

Soil, soil functions & functional land management awareness within the @LANDMARK2020 project

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5th ENSA meeting - Giving soils a voice

29.09.2017 Bratislava, Slovakia



DEMANDS ON OUR LAND

Water Provision
and purification

Carbon
sequestration

Habitat for
biodiversity



Primary
Production

Nutrient Cycling

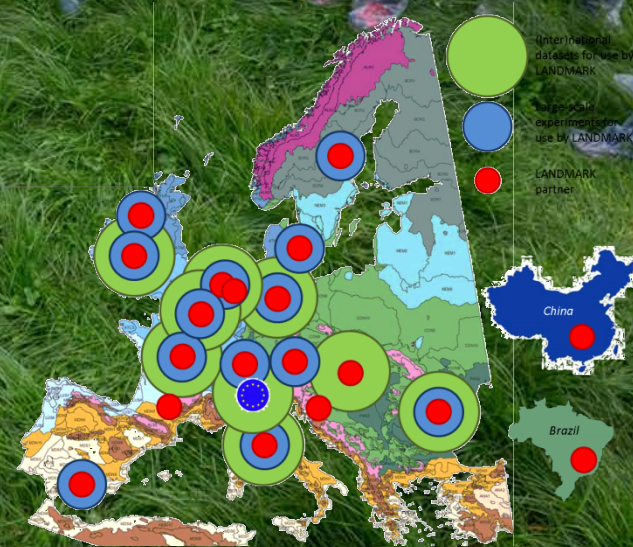
All soils / land perform all **soil functions** ...but
different parts of the land(scape) are better at
delivering different functions

Schulte et al., 2014



LAND MANAGEMENT: ASSESSMENT, RESEARCH , KNOWLEDGE BASE

Objective: to quantify the supply of soil functions across the EU as determined by soil properties, land use and soil management practices.



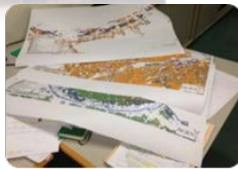
SPECIFIC OBJECTIVES

- 1. Farm scale:** Develop an agricultural Decision Support Tool (DST) for soil management
- 2. Country scale:** Design a monitoring scheme for Soil Functions that is applicable at regional scale, for a range of soil types, land uses and pedo-climatic zones;
- 3. EU scale:** Develop a policy framework for 'Functional Land Management' at European scale that aims to optimise the sustainable use of Europe's soil resource





Which is the knowledge of **#SOIL** across different stakeholders?



↳ **# SOIL**

↳ **# SOIL QUALITY and FUNCTIONS**

↳ **# Land and soil management practices**

↳ **# Actions, policies, tools, ideas, needs, requirements & concerns**



STAKEHOLDER CONSULTATION: existing knowledge, knowledge requirements and prioritization of soil functions

STAKEHOLDER CONSULTATION



WHAT FUNCTIONS DO I WANT TO INCREASE ON MY LAND?

Who am I?



Farmer

Pillar 1 local

Water Agency officer

Pillar 2 regional or national

Policy maker

Pillar 3 EU



*Regional multistakeholder workshop,
Midi Pyrenees, April 2016*

ANNEX 4: 1st SOIL FUNCTIONS RANKING (ANTE)

Name and surname: _____
 Role: _____
 Organisation: _____
 Instructions: at the beginning of the workshop, allocate 15 points between the five soil functions, where one function can receive 5 points maximum.

Soil functions	Points
Primary productivity	
Water regulation and purification	
Carbon sequestration, cycling and regulation	
Nutrient cycling and provision	
Habitat and biodiversity	

Comments: _____

SOIL FUNCTIONS RANKING sheet (Ante/Post)

Allocation of 15 points x 5 soil functions



My role

WHAT FUNCTIONS DO I WANT TO INCREASE ON MY LAND?

