



BUWAL Bundesamt für Umwelt, Wald und Landschaft
OFEFP Office fédéral de l'environnement, des forêts et du paysage
UFAFP Ufficio federale dell'ambiente, delle foreste e del paesaggio
SAEFL Swiss Agency for the Environment, Forests and Landscape

State Secretary

CH-3003 Berne, 6 July 2005

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Ministers of Environment
Ministers of Forestry
Ministers of Agriculture

Votre référence

Votre communication du

Notre référence

Objet **Seminar on environmental services and financing for the protection and sustainable use of ecosystems (Geneva, 10-11 October 2005)**

Excellency,

The role of ecosystems in water management, such as forests, soils and wetlands, which capture, filter, store and distribute water, and mitigate floods, has increasingly been recognized lately.

In March 2005, the Millennium Ecosystem Assessment Report revealed that the degradation of ecosystem together with their services could grow significantly worse during the first half of this century and become a barrier to achieving the UN Millennium Development Goals.

The 13th session of the Commission on Sustainable Development (11-22 April 2005) adopted a decision, which recognized that the ecosystem services are being essential for human beings, especially in the framework of integrated water resources management (IWRM) (Annex 1). Therefore, these ecosystems need to be protected and restored. The development of innovative means of financing for the protection and restoration of ecosystems, such as payment for ecosystem services, has been called for.

The Parties to the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) decided at their third meeting (Madrid, November 2003) to hold in 2005 a seminar on environmental services and financing for the protection and sustainable use of ecosystems in relation to water management. (see: ECE/MP.WAT/15/Add.2, <http://www.unece.org/env/documents/2004/wat/ece.mp.wat.15.e.add2.pdf>).

Switzerland is the Lead Party for this activity. Its Agency for the Environment, Forests and Landscape and the secretariat of the Water Convention will organize the seminar in close cooperation with the secretariat of the 1971 Ramsar Convention on Wetlands and the World Conservation Union (IUCN). The UNECE Timber Committee, the FAO European Forestry Commission and its Working Party on the Management of Mountain Watersheds as well as the FAO Land and Water Development Division have also been invited to contribute.

The seminar will be held on 10-11 October 2005 in Geneva. It will review methods for valuing ecosystems services, existing legal and contractual arrangements for the payment of ecosystems services and challenges in their practical implementation.

It will bring together policy and decision makers, lawyers, economists, managers and technical experts from different sectors (water management, forestry, landscape, nature conservation, agriculture, etc.). It will provide a platform for governmental officials to meet experts from international organizations, the private sector and civil society, take stock of the available experience in the UNECE region, share best practices and bring in valuable expertise from other regions.

To facilitate the sharing of experience and best practices, you are invited to submit a national report on the situation in your country to the secretariat of the Water Convention by **15 September 2005 at the latest**. To this end, you might wish to appoint a national coordinator and inform the UNECE secretariat of the nomination.

For your convenience, the outline of the country report and the programme of the seminar are attached (Annex 2 and Annex 3). The national reports will be posted on the Water Convention's web site, made available at the seminar and be reflected in the seminar's proceedings.

I am aware that not all countries have already a scheme of payments for ecosystem services in place; therefore I invite these countries to use the outline and send a report on these countries' questions, needs and concerns for initiating and implementing such schemes.

National reports should be sent by 15 September 2005, preferably by e-mail to:

**Water Convention secretariat
United Nations Economic Commission for Europe
Palais des Nations, office 311
CH 1211 Geneva 10
Fax: +41-(0) 22-917 01 07
E-mail: water.convention@unece.org**

Further documentation will be dispatched in the near future and posted on the above-mentioned web site.

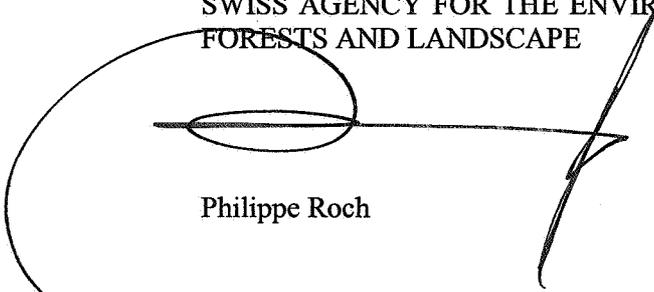
The seminar recommendations will be submitted for information to the 9th Conference of the Parties to the Ramsar Convention on wetlands (Uganda, 7-15 November 2005) and to the 4th World Water Forum in March 2006 in Mexico.

