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Natural Capital, partner in sustainable development

Innovation through sustainable use of the soil-sediment-water-system?

A challenge to take up together

Consciousness is needed for the fact that the natural capital and its services can help to solve societal challenges. We need to show the possibilities of the soil-sediment-water-system (SSW) and the way how it can be sustainably used and managed. In which ways can we create value and protect our natural capital at the same time? This asks for knowledge of the SSW and its interactions with land use. This knowledge is best gained by joint research: scientist, land users, decision makers and other stakeholders.

Natural capital: a necessity to solve societal challenges

The European member States have many corresponding societal challenges. We strive for healthy food and food security, enough and safe drinking water, energy safety and security, adaption to climate change, resource efficiency and healthy cities. This within an environment where the global population grows, urbanization takes place, resources and means diminish and therewith pressure on the environment land use and resources grows.

Understanding of the SSW and its services as a part of the natural capital will help to solve these challenges. The SSW contributes to welfare; it supplies resources, it is the base for food, energy supply, building materials for constructions and the production of drinking water. Today, unfortunately, our natural capital is not always used nor managed in a sustainable way. With as a result damage, extra unforeseen costs, inequality and instability on local, regional, national and global scale.

Sustainable use is value creation

Policy in Europe is often based on protection and sectorial organized: water, air, noise, waste, nature. This is reflected in the organization of our research. It is our opinion that we should strive towards integrated sustainable use and management of the SSW as one. By integrated sustainable use and



management we create value and values are worth protection. So by value creation we realize protection of our natural capital.

How can we sustainably use and manage our natural capital and avoid the principle “first comes, first serves”? We think that upscaling towards an area oriented approach in combination with land management is the key. We have to think in three or even four dimensions (this includes subsoil and time). This means we need to work from an integral approach and long term perspectives. This can be on a regional, national or global scale, but always on scale of the SSW.

Challenges and chances for research

With declining budgets caused by the economic crisis, environmental based research is under pressure. Researchers need to be active in showing the value and valorization of their work. Horizon 2020, the investment program of the European Union, asks for smart, green and inclusive research. Solving societal challenges with smart, sustainable and competitive concepts and solutions, will create new jobs. As said before, the SSW can help solve societal challenges in a sustainable way. Therefore knowledge of the SSW is needed, a chance for researchers, but in general a new attitude is essential. Researchers have to work together with the stakeholders in a multi-disciplinary way. New research is demand driven. Who are the users of the SSW, who are the potential beneficiaries and investors? Farmers, developers, builders, drinking water companies, decision makers, bankers, spatial planners and so on all use the SSW and add value or get value from its use and therefore are the target groups. They have interests and are potential investors. Researchers have to be connected to them!

Horizon 2020 project INSPIRATION

In the Netherlands transition in policy started in 2003 and this process is still going on. Our policy was determined on protection by chemical soil quality and mainly based on site specific soil remediation. It now has shifted towards a policy where soil quality is part of 4D (time and subsurface) spatial planning and the SSW is considered as partner in sustainable use and development. It may be understood that good management, information and knowledge is required.

We realize that a lot of other countries are less over populated and therefore do not share the Dutch lack of space and are not always considering the SSW as a whole in their policies. However we see that many countries share the same societal challenges, especially in urban areas. That was the reason to consult our international network to see if it was possible to join our efforts and budgets for research on this theme. With INSPIRATION we create this possibility. With a demand driven strategic research agenda, together with stakeholders and the development of new financing models, we can join research efforts where we have shared problems or see possibilities for innovative solutions. We made a good start already bringing together stakeholders with common interests. The proposal was accompanied by nearly 100 letters of support from stakeholders: municipalities, industries, research institutes and NGO's.