

Forum Rapporteur's Overview

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1. Introduction

From the scientific evidence available, it is clear that societies around the world have mismanaged soil over many generations. As a result, in many parts of the world, soil has been lost at a rate greater than its formation and its natural functions have been diminished and degraded. Soil is no longer as productive as it naturally can be. Soil does not act effectively as a store of water and of nutrients. Soil is less resilient to natural events of floods and high precipitation. Soil has lost a great deal of carbon and other critical components to the atmosphere and to the oceans. Soil now has a reduced capacity for carbon storage and is less able to act as a buffer against climate change.

It is suggested that many governmental institutions and global initiatives and processes have failed to recognize the importance of soil to society. If the soil management objectives of international agreements, such as the Millennium Development Goals and those goals agreed to under the UN Framework Convention on Climate Change, the UN Convention on Combating Desertification and the UN Convention on Biodiversity Conservation, are to be achieved, then individual nations should work more closely with international organizations on the management of soil and the restoration of degraded land.

The situation is urgent. The global community has set ambitious targets for poverty alleviation and improved access to clean water, among others, through the Millennium Development Goals. Many commentators, including the global community of climate experts, consider that similarly ambitious targets are required in the reduction of greenhouse gases to help combat global climate change. At present, the trends on these issues are progressing in the wrong direction, and in too many parts of the world soil stewardship and land restoration are making limited progress. Without agreement on action and urgent implementation, the position of this vital natural and social resource will further deteriorate.

Traditional approaches developed in the industrialized world have been inadequate to meet the challenges facing us today. These approaches tend to be top-down; politically motivated; superficial; with available financial resources misallocated; and they are not based on the best scientific, technical and traditional knowledge available.

A new vision is needed that places soil at the heart of global social, economic and environmental solutions. This vision should recognize the dependency that nature and human society have on the functioning and productivity of the soil. This means greater recognition of the necessity for better stewardship in order to combat detrimental global environmental and social changes. This will require a new ethic of land stewardship, new

policies, improved instruments, improved resource management and better targeted financial support. These, in turn, will require increased political support, financial commitment, and the application of improved scientific and technical knowledge.

If greater care and stewardship of the soil and a greater emphasis on soil and land restoration can be achieved, then many benefits will result. Such benefits include: reduction in the loss of the soil resource; increased soil organic matter and nutrient status; improved food and fibre productivity; increased water storage capacity and water availability; reduction in flooding and erosion; and, increased capture and retention of carbon and other greenhouse gases. If this action is taken, it will contribute to a reduction in poverty, improved land productivity, greater access to water resources, reduction in the loss of biodiversity, reduction in emissions that contribute to global climate change, and improvement in environmental and food security.

2. The Forum Plenary: Key Issues

This summary is based on the presentations and discussions during the Forum, and was presented to the final plenary as a Forum Overview by the Forum Rapporteur.

Two contrasting perspectives emerged from the plenary. The first concerned the negative trends in soil and land degradation and the associated effects on human well-being. The second concerned more positive opportunities for addressing and improving the situation. Although there was no systematic assessment of the situation across different continents, the material presented highlighted the challenges apparent in the regions of Africa south of the Sahara, in parts of Asia, and parts of Latin America, where the interconnections between soil, land degradation and poverty are most markedly negative.

2.1. Negative trends and their consequences

A number of headline messages concerning negative trends and their consequences were presented. The following are those which resonated most with the participants of the Forum:

- “The Poverty Trap: the Downwards Spiral of Land Degradation and Human Poverty”; and
- “The Tragedy of the Environmental Commons”.

The key points that emerged on negative trends were that, at the very least, 10% of the world’s drylands are suffering from severe land degradation. Some estimates put the level of land degradation as high as 70%. One of the major natural consequences of this degradation has been that an estimated 60-100 billion tonnes of carbon has been lost from the soil during the course of human history.