Furthermore, on the basis of this seminar and the previous one on the role of ecosystems as water suppliers (Geneva, 13-14 December 2004), a code of practice on the integrated management of water and related ecosystems will be presented to the Parties to the Water Convention for adoption at their fourth meeting in October 2006.

I am confident that the seminar will increase awareness of the inter-linkages and measures to ensure sustainable water resources management integrating water, wetlands, forest and soils. It is an essential contribution to the implementation of the Johannesburg Plan of Implementation.

I am looking forward to the active participation of your country in the seminar.
Accept, Excellency, the assurances of my highest consideration.

SWISS AGENCY FOR THE ENVIRONMENT,
FORESTS AND LANDSCAPE



Philippe Roch

Enclosures

E-mail copies to: National Focal Points of the UNECE Water Convention;
National Focal Points of the Convention on Wetlands;
Members of the UNECE Timber Committee;
Members of the FAO European Forestry Commission and of its Working Party
on the Management of Mountain Watersheds;
Members of the FAO Committee on Agriculture
Participants to the Ministerial Conference on the Protection of Forests in Europe
(MCPFE).
EU Water Directors
National focal points of the Pan-European biological and Landscape Diversity
Strategy
Missions to the UN in Geneva

Annex 1
Excerpts of the decision adopted
by the Commission on sustainable development, thirteenth session

(Based on the advance unedited version of 22 April 2005)

A. Water.....

Integrated water resources management (IWRM)

(d) Recognizing that the 2005 target on IWRM may not be met by all countries, accelerate the provision of technical and financial assistance to countries in preparing nationally-owned IWRM and water-efficiency plans tailored to country-specific needs, paying particular attention to economic development, social and environmental needs, supporting implementation through learning-by-doing, directed, *inter alia*, towards the following:

- (i)
- (ii) Enhancing the **sustainability of ecosystems** that provide essential resources and services for human well being and economic activity in water-related decision-making;
- (vii) Strengthening the prevention of pollution resulting from wastewater, solid waste, industrial and **agricultural activities**;
- (viii) **Developing preventive and preparedness measures**, as well as risk mitigation and disaster reduction, including early warning systems;
- (ix) **Protecting and rehabilitating catchment** areas for regulating water flows and improving water quality, taking into account the critical role of ecosystems;
- (x) Encouraging, where appropriate and within their mandates, **the use of MEAs** to leverage additional resources for IWRM;
- (xiii) Promoting higher priority and greater action on **water quality**;

D. Interlinkages and Cross-Cutting Issues

.....(x) Concerning the means of implementation, mobilize adequate resources to meet the water, sanitation and human settlements goals and targets, tapping both domestic and international sources through a range of financing approaches, such as:

- (i)
- (iii) Enhancing the sustainability of **ecosystems that provide essential resources and services** for human well-being and economic activity and developing innovative means of financing for their **protection**.....

Annex 2

OUTLINE FOR A REPORT ON ENVIRONMENTAL SERVICES AND FINANCING FOR THE PROTECTION AND SUSTAINABLE USE OF WATER-RELATED ECOSYSTEMS

Introduction

Healthy natural ecosystems fulfil specific functions and provide goods and services, which are vital to human beings and the environment (fauna and flora).

Ecosystems, such as wetlands, forests, meadows and soils play a great role in water resources management and drinking-water supply, as they capture, filter, store and distribute water. Some of their roles and functions are flood control and local water storage in areas of flood formation, groundwater replenishment, water purification, sediment retention and residual water flows (minimum stream flow).

Environmental degradation by over-harvesting, overuse, misuse or excessive conversion of ecosystems into man-made systems, caused by land user, leads to unhealthy ecosystems with decreasing capacities of delivering services. This degradation of ecosystem services is representing a loss of a capital asset.

Although there is also growing awareness of the costs to society when these services are degraded or lost, these costs contribute to poverty and social conflict, as they are being borne disproportionately by the poor which livelihood depends on these ecosystems.

Two approaches are being used to help reduce environmental degradation of water-related ecosystems: the Command and Control Approach and a market-based approach. The Command and Control Approach stems from the premise that land users will change their land use practice to avoid penalty. Public institutions have used this approach traditionally, but its success is sometimes limited due to its technocratic, reactive and sectoral nature. Modern water policies, strategies and action are anticipative and adaptive, societal oriented and integrative. This has led to market-based approaches to protect and wisely use water-related ecosystems.

