JOURNAL OF FOREST SCIENCE, *58*, 2012 (3): 131–136

Legal framework for payments for forest ecosystem services in the Czech Republic

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ABSTRACT: Although examples of payments for ecosystem services (PES) can be traced back at least as far as the 1980's, it is still a relatively new instrument, and the hitherto experience in many parts of the world is not extensive yet, or based on a very long timeframe. In addition, PES is being introduced in more and more sectors (agriculture, water supply, carbon sequestration, biodiversity conservation, etc.) and in relation to more and more ecosystems (surface water, groundwater, forest, etc.). But such PES can work only with good governance in place, comprising an effective political, legislative as well as institutional system. Nevertheless, an effective introduction of PES system into national legislation calls for an appropriate analysis of the current legal system so that duplications can be excluded and only valuable measures can be added. The main goal of this paper is to analyze if the current legal framework of the Czech Republic provides an appropriate basis for establishing payments for a forest ecosystem services scheme.

Keywords: forest ecosystem services; legal framework; legislation; payment for ecosystem services

Forests produce both goods and services. Both are of great economic value. However, in valuation studies, ecosystem services like carbon storage or watershed protection frequently provide higher values than forest products or alternative land uses. Generally speaking, services derived from forests also contribute more than other terrestrial biomes to climate relevant cycles and processes as well as biodiversity related processes (e.g. Miller, Tangley 1991).

Unlike forestry goods such as timber, ecosystem services are far less tangible and cannot easily be marketed and priced. For this reason, most forest ecosystem services are inadequately paid for and therefore inadequately provided. Those who own or control forests do not benefit fully from the value of these ecosystem services and therefore there is a lack of incentives to maintain them fully intact (Šišák 2000). In fact, it may create a perverse incentive structure that leads to degradation rather than proactive action to conserve and improve the forests.

In many countries governments are seeking to institutionalize frameworks aimed at increasing incentives of forests owners and forest dependent people with a stake in forest management to ensure the provision of these services. The creation of incentives in itself, however, is not a universal panacea (Wunder 2005). The incentives have to be adequate and relevant to the local context. Forest governance frameworks are equally important. Under weak governance regimes, it will be very difficult for incentives to become effective (Burchi 2007). Therefore it is necessary to enact suitable legislation which is comprehensive and covers all inter-sectoral linkages. But many governments prefer legislation to policy because the former provides the long-term security required in the case of forestry sector and minimizes the potential of conflict between suppliers and beneficiaries of these services and amongst the suppliers.

For the purpose of this article, a hypothesis has been formulated: "Current legal framework of the

Czech Republic represents an appropriate basis for establishing payments for a forest ecosystem services scheme."

MATERIAL AND METHODS

While the social and environmental aspects of forest-related payments for ecosystem services (hereinafter PES) received considerable attention in the past, there exist few analyses of the legal implications of PES schemes. Many PES studies simply ignore the legislative requirements for effective and efficient PES systems. Those analyses that discuss the legal issues are mostly limited to theoretical and very general recommendations.

The overall goal of this article is to examine the current legislation of the Czech Republic. Its objective is to give recommendations for the future development of legal framework which support forest-related PES schemes and their implementation. Three key questions will therefore be answered:

– What are the main differences between ecosystem functions and ecosystem services?
– What is understood under payments for ecosystem services?
– What should policy-makers consider when assessing and potentially revising the legal framework for forest-related PES schemes?

Firstly, it is necessary to underline a current state in the field of ecosystem services, therefore a short description of differences between functions and services is presented.