In addition to poor husbandry and poor stewardship of the soil, a number of other reasons were put forward as the causes for the level of degradation. There has been a preponderance of single solutions, whereas land degradation requires a much more multi-

faceted and complex approach. The position is made even more complex because there is confusion about what are the causes and what are the effects. Indeed, the best that can be said is that there is a confusion between cause and effect, complicated even further by many feedback loops. The drivers of changes in soil and land degradation vary radically in type and effect over time. Overall, agricultural production is frequently considered to be the main and dominant driver; however, it is regarded as too strong an influence by some. Many of the approaches used to combat soil and land degradation have been top-down and have failed to engage the local stakeholders who own and manage the land, and local communities whose lives and livelihoods depend upon it. At the same time, there has been a loss of what is commonly referred to as a 'land ethic', and also a loss of traditional knowledge. Many new solutions have been developed and introduced, but they have not always been successful because some have been ill thought out or oversimplistic. Also, grave doubts were expressed about the efficacy and ethics of market mechanisms.

The scale of soil and land degradation is not at all clear, as the figures indicated above illustrate. This means that targeting action is extraordinarily different. Also, many different methodologies have been used and there is no compatibility between them; hence, comparative assessments are not possible. This situation becomes critical for the world's drylands, as there is no agreed definition of desertification; the Forum identified this as a point for urgent activity, but did not come to any agreement on a new definition.

Despite the amount of international attention given to various environmental issues, there is a great deal of separate and uncoordinated activity. Speakers observed that the three key UN Conventions (Desertification, Climate Change and Biodiversity), are not integrated and operate as separate entities. As a result, there is a need for more coordinated efforts that, in part, focus on soil as a major component relevant to each Convention and to achieving the Millennium Development Goals.

There is a recognition that the message about the importance of soil to society's well-being is not getting through to wider audiences, including key decision-makers in the international environment and development arenas. The responsibility clearly lies with the soil and soil conservation expert community to ensure that their message is being more effectively communicated.

2.2. Reasons for Hope

Despite the many negative aspects of soil and land degradation identified by speakers, many optimistic points were raised.

The headlines which resonated with delegates were:

- "Trust in the Soil"
- "Soil is the Common Denominator"
- "Soil is at Heart of the Sustainable Development Debate"

There was a strong consensus that a new paradigm on soil and land restoration is needed if the current negative trends are to be reversed and if instruments are to become more effective. This new paradigm should contain ethics and societal values as major components. There was also recognition that a more anthropocentric approach was needed rather than a purely technocratic or environmental approach. Putting people at the centre of new solutions was seen as essential. Integrated and holistic approaches are needed to define synergies, identify multiple goals, and engage the whole range of stakeholders. Land custodians and local communities are key actors in defining and delivering new solutions.

There was a recognition that new mechanisms and techniques can help to provide solutions. Among the suggestions made were: models to identify thresholds between sustainable and unsustainable trends; a systems approach for understanding interconnections between many variables; and economic analysis to define costs and benefits (including whole life cycle environmental and social costs). Also, there was widespread recognition of the need to learn from mistakes as well as successes, and to apply practical solutions relevant to circumstances. It was also considered necessary to operate and to find solutions at a scale commensurate to that of the problems; this could be at the local community, catchment, national, regional or global level, depending on the issue in question and the solutions proposed.

Environmental markets, voluntary and/or enforced, were considered to provide opportunities for solutions, despite difficulties experienced. Carbon capture and carbon trading schemes may be the most innovative solutions for soil restoration and improving the productivity of the land.

3. A New Paradigm

Reflecting on the points that emerged from the plenary and the ensuing discussions, the Forum Rapporteur proposes a New Paradigm:

“Soils for the Sustainable Health of Our World - achieving acceptance of healthy soil as a fundamental component of human life: an ethical, value-driven and practical approach at the core of a new Global Covenant”

Key elements of the New Paradigm are:

- There is no one driver and no one solution, and therefore no all-encompassing golden bullet solution.
- Any solution must recognise the complex interrelationship between drivers.
- Whole ecosystem approaches are needed, with humans as a constituent part.
- Soil sustainability through restoration and improved stewardship results in many benefits, including climate change amelioration, poverty reduction, water retention, and reduction in biodiversity loss.

- Any solution must recognise that land degradation and the poverty trap are interlinked in complex ways, and the solution lies in breaking this negative cycle and replacing it with a more positive one.
- The results from scientific studies should be made accessible to local communities, key actors, and other members of the public.
- Options for sustainable land use, including a new future for farmers, should be elaborated.
- Better interactive approaches with a greater focus on local solutions with effective knowledge management and transfer are required.