Using a market-based approach in a river basin, upstream land users are compensated for their behavioural change by receiving a payment for the environmental services (PES) they help protect or restore. This payment provides a direct incentive to adopt environmentally friendly land use practices. In essence, land managers are paid for “growing water” for the downstream part of the watershed, for example, by forest protection activities rather than for the production of timber or crops. Suppliers and beneficiaries of ecosystem services can be individual landholders, private corporations or public institutions. In practice, payments schemes have been established to benefit individual land users/owners, communities and public institutions. Most transfers have been from public institutions to private individual landowners, although the private sector is slowly becoming involved (Figure).

In a market-based approach, agro-ecosystems, which are considered to be man-made ecosystems, depend on ecosystem services for water, soil fertility, and biodiversity. For example, nutrients cycles are contributing to farming, but at the same time farming practices

have also an impact on these cycles. Water pollution by inefficient and excessive application of fertilizers (e.g. manure or agrochemicals) or pesticides, salinization, and soil erosion can be controlled by payment for ecosystem services in order to redress the ecosystem health so that it sustains its ecosystem services and downstream damaging impacts within a watershed are prevented. PES in agriculture can promote eco-agriculture, the conversion of agricultural land in protected areas and the mixed arable/livestock systems

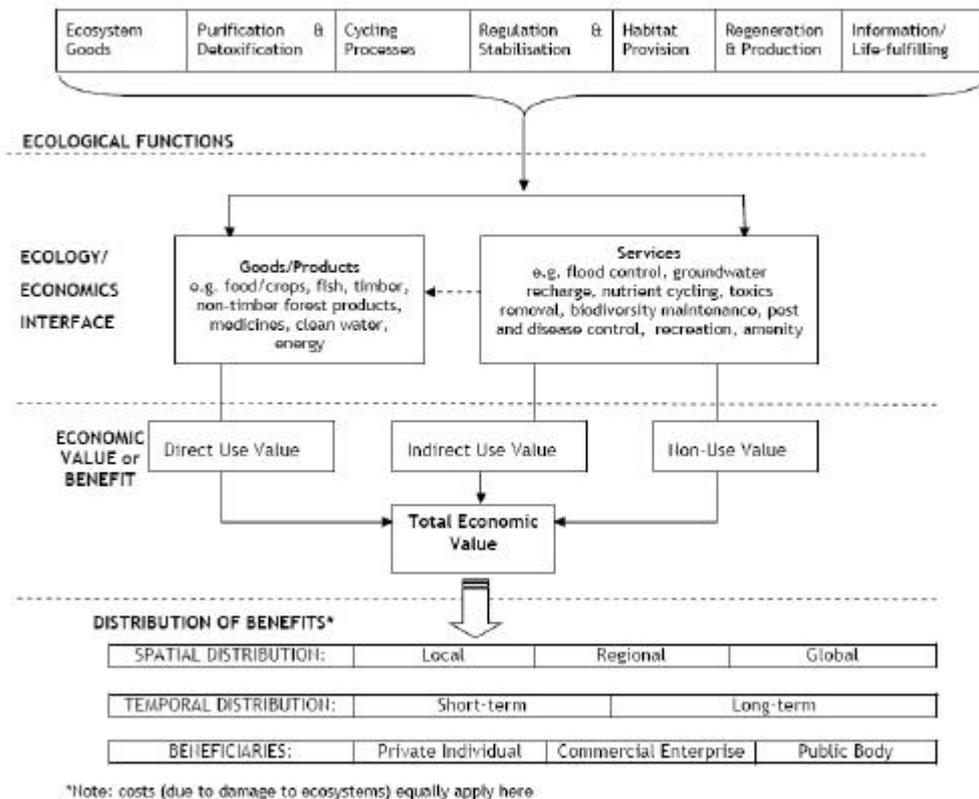


Figure: Framework of the ecosystem services: (from eftec (2004) *The Economic, Social and Ecological Value of Ecosystem Services: A Literature Review*. Report for DEFRA, London UK.)

- > Direct use value: in the case of consumptive, extractive use (fish, timber) and non consumptive (recreation, educational activities);
- > Indirect use value: derives from services (flood mitigation).
- > Non-use value: benefits derived from knowledge ecosystem is maintained

Reporting scheme for information on ecosystem services

The reporting scheme aims to gather experience and practical measures to integrate forests, wetlands and agro-ecosystems in water management through the payments for the ecosystem services they provide. The outline and questions below should help to organize the response by countries, governmental organizations, NGOs and individual experts. It aims to get a comprehensive picture to integrate the different local, national and transboundary approaches and practices, making the links between the identification of ecosystem services, their valuation, and the integration of this analysis into legal rules and implementation policies, including economic incentives, etc.