- *In the field, or indoor we get the stakeholders to consider the demand of soil functions by means of land management.*
- *The discussion starts from their previous ranking*



LANDSCAPE MANAGEMENT MODEL exercise



Regional multistakeholder workshop, Midi Pyrenees, France April 2016



Test with farmer advisors Region Poitou Charentes, France, october 2015



Local farmer workshop,, Maves, Region Centre, France, April 2016



Local farmer workshop,, Wexford, Ireland, March 2016

My land

32 STAKEHOLDER WORKSHOPS



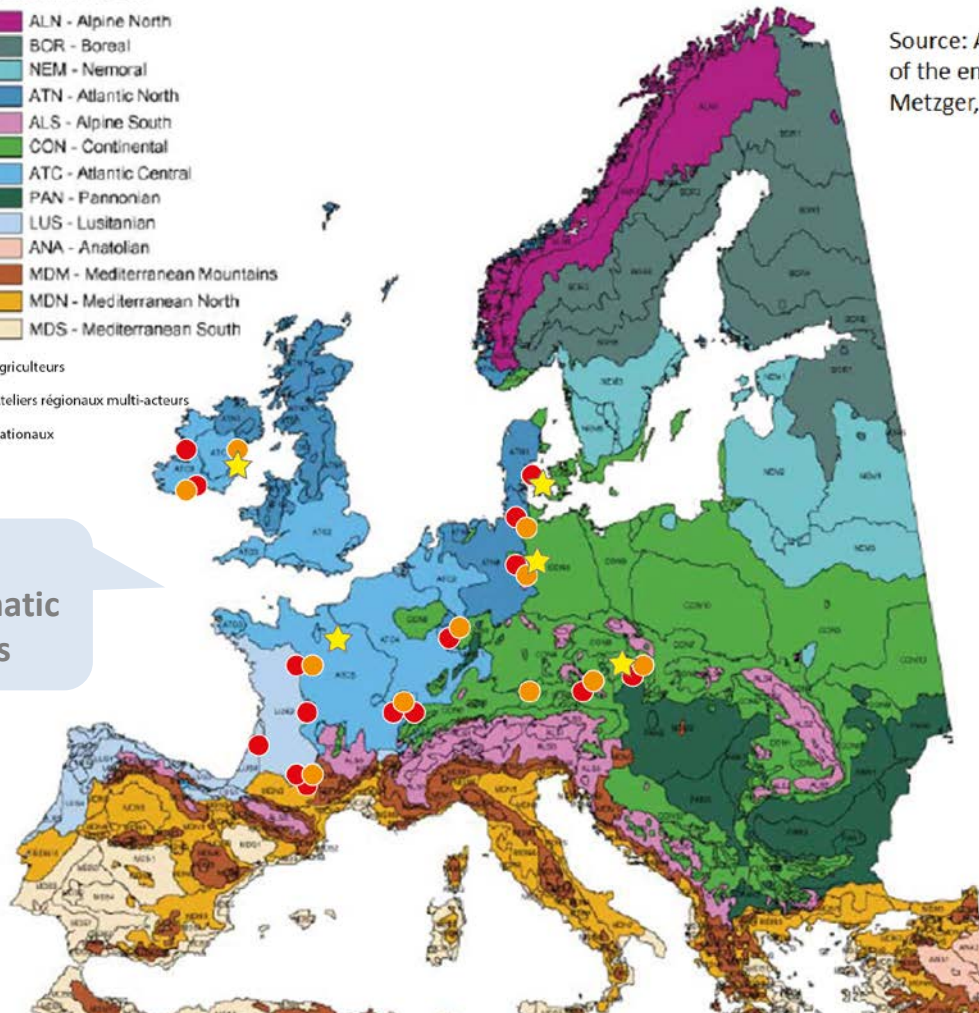
Source: A climatic stratification of the environment of Europe, Metzger, 2005

