

CF Working group Soil as a Resource

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Special on Land Stewardship

"Creating public values, restoring degraded land, a collective responsibility"

Introduction

Together with the Nicole network the CF working group SAR has published a booklet on land stewardship (LS). With this booklet both started a search and discussion on LS as a means to give added value to industrial or degraded land. They explored the instrument LS and showed cases of how this instrument, mainly used for stakeholder involvement in nature conservation and improvement of biodiversity, can also be used in management of industrial land. The booklet is meant to stimulate owners and users of land and soil to rethink the value of degraded or industrial land and the soil system and become aware of opportunities, of their own responsibilities in managing land sustainably and adding extra (public) values by teaming up with other stakeholders.

Therefore the aim of the workshop "How to achieve an added value for degraded land by land stewardship" was multifold:

- To become aware of the possibilities to optimize value creation of diffuse contaminated land
- To get insight in the options and necessities for value creation and the management of diffuse contaminated land
- To get insight in the different roles of soil contamination policy makers and experts, land owners and other stakeholders
- To identifying challenges and barriers in using LS as a concept

The output of the workshop and discussions will be used to explore a joint position paper with the NICOLE network.

Margot de Cleen gave an introduction to the special session. Land and soil, the natural system, are essential for our well being. Therefore sustainable land use, land management and land restoration is essential. What are keys to achieve this and how to cope with deteriorated, for example diffusely contaminated, land, where means for restoration are not at hand? Is LS the key?

She started with the definition of LS by the Canadian Centre for Land Stewardship www.landstewardship.org:

"In its broadest sense, Land Stewardship is the recognition of our **collective responsibility** to retain the quality and abundance of our land, air, water and biodiversity, and to manage this natural capital in a way that conserves all of its **values**."

Next she sketched the background of the start of the discussion on LS as a concept and instrument to cope with and give extra (public) value to degraded land. She showed not only the mutual challenge the MS face to achieve Land Degradation Neutrality (SDG15.3) and therefore combat soil degradation and cope with diffuse contamination, but she also indicated the extra pressure on land and soil caused by societal challenges such as climate mitigation and adaptation, housing, sustainable energy and so on. Challenges which have to be achieved by mostly privately owned land, while for diffuse contamination the means and technologies to clean up lack. By identifying other uses for degraded land, this land gets other values and can add to societal needs if managed.

A Catalan case study on LS "Xarxa de custodia del territori"

Jofre Rodrigo from Xarxa de custodia del territori, a Catalan network for land stewardship showed how this professional organization facilitates and manages many LS agreements between land owners and land users. This case is taken up in the booklet as an example. In Catalonia LS is taken up in the Catalan legislation as an official management agreement for biodiversity conservation and nature based agriculture. The toolkit for LS has been developed in a European project on LS and has been embraced by the Catalans. Jofre shows that Catalonia has a broad LS network and a lot of participating land owners. He shows how the LS organisation facilitates: by connecting land owners and land users and other stake holders, by giving legal support, by giving technical and financial support and helping to plan and manage restoration. As an organization they lobby and create awareness by the public, they bring networks together to sustain one another and to exchange knowledge and raise funds. It is clear that LS is about working together to achieve mutual goals but also that, even though people volunteer to make agreements, it is not a free ride. When agreements are made, and Jofre showed several options for agreements with different time

frames, you are legally hold to keep to those. LS is a good working concept and leads to good joint governance for nature conservation. It may also be a good concept to govern degraded land.

International Workshop “Land Stewardship” Mechelen

Together with their colleagues from OVAM and the Leuven University, Johan Ceenaeme and Kris van Looy organized an international workshop on Land Stewardship in April this year. At the CF special they gave feed back on the discussions and experiences of that meeting. They also started with the observation that soil and land are vital for our well being and that land and soil services are essential for all kind of societal functions. They pin pointed the vulnerability of the system and the need to restore soil functions and govern land and soil use and management. Therefore a search for new strategies is needed to tackle challenges such as coping with diffuse pollution and invoking circular soil management. In the workshop they identified the following needs:

- A change in mind-set (awareness) resulting in more care about soil
- A change in relationship between soil and society with a focus on reciprocity
- Involvement and engagement of stakeholders to care for soil in practice
- A framework with guidelines, tools, ... for “shared responsibility” for soil
- Evaluation of property rights

Besides these needs the following considerations have to be taken into account:

- Local conditions; geo-political, historical, social..
- Multiple meanings of land; legal, cultural, religious economic, political
- Forms of land ownership; rarely absolute or exclusive, use (customary) vs legal rights
- The interdependency between land and other resources
- How land relations are; shaped by (and shape) political-economies, ideologically informed.

They concluded that it’s not only about a relationship between people and land, it is also a relationship between people about land.

Group discussion

“How to achieve an added value for degraded land by land stewardship”

The group discussion was focussed on 3 cases:

- A landfill
- Diffuse contamination in agricultural areas
- Diffuse groundwater contamination in industrial areas

The mutual goal was to discuss how in these cases of degraded land and a lack of means opportunities and value creation could be achieved by a holistic approach and LS: an area approach, connecting non degraded soil functions to societal and private goals, searching for (new) business models, identifying stakeholders, identifying management options and needs.