Authors, who wish to reply to this reporting scheme, should not necessarily answer all the questions below. Their reports, however, should be as comprehensive as possible and incorporate information on the measures taken, including examples and best practices, excerpts from national laws and case studies. Not only success stories should be reported; it is equally important to learn about bad experiences and failures.

I. VALUING ECOSYSTEM SERVICES

A. Determining factors for using payment for ecosystems services (PES)

What were the reasons for introducing payments for ecosystems services (e.g. absence of, or inadequate, legislation; inadequate implementation of legislation; lack of funding for the protection of ecosystems or catchment areas, water-quality and/or water-quantity problems, customers and/or users' willingness to pay, demand for this service)?

B. Characteristics of river basins or ecosystems favorable to establishing PES

What were the prominent characteristics (e.g. basin size, land-use, property rights regime, size of upstream-downstream populations, national or transboundary character of the river basin or ecosystem) that facilitated the establishment of PES?

C. Measuring ecosystem services

Was the specific service identified and quantified before a project started? Were the cause-effect relationships between land use and the services (i.e. biophysical relationships) measured or observed? If measurements or observations were made, what parameters have been included and what was the periodicity of such measurements/observations? If not measured or observed, how were then the assumptions about cause-effect relationships verified?

Were the users' characteristics and needs also taken into account (e.g. different needs for a hydropower plant operator and a water supplier)? Is this a cost-effective method to reach the goals established?

D. Social and economic aspects

How is the social value of water-related ecosystems with regard to water supply and health addressed? How are benefits to low-income sectors assessed and what about equity?

Is there an economic assessment of the value of water-related ecosystems in relation to water management and drinking-water supply? Which methods were used?

E. Cost-benefit analysis of land use alternative and their impact on ecosystem services

Did the analysis look at all flow of services or was it restricted to the provision of water? Which management options were explored and how were trade-offs addressed?

When analyzing the advantage and disadvantage of ecosystem services against technical alternatives, did the analysis include considerations of lower/higher costs, the same level of service and magnitude and the willingness of consumers to pay? Which other components were included in such an analysis?

Was consumer's willingness to pay evaluated? Were there any perverse incentives derived from the introduction of PES?

II. LEGAL AND CONTRACTUAL ASPECTS

A. Legal and regulatory frameworks that can help establish payments for ecosystem services

Is national legislation conducive to the creation of payment of ecosystem services schemes or policies? Are there any bilateral or multilateral agreements that are devoted to, or have included, ecosystem services? Is the creation of funding mechanisms envisaged? When were PES introduced?

How is the level of payment determined and by whom? How are payments used afterwards (e.g. in follow up projects)? What are the sources of funding (e.g. national financial resources, contributions from users, international cooperation funding)? Is the funding self-sufficient or is it subsidized by the State budget?

How are payments made? Are the PES permanent or one-time payments? Is such a scheme coordinated across sectors? Which entity is managing the PES system? Which are the follow-up and control mechanisms of the PES scheme?

B. Contractual arrangements

Which types of contracts (e.g. self organized deals, trading schemes, public payments schemes)¹ are used? In case of default by service providers, does the PES scheme allow for legal action?

¹ *Self-organized private deals* : payments made voluntarily by members of the private sector, such as private companies or associations of water users, with little or no government involvement ; *Trading schemes* : usually occur where government sets either a very strict water quality standard or a cap on total pollution emissions. For example, under nutrient trading a polluter with a nitrogen or phosphorus discharge level lower than the required standard may exchange this 'water quality credit' with a polluter with a 'water quality deficit'. *Public payment schemes*, by far the most common mechanism, are established when a municipality, a state, or a national government decides to finance upstream activities such as land retirement or reforestation. In return the government entity expects improvement in hydrological services downstream (from **Case Studies of Markets and Innovative Financial Mechanisms for Water Services from Forests, Danièle Perrot-Maître and Patsy Davis, Esq. May, 2001**) (<http://www.forest-trends.org/documents/publications/casesWSofF.pdf>)

What is the duration of the contracts? Who are the facilitators (Government, national/local authorities, private sector, NGOs)? Which entity (e.g. public, private, NGOs) is managing the PES systems? Were transaction costs evaluated?

