# SoCoRisk

# Implementation of soil compaction risk assessment system: end-user's evaluation of potentials and barriers

## Introduction

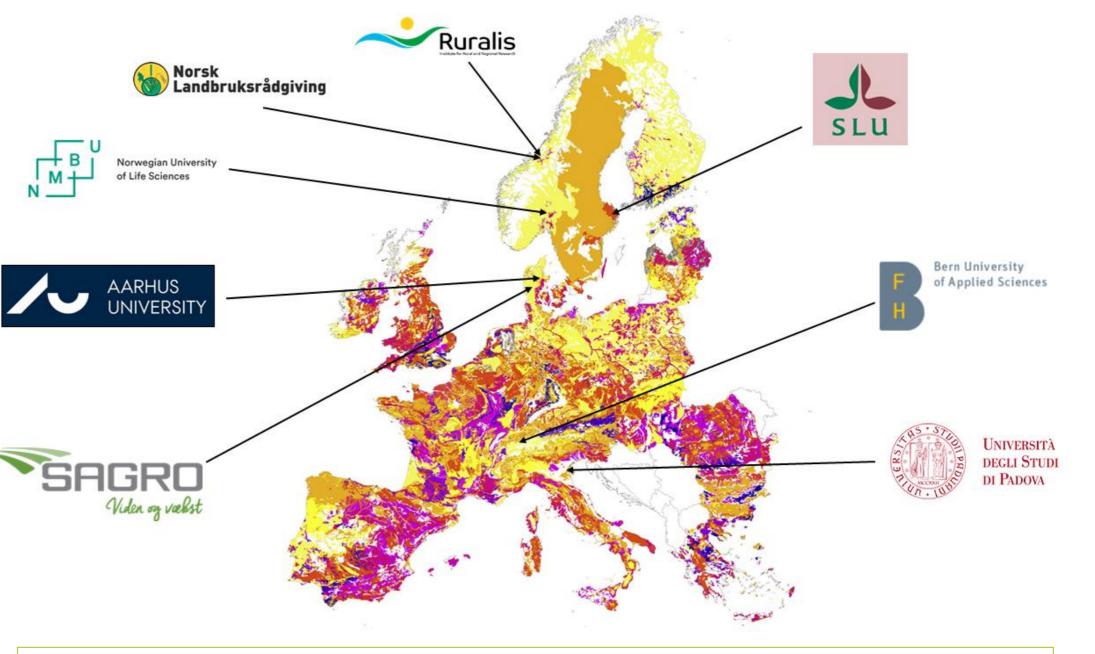
Soil compaction due to traffic with modern agricultural machinery is one of the major threats to soil quality. Compaction adversely affects soil ecosystem services, in particular regulating services (e.g. flood control) and production services (e.g. agricultural production), resulting in significant ecological and economic damage to farmers and society.

Ever increasing weights of farm machinery particularly result in compaction of the subsoil (the soil below tillage depth), which is effectively persistent. Then, prevention of soil compaction is needed.

The aim of the SoCoRisk project is to integrate prevention of soil compaction into farmers' strategic planning.







# Methods



Terranimo<sup>®</sup> is the risk assessment system used in the project. A living lab involving soil scientists, agronomists, social scientists, farmers, contractors, advisers, has been established in each of the five countries participating. In each country, stakeholders are actively participating to workshops where the following three research questions are addressed:

1) What are the potentials and barriers of using Terranimo<sup>®</sup> in its present form?

2) Which new ways of using Terranimo<sup>®</sup> would be efficient for end-users?

3) Which strategies could be developed for the use of Terranimo<sup>®</sup> by farmers in their decision making and planning?

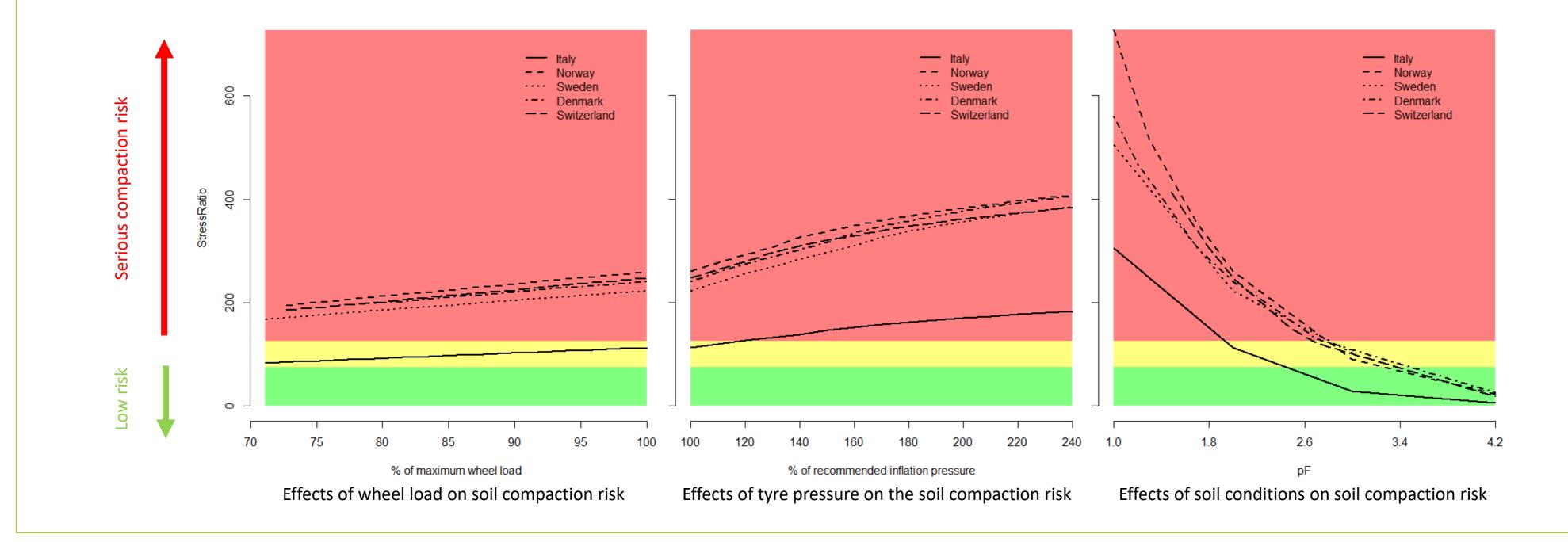
## **Preliminary results**

**Question 1)** What are the potentials and barriers of using Terranimo<sup>®</sup> in its present form?

- Stakeholders are all aware of the problem of soil compaction.
- There were differences in the knowledge of the online tool for risk assessment.
- Generally, it was mentioned that the online tool is not easy for day-to-day use in its present form, and several common suggestions for improvement came out from the discussions (facilitated data inputs, spatialized outputs, assessment from the weather forecast, etc.).
- The economic incentive of using the tool is missing (consequences of soil compaction on the yields).

#### Question 2) Which new ways of using Terranimo<sup>®</sup> would be efficient for end-users?

- There is a huge interest for a further development and adaptation of the online tool from a range of stakeholders (farmers, contractors, advisors, etc.) from all countries participating.
- There was a general interest among stakeholders for <u>a strategic use</u> the tool (example below).



### Final research activities in the project

- Next living lab workshop to be hold in each country to discuss further Question 2) and to address Question 3).
- Synthesis of the results from the next workshop of the five living labs.



This project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement no 862665.

