

UNIVERSITÉ LAVAL

Faculté de Foresterie et de Géomatique
Département des Sciences du Bois et de la Forêt

Groupe de Coordination sur les Bois Raméaux

PROPOSITION DE TUTZING
sur un projet de convention internationale

«*Preserving Soils for Life*»

Proposal for a "Convention on Sustainable Use of Soils"
(Soil Convention)

par
Martin Held, Klaus Kümmerer et Kerstin Brandt

avril 1998

proposition aux NATIONS UNIES

Original en langue allemande
(version anglaise)

Publication n° 85

<http://forestgeomat.for.ulaval.ca/brf>

édité par le
Groupe de Coordination sur les Bois Raméaux

UNIVERSITÉ LAVAL
Département des Sciences du Bois et de la Forêt
Québec G1K 7P4
QUÉBEC Canada

The Tutzing Project "Time Ecology"

Preserving Soils for Life

Proposal for a "Convention on Sustainable Use of Soils"

(Soil Convention)

INTRODUCTION

Le texte de la convention sur les sols, qui suit m'a été donné pour appui au niveau des Nations Unies. Je l'ai trouvé tellement pertinent que nous en ferons une publication spéciale commentée en fonction de nos travaux et recherches. Nous en obtiendrons vraisemblablement une version française et une autre espagnole. Pour le moment j'utiliserai la version anglaise, l'original étant en langue allemande.

Le Professeur Klaus Topfer, le nouveau directeur de l'UNEP dont le siège est à Nairobi (Kenya), sera en Allemagne à l'automne pour une conférence de planification de cette Convention. C'est à l'initiative des Dr Martin Held de l'Académie Protestante de Tuzing, du Dr Klaus Kümmerer de l'Hopital universitaire de Freiburg ainsi que de M^{me} Kerstin Brandt de Peitz en Allemagne que ce texte a pu voir le jour.

Ce texte m'a été remis par le Dr David Pimentel de l'Université Cornell, Ithaca, N Y, USA pour que nous donnions notre appui à cette Convention, ce que nous faisons sans hésitation. L'analyse qui suivra dans les pages suivantes a pour but de mettre en lumière les points qui nous sont d'intérêt tout en soulignant qu'il s'agit d'une convention souvent d'aspect juridique et de droit international mais qui cadre presque à la perfection dans l'esprit de nos travaux et tout particulièrement à la suite de la présentation au CRDI de notre projet pour l'Afrique **«Projet d'implantation de la technologie des BRF en Afrique: développement et recherche en agroforesterie appliqués à l'agriculture et à la forêt»**.

Nous pensons que ce texte est bien construit et la définition des termes est précieuse. Nous pouvons regretter cependant que le sol soit considéré comme presque immuable et que aucune référence soit faite aux mécanismes pédogénétiques par lesquels des modifications positives peuvent être apportées. Il en va de même de l'origine des sols cultivés dont personne ne semble soupçonner l'origine forestière dans toutes les parties du monde. Il y a là un potentiel qui devrait être reconnu dans une telle charte, protégé et mis en valeur.

C'est avec beaucoup de plaisir que nous voyons le lien qui est fait entre la charte des sols du monde de la FAO et la Convention des Nations Unies sur la Désertification en Afrique de même que avec celle des Changement Climatiques. Ici aussi nous pensons devoir apporter des précisions sur le rôle du sol par le biais de plusieurs publications et démonstration.

Il va de soi que la perception de la répercussion des changements climatiques sur les sols et les dommages permanent que nous constatons est une réalité incontournable. Néanmoins, nous pensons qu'une place est possible pour la découverte et la mise en place de mécanismes de reconstruction, mais qui

nécessitent beaucoup plus d'efforts que ceux consacrés jusqu'ici de la part de tous, au niveau des connaissances sur lesquelles on doit se baser pour comprendre et agir.

Enfin nous croyons que trop d'emphase est mis sur la conservation des sols laissant peu d'espace au dynamisme intrinsèque des sol qui sont en fait une des édifices biologiques dans une matrice polyphénolique dont les échanges sont induits par des systèmes enzymatiques issus d'une masse protéique structurée et complexe et dont les sucres et les polyholocides sont les principaux carburants. Cette «masse protéique» est représentée par les chaînes trophiques dont la biodiversité est l'expression la plus connue aujourd'hui. Une telle approche dans le préambule aurait donner plus de souplesse aux interprétations qui seront faites dans les années qui viennent.

Nous pouvons regretter également qu'aucune allusion soit faite aux lois universelles de la physique dans la constitution, la chimie, les liens entre la vie et la géologie des différents sols et la participation aux lois universelles de la thermodynamiques. La dynamique des sols implique des alternances et des tendances qui peuvent s'inverser, mais revenir à d'autres équilibres, ou aux mêmes, dans des phases subséquentes. La vie (plantes et animaux) influencent la dynamique du sol et inversement, mais souvent dans des temps différents et asymétriques.

Nous notons avec plaisir l'existence d'institutions internationales qui nous sont totalement inconnues ici comme la Société Internationale pour la Science du Sol dont le siège est à Vienne (Autriche) et le Centre International de Référence et de Formation sur le Sol de Wageningen (Hollande).

En résumé nous pensons que l'approche est trop formelle et rigide mais dont nous voyons très bien la nécessité aujourd'hui. Une Convention est une Convention qui peut être adaptée à toutes les situations dans le temps et dans l'espace, d'où la nécessité d'amender et de rectifier comme le permettent les articles 16 à 21.

