INtegrated Spatial PlannIng, land use and soil management Research ActTION

Assessment and monitoring of soil, water and sediment quality – Valérie Guerin (BRGM)

IRT 1 Harmonised, statistically robust soil assessment & monitoring

D 2 Map, assess, regulate ecosystem services

IRT 15 Restoring ecological & socio-economic value of degraded land

IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover

NI 1.1 Net impact of changing SSW on human well-being & prosperity; effects of contaminants on organisms & ecosystem services

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Description of the topics

IRT 1 Harmonised, statistically robust soil assessment & monitoring

Integrated environmental assessment and soil EU monitoring : which indicators? What indicators should be used to quantify soil degradation?, What data and system concepts are needed to harmonize monitoring data and make them available on a European scale? How could we deal with heterogeneous data and which statistical methods can be used for monitoring purposes (geo-statistics, new statistical procedures)?

D 2 Map, assess, regulate ecosystem services

Regulating Ecosystem services : Assessment and mapping of soil ecosystem services

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Description of the topics

IRT 15 Restoring ecological & socio-economic value of degraded land

Sustainable management to restore the ecological and socio-economic values of degraded land : There is a strong demand on specific (degradation focused) mapping and assessment of specific functional ecological targets for degraded sites in a regional or landscape context

IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover

Innovative technologies and eco-engineering : Modern and cost-efficient on-site monitoring (water, nutrient, fertility status (crop yield, plant nutrition, soil compaction), soil quality (e.g. control and prevention of soil erosion and salinisation), plant cover (farming, up-ground biodiversity))

NI 1.1 Net impact of changing SSW on human well-being & prosperity: effects of contaminants on organisms & ecosystem services

Development of methods and indicators to assess and monitor changes in SSW and net impact on human well-being and economic prosperity : Define indicators and descriptors of effects of contaminants on organisms and on ecosystem services

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Raw notes

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Topics rating

13 delegates participated: 5 in the first round table, 6 in the second one and 2 in the third one.

Topics	Interest
IRT 1 Harmonised, statistically robust soil assessment & monitoring	11/13
D 2 Map, assess, regulate ecosystem services IRT 15 Restoring ecological & socio-economic value of degraded land	6/13
IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover	5/13
NI 1.1 Net impact of changing SSW on human well-being & prosperity; effects of contaminants on organisms & ecosystem services	6/13

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Funding opportunity

IRT 1 Harmonised, statistically robust soil assessment & monitoring

Policy Makers: For most of the people, the management of the database must be financially supported /carried out by the state/government.

User: Some industrials may willing to contribute to knowledge arround the industrial area

Taxes: A system of tax could be implemented to allow data aquisition and management

Raw data must be free (Aarhus) but interpreted data could be valuable (not for free). Create additionnal value from data which would pay off the value of raw data to data owners
Possible questions regarding computer and freedom

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Funding opportunity

IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover

- In some countries, national or local funds are available for the last phase of maturation and transfer of the technology.
- In other countries, the companies must take the financial risk as they will make money afterward
- EU funding may leverage/facilitate the transfer of technologies
- Possibility of crowdfunding
- Spin-off of research laboratories

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Needs/advices and insight collected

IRT 1 Harmonised, statistically robust soil assessment & monitoring

Which type of data are essential? Needs are quite different depending on the scientific community and on the operational question(s) addressed (diffuse or point source pollution)

Which frequency is needed for each type of data ? Real time not needed for every data

Start from the evaluation of risk to define which data are essential (reverse process)

Lots of data available: however data gained from the projects are not valued

People must be involved in monitoring: but attention must be paid to the equilibrium between number of data available/quality of data

Collect not only chemical information but also other determinants of quality

Question on the proper way to use data

Correlation not always relevant/possible

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Needs/advices and insight collected

IRT 16 Innovative technologies & eco-engineering for on-site monitoring, soil quality & plant cover

Still a need for screening tool(s)

University/research institution need to teach service provider and end-user to increase the use of innovative technology and help spin off to develop their activity => Importance of networking + partnerships also to facilitate transfer of technologies

Innovative monitoring technology needed for assessing ecosystem health

Methods for emerging contaminants have to be developed

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Needs/advices and insight collected

NI 1.1 Net impact of changing SSW on human well-being & prosperity; effects of contaminants on organisms & ecosystem services

This approach must be followed/used to identify the right indicators to follow (link to IRT1)

Bioaccessibility is still a subject of interest

Need of tools to follow the effect of contaminants (link to IRT 15)

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