Innovative Soil Management Practices (SMP) Assessment in Europe and China

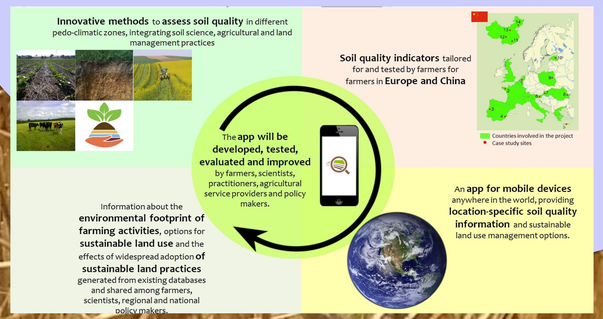
Lúcia Barão[1*], Gottlieb Basch[1], Abdallah Alaoui[2], Gudrun Schwilch[2], Hermann Tamás[3], Violette Geissen[4], Wijnand Sukkel[5], Julie Lemesle[6], Carla Ferreira[7], Fuensanta Garcia-Orenes[8], Alicia Morugán-Coronado[8], Jorge Mataix-Solera[8], Costas Kosmas[9], Matjaž Glavan[10], Brigitta Tóth[3,11], Olga Petruta Vizitiu[12], Jerzy Lipiec[13], Endla Reintam[14], Minggang Xu[15], Jiaying Di[15], Hongzhu Fan[16], Wang Fei[17]

* Contacting author – lbarao@uevora.pt

1 Instituto das Ciências Agrárias e Ambientais Mediterrânicas (ICAAM), University of Évora, Núcleo da Mitra Apartado 94 7006-554 Évora, Portugal
2 Centre for Development and Environment (CDE), University of Bern, Hallerstrasse 10, 2012 Bern, Switzerland
3 University of Pannonia (UP), Deák F. u. 16., H-8360 Keszthely, Hungary
4 Wageningen University (WU)
5 Stichting Dienst Landbouwkundig Onderzoek (DLO)
6 Gaec de la Branchette (GB)
7 Research Centre for Natural Resources, Environment and Society (CERNAS), College of Agriculture, Polytechnic Institute of Coimbra, Coimbra, Portugal
8 University of Miguel Hernández (UMH)
9 Agricultural University Athens (AUA)
10 University of Ljubljana, Biotechnical Faculty, Jamnikarjeva 101, 1000 Ljubljana, Slovenia
11 Institute for Soil Sciences and Agricultural Chemistry, Centre for Agricultural Research, Hungarian Academy of Sciences, Herman Ottó út. 15., H-1022 Budapest, Hungary
12 National Research and Development Institute for Soil Science, Agrochemistry and Environmental Protection (ICPA)
13 Institute of Agrophysics, Polish Academy of Sciences, Doświadczalna 4, 20-290 Lublin, Poland
14 Estonian University of Life Sciences, Institute of Agricultural and Environmental Sciences, Estonia
15 Institute of Agricultural Resources and Regional Planning, Chinese Academy of Agricultural Sciences (IARRP, CAAS)
16 Soil and Fertilizer Institute of the Sichuan Academy of Agricultural Sciences (SFI)
17 Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources (ISWC)

iSQAPER - Interactive Soil Quality Assessment in Europe and China for Agricultural Productivity and Environmental Resilience

- **iSQAPER project** has started in May 2015 and has a **duration of 5 years;**
- **25 partners** (including **14 case study sites in Europe and China**) are part of the project;
- **WP6** – **Testing, evaluating and demonstrating measures to improve soil quality, crop production and yield stability;**
- Identification of **promising/innovative soil management practices** in the most common farming systems and soil types in Europe and China.

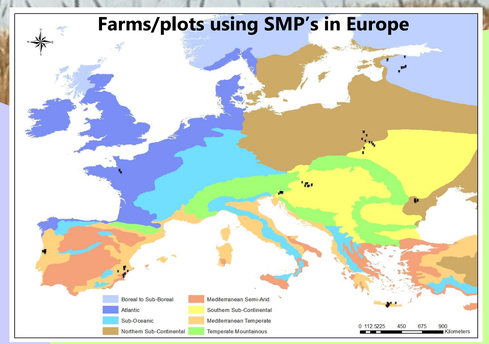


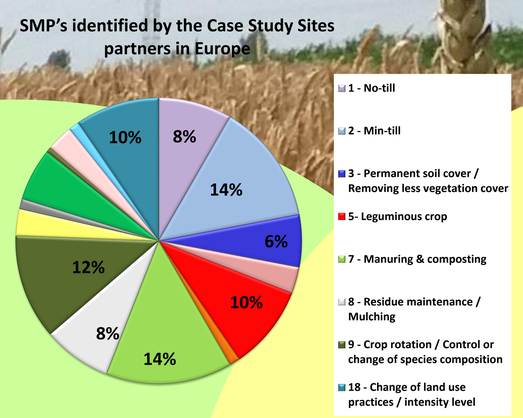
DO YOU WANT TO KNOW MORE ABOUT iSQAPER?

