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Losing ground? Global Soil Week 2013

Once a year, on the 5th December, the International Union of Soil Sciences highlights the importance of soil as a natural resource. In the run-up to World Soil Day, international experts met in Berlin, Germany, to discuss an Agenda for Action towards a land degradation-neutral world.

At the UN Conference on Sustainable Development (Rio+20) in June 2012, the international community agreed on an aspirational goal: a land degradation-neutral world. The measures that this requires and the hurdles that need to be cleared were discussed at the Second Global Soil Week, which was organised by the Institute for Advanced Sustainability Studies (IASS) together with various UN organisations, the EU Commission and the German Federal Government in Berlin/Germany in late October.



Speakers in the opening event once again illustrated the urgency of the issue: the worrying loss of soil as a valuable natural resource (an estimated 24 billion tons a year), its finiteness (the formation of a 2.5 cm thick layer of humus takes around 500 years), its unequal distribution (less than two per cent of the land world-wide is owned by women) and the annual losses for the global economy (an estimated 420 billion euro). In addition, they demonstrated the close relations between the use and availability of soil and the overall goal of hunger alleviation, sustainable resource use, mitigation of climate change and security.

Taking global responsibility seriously

"Without soil and energy, we will not overcome poverty in the world," IASS Executive Director Klaus Töpfer warned, and he called on the countries of the North to assume their global responsibility. Africa can boast 3,500 solar hours a year, compared to Germany's mere 900. While Germany was showing hardly any interest in research on renewables, this was a crucial factor to Africa in efforts to overcome energy poverty. However, the continent was unable to finance research by itself. More research was also needed to provide reliable data, which was indispensable in taking tailor-made measures to protect the soil.

Tarja Halonen, Co-chair of the High-level Panel of the UN Secretary-General on Global Sustainability, reminded the audience that sustainable soil management was one of the most effective means of poverty alleviation and food security, which in turn had a crucial influence on a country's social stability. However, Vandana Shiva, Board member of the International Forum on Globalization, maintained that, for a long time, soil had been regarded as an empty container that only needed to be filled with nutrients – especially in the times of the Green Revolution. "It is wrong to believe that fertility comes from fertiliser!" the activist explained, calling instead for a focus on an optimum provision of soils with organic material and the conservation of soil biodiversity.

Torgny Holmgren, Executive Director of the Stockholm International Water Institute, stressed that food production depended on water and energy. First, food production was one of the largest freshwater users in the world – alone the production of one kilogram of meat required 16,000 litres of water. Second, 50 per cent of water resources was being used in shared agreements. Scarcity and the transboundary nature of water could easily result in conflicts. In addition to investment in sound new technologies, partnerships among water and land owners and users were needed, said Holmgren.

The kick-off event was followed by numerous dialogue sessions and plenary discussions centring on four thematic threads: "Material cycles", "Sustainable land management & soil engineering", "International soil policy & sustainable development goals" and "Responsible land governance".

Are we undermining our future?

Often, the issue of mining only plays a subordinate role in the debate on soil quality and the sustainable use of natural resources. This does not do its significance justice, as Graciela Metternicht, Professor at the University of New South Wales/Australia, and Mariné Pienaar, founder of Terra Africa Consult, demonstrated, referring to the impacts of extractive industries: immense water consumption, the conversion of agricultural land, deforestation, a loss of biodiversity, discharge of CO₂, gas flares and toxic chemicals, land degradation, water pollution, mining accidents, and the resettlement of villages.

In Peru, for example, 12,000 people are involved in artisanal mining, while a further 30,000 depend indirectly on mining. "From 1975 to 2002, nearly 2,000 tons of gold was extracted in Peru, with 3,000 tons of mercury being left behind," Metternicht explained. Up to 30 per cent of this poisonous element ends up in the watercourses, while half of it evaporates. And in Papua-New Guinea, the activities of OK Tedi Mine, who extract copper and gold in the country's Western Province, leave behind 70 million tons of waste rock and mine tailings a year that flows a distance of more than 1,000 km down the rivers, threatening biodiversity. Cuba is one of the largest producers of nickel. High levels of contamination have been reported for at least 1,350 hectares of coastal waters in the country's Southeast.

In many poor countries, mining concessions are awarded unconditionally to mining corporations because the latter provide services that governments are unable to perform (sufficiently), such as building schools and hospitals. This in turn attracts many people from outside who settle in the mining locations. However, as Pienaar explained, not only do people lose their jobs when the mines close down after 20 to 30 years, but all public services are terminated as well.

Rethinking has started

In vast number of countries, artisanal mining is an important source of income for local communities, while mineral resources represent an indispensable means of gaining foreign exchange for the countries concerned. "It is a complete illusion to think that we can stop mining," Metternicht said. However, a rethinking of the issue was gradually setting in. Australia has introduced a guide to sustainable mining. With its Green Mining Initiative, Canada is attempting to position the country's mining sector as "the global leader in green mining technologies and practices". And some corporations seem to be increasingly aware of their responsibility, too, such as Richard Bay Minerals (RBM), a South African mining company that has been operating open-pit mining along the KwaZulu-Natal coast in South Africa since 1976, where it is mainly extracting titanium dioxide, zircon and high purity iron. The company's chief owners are Rio Tinto, one of the world's three largest mining companies.

Staff member Theresia Ott presented some of the company's mining guidelines, according to which efforts are being made to maintain most of the topography and prevent soil movement. These include setting up windbreaks and the restoration of the natural vegetation. When areas are exploited, a 15 cm layer of topsoil is removed after bush clearing, spread at another location and then planted with cover crops such as sunflowers by the women in the community. These plants reach full height after about three to five months. Since all the seeds of the original forests are contained in the topsoil that has been removed, the original vegetation gradually redevelops. Initial tree growth, comprising Acacia karoo, dies off after around 20 years, and about 30 years later, a forest with high diversity will have established itself, it is claimed.

Each year, 45 hectares of these areas is handed over to the community. Ott said that surveys by the University of Pretoria had revealed that in the course of the past years, both soil carbon and soil nitrogen content and the number of soil organisms had significantly increased. The company is spending around 320,000 Rand per hectare (31,500 US dollars) on restoration. "This money is already embedded in the operational costs," Ott explained. The ecologist is convinced that competition among the mining companies is going to increase in future, so that they will be forced to address rehabilitation issues. Jorge Jurado, Ecuadorian Ambassador to Germany, seemed sceptical, maintaining that corporations only acted in a responsible manner if forced to do so by a respective country's legislation.

Only that there is a lack of political will

Many encouraging examples were presented at this Second Global Soilweek. At the end of the day, however, it once again became clear that no matter how much expertise and engagement is put in, it will achieve nothing as long as political myopia gains the upper hand. In his video message on the opening day, Janez Potočnik, EU Commissioner for the Environment, had pledged further support for a European Soil Framework Directive, which the EU has been trying to implement in the context of its Soil Thematic Strategy since 2006. Opposition by a blocking minority of EU Member States has always prevented the full adoption of the Directive in the EU Council, the main reason given being that unlike air and water, soil does not reach across borders, which is why, in accordance with the subsidiary principle, no European regulations are required. Early in November 2013, José Manuel Barroso, President of the European Commission, announced that the Directive would be deleted from the agenda.

More information on the various events and the final draft of the Soil Weeks's "Agenda for Action". Please Visit:- **Global Soil Week**

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Guestbook

Nothing found in the guestbook.