The analysis proceeds from a part of questionnaire, developed by the IUCN Environmental Law Centre, linked to the legal instruments for payments for ecosystem services. The questionnaire offers guidance on the issues to be considered when conducting an assessment of a country's legal and institutional framework relating to Payments for Ecosystem Services. The questionnaire is composed of eight parts:

– Introduction should bring basic information on the given country.
– Legal and institutional framework regarding PES schemes aims to find out proper legislation to PES and is divided into four sections in order of legal power – constitutional order, specific PES legislation, ecosystem-related legislation and indirectly relevant legislation. Another part of the chapter deals with institutional issues.
– Property rights issues address questions for individuals and communities how property rights are involved in legislation.
– Negotiation deals with strategy how the PES are negotiated in the given country.
– Contractual issues are focused on types of contracts.
– Monitoring, non-compliance and enforcement contain, inter alia, the question how the provision of services will be monitored.
– Good governance deals with good practices, public participation, access to information and transparency.
– Overall conclusion summarizes the whole analysis and gives recommendations both for policy- and decision-makers.

It is needed to fulfil the questionnaire step by step, because each subsequent chapter draws on data from the previous one and is based on these sources.

The second chapter is used for the analysis as a basic approach of this article. A base for the analysis, legal acts of the Czech Republic are used and specific content is compared how it is engaged in PES.

RESULTS

Definitions and facts – where are we?

Ecosystem functions are the biophysical processes that take place within an ecosystem. They can be characterized apart from any human context (e.g. fish and waterfowl habitat, carbon cycle or nutrient trapping), though they are generally affected by human activities (Daily 1997). The level – local, regional, global – of functions depends on the ecosystem (e.g. terrestrial or marine, tropical, temperate or boreal, covering small or large areas, simple or complex, biodiversity-rich or not, damaged or intact etc.) and on certain aspects of the landscape context (e.g. connectedness to other natural/human features, accessibility etc.) (Constanza et al. 1997).

Ecosystem services are the outcomes from ecosystem functions that are to the benefit of human beings (Miller, Tangley 1991). In principle, these could include both forest products (timber and non-timber) and services. Ecosystem services cannot be characterized apart from the human context and require some interactions with humans. Functions become services only to such an extent to what humans acknowledge them within their social systems of the value generation. However, unlike forest products, most forest service values are not paid for (Constanza et al. 1997). This means that

the economic value of services more often than not remains without a financial counterpart, in other words those who own or control forests where those services are produced, do not capture the economic benefits that result from those services.

Different level of benefits: Corresponding to the layer distinction for ecosystem functions, benefits also accrue at different spatial levels (Miller, Tangley 1991). Notably, it is vital to distinguish between services internalized at the local level by forest owners and managers (e.g. local pest control functions) versus external benefits (Greiber 2009). The latter can include regional benefits (e.g. a downstream farmer using water for irrigation), national (e.g. a downstream hydroelectric dam) and global ones (e.g. carbon storage mitigating climate change).

The working *definition of a PES scheme* is a voluntary, conditional agreement between at least one seller and at least one buyer over a well-defined environmental service (Wunder 2005). The condition is that the seller supplies the service. However, PES often occur when there is a weak evidence of provision and/or the ecosystem services are loosely defined, so that in practice many cases are PES-like mechanisms. These can be broadly classified into four main types (Greiber 2009):

– Public payment schemes to forest owners or managers in which the government is the main or the only buyer.
– Trading between buyers and sellers of ecosystem services around a regulatory floor on the level of services to be provided or a cap/quota on allowable damage or deterioration, known as cap and trade mechanisms.
– Private market-based deals in which beneficiaries of ecosystem services contract directly with service providers (e.g. downstream beneficiaries with upstream watershed managers).
– Eco-labelling or certification of forest or farm products in which consumers pay a green premium to assure neutral or positive ecosystem impacts.

PES must be supported by legally binding agreements. In order that those agreements will be effective, the rights of the parties – whether they are individuals, households, communities or organizations – to use, manage and benefit from the resources that provide the services must be clearly established (Daily 1997). National laws, regulations and decrees provide the required legal basis for all aspects of payments for ecosystem services, defining the ecosystem services themselves; defining the capacity of potential parties to enter into agreements; and defining the rights of all parties to the resources and services and the benefits they provide.

Legal framework

If appropriately drafted, the legal framework of a country can enable the successful development and implementation of PES schemes. In the worst case, however, the legislation in place can prove cumbersome or even obstruct efficient and effective PES projects.