Professeur Gilles Lemieux
Québec, avril 1998

The Tutzing Project "Time Ecology"

Preserving Soils for Life

Proposal for a "Convention on Sustainable Use of Soils"

(Soil Convention)

II. Proposal for a “Convention on Sustainable Use of Soils” (Soil Convention)

(Convention for Preserving Soils as Natural Resource and
Sustainable Life Support System)

Preamble

The Parties to this Convention,

Conscious of the fact that soils constitute the basis for life of human beings, animals and plants as well as the habitat for an immense wealth of creatures living in it,

Aware of the discrepancy between the rapid progression of soil degradation and the extremely slow process of soil formation,

Noting that measures to achieve a sustainable use of soils and to conserve all its vital functions depend on the different types of soil, the climatic conditions, and the forms of land cultivation and, therefore, must greatly vary,

Conscious that conservation of soils and of soil functions is a precondition for ensuring the global food supply in a durable manner and that renewable resources will gain increasing importance for sustainable development,

Recognizing the importance of the sustainable use of soils for the conservation of biological diversity,

Noting the importance of soils for the global climate system, as well as the repercussions of climate changes on soils,

Noting also the importance of soils for the sustainable use of water, as well as the great importance of water systems for soil productivity and the life system,

Concerned that the many different local and regional soil degradations accumulate to a global threat to humankind comparable in its magnitude to an anthropogenic greenhouse effect and to the loss of biological diversity,

Concerned also that this process is already going on and that - unlike the beginning climate change - the damage is massive already at present,

Concerned further that despite single counter-measures and some positive examples of sustainable use of soils, the tendency towards an accelerated soil degradation remains,

Reaffirming the World Soil Charter as adopted by the FAO and the concern about the loss of and the damage to soils expressed therein,

Affirming the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and / or Desertification, particularly in Africa (Convention on Desertification) as an important first step towards the protection of soils and the sustainable use of land,

Reaffirming that the first steps taken within the framework of the Convention on Desertification shall be continued decidedly and without any delay during the transition period to this convention,

Reaffirming also the necessity of integrating all stakeholders in the sustainable use of soils,

Acknowledging that local practical knowledge about the locally appropriate uses of soils, including seasonal rhythms and regeneration periods has the same importance to soil research as scientific approaches,

Acknowledging also that sustainable use of soils as part of sustainable development is only possible if, in accordance with the stakeholder approach, the economic and social circumstances are taken into account,

Recognizing the intrinsic value of soils and of the diversity of soils,

Have agreed as follows:

Article 1

Use of terms

For the purposes of this Convention:

1. **"Biological Diversity"** means the variability among living organisms from all sources, not only organisms living in soils, but also above ground terrestrial and aquatic organisms dependant on soil productivity. This includes diversity within species, among species, of ecosystems, and of processes operating within them.
2. **"Desertification"** means the process of soil degradation in arid, semi-arid, and dry sub-humid areas resulting from various factors, including climatic variations and human activities.
3. **"Forms of soil utilization"** means the different possibilities of soil utilization by humans beings in the form of agricultural and forest production, exploitation of mineral resources, utilization as surface for settlement, traffic, industrial and other commercial production, recreation purposes, supply and waste disposal, as well as utilization as archives of natural and cultural history.

4. **"Soil"** means the thin upper part of the Earth's crust where rock (lithosphere), air (atmosphere), water (hydrosphere) and living organisms (biosphere) interpenetrate (pedosphere). Soils are natural entities that exist in a wide range of different types.

5. **"Soil degradation"** means the damage to and the destruction of soils and soil functions in the form of erosion by wind and water, salination, acidification, contamination and various pollutions, the damage to life in soils and other forms of damage to the soil conditions such as compression, surface sealing, excavation and other negative effects from human activities.

6. **"Soil fertility"** means the capacity of soils to feed plants and animals depending on the natural supply of nutrients and the volume of water available for plant growth. Soil fertility is influenced by different forms of land use and cultivation. The activities of organisms living in soils are of particular interest for soil fertility.

7. **"Soil formation processes"** means the processes that lead to the formation of soils and their different horizons and structures. The time scales of formation range from centuries to millenia, depending on the underlying parent materials, the age of soils and the climate conditions, and these processes can be altered by various forms of soil utilization.

8. **"Soil functions"** means the different functions of soils: the habitat function, the regulation function, the utilization function and the cultural function.

9. **"Soil type"** means the different forms and sequences of soil horizons.

10. **"Stakeholder approach"** means the active integration of all actors from various levels of society, in particular those at local and regional level.

11. **"Sustainable use of soils"** means the utilization and use of soils in a manner that preserves the balance between the processes of soil formation and soil degradation, as well as maintaining all soil functions.

12. **"Syndrome"** means the regionally based grouping of soil degradation features corresponding to typical causes and phenotypes. The syndromes can be applied at a regional and / or local level, depending on the degree of aggregation chosen.

Article 2

Objectives

(1) The objective of this Convention is the sustainable use of all kinds of soils by all States of the Earth in order to preserve all soil functions. For this purpose the different forms of soil degradation, depending on climate, forms of land cultivation, type and age of soils etc. must be reduced to achieve a balance with the processes of soil formation. The forms of land cultivation shall preserve and promote soil fertility in a locally appropriate manner in order to ensure food production and to supply renewable resource needs. The consideration of other soil functions is of equal importance. Special attention shall be directed to the conservation of biological diversity in soils.

(2) A further objective is to organize more efficiently, corresponding to the criteria of sustainability, the utilization of fossil fuels and raw materials for land cultivation and to reduce it gradually, so that the carbon deposits that built up in millions of years are not exhausted within a few generations but remain, as utilizable stocks, available for future generations.

(3) The objectives of the Convention on Desertification, to combat desertification and mitigate the effects of drought in countries seriously affected, particularly in Africa, are emphatically pursued as an important part of the wider task.

(4) In accordance with the stakeholder approach all actors shall be integrated; particularly local and regional initiatives shall be promoted to achieve the locally appropriate use of soils.

Article 3

Principles

(1) States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources. But in doing so they are subject to the principle of sustainable development.

(2) In order to achieve a sustainable use of soils it is indispensable to approach soil problems in an action-oriented manner and to take the stakeholder approach as the basis for all activities which have a bearing on soils.