Environmental Zone

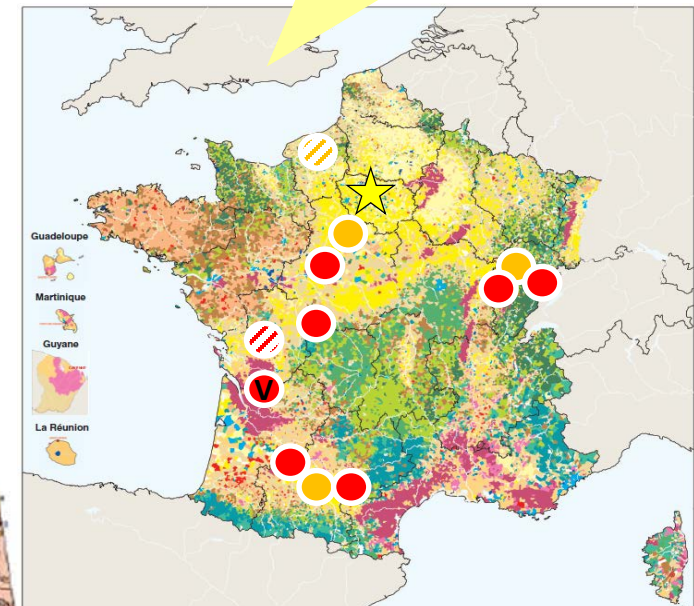
- ALN - Alpine North
- BCR - Boreal
- NEM - Nemoral
- ATN - Atlantic North
- ALS - Alpine South
- CON - Continental
- ATC - Atlantic Central
- PAN - Pannonian
- LUS - Lusitanian
- ANA - Anatolian
- MDM - Mediterranean Mountains
- MDN - Mediterranean North
- MDS - Mediterranean South

- Ateliers agricoles
- Ateliers Ateliers régionaux multi-acteurs
- ★ Ateliers nationaux

Different pedo-climatic conditions



Different farming systems & methods. E.g. France
Land use map



Source: Agreste – Recensement agricole 2010

RESULTS: perception of soil quality

What is a good soil for you?



Midi-Pyr

GOOD vs BAD

Fertile

/ant

What does soil
quality means
for you?



Austrian farmers & stakeholders workshops

- ✓ Special interest in biological functioning, nutrient cycling & availability for plants
- ✓ Organic Matter vs. Carbon sequestration

goodStructure
waterStorageCapacity

[illegible]

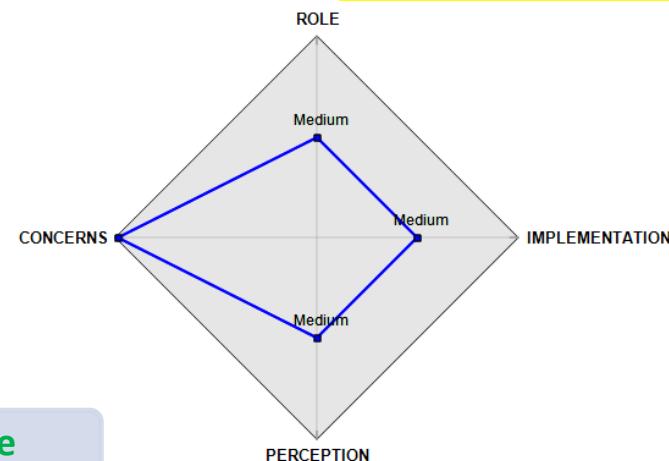
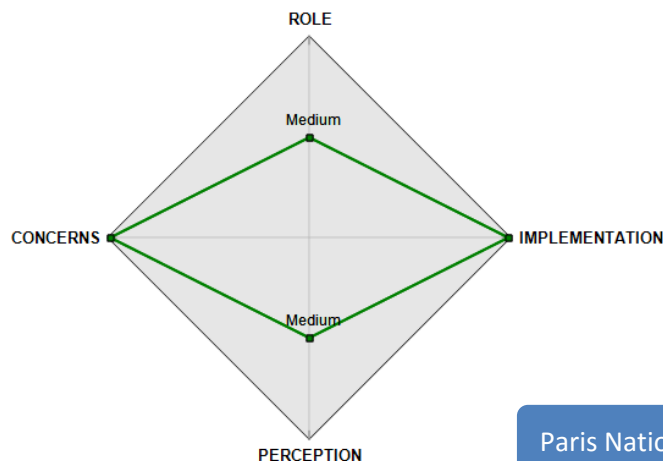
France National multi-stakeholders workshop

