



# Exploring of Grain Legumes diversity for sustainable European Agri-food Systems

Creola Brezeanu

Vegetable Research and Development Station, Bacau

Grain Legumes WG - ECPGR

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# Exploring of Grain Legumes Diversity for Sustainable European Agri-food Systems



33 months



DURATION

10 partners

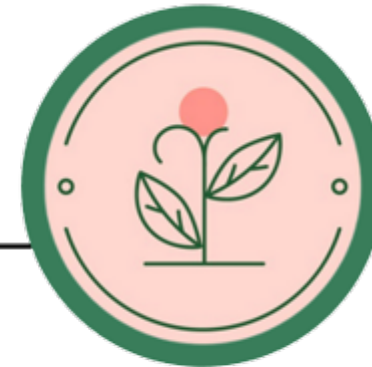


PARTENERS



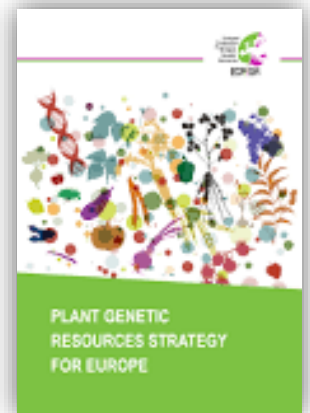
FUNDING

Grain legumes



MULTI CROPS

there is a crucial need to improve the enabling environment for the **direct use of diverse genetic resources maintained on-farm** — particularly to **support diversification**





# CONTEXT

**NEED TO enhance diversification by using of PGR conserved on-farm and ex situ**



**NEED OF robust and resilient food systems that functions in unfavorable circumstances**

**Opportunity to exploit the local germplasm for gene pools associated to adaptive traits**



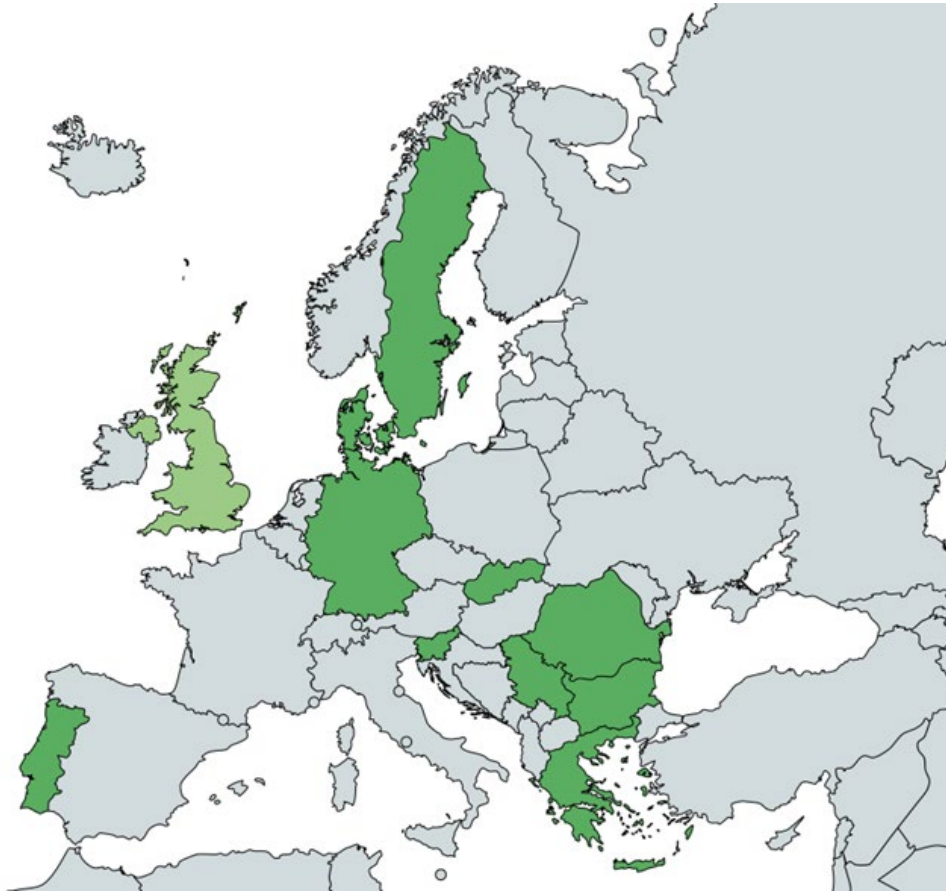
**Challenge:** valorization of the Grain legumes diversity, with the aim to identify and secure materials, particularly to sustain adaptive capacity for resilience to climate change. On long term this, will boost local and rural economies while sustaining diverse agro-ecosystems and creating new food and non-food value chains



# Partners and their role



■ Partners involved in  
ExploDiv project



**Denmark, Germany, Serbia, Bulgaria, Greece,  
Slovenia, Portugal, Sweden, Romania, Slovakia.**

**Expertise of  
consortium:  
conservation,  
breeding, cropping**

**Facilities for  
conservation and  
characterization, as  
well for  
experimental trials  
with low inputs  
management system,  
including organic  
certified fields.**