Article 4

Commitments

(1) The Parties shall:

a) take the stakeholder approach as the basis for all their activities which have a bearing on soils;

b) formulate and publish national programmes for the sustainable use of soils containing the objectives, priorities, measures, legal and other requirements for fulfilling these objectives, research efforts, promotion of local knowledge and the financing. The integrated approach shall be of special importance for the planning of land utilization and the use of soil resources;

c) actively implement the national programmes and particularly create favourable institutional conditions that enable and encourage land users and other actors to engage in the sustainable use of soils;

d) periodically review and systematically assess the effectiveness of national programmes with regard to the different soils and the crucial problems of soil degradation;

e) develop, in order to improve and make the national programmes more effective, systematic national inventories containing the most important soil degradation syndromes which will serve the national programmes as a basis for the measures to be taken;

f) develop a systematic and comprehensive soil monitoring;

g) promote education, training and public awareness related to the use of soils;

h) intensify the international exchange of information related to the sustainable use of soils, particularly assisting developing countries;

i) work towards the achievement of the objectives of this Convention in supranational and international organizations;

j) make intensive efforts to conserve and promote soil fertility and soil formation applying special attention to vegetation cover and reduction of surface sealing;

k) orient all their measures on conservation, improvement and recovery of soils to the objectives of this Convention;

(2) The developed country Parties shall assist countries experiencing serious problems of soil degradation including contamination, drought and desertification in their measures on conservation, improvement and recovery of soils.

Article 5

Stakeholder approach

In carrying out their commitments under Article 4, paragraph 1 (a) the Parties shall:

a) consider the interests of all stakeholders at the various levels integrating particularly local and regional stakeholders;

b) specify in their national programmes the measures serving the integration of all stakeholders in the process of sustainable use of soils as well as their active participation;

c) work towards the integration of all stakeholders, particularly the communities, local groups and land users, in international programmes and in multi- and bilateral aid programmes.

Article 6

Soil degradation syndrome

(1) As basis for the action-oriented approach of this Convention, special emphasis shall be given to the assessment of the most important soil degradation syndromes. The syndrome approach enables an approach to soils problems on a regional and/or a local level, depending on the degree of aggregation chosen.

(2) In carrying out their commitments under Article 4, paragraph 1 (e), the Parties shall:

a) assess the soil degradation syndromes both at a regional and at a local level by choosing different degrees of aggregation;

b) develop comparable clinical profiles in order to group the variety of soils, the forms of land cultivation and the consequences of soil degradation to the soil functions as well as their causes and effects in regionally-based syndromes;

c) direct special attention to the conservation of biological diversity and to the regeneration periods of soils:

d) use the soil degradation syndromes both as a basis for the prioritization of broad measures to be taken and as a standard to evaluate the effectiveness of the measures taken and their effects.

Article 7

Soil monitoring and soil research

(1) In carrying out their commitments under Article 4, paragraph 1 (f), the Parties shall:

a) use available data and methods like the Global Assessment of Soil Degradation (GLASOD) as basis for their work;

b) assess the development of soil degradation differentiating between soil types, soil functions, types of soil degradation and the pertinent syndromes and gather not only standard information but also practical knowledge of local land users of the different categories;

c) assess the soil formation processes, including the effects of human activities, on the time scales of these processes;

d) develop an Index on Sustainable Use of Soils (ISUS) by constantly assessing and comparing the rates of soil formation and of soil degradation in appropriate spatial units and thus systematically comparing different periods and areas;

e) assess, according to the methodology and data of the World Overview of Conservation Approaches and Technologies (WOCAT), the effects of measures taken to improve the use of soils, particularly differentiating between different forms of land cultivation;

f) analyze the effects of soil degradation on yields and costs;

g) acquire data on the economic and socio-cultural as well as political and legal framework which have a bearing on soils;

h) cooperate, under the guidance of the Conference of the Parties, to work out worldwide comparable patterns for the acquisition of data;

i) cooperate, under the guidance of the Conference of the Parties, to develop a globally-coordinated soil survey on the basis of national soil monitoring.

(2) The Parties shall prepare the data on soil monitoring for the local land users, the public, and those institutions which are responsible for land use. At the same time they shall use the data as a basis for research, for measures within the scope of the national programmes for the sustainable use of soils, and for the further development of methods on ecological agriculture for instance.

(3) In the field of research and research support, the Parties shall set up the following priorities, which shall be constantly reviewed and further developed according to the accumulation of knowledge and practical experiences;

a) reconciliation of the rivalry between agricultural / forest use of land and housing development;

b) the possibilities to reconcile the development of the utilization function with the other soil functions;

c) the development of evaluation standards for the sustainable use of soils;

d) the assessment and the understanding of biological diversity in soils and its importance for the resilience and the buffer capacity of soils.

Article 8

Education, training and public awareness

In carrying out their commitments under Article 4, paragraph 1 (g), the Parties shall:

a) promote understanding of the fact that soil degradation causes not only local problems but is accumulating to form a global threat to the life support systems comparable with other great ecological issues such as water, biological diversity and climate change.

b) encourage the understanding of the diversity and the local variability of soils in a region and its smaller units;

- c) promote understanding of the short period of time in which soils are degraded and destroyed by human intervention and the comparatively long period of time which is needed for soil formation;
- d) emphasize the importance of cultivating land in diverse forms with regard to rhythms and, connected therewith, the variety of soils;
- e) assume their responsibilities for education at all levels of their educational system.

Article 9

Transition of the Convention on Desertification

The provisions of the United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and / or Desertification, particularly in Africa (Convention on Desertification) form an integral part of this Convention. After the inception of this Convention the measures to be undertaken and determined to implement the Convention on Desertification shall be carried out and ensured by the organizational and financial mechanisms of this Convention. Details are laid down in Annex 1 to this Convention.

Article 10

Relationship with other international conventions

(1) The provision of this Convention shall not affect the rights and obligations of any Party deriving from any existing international agreement, except where the exercise of those rights and obligations would cause a serious damage or threat to the sustainable use of soils.

(2) On account of the substantive overlapping of the provisions of this Convention and the provisions of the Convention on Biological Diversity, the Conference of the Parties shall:

a) present, at regular intervals, to the Conference of the Parties of the Convention on Biological Diversity reports on the measures taken in accordance with this Convention;

b) contact, through the secretariat, the secretariat of the Convention on Biological Diversity with a view to establishing appropriate forms of co-operation.