RESULTS: soil knowledge

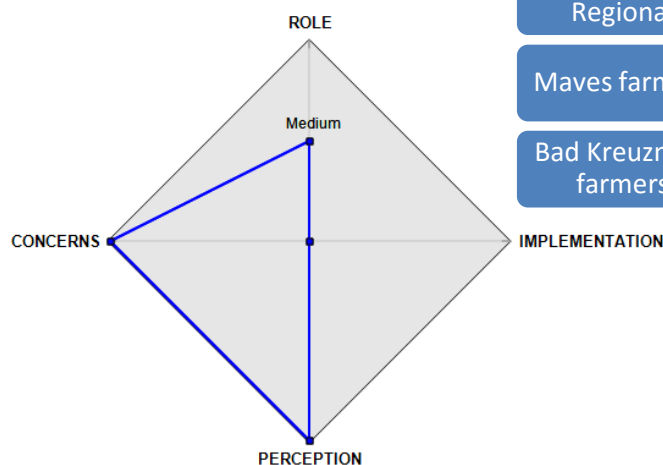
What is the status of the knowledge on soil between the different stakeholders?

Paris National

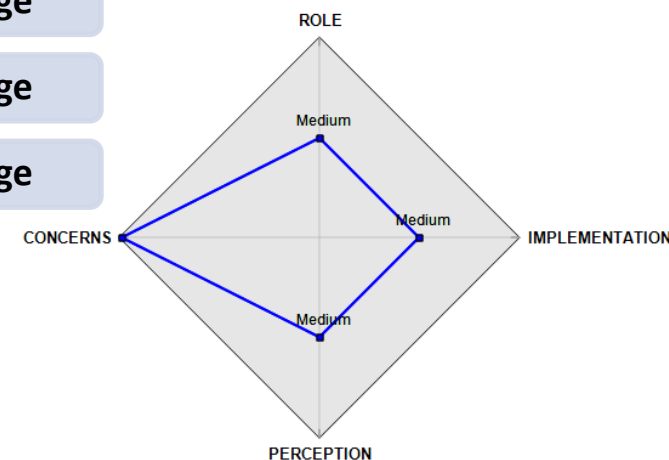
Orleans regional



Maves farmers



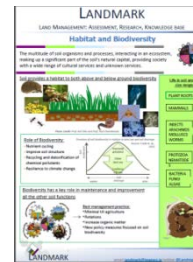
Paris National	• High knowledge
Orleans Regional	• Good Knowledge
Maves farmers	• Good Knowledge
Bad Kreuznach farmers	• Good Knowledge



LANDMARK COMMUNICATION AND DISSEMINATION STRATEGY

What : Common VISUAL IDENTITY and 'branding'

- Logo & Standard templates
- Common mailing lists
- Fast facts 2015, Fast Fact 2016, soil functions posters



- External & Internal newsletter
- Publication trees...

