



Newsletter #6 (winter 2018)

pdf format

Welcome to the <u>LANDMARK project</u> newsletter, bringing you highlights of activities since the launch in May 2015.

Please feel free to forward it.

#### 5X5 - Soil functions reports on indicators and management strategies

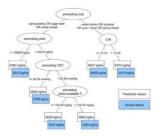
All soil performs each of the five soil functions to some extent simultaneously. However soils differ in their relative capacity to perform them. We came up with common definitions, attributes, key indicators, management strategies and decision models for primary productivity, water purification and regulation, carbon sequestration and climate regulation, soil biodiversity and habitat provisioning, nutrient cycling and provision.



Download the reports here

## [PAPER] <u>Using Data Mining Techniques To Model Primary Productivity</u> <u>From International Long-Term Ecological Research (Ilter) Agricultural</u> <u>Experiments In Austria</u>

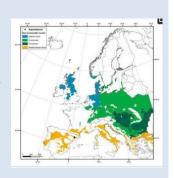
The results obtained by data mining are in line with previous studies and enhance our knowledge about the driving forces of primary productivity in arable systems. Hence, the models are considered very suitable and reliable for predicting the primary productivity at these ILTER sites in the future. They may also encourage researcher-farmer-advisor-stakeholder interaction, and thus create enabling environment for ...



Open access on link

# [PAPER] <u>Assessment Of Benefits Of Conservation Agriculture On Soil</u> <u>Functions In Arable Production Systems In Europe</u>

The objective was to compare effects of Conservation Agriculture and Conventional farming practices on the five soil functions in four major environmental zones (Atlantic North, Pannonian, Continental and Mediterranean North) in Europe by applying expert scoring based on synthesis of existing literature. The study proposes the need for..



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## What is a good soil for you? Your 473 replies

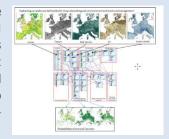
We came to you in Austria, Belgium, Denmark, France, Germany, Ireland, and asked: what is a good soil for you? What is a bad soil for you? How does it evolve over time? What does it mean soil quality? To what extent are you involved in soil and land management in your daily work? What do you need and what you know already in terms of management and policies? We gave to 473 stakeholders a voice..



Results link <u>here</u>, <u>stakeholders platform</u> and full <u>report</u>

#### DEMAND scenarios for soil functions and SUPPLY maps

Policy makers are increasingly aware of the impact of their decisions on the global economy, as well as the impact of the global economy on regional and national resource use. Despite this, there is a tendency towards simplified reasoning patterns that neglect the underlying, complex interactions with concurrent policy objectives. Understanding demand and supply interactions and associated trade-off mechanisms are crucial to obviate the unexpected and unintended consequences of policies on landuse and management.



Download the Demand scenarios report and the Supply maps

#### Augmented Reality applied in a Brazilian catchment

Is the world big enough? Is it possible to meet all these demands simultaneously in a context of a declining resource base? And, if so, how should we manage our land accordingly? During the  $21^{st}$  World Congress of Soil Science - Soils to feed and fuel the world in Rio de Janeiro, Brazil. We used the concept of Functional Land Management to explore how to connect decision making on soil management across spatial scales, through Augmented Reality applied to a virtual Brazilian agricultural catchment.



*More info* here and video

#### Do you want to test the soil navigator on your farm?

In 2019 we will start testing our <u>soil navigator</u> decision support tool with farmers and farm advisors in cropland and grassland farms. We are planning our 2019 workshops. If you are part of a discussion group and would like to test it write us!



Write us at <a href="mailto:info.landmark@wur.nl">info.landmark@wur.nl</a>

## 100 sites sampled for monitoring soil functions

During this past spring our surveyors with the help of great innovators farmers in Austria, Belgium, Denmark, France, Germany, Hungary, Ireland, Italy, Romania, Spain, Sweden, Switzerland and The Netherlands sampled 100 sites to help with a development schema for monitoring soil.





# LANDMARK meets Wageningen Soil Conference 2019

LANDMARK team will be participating actively and having a side workshop at the Wageningen Soil Conference next year from 27<sup>th</sup> to 30 of August 2019 in The Netherlands. If you want to try the soil navigator, discuss about our stakeholders workshop, experiencing Augmented Reality, applying data mining to soil functions, improve your lab skills in soil note this date in your agenda and send an abstract by 15.04.2019





#### What's next?

- <u>EUFRAS Annual Assembly</u> 12-13.02.2019 Lisbon, Portugal
- <u>EGU 2019</u> 7-12.04.2019 Vienna, Austria
- <u>Lab skills course in Soil Biology and Biochemistry</u> 13-17.05.2019 Wageningen, The Netherlands

• Wageningen Soil Conference 27-30.08.2019, Wageningen, The Netherlands

## LANDMARK attended also

| EGU general Assembly Vienna | RoundTable 7 Vienna | Ecology of Soil Microorganisms conference Digging deeper
Helsinki | PROVIDE H2020 Final Conference Bruxelles | 2nd project review meeting Wageningen | EASAC report
launch Bruxelles | RECARE Final Policy conference Bruxelles | RoundTable 8 Copenhagen | International Soil
Modeling conference Wageningen | Fair data Science Symposium Wageningen | BES2018 Birmingham |

## **HAPPY WINTER BREAK and see you in 2019!**

The <u>LANDMARK team</u> is looking forward <u>collaborating</u> and <u>engaging</u> with you in our last year!

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