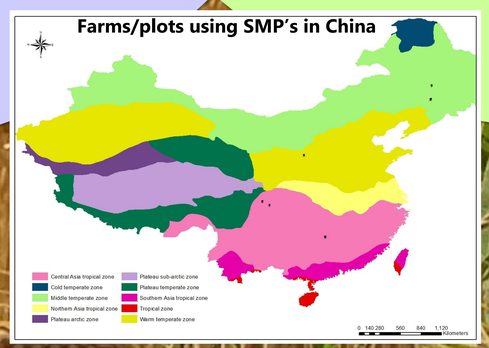
iSQAPER Interactive Soil Quality Assessment

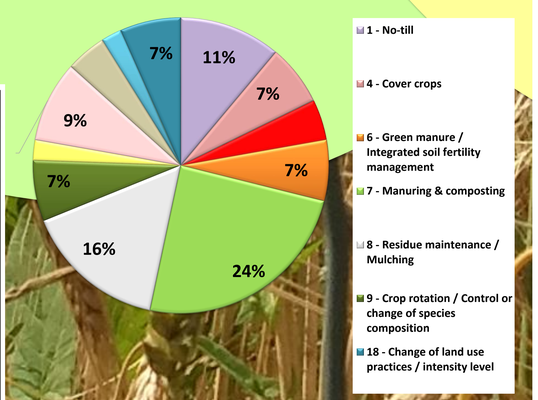
Identification of Farmers using SMP in Europe and China

- Farmers using ***promising/innovative*** **Soil Management practices** were identified by Case Study Site project partners, covering 6 out 8 climatic regions in Europe and 3 out of 10 climatic regions in China;
- Identification/Selection favoured farmers using SMP's in the **most representative soil types** and **farming systems** of the region;
- **155 plots/farms** were identified: 115 in Europe and 40 in China.



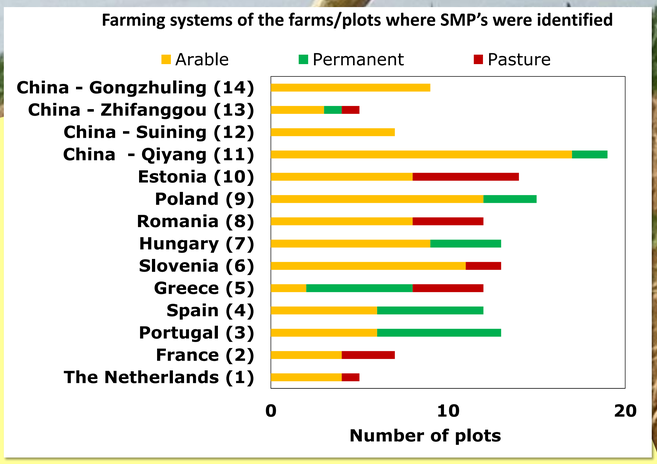


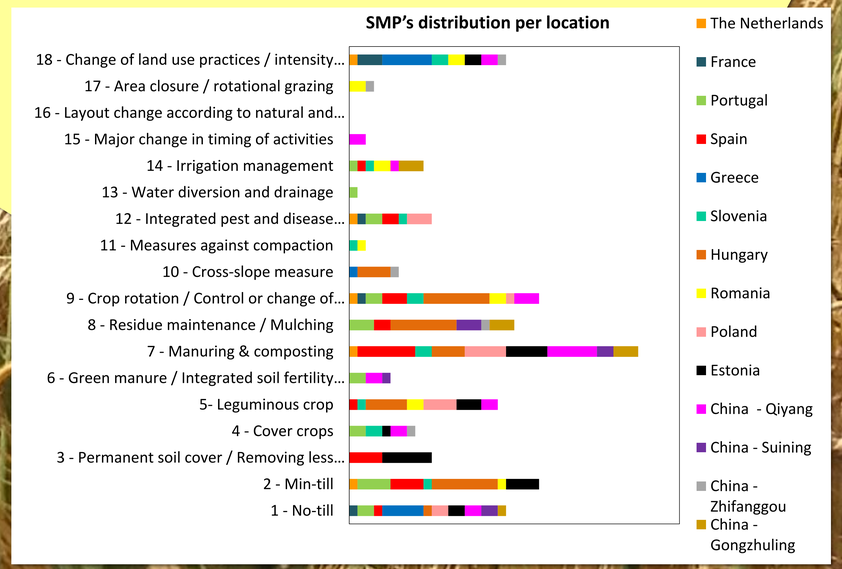




Promising/Innovative soil management practices in Europe and China

- Most farms/plots identified using SMP's are located in **Arable lands** (60% in Europe and 90% in China), followed by **Permanent** (23% in Europe and 7% in China) and finally **Pastures** (17% in Europe and 3% in China);
- The three most common SMP's identified in Europe were **Manuring & Composting (14%), Min-till (14%) and Crop rotation (12%)** and in China were **Manuring & Composting (24%), Residue maintenance/Mulching (16%) and no-till (11%)**.





This project has received funding from:
European Union Horizon 2020 research and innovation programme. Grant agreement: 635750 Project officer: Antonio Pérez-Rendón Duration: 2015-2020
Chinese Academy of Agricultural Sciences Chinese Academy of Sciences
Swiss State Secretariat for Education, Research and Innovation. Contract: 15.0170-1
FCT Fundação para a Ciência e a Tecnologia MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR
GOVERNO DE PORTUGAL
This work is funded by National Funds through FCT – Foundation for Science and Technology under the project UID/AGR/00115/2013