4. Agenda For Action

The principal areas for action identified during the course of the Forum have been classified under the following headings and are further accompanied by a description. These action areas complement the Programme of Action agreed upon by the participants, and suggest a way forward beyond the Programme of Action.

For each of these actionable items identified by the Forum Rapporteur, the following points need to be addressed: defining the issue, identifying the action needed, and who takes the lead and who provide support, and the timescale for realisation. A draft for each action is proposed.

I. Making the Case for Soils and Society

Under this umbrella action area, the following actions are proposed:

- a) International Forum on Soils, Society & Global Change Programme of Action

The Programme of Action was developed in order to gain attention of opinion farmers and leaders, to promote the need for integrated approaches, and to link soils to the global agendas on climate change, poverty reduction, and biodiversity. The Organising Committee of the Forum was tasked with disseminating the Programme to international institutions.

- b) Developing and promoting a new paradigm for soil stewardship

A new paradigm is proposed as a way to ensure that soil stewardship is universally recognised as part of an integrated solution to global well-being. It was proposed that the further development of this new paradigm should be undertaken by an *ad hoc* group led by Ron Engel, and that it be widely disseminated, both globally and locally, as a contribution to a new global Earth Covenant.

- c) Round Table on Soils, Society and Global Change

In order to stimulate political commitment, financial support and global action on soil stewardship and land restoration, especially in those parts of the world where human need

is greatest, it is proposed that the President of Iceland convene a high-level round table discussion involving key global stakeholders, such as governments, the business community, the scientific community, environmental leaders, and civil society participants. It is hoped that this discussion will lead to transformation of the enabling environment, leveraging of financial resources, and improvement of market conditions. This activity should be taken forward by the Forum Organising Committee with the President of Iceland.

d) Advocating for a UN Year of Land Care

In order to raise the profile of soil stewardship and land care globally, the feasibility of declaring a UN Year of Land Care should be evaluated by participants in the Forum Working Group on Land Care in consultation with national governments. Support from national governments will need to be garnered in order for a proposal to be submitted to the UN General Assembly.

e) Amendment to the Earth Charter to include soil protection

Forum participants noted that soil protection was a major missing component in the Earth Charter. It is proposed that an amendment to the Earth Charter to include soil protection be drafted, and to seek agreement from the Charter's guardians. It is proposed that Ron Engel lead this development.

f) Enlightening the interconnections

Forum participants identified a confusing circularity between the causes and effects, and a downward spiral of ecological and human health and well-being. It is therefore proposed that a systematic approach to challenges be developed which will address the interconnections between water, climate change, land productivity and biodiversity. This activity should be initiated through joint agreement by the Secretariats of the relevant international Conventions; relevant experts should be commissioned to undertake the task.

II. Making the UN Conventions Connect

Through the following action items, Forum participants are keen to see increased synergy and enhanced cooperation between the UN Conventions and their Secretariats, and increased coherence between sustainable development and achievement of the Millennium Development Goals.

- a) Invite the IPCC Secretariat through the UNCCD to develop a special report on land degradation and climate change.
- b) Establish an ad hoc Group of Experts selected jointly by the three UN Conventions with the task of identifying the synergies and linkages between the Conventions.

- c) Each Convention should establish a certification mechanism on soil stewardship for all of its policies, activities and projects related to soil. .
- d) The UN CBD to develop an approved work programme on agricultural biodiversity.
- e) Encourage national governments parties to the UNCCD to undertake their responsibilities on the protection and sustainable use of soil.

III. Developing the instruments and mechanisms to ensure the improved outcomes are achieved

- a) Improvement of the carbon market

It is proposed that the workings of the carbon market be improved by the following ways, in order to provide more incentives for land restoration through the Clean Development Mechanism: reduction of transaction costs; standardisation of methodologies for monitoring and verification of greenhouse gases in land restoration; promotion of voluntary certification systems; engagement of the insurance sector; and, development of a certification scheme.