Therefore posters were made with the following supporting questions and statements:

1. **Which SDGs are relevant?** How can you achieve an added value despite of land degradation by connecting to the SDGs?
2. **How can you achieve optimization of the use and management of the soil-sediment-watersystem?** What is needed in the sense of (policy) actions, knowledge, data....?
3. **How can you achieve public goals by private means: a collective responsibility?;** What are possible opportunities, stakeholder interests; roles and responsibilities, what is needed (short term and long term actions)?
4. **What is needed to come to land stewardship?** Which ingredients do you need to come to an agreement?

Case 1 Landfill

1 Relevant SDGs

SDG 3, health, was connected to recreation and sports

SDG 6, clean drinking water, asks for special attention and monitoring

SDG 7, sustainable energy, contribution in form of biogas, solar panels, wind, biomass

SDG 9, innovation and sustainable infrastructure, innovative use and innovative buildings

SDG 11, sustainable cities, connected to space for recreation

SDG 12, sustainable consumption and production, source for raw materials, biomass

SDG 13, climate action, attention for biogas leaching and use of biogas production

SDG 14, life under water, attention for leaching to groundwater
SDG 15, life on land, contribution to biodiversity, new habitats
SDG 17, partnerships, several partnerships possible, depending on goals you set.

Overall remark: it's all so bloody obvious, how do we make it normal?

2 Optimization of the use of the soil-sediment-water system

Thoughts on value addition of landfills are already going on and subject of study in the H2020 project Cocoon. The weighing of the most sustainable or highest added (public) value is not (yet) taking place.

It is hard to monetize the obvious benefits. Is this a case of "the tragedy of the commons"?

Overall remark: You need an integrated approach

3 Public goals by private means

Special targeted taxes (hypothecated)

Identify the beneficiaries ; health care (sports), electricity companies, users and miners of resources, recreation and sports sector

Identify who can pay/what activities can create money

Let parties pay for a social license to operate

Land value capture (property tax)

Overall remark: You need to innovate the stakeholders

4 Needs for LS

Social benefits; input in how to bring all this together

How to build trust

Planning in advance the second life ("sugar coating")

Communicate (on air and water quality)

Raise expectations

Overall remark: Plan in advance.

Case 2: Diffuse contamination in agricultural areas

1 Relevant SDGs

SDG 1, no poverty, attributes to labor, ownership, soil quality

SDG 2, zero hunger, contributes to food security, security of capital and services

SDG 3, health, product quality and food safety, wellness, air and soil quality,

SDG4, education, farmers awareness

SDG5, gender equality, ownership, tenure

SDG 6, clean drinking water, agricultural practices

SDG 7, sustainable energy, energy vs food production

SDG 8, good jobs and sustainable growth, connection with SDG1

SDG 9, innovation and sustainable infrastructure, link with intensive farming, urban farming

SDG10, stop inequality, connected to SDG1 and 16

SDG 11, sustainable cities, influenced by urban sprawl, value agricultural areas vs residential areas

SDG 12, sustainable consumption and production, contribution by fair trade, labels, short circuits

SDG 13, climate action, related to C-stocks vs soil fertility, fluxes of C and N, pollutants

SDG 14, life under water, relation with soil quality and eutrophication

SDG 15, life on land, connected to soil biodiversity and agricultural practices

SDG 16, peace, safety and justice, connected with poverty, migration and implementation issues

SDG 17, partnerships, such as CF, NICOLE, GSP, LS network, stakeholders

2 Optimization of the use of the soil-sediment-water system

Farming concepts, agro ecology, payment for ESS

Bottom up approach

Picture of diffuse pollution vs fit for use => tools are neglected

Tend to stop by prevention

3 Public goals by private means

Municipal level; initiative by local authorities and farmers; funding private and public
Communication on risks from land and applicators (?)
Associate on ...(natural associates)

4 Needs for LS

Mind change (green PAC), better integration
Common interest
Empathy
Trust

Determine partners if the soil is a problem is = -
Local partnerships , short circuits, demonstration farms (awareness and education) = +

Case 3: Diffuse groundwater contamination in industrial areas

1 Relevant SDGs

SDG 1, no poverty
SDG 2, zero hunger
SDG 3, health
SDG 6, clean drinking water,
SDG 7, sustainable energy,
SDG 8, good jobs and sustainable growth
SDG 9, innovation and sustainable infrastructure,
SDG10, stop inequality
SDG 11, sustainable cities,
SDG 12, sustainable consumption and production,
SDG 13, climate action,
SDG 14, life under water,
SDG 15, life on land,
SDG 16, peace, safety and justice
SDG 17, partnerships,.

2 Optimization of the use of the soil-sediment-water system

3 Public goals by private means

4 Needs for LS

Communication and public awareness
Expectations should be clear, select SDGs
Make a vision for the development of an area
Identify your stakeholders
Make use of positive language (no contamination)

Make scenario's
in an early stage
determine the risks for different options

Find common goals/interests/the money driver
Who are the stakeholders
Better techniques to reduce risks
Employment
Spin off to broader area = value creation