EXTERNAL

NEWSLETTER

How: internet, meetings, press, interviews

NEXT DECEMBER 2017

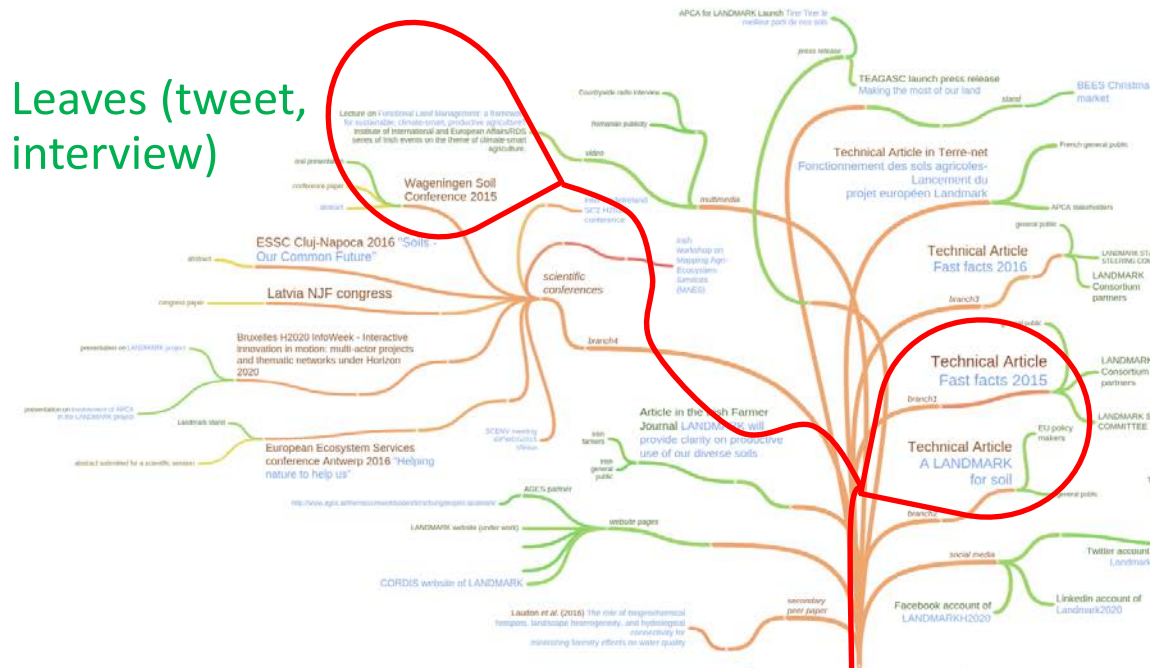
- Newsletter email sign up info. landmark@wur.nl
- Website <http://landmark2020.eu>



Publication tree n1

<https://landmark2020.bitrix24.com/~uzoht>

Leaves (tweet, interview)



Branches (technical article)

Root (scientific paper)