Does the contract imply management plans for the ecosystems? How is the implementation of these ecosystem management plans controlled? Were informal and traditional “rules for water” (e.g. local experience and traditional knowledge) considered in the design of the scheme?

What is the level of involvement of local communities and other stakeholders in the design, operation, supervision and/or follow up of the scheme?

C. Socio-economic and environmental impacts of PES

Will the scheme of payment for ecosystem services become part of the your poverty reduction strategies papers (PRSP) or is it already a part of it?

Will the scheme of payment for ecosystem services become part of the integrated water management (IWRM) plans for 2005 or is already a part of it?

What other socio-economic and environmental aspects are important given your experience and knowledge?

III. CHALLENGES FOR IMPLEMENTATION

A. Challenges for the establishment of PES

What are the triggers to establish a payment scheme in your country?

What measures do you propose to identify suitable providers and buyers (e.g. public sector, local authorities, private sector)? What would be the roles and responsibilities of your partners? Based on your experience, what would be your approach to involve or jointly act with the private sector?

What would be the obstacles to implement payments and how would you overcome them?

B. Challenges for the dissemination of best practice

Are the dissemination of best practices and the exchange of information common among authorities and institutions at the local, national and international levels? What is the degree of awareness on the opportunities of payment for ecosystem services?

How is the information exchange between buyers and providers?

Have public information campaigns been organized when introducing such schemes? Is civil society well educated and trained to make a link between forests, wetlands and water management? Does civil society promote the concept of PES? What would be needed to increase the involvement and/or active support of the civil society sector?

C. Challenges for the private sector

What is the degree of awareness on the opportunities of payment for ecosystem services?
Are commercial associations used to help the promotion of such schemes?

Is there any experience of a private company financing payments for environmental services?

What is the experience of the private sector with other private/public partners? Is the private sector involved in establishing payment schemes and paying for ecosystem services?

D. Challenges for research and capacity building initiatives

Are specific research programmes developed on this specific issue?

What forms of capacity building have been put in place?

National reports and discussion papers should be submitted by **15 September 2005 at the latest** in at least one of the three UNECE working languages (English, French or Russian). They should not exceed 15 pages including graphs and tables.

The cover page should contain the title of the contribution, the full names and professional postal addresses (including telephone and fax numbers, e-mail addresses) of all authors. The FAMILY NAMES of authors should be in capital letters.

Graphs should be in black and white drawing, and any captions should be written in English, French or Russian. Photographs cannot be accepted for reproduction. Footnotes and source and reference notes should be kept to a minimum. The text should be provided in Microsoft WORD and communicated by e-mail and/or on diskette to:

Water Convention secretariat
United Nations Economic Commission for Europe (UNECE)
Palais des Nations, office 311
8-14, Avenue de la Paix
CH-1211 Geneva 10, Switzerland
Tel.: (+41) 22 917 2373 or 2463
Fax: (+41) 22 917 0107
E-mail: water.convention@unece.org

Annex 3**DRAFT SEMINAR PROGRAMME**

Geneva, 10-11 October 2005

Opening of the Seminar

- **Welcome addresses**
- **Keynote address: Ecosystem services – global commitments and regional action**

I. VALUING ECOSYSTEM SERVICES

- **Keynote lecture: Ecosystems services – from theory to practice**
- **Presentations by countries**
- **Discussion**

The discussion will focus on such issues as: Determining factors for using payment for ecosystems services (PES), characteristics of river basins or ecosystems favorable to establishing PES, measuring ecosystem services, social and economic aspects, cost-benefit analysis of land use alternative and their impact on ecosystem services (for more details see annex 2)

II. LEGAL AND CONTRACTUAL ASPECTS

- **Keynote lecture: Ecosystems services – lessons from country reports on legal, administrative, institutional and technical arrangements**
- **Presentations by countries**
- **Discussion**

The discussion will focus on such issues as: legal and regulatory frameworks that can help establish payments for ecosystem services, contractual arrangements, and socio-economic and environmental impacts of PES (for more details see annex 2).

III. CHALLENGES FOR IMPLEMENTATION

- **Keynote lecture: A toolbox for ecosystem services**
- **Keynote lecture: Ecosystems services – challenges for non-governmental organizations, including private sector and business entities**
- **Discussion**

The discussion will focus on such issues as: challenges for the establishment of PES, challenges for the dissemination of best practice, and challenges for research and capacity building initiatives (for more details see annex 2).

VI. CONCLUSIONS AND RECOMMENDATIONS

- **Keynote lecture: Lessons learned and Seminar recommendations**
- **Discussion**