- b) Develop a binding international instrument on the protection and sustainable use of soils

It is proposed that an international legal instrument is developed and agreed to under the auspices of the UN to obligate all nations to undertake actions to ensure that national soil resources are properly protected and cared for, so that the productivity of the soil can be sustained in perpetuity.

- c) Conclude the development of guidelines for national legislation on soils

The work by the IUCN Commission on Environmental Law Specialist Group on Sustainable Use of Soils and Desertification should be concluded and the results disseminated to all governments.

- d) Develop guidelines for national legislation on the treatment of contaminated soils

The IUCN Commission on Environmental Law Specialist Group on Sustainable Use of Soils and Desertification should be invited to draw up guidelines for legislation on contaminated soils that can be used in the drafting of legislation in all nations.

IV. Increasing the Knowledge Base

- a) Invite the IPCC to develop an assessment of land degradation and climate change.
- b) Develop a common methodology for assessing soil and land degradation.

During the Forum, participants recognised that there is disagreement on the scale and severity of land degradation, which in turn affects the overall credibility to make a case for action against it. Furthermore, participants agreed that there is currently no consistency in the methodologies of assessment. It was proposed that a standardised methodology for defining land degradation is developed, with the flexibility to meet different objectives. It was also suggested that a definitive statement on levels of degradation in different biomes and in different continents, on soil ecosystem functionality, and on the valuation of social and economic aspects of land degradation and restoration be developed. This development would be jointly led, among others, by experts from the United Nations University, the Agricultural University of Iceland, and Ohio State University.

- c) Update data sets and create harmonised methodologies which are properly funded and accredited, and made widely available, particularly at the Food and Agriculture Organization and the United Nations Environment Programme.
- d) Initiate the creation of a report by the United Nations Environment Programme and the Global Environment Facility on land restoration and climate change.
- e) Redefine the definition of desertification.

V. Action on the Ground

- a) Develop a soil and land restoration outreach programme.

It was proposed that an integrated programme in key African and Indian sub-continent countries be developed in an effort to raise awareness and undertake action on land restoration, including actions on capacity building and carbon sequestration. It was suggested that Rattan Lal lead the development of this initiative, and that it be developed in consultation with the members of the proposed high-level round table discussion.

- b) Develop guidelines on land care
Over the last 25 years, the guiding principles for improved soil stewardship have been developed across a number of countries, in the form of a range of participatory approaches at the local level, under a broad umbrella called Land Care. Landcare focuses on empowering local people to willingly take action on local soil stewardship issues and integrating these into the broader issues relating to land resource use and management. These activities are strongly commended and have resulted in a break through on soil stewardship in many parts of the world. There is now a need to disseminate all of this good practice more widely and to use it as a basis for developing specific guidelines applicable to different regional and national circumstances and opportunities. International Landcare might wish to consider taking the lead on this activity.
- c) Define the choices for land use beyond agriculture

It was recognised that though the use of land for food and fibre production must continue, the income stream from this activity influences soil and ecological integrity. It was recognized that other opportunities for land use need to be identified, and it was proposed that this could be done through a review paper on options for the use of land care and development of guidelines in how to make choices on land use. And ad hoc working group led by the Food and Agriculture Organization was suggested to take the lead.

- d) Develop a portfolio of pilot projects for carbon trading.

VI. Building Capacity

- a) Undertake effective communication and capacity building on carbon financing programmes through clearing house approaches.
- b) Develop an informal network of practice on land care.
- c) Involve businesses through the World Business Centre for Sustainable Development.
- d) Establish a knowledge base of lessons learned from capacity building.
- e) Establish ways for the scientific community to make knowledge available to key stakeholders in an accessible manner.

5. Forum Message

The overall message that emerged from the Forum was the importance of soil and its inter-connectedness to other key environmental and development issues. Soil is a critical component of ecological processes and biodiversity, and cannot be forgotten. Through better stewardship of the soil, and better recognition worldwide of its importance and its many linkages, we can better address the many other environmental and development challenges we face today. The care of the soil is vital to the well-being of society, now and in the future.

Don't forget the soil. Through its stewardship by society throughout the World, it provides essential food and fibre, it acts as an important water store, it is the filter for pollutants, it is a vital carbon store, and it is a critical component of ecological processes and biodiversity. The care of the soil is vital to the well-being of society now and in the future.