(3) On account of the substantive overlapping of the provisions of this Convention and the provisions of the United Nations Framework Convention on Climate Change, the Conference of the Parties shall:

a) present, at regular intervals, to the Conference of the Parties of the United Nations Framework Convention on Climate Change reports on the measures taken in accordance with this Convention;

b) contact, through the secretariat, the secretariat of the United Nations Framework Convention on Climate Change with a view to establishing appropriate forms of co-operation.

Article 11

Conference of the Parties

(1) A Conference of the Parties is hereby established.

(2) The Conference of the Parties, as the supreme body of this Convention, shall keep under regular review the implementation of this Convention and any related legal instruments that the Conference of the Parties may adopt, and shall make, within its mandate, the decisions necessary to promote the effective implementation of this Convention. To this end it shall:

a) review the reports submitted by the Parties in accordance with Article 16, paragraph 1 and transmit the data submitted by the Parties in accordance with Article 16, paragraph 2, to the advisory committee for the establishment of international inventories and indexes;

b) promote and guide, in accordance with Article 7, paragraph 1 (h), (i), the co-operation between the Parties to work out worldwide comparable patterns for the acquisition of data and to develop a globally-coordinated soil survey on the basis of national soil monitoring;

c) assess, on the basis of all information made available to it in accordance with the provisions of this Convention, the implementation of this Convention by the Parties, the overall effects of the measures taken pursuant to this Convention and the extent to which progress towards the objective of this Convention is being achieved;

d) consider and adopt regular reports on the implementation of this Convention and ensure their publication;

e) make recommendations on any matters necessary for the implementation of this Convention;

f) establish, in accordance with Article 13, paragraph 5, such subsidiary bodies as are deemed necessary for the implementation of this Convention;

g) review reports submitted by its subsidiary bodies and provide guidance to them;

h) agree upon and adopt by consensus, rule of procedure and financial rules for itself and for any subsidiary bodies;

i) adopt, at each ordinary session, a budget for the financial period until the next ordinary session;

- j) seek and utilize, where appropriate, the services and cooperation of, and information provided by, competent international organizations and intergovernmental and non-governmental bodies;
- k) exercise such other functions as are required for the achievement of the objectives of this Convention as well as all other functions assigned to it under this Convention.

(3) The first session of the Conference of the Parties shall be convened by the Executive Director of the United Nations Environment Programme not later than one year after the entry into force of this Convention. Thereafter, ordinary sessions of the Conference of the Parties shall be held every year unless otherwise decided by the Conference of the Parties.

(4) Extraordinary sessions of the Conference of the Parties shall be held at such other times as may be deemed necessary by the Conference, or at the written request of any Party, provided that, within six months of the request being communicated to the Parties by the secretariat, it is supported by at least one third of the Parties.

(5) The United Nations, its specialized agencies, as well as any member State thereof or observers thereto not Party to this Convention may be represented at sessions of the Conference of the Parties as observers. Any body or agency whether national or international, governmental or non-governmental which is qualified in matters covered by this Convention, and which has informed the secretariat of its wish to be represented at a session of the Conference of the Parties as an observer, may be admitted unless at least one third of the Parties present object. The admission and participation of observers shall be subject to the rules of procedure adopted by the Conference of the Parties.

Article 12

Secretariat

(1) A secretariat is hereby established.

(2) The functions of the secretariat shall be:

a) to make arrangements for sessions for the Conference of the Parties and its subsidiary bodies established under this Convention and to provide them with services required;

b) to compile and transmit reports submitted to it;

c) to prepare reports on its activities and present them to the Conference of the Parties;

d) to enter, under the overall guidance of the Conference of the Parties, into such administrative and contractual arrangements as may be required for the effective discharge of its functions;

e) to perform the other functions specified in this Convention and such other functions as may be determined by the Conference of the Parties.

(3) The Conference of the Parties, at its first session, shall designate a permanent secretariat and make arrangements for its functioning.

Article 13

Advisory committee and other subsidiary bodies

(1) An advisory committee is hereby established.

(2) The advisory committee shall provide the Conference of the Parties and, as appropriate, its other subsidiary bodies with timely advice relating to the implementation of this Convention. The advisory committee shall be open to participation by all Parties and shall be multidisciplinary. It shall comprise government representatives competent in the relevant field of expertise. It shall report regularly to the Conference of the Parties on all aspects of its work.

(3) The advisory committee shall work under the authority of and in accordance with guidelines laid down by the Conference of the Parties. Drawing upon existing competent international bodies and including the stakeholders, the advisory committee shall:

- a) provide scientific, technical and technological assessments as well as assessments based on local practical experience of the status of soils;
- b) prepare scientific assessments, as well as assessments based on local practical experience on the effects of measures taken in the implementation of this Convention;
- c) gather and systematically evaluate local practical knowledge on locally appropriate use of soils including seasonal rhythms and regeneration periods;
- d) identify innovative and state-of-the-art technologies and expertise relating to the conservation and sustainable use of soils and advise on the ways and means of promoting development and transferring such technologies;
- e) provide advice on the realization of the stakeholder approach, on scientific programmes and on international cooperation in research and development related to the conservation and sustainable use of soils;
- f) respond to scientific, technical, technological and methodological questions, as well as to questions relating to the stakeholder approach that the Conference of the Parties and its subsidiary bodies may put to the advisory committee;
- g) support the Conference of the Parties in the review of the reports submitted to it by the Parties in accordance with Article 6, paragraph 1, by evaluating, in a comparative manner, the national programmes on sustainable use of soils included in the reports;

h) support the Conference of the Parties in the elaboration of worldwide comparable patterns for soil monitoring, as well as in the establishment and the continuous care of a globally coordinated soil survey;

i) record, in a comparative manner and on the basis of the data on soil monitoring and soil survey presented by the Parties, the most important soil degradation syndromes;

j) develop, on the basis of data presented by the parties, an international Index on Sustainable Use of Soils (ISUS).

(4) The functions, terms of reference, organization and operations of the advisory committee may be further elaborated by the Conference of the Parties. The Conference of the Parties may, in cooperation with the advisory committee, assign further functions to the advisory committee.

(5) The Conference of the Parties may, in addition to the advisory committee, establish further subsidiary bodies as are deemed necessary,

Article 14

Financial resources.

