Soils in Poland
– how to improve and save

General information

Predominance of light, sand-derived soils (60%) of low productivity, simplified crop rotation with 60-70% of cereals

Main threats:

low soil organic matter content, low water holding capacity and soil acidity hindering crop production and other soil functions

The importance of soil quality

"The capacity of a soil to function" or "to satisfy human food and fiber needs" Soils deliver ecosystem services enabling life on Earth (e.g. water purification, greenhouse gas exchange, climate regulation).

Improving our soils

Increasing humic substances and natural organic matter affecting beneficially most soil properties and functions and controlling release and access of nutrients for crops.

organic farming

biochar

Sustainable soil management:

- enhancing return of crop residues and using animal manures, promoting crop rotation with legumes,
- using external organic matter e.g. digestates, biochar to maintain or sequestrate favourable soil organic matter,
- encouraging organic farming, conservation agriculture and tillage to: maintain permanent organic soil cover, reduce soil disturbance and improve soil water retention and biodiversity,
- adjusting soil management practices and crop production systems to adapt to vulnerability by e.g. planting dates and species combinations

Soils for future generations

Decreasing agricultural area due to competing uses of soil for e.g. urbanization and energy crops.
Degradation of soil due to intensive use and degradation by acidification, compaction, erosion and nutrient depletion.

Saving our soils:

Effective education to:

- increase knowledge and awareness of public about non-renewable soil resources (formation of 1 cm soil needs 1000 years),
- get better knowledge and capacity for accessing sustainable agricultural practices

iSQAPER
Interactive Soil Quality Assessment

iSQAPER has received funding from

European Union's Horizon 2020 Research and Innovation Programme under grant agreement no. 653750

Ministry of Science and Technology under grant no. 2016YFE011270
Chinese Academy of Sciences under grant no. 16146KYSB20150001

Swiss Secretariat for Education, Research and Innovation under contract no. 15.0170-1