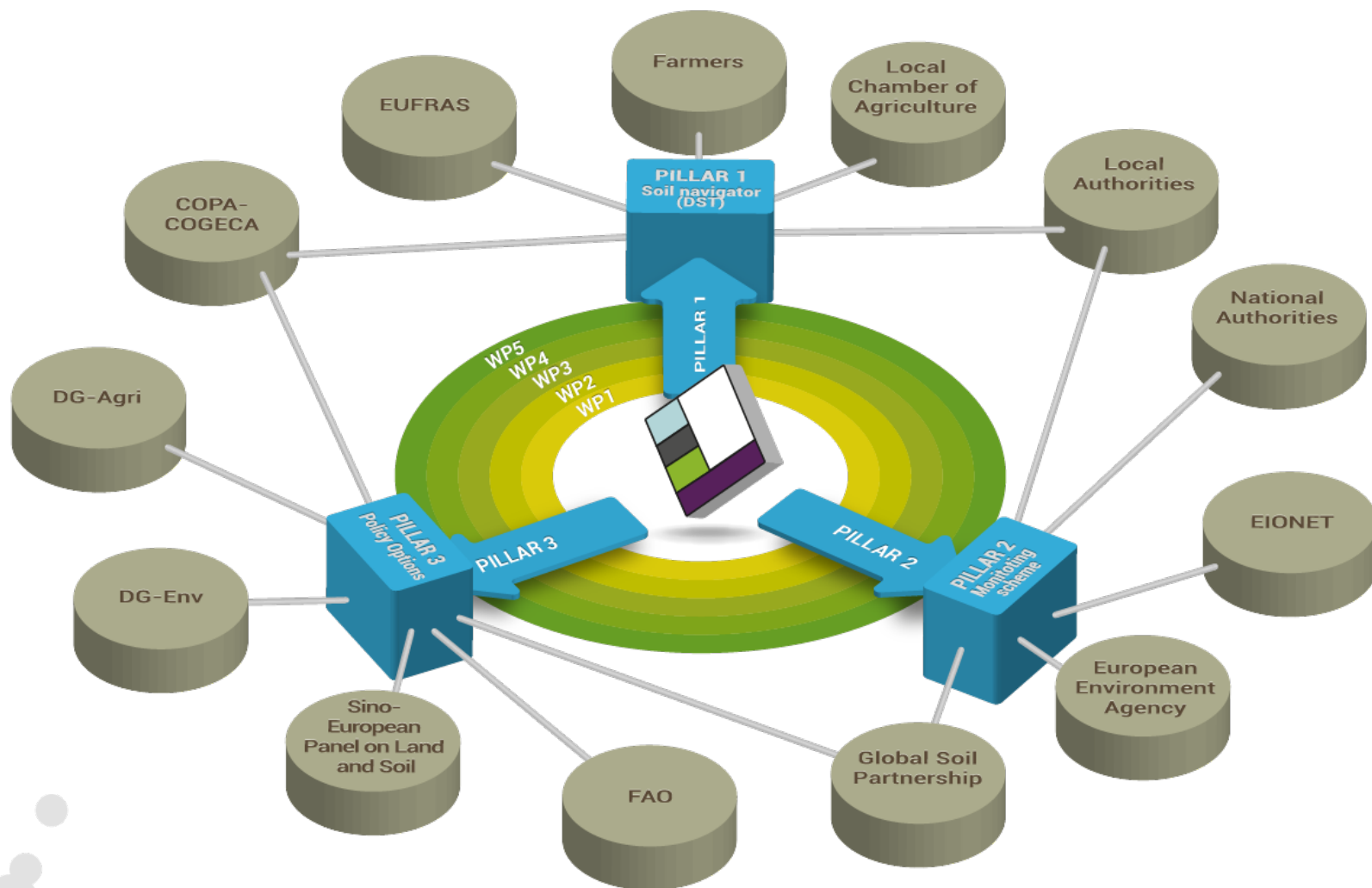


LANDMARK
I Publication Tree

PROJECT
PROPOSAL

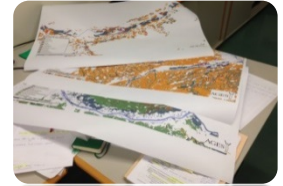
LAND Management: Assessment, Research, Knowledge base
Project reference: 635091
Call for proposal 4/2020-4/15/2014-2
Topic: SP9-04-2014 - Soil quality and function
<http://ec.europa.eu/agriculture/landmark/>

Dissemination strategy – Strategic Research Agenda



LESSON LEARNT

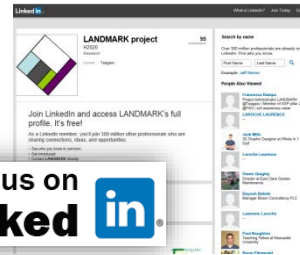
- ✓ More soil science in education and training programmes
- ✓ Funding for applied research and soil monitoring
- ✓ Incentives to change soil and land management & commodity risk
- ✓ Regional differences in language terminology and ranking soil functions
- ✓ Support farmers groups developing soil-friendly practices , sharing experiences
- ✓ More focus on urbanization, land planning and soil functions
- ✓ Up-to-date neutral technical advices



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