(1) Each Party undertakes to provide, according to its capabilities, financial support and incentives in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes.

(2) The developed country Parties shall endeavour to assist the developing country Parties in mobilizing the financial resources necessary for the national implementation of the Convention. For this purpose they shall, in accordance with their national plans, priorities, and programmes:

a) provide grants and concessional loans, in order to support the national programmes worked out by the developing country Parties to implement this Convention;

b) promote the mobilization of new additional funding from the Global Environmental Facility;

c) facilitate through international co-operation the transfer of technology, knowledge and know-how and thereby support local practical experience on locally-adapted site-specific use of soils:

d) explore, in co-operation with developing country Parties, innovative methods and incentives for mobilizing financial resources, including those of foundations, non-governmental organizations, and other private sector entities;

e) offer debt swaps in connection with national activities and programmes which serve to implement this Convention.

(3) The developing country Parties, taking into account their capabilities, shall endeavour to mobilize their own financial resources necessary for the national implementation of this Convention, and to resort to the aid of developed country Parties only where they are not able to mobilize necessary financial resources. In this connection, it is necessary to take into account that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties.

(4) The developed country Parties may also provide, and developing country Parties avail themselves of, financial resources related to the implementation of this Convention through bilateral, regional and other multilateral channels.

(5) The developed country Parties shall bear the costs for international action taken in accordance with this Convention.

(6) For the purpose of this Article, the Conference of the Parties shall at its first session establish a list of developed country Parties and other Parties which voluntarily assume the obligations of the developed country Parties. The Conference of the Parties shall periodically review and if necessary amend the list.

Article 15

Financial mechanisms

(1) There shall be a mechanism for the provision of financial resources to developing country Parties in accordance with Article 14, paragraph 2 (a) on a grant or concessional basis, the essential elements of which are described in this Article.

(2) The mechanism shall function under the authority and guidance of, and be accountable to, the Conference of the Parties. The operation of the mechanism shall be carried out by such institutional structure as may be decided upon by the Conference of the Parties at its first session. The Conference of the Parties shall work out recommendations on the amount of the contributions to be paid by the developed country Parties. Voluntary additional contributions may also be made by the developed country Parties and by other countries and sources. The mechanism shall operate within a democratic and transparent system of governance.

(3) Pursuant to the objectives of this Convention, the Conference of the Parties shall at first session determine the policy, strategy and programmes priorities, as well as detailed criteria and guidelines for eligibility, for access to and utilization of the financial resources, including monitoring and evaluation, on a regular basis of such utilization. The Conference of the Parties shall decide on the arrangements to give effect to paragraph 2 above after consultation with the institutional structure entrusted with the operation of the financial mechanism.

(4) The Conference of the Parties shall review the effectiveness of the mechanism established under this Article, including the criteria and guidelines referred to in paragraph 3 above not less than two years after the entry into force of this Convention and thereafter on a regular basis. Based on such review, it shall take appropriate action to improve the effectiveness of the mechanism if necessary.

Article 16

Reports

(1) Each Party shall, at intervals of two years, present to the Conference of the Parties reports on measures which it has taken for the implementation of the provisions of this Convention, and their effectiveness in meeting the objectives of this Convention.

(2) Each Party shall, together with the reports, present to the Conference of the Parties, its lists of data gathered for the purposes of the monitoring of soils and the land register, as well as its Index on Sustainable use of Soils (ISUS).

Article 17

Resolution of questions regarding implementation

The Conference of the Parties shall, at its first session, consider the establishment of a multilateral consultative process, available to Parties on their request, for the resolution of questions regarding the implementation of this Convention,

Article 18

Settlement of disputes

(1) In the event of a dispute between Parties concerning the interpretation or application of this Convention, the parties concerned shall seek solution by negotiation.

(2) If the parties concerned cannot reach agreement by negotiation, they may jointly seek the good offices of, or request mediation by, a third party.

(3) When ratifying, accepting, approving or acceding to this Convention, or at any time thereafter, a State or regional economic integration organization may declare in writing to the Depositary that for a dispute not resolved in accordance with paragraph 1 or paragraph 2 of settlement above, it accepts one or both of the following means of dispute settlement as compulsory:

a) Submission of the dispute to the International Court of Justice;

b) Arbitration in accordance with procedures to be adopted by the Conference of the Parties as soon as practicable, in Part 1 of Annex II.

(4) A declaration made under paragraph 3 above shall remain in force until it expires in accordance with its terms or until three months after written notice of its revocation has been deposited with the Depositary.

(5) If the parties to the dispute have not, in accordance with paragraph 3 above, accepted the same or any procedure, the dispute shall be submitted to conciliation unless the parties otherwise agree. The procedures of conciliation shall be adopted by the Conference of the Parties as soon as practicable, in Part 2 of Annex II.

(6) The provisions of this Article shall apply with respect to any protocol except as otherwise provided in the protocol concerned.

Article 19

Amendments to the Convention

(1) Any Party may propose amendments to this Convention.

(2) Amendments to this Convention shall be adopted at an ordinary session of the Conference of the Parties. The text of any proposed amendment to the Convention shall be communicated to the Parties by the secretariat at least six months before the meeting at which it is proposed for adoption. The secretariat shall also communicate proposed amendments to the signatories to this Convention and, for information, to the Depositary.

(3) The Parties shall make every effort to reach agreement on any proposed amendment to this Convention by consensus. If all efforts at consensus have been exhausted, and no agreement is reached, the amendment shall, as a last resort, be adopted by the three-fourths majority vote at the Parties present and voting at the meeting. The adopted amendment shall be communicated by the secretariat to the Depositary, who shall circulate it to all Parties for their acceptance.

(4) Instruments of acceptance in respect of an amendment shall be deposited with the Depositary. An amendment adopted in accordance with paragraph 3 above shall enter into force for those Parties having accepted it on the ninetieth day after the date of receipt by the Depositary on an instrument of acceptance by at least three-fourths of the Parties to this Convention.

(5) The amendment shall enter into force for any other Party on the ninetieth day after the date on which that Party deposits with the Depositary its instrument of acceptance of the said amendment.

(6) For the purposes of the Article, "Parties present and voting" means Parties present and casting an affirmative or negative vote.