Constitutional order

In the Czech Republic, the constitutional system in the strict sense is understood as the Constitution and the Charter of Fundamental Rights and Basic Freedoms (hereinafter Charter). The Constitution defines the basic authorities of the state and the rules governing their functioning. The Charter is primarily based on the Universal Declaration of Human Rights approved by the General Assembly of the United Nations on 10th December 1948. However, the basis referred to in the Charter has been considerably extended. From the perspective of PES, there are two articles of the Charter:

1. Article 11 dealing with property rights:

(1) Everyone has the right to own property. The property right of all owners has the same statutory content and protection. Inheritance shall be guaranteed (...).
(3) Ownership is committed. It is not allowed to be misused to the detriment of the rights of others or in conflict with the law protected by the general interest. Its performance may not cause harm to human health, nature and environment above the level laid down by law.
(4) Expropriation or compulsory restrictions of ownership may be in the public interest, on the basis of the law, and for compensation.

2. Article 35 dealing with the environment:

(1) Everyone has the right to a favourable environment.
(2) Everyone has the right to timely and complete information about conditions of the environment and natural resources.
(3) In performance of their rights, no one may threaten or harm the environment, natural resources, the species richness of nature and the cultural monuments laid down by law.

On the basis of the above-mentioned constitutional framework, a common practice in the Czech legal order has been stabilized.

Subjects in legal ownerships having a major importance for society are limited so as to serve not only as the subject of ownership, but also to carry out other functions guarantying sustainable development and, inter alia, ensuring the right of the Czech citizens to a favourable environment. Such constraints are imposed in cases of using agricultural and forest land. If there are ownership restrictions of general character (they are imposed on all owners with things of the same sort – the forests), then the owners have no rights to compensation, because the property right has the same statutory content and it is not about limitations – discrimination compared to other owners. This general restriction or the definition of property rights has, however, its limits. It is not possible to impose such restrictions that would put land owners at disadvantages to have lost their competitiveness across Europe.

In 2003, the provisions laying down the obligation of the state to pay to owners for compensation in the case of management restrictions was added to the law on the protection of nature and landscape. Restrictions imposed on owners of agricultural and forest lands are implemented on the basis of the law, compensation, and in the public interest, in accordance with the constitutional system. Till 2003 the restrictions imposed by the authorities charged with the protection of nature and landscape were not paid at all. A legal possibility of payment for restrictions was already developed and embedded in Act No. 114/1992 on the Protection of Nature and Landscape (hereinafter Act on Nature Protection), but there are procedural obstacles from the side of the Ministry of Environment and therefore the system does not fulfil its tasks efficiently.

At the time of the stretched state budget of the Czech Republic, there is a prevailing tendency to provide ecological services with general restrictions without any compensation to forest owners. It should be noted that there are no financial resources available for the enlargement or deepening of environmental services. Therefore the Czech Republic is among the countries with considerable legal regulations where the performance of environmental services occurs in a directive manner by means of legal commands and prohibitions.

Specific PES legislation

There is no specific legislation directly linked to PES schemes.

Ecosystem-related legislation – Forest legislation

The basic legislation on forests and forest management is set down by Act No. 289/1995 on Forests, with its latest amendments (hereinafter Forest Act). The Forest Act lays down obligations of the state to pay for a part of increased costs necessary for the planting of a minimal number of soil-improving and stabilizing tree species (in general, support to the planting of broadleaved tree species).

The implementation of stream restoration in forests can be considered as the only ecological service paid for by the state. In case that the authority of the state forest management or, where appropriate, the authority of the state water management decides that the measures are in public interest, then these measures shall be paid by the state in full. These are preventive measures against floods and erosion.

In the annex of the State Budget Act, aids for forest management are laid down. The subsidies, inter alia, are aimed at:

- regeneration of forests damaged by air pollution,
- reforestation, establishment of stands and their tending,
- ecologically friendly and close-to-nature technologies,
- non-wood-producing function of the forest,
- other forest management practices.

Other subsidies are provided by regional authorities with separate subsidies rules on the voