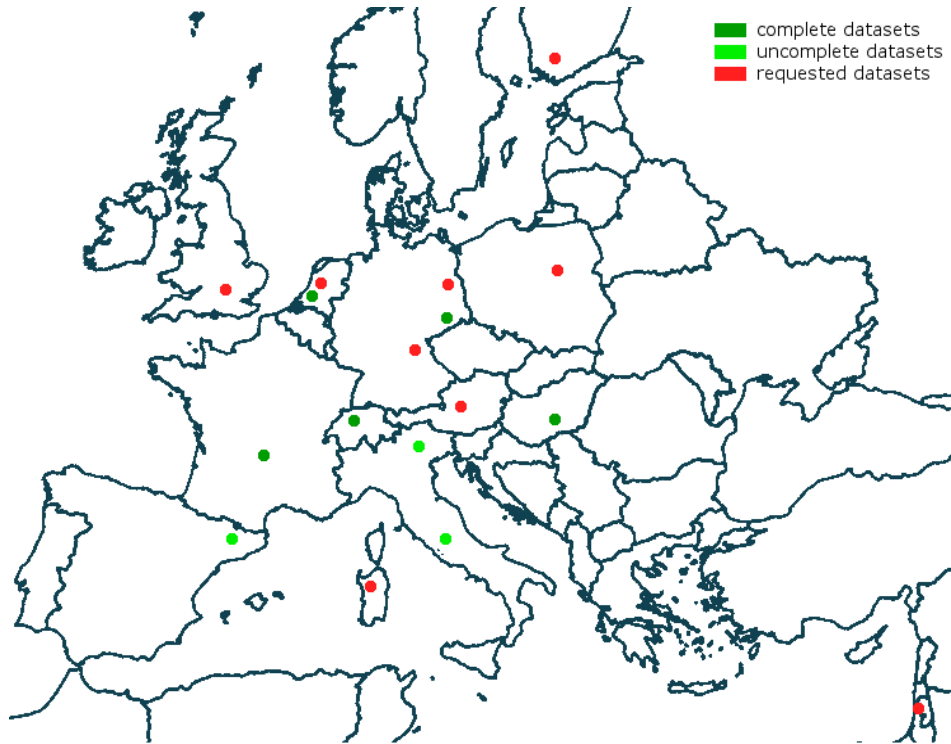


Fig. 1: Map with sites of available complete and incomplete as well as requested grassland datasets (including those of WP L2)

Acknowledgements

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