Article 20

Adoption and amendment of annexes to the Convention

(1) Annexes to this Convention shall form an integral part thereof. Unless otherwise expressly provided, a reference to this Convention constitutes at the same time a reference to any annexes thereto. Without prejudice to the provisions of Article 9 and of Article 18,

paragraph 3 (b) and 5, such annexes shall be restricted to lists, forms and any other material of a descriptive nature that is of a scientific, technical, procedural or administrative character.

(2) Annexes to this Convention shall be proposed and adopted in accordance with the procedure set forth in Article 19, paragraphs 2, 3, 4.

(3) An annex that has been adopted in accordance with paragraph 2 above shall enter into force for all Parties to this Convention six months after the date of the communication by the Depositary to such Parties of the adoption of the annex, except for those Parties that have notified the Depositary, in writing, within that period of non-acceptance of the annex. The annex shall enter into force for Parties which withdraw their notification of non-acceptance on the ninetieth day after the date of which withdrawal of such notification has been received by the Depositary.

(4) The proposal, adoption and entry into force for amendments to annexes to this Convention shall be subject to the same procedure as that for the proposal, adoption and entry into force of annexes to this Convention in accordance with paragraphs 2 and 3 above.

(5) If the adoption of an annex or an amendment to an annex involves an amendment to this Convention, that annex or amendment to an annex shall not enter into force until such time as the amendment to the Convention enters into force.

Article 21

Protocols

(1) The Conference of the Parties may, at any ordinary session, adopt protocols to this Convention.

(2) The text of any proposed protocol shall be communicated to the Parties by the secretariat at least six months before such a session.

(3) The requirements for the entry into force of any protocol shall be established by that instrument.

(4) Only parties to this Convention may be Parties to a protocol.

(5) Decisions under any Protocol shall be taken only by the Parties to the protocol concerned.

Article 22

Right to vote

(1) Each Party to this Convention shall have one vote, except as provided for in paragraph 2 below.

(2) Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States that are Parties to this Convention. Such an organization shall not exercise its right to vote if any of its member States exercise its right, and vice versa.

Article 23

Depositary

The Secretary-General of the United Nations shall be the Depositary of this Convention and the protocols adopted in accordance with Article 21.

Article 24

Signature

This Convention shall be opened for signature at the United Nations Headquarters in New York by all States and any regional economic integration organization from...until...

Article 25

Ratification, acceptance or approval

(1) This Convention shall be subject to ratification, acceptance or approval by States and by regional economic integration organizations. Instruments of ratification, acceptance or approval shall be deposited with the Depositary.

(2) Any organization referred to in paragraph 1 above which becomes a Party to this Convention without any of its member States being a Party shall be bound by all the obligations under the Convention. Where one or more member States of such an organization are also a Party to this Convention, the organization and its member States shall decide on their respective responsibilities for the performance of their obligations under the Convention. In such cases, the organization and the member States shall not be entitled to exercise rights under the Convention concurrently.

(3) In their instruments of ratification, acceptance or approval, the organization referred to in paragraph 1 above shall declare the extent of their competence with respect to the matters governed by this Convention. These organizations shall also inform the Depositary of any relevant modification in the extent of their competence.

Article 26

Accession

(1) This Convention shall be opened for accession by States and by regional economic integration organizations from the date on which the Convention is closed for signature. The instrument of accession shall be deposited with the Depositary.

(2) In their instruments of accession, the organizations referred to in paragraph 1 above shall declare the extent of their competence with respect to the matters governed by this Convention. These organizations shall also inform the Depositary of any relevant modification in the extent of their competence.

(3) The provisions of Article 25, paragraph 2, shall apply to regional economic integration organizations which accede to this Convention.

Article 27

Entry into force

(1) This Convention shall enter into force on the ninetieth day after the date of deposit of the fiftieth instrument for ratification, acceptance, approval or accession.

(2) For each State or regional economic integration organisations that ratifies, accepts or approves this Convention or accedes thereto after the deposit of the fiftieth instrument of ratification, acceptance, approval or accession, the Convention shall enter into force on the ninetieth day after the date of deposit by such State or regional economic integration organization of its instrument of ratification, acceptance, approval or accession.

(3) For the purposes of the paragraphs 1 and 2 above, any instrument deposited by a regional economic integration organization shall not be counted as additional to those deposited by member States of such organization.

Article 28

Reservations

No reservations may be made to this Convention.

Article 29

Withdrawal

(1) At any time after three years from the date on which this Convention has been entered into force for a Party, that Party may withdraw from the Convention by giving written notification to the Depositary.

(2) Any such withdrawal shall take effect upon expiry of one year from the date of receipt by the Depositary of the notification of withdrawal, or on such later date as may be specified in the notification of withdrawal.

(3) Any Party that withdraws from this Convention shall be considered as also having withdrawn from any protocol to which it is a Party.

Article 30

Authentic Texts

The original of this Convention, of which the Arabic, Chinese, English, French, Russian, and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

Tutzing, January 1998

III. Background Documents and Literature

(a) International conventions and recommendations

- *Council of Europe* (1972), European Soil Charter, Resolution (72) 19, May 30 1972, in: Ruster / Simma, International Protection of the Environment vol. V, 2498.
- *Food and Agriculture Organization (FAO)* (1981), World Soil Charter, Resolution C 81 / 27, November 25, 1981.
- *United Nations* (1992), Agenda 21, UN Doc. A / CONF. 151 / 26 (vol. I-III) August 12, 1992, chapter 10-14.
- *United Nations* (1992), Convention on Biological Diversity, in ILM 31, 822
- *United Nations* (1992), United Nations Framework Convention on Climate Change, May 9, 1992, in: ILM 31, 851.
- *United Nations* (1994), United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and / or Desertification, particularly in Africa, June 17, in: ILM 33 (1994), 1328.