**Source of PGR:  
local germplasm,  
on farm, in situ and  
and ex situ**

**Species prioritized  
*Vicia faba, Pisum  
sativum, Phaseolus  
vulgaris, Cicer  
arietinum, Lathyrus,  
Lens, Vigna, Lupinus***

# WORKPLAN



## ACTION 1

Survey and selection of PGR on farm, in situ, ex situ

D 1.1

List of selected material to be evaluated in each location

D 1.2

Evaluation sites description



D2.1  
Protocols for phenotyping,  
prioritized traits

D2.2  
DOI assessment for all  
selected GenRes

D2.3  
Template for sites description

D2.4  
List of experiments for Action  
4

## ACTION 2

Development of templates, unified protocols, DOI implementation, set of experiments



## ACTION 3

Study of 40 accessions in each location, phenotyping during multiplication cycle, selection of 10-15 accessions, based on performance of specific traits.

D3.1

Phenotypic data available for EURISCO

D3.2

Seeds availabilities (for conservation and for Action 4).



## ACTION 4

Agronomic evaluation of a subset of 10 – 15 accessions

D4.1

Set of materials

D 4.2

Evaluation data, accessions for EURISCO

D4.3

Seeds availabilities



## ACTION 5

Management and reporting

D 5.1

Kick off meeting on line

D5.2

Workshop DOI implementation

D 5.3

Progress report 1

D 5.4

Progress report

D 5.5

Final meeting-on line

D 5.6

Final report

# Species with interest in different areas



Selection of 40 accessions for each location



ON FARM



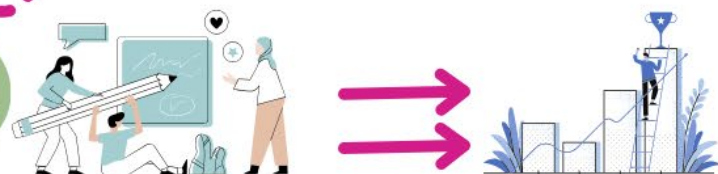
EX SITU

## Phenotyping during multiplication cycle in 10 locations trials.

- Denmark
- Germany
- Serbia
- Bulgaria
- Greece
- Slovenia
- Portugal
- Sweden
- Romania
- Slovakia



Selection of 10-15 accessions in each location



10 specific experiments in 10 different locations



Safeguard Grain Legumes diversity to respond and adapt to the future impacts of global change

# EXPECTED PRODUCTS



**List of local  
germplasm identified  
and proposed for  
investigations**

**Agroclimatic profile of  
each location – sites  
description**

**Set of traits to be  
investigated for each  
species - unified  
protocols**

**List of experiments for  
agronomic assessment**

**Number of accessions  
with DOI assigned**

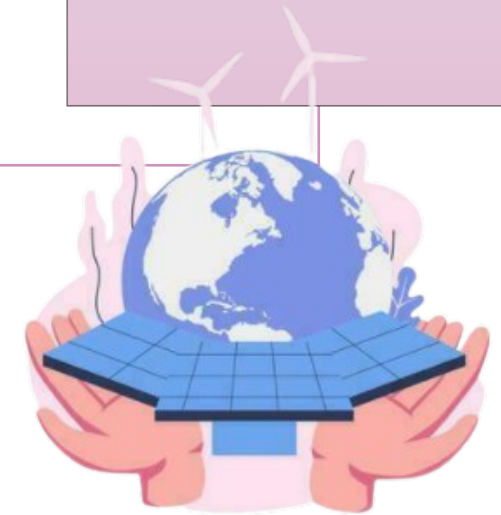
**Systematized data  
related phenotypic  
characterization of  
local germplasm**

**Data and materials  
shared via EURISCO**

**Data related  
agronomic evaluation  
of selected accessions  
in low-input conditions**

**Recommendation for  
synergies between on  
farm and ex situ  
conservation**

**Identification of useful  
germplasm featured  
resilience**

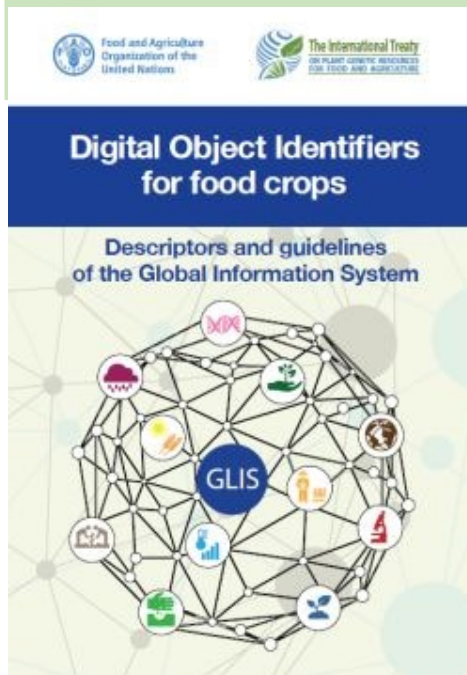


# Support initiatives for ExploDiv implementation



DOI  
ASSIGNING

WORKSHOP  
ON LINE



EURISCO  
DATA



CITIZEN  
SCIENCE  
APPROACH

COMPETITION

