Topics AquaConSoil 2019 – short version

1. Soil and water in the digital world

1a) Big data, smart data combinations
1b) Artificial intelligence (e.g. machine learning, data treatment, forecasting/trends, etc.…), internet of things and block chain
1c) New technological developments (use of drones, smart sensors, participatory monitoring by smartphones / twitter, etc.…)

2. Advances in assessment of risk and monitoring of soil, sediment and water quality

2a) Advances in sampling, monitoring techniques and methods (e.g. molecular bio indicators, online monitoring tools, etc…)
2b) Analysis techniques (e.g. screening, non-target analysis, etc.…)
2c) soil-sediment-water interaction and system dynamics
2d) Human and environmental health risk assessment

3. Diffuse and emerging contaminants in the soil-sediment-water system

3a) Sampling and analysis of diffuse and emerging contaminants
3b) Risk assessment and strategies for prioritization and monitoring of diffuse and emerging contaminants
3c) Reactive interfaces: unsaturated zone, sediments and groundwater
3d) Policy strategies and governance of diffuse and contaminants of emerging concern

4. Advances in remediation technologies

4a) Bio-, nano-, and chemical remediation
4b) Physical, thermal and stabilization techniques
4c) Combined treatment technologies and technology trains
4d) Phytoremediation and ecological engineering and nature based solutions
4e) Post-treatment monitoring in relation to long term site management

5. Strategies and management of contaminated land including legal, social and economic aspects

5a) Legal and economic aspects of the management of contaminated land
5b) Remediation goals and strategies
5c) Sustainability and socio-economic evaluation and public perception related to remediation, including societal participatory approaches
5d) Managing large scale industrial and agricultural pollution (water soil energy food nexus)

6. Land stewardship

6a) Valuations of soil-sediment-water systems: natural capital accounting, ecosystem service assessment and socio-economic cost benefit analysis
6b) The role of soil, water and sediment in relation to societal challenges and UN Sustainable Development Goals
6c) Sustainable spatial planning of land and the subsurface, balancing rural-urban systems
6d) Public perception and behaviour in relation to soil and water

7. Land, soil, water and sediment in the circular economy

7a) Circular land use and brownfield regeneration
7b) Reuse and upgrading of soil, sediment and water and their products; recovery of valuable resources; improving ecological functioning
7c) Nature based solutions: effectiveness for long term ecosystem services for soil and water

http://www.aquaconsoil.org/topics.html