(b) Literature

- *German Advisory Council on Global Change* (1995), World in Transition: The Threat to Soils. Annual Report 1994. Bonn : Economica
- *German Advisory Council on Global Change* (1996), World in Transition: Ways towards Global Environmental Solutions. Annual Report 1995. Berlin/Heidelberg: Springer
- *Häberli, R. et al.* (1991), Boden-Kultur. Vorschläge für eine haushälterische Nutzung des Bodens in der Schweiz Zürich: VDF, (Soil-Culture. Proposals for a Sustainable Use of Soils in Switzerland)
- *Hurni, H. et al.* (1996), Precious Earth. From Soil and Water Conservation to Sustainable Land Management. Bern: International Soil Conservation Organisation.
- *International Soil Conservation Organisation (ISCO)* (1996), 9th Conference, Bonn, Conclusions and Recommendations. Bonn.
- *Norse, D. et al.* (1992), Chapter 2: Agriculture, Land Use and Degradation. In: Dooge, J.C.I et al. (Ed) An agenda of Science for Environment and Development into the 21st Century. Based on a Conference held in Vienna Nov. 1992. Cambridge: Cambridge University Press, pp.79-89.
- *Pimentel, D. et al.* (1995), Environmental and Economic Costs of Soil Erosion and Conservation Benefits. Science Vol. 267 pp 1117-1123.

IV. Support of the Proposal for a Soil Convention

The proposal for a Soil Convention supported by the following persons and institutions (January 23, 1998)

Persons

- **Prof. Dr. Dr. Günter Altner**, University Koblenz-Landau, Heidelberg (Germany)
- **Ass. Prof. Dr Karl Auerswald**, Lehrstuhl für Bodenkunde, Technische Universität München. Freising-Weihenstephan (Germany)
- **Dr, Günter Bachman**, Berlin (Germany)
- **Prof. Dr. Freidrich O. Beese**, Institute for Soil Science and Forest Nutrition, University Göttingen, Member of German Advisory Council on Global Change (Germany)
- **Prof. Dr. Fred H. Beinroth**, Dept. of Agronomy and Soils University of Puerto Rico, Mayaguez (Puerto Rico)
- **Frank Biermann**, Staff of German Advisory Council on Global Change, Bremerhaven (Germany)
- **Prof. Dr. Winfried E.H. Blum**, University of Agricultural Sciences. Vienna. Secretary-General of the International Society of Soil Science (Austria)
- **Prof. Dr. Engelhard Boehncke**, Department of Biological Animal Husbandry, University of Kassel, President of the International Society for Livestock Husbandry (IGN) (Germany)
- **Prof. Dr. Klaus Bosselmann**, Faculty of Law, University Auckland (New Zealand)
- **Kerstin Brandt**, Expert of Public International Law, Cottbus (Germany)
- **Prof. Dr. Stephan Dabbert**, Institute for Farm Economics, University Hohenheim (Germany)
- **Ass. Prof. Dr.Karl-Heinz Feger** Institute for Soil Science and Forest Nutrition, University Freiburg. (Germany)
- **Prof. Dr. Peter Felix-Henningsen**, Institute for Soil Science and Soil Conservation, University Giessen (Germany)
- **Prof. Dr. Dr. h.c. Z. Filip**, Institute for Water, Soil and Air Hygiene of the Federal Environmental Agency, Langen (Germany)
- **Jochen Flasbarth**, President of the German Association for Nature's Conservation (NABU) Bonn (Germany)
- **Prof. Dr. Hans-Georg Frede** Department of Agricultural Ecology and Nature Resources Management, University Giessen (Germany)
- **Bernward Geier**, Director International Federation of Organic Agriculture Movements (IFOAM), Theley (Germany)
- **Prof. Dr. Hartmut Graßl**, Director of the World Climate Research Programme, 1992-94 President of German Advisory Council on Global Change with annual report focused on soils, Geneva (Confédération Helvétique)
- **Prof. Dr. Wolfgang Haber**, 1981-1990 Member of German Advisory Council on Environmental Affairs, in 1985-90, President of this Council, till 1996 President of the

International Association of Ecology, since 1990, Speaker of German Board for Land-Conservation, Freising-Weihenstephan (Germany)

- **Dr. Rudolf Häberli**, Director of the Swiss Priority Programme Environment, former Coordinator National Research Programme „Use of Soils in Switzerland". Bern (Confédération Helvétique)
- **Ulrich Hack**, Speaker of Environmental Advisors of German Protestant Churches, Düsseldorf (Germany)
- **Prof. Dr. Ulrich Hampicke**, University of Greifswald (Germany)
- **Dr. Ulrich Hampl**, Foundation of Ecology and Agriculture (SÖL), Bad Dürkheim (Germany)
- **Dr Martin Held**, Protestant Academy Tutzing (Germany)
- **Prof. Dr. Hans Hurni**, Institute of Geography, University Bern, Editor "Precious Earth", 9th World Conference of International Soil Conservation Organization (Confédération Helvétique)
- **Ass. Prof. Dr. Dietmar Kanatsching**, Director of the Austrian Institute for Sustainable Development, Vienna (Austria)
- **Prof. Dr. Ingrid Kögel-Knabner**, Lehrstuhl für Bodenkunde, Technische Universität München, Freising-Weihenstephan (Germany)
- **Prof. Dr. Dr. Juliane Kokott**, Faculty of Law, University Düsseldorf, Deputy Chairperson of the German Advisory Council on Global Change (Germany)
- **Dr Johannes Kotschi**, Agricultural Scientist, Institute for Rural Development, Marburg (Germany)
- **Prof. Dr. Lenelis Kruse**, Ecological Psychology at the University Hagen, Member of German Advisory Council on Global Change (Germany)
- **Dr. Klaus Kümmerer**, Institute for Hospital Epidemiology and Environmental Medicine, University Hospital Freiburg (Germany)
- **Prof. Dr. Heinrich Freiherr von Lersner**, Former president of Federal Environmental Agency, Berlin (Germany)
- **Claude Lüscher**, Consultancy, Co-Author of „Boden-Kultur Vorschläge für eine nachhaltige Nutzung des Bodens in der Schweiz" Zürich (Confédération Helvétique)
- **Ass. Prof. Dr Ludwig Maurer**, Director of the Ludwig-Boltzmann-Institute for Organic Farming and Applied Ecology, Vienna (Austria)
- **Konrad Meyer**, WWF Switzerland Zürich (Confédération Helvétique)
- **Prof. Dr. Klaus Michael Meyer-Abich**, University Essen (Germany)
- **Dr. Urs Niggli**, Director of the Research Institute of Organic Agriculture (FiBL) Frick (Confédération Helvétique)
- **Dr Guido Odendahl**, Lawyer, Cottbus (Germany)
- **Dr. L. Roel Oldeman**, Director of the International Soil Reference and Information Centre, Wageningen (Holland)
- **Prof. Dr. Norman Peineman**, Depart. de Agronomia Universidad Nacional del Sur, Altos del Palihue (Argentina)
- **Prof. Dr. David Pimentel**, College of Agriculture and Life Sciences, Cornell University, Ithaca NY, Member of various National and Government Committees (USA)
- **Dr. Stephan Raspe**, Institute for Soil Science and Forest Nutrition, University Freiburg (Germany)

- **Prof. Dr. Armin Reller**, Institute for Anorganical Chemistry, University Hamburg (Germany) and BEW-Programme Solarchemistry-Hydrogen, Winterthur (Confédération Helvétique)
- **Prof. Dr. Ortwin Renn**, Academy for Technology Assessment in Baden-Württemberg, Member of German Advisory Council on Global Change, Stuttgart (Germany)
- **Prof. Dr. Robert Sauerbrey**, Ecology of Resource management, Institute for Planting Sciences, Humboldt-University, Berlin (representing 26 students of the Department for Agriculture and Horticulture) Berlin (Germany)
- **Prof. Dr. Hans-Joachim Schellnuber**, Director of the Potsdam institute for Climate Impact Research, Chairperson of the German Advisory Council on Global Change, Potsdam (Germany)
- **Prof. Werner Schenkel**, Berlin (Germany)
- **Prof. Dr. Bernhard Schmid**, Institute for Environmental Sciences, University of Zürich (Confédération Helvétique)
- **Dr. Manuel Schneider**, Schweisfurth-Foundation, Munich (Germany)
- **Dr. Engelbert Schramm**, Institute for Social-Ecology Research, Frankfurt (Germany)
- **Prof. Dr. Udo Simonis**, Environmental-Policy Research at Science Center Berlin, till 1996 Member of German Advisory Council on Global Change (Germany)
- **Dr. Otto Smrekar**, Chief Editor GAIA, Basel (Confédération Helvétique)
- **Prof. Dr. Karl Stahr**, Institute for Soil Science, University Hohenheim, President of German Association for Soil Sciences, Stuttgart (Germany)
- **Prof. Dr. Michael Succow**, University Greifswald, Vice-President of German Association for Nature's Conservation, Alternative Nobel Prize Award 1997 (Germany)
- **Prof. Dr Hardy Vogtmann**, President of the Hessian Government Office for Regional Development and Agriculture, Kassel (Germany)
- **Prof. Dr. Hubert Weiger**, Director of the Bavarian Union for Nature Protection, Nürnberg (Germany)
- **Hubert Weinzierl**, President of Friends of the Earth Germany (BUND) Wiesenfelden (Germany)
- **Christine von Weizäcker**, Biologist/Journalist, Vice-President ecoropa, Bonn (Germany)
- **Prof. Dr. Dan H. Yaalon**, Institute of Earth Sciences, The Hebrew University of Jerusalem (Israel)
- **Dr. Angelika Zahrnt**, Vice-President of Friends of the Earth Germany (BUND), Neckargemünd (Germany)

Institutions

- **BUND, German Union for Environment and Nature Protection**, Friends of the Earth Germany, Bonn (Germany)
- **German Soil Science Society**, Oldenburg (Germany)
- **International Society of Soil Science**, Vienna (Austria)
- **ISRIC, International Soil Reference and Information Centre**, Wageningen (Holland)
- **NABU, German Association for Nature's Conservation** Bonn (Germany)
- **Oekopolis Foundation for Democratic Culture of Moderation and Genuineness**, Zürich (Confédération Helvétique)
- **Schweisfurth-Foundation**, Munich (Germany)
- **SÖL, Foundation Ecology and Agriculture**, Bad Dürkheim (Germany)

V. Acknowledgements

This proposal forms part of the Tutzing Project "Time Ecology". We would like to thank the "Deutsche Bundesstiftung Umwelt" and the "Scheidfurth-Stiftung" for their support.

Article 11 to 13 and 17 to 30 of the proposal for a convention on Sustainable Use of Soils (Soil Convention) had been written by the expert on public international law, Kerstin Brandt, Cottbus. We would like to thank for her assistance and for her translation of the text into English.

We greatly appreciate having received constructive comments and suggestions concerning drafts of this proposal for a Soil Convention from many soil specialists and numerous others supporting this proposal.

VI. Authors

Authors/Correspondence Addresses

Dr. rer.pol. Martin Held
Economics and Ecology
Protestant Academy Tutzing
Postbox D-82324 Tutzing
Phone ++49/8158/251-116
FAX ++49/8158/251-133
e-mail: eat06@ev-akademie-tutzing.de

Dr. rer.nat. Klaus Kümmerer
Institute for Hospital Epidemiology and Environmental Medicine
University Hospital Freiburg
Hugstetter Straße 55
D-79106 Freiburg
Phone ++49/761/270-5464
FAX ++49/761/270-5485
e-mail: kkuemmer@ihkl.ukl.uni-freiburg.de

Author of the organizational and juridical parts

(Articles 11 to 13 and 17 to 30)
Ref. jur. Kerstin Brandt
Frankfurter Straße 10
D-03185 Peitz
Phone/FAX: ++49/35601/24512
e-mail: kerstin.brandt@t-online.de

avril 1998

édité par

Le Groupe de Coordination sur les Bois Raméaux

Département des Sciences du Bois et de la Forêt

Faculté de Foresterie et de Géomatique

Université Laval

Québec G1K 7P4

QUÉBEC

Canada

courriel:

gilles.lemieux@sbf.ulaval.ca

<http://forestgeomat.for.ulaval.ca/brf>

FAX 418-656-3177

tel. 418-656-2131 poste 2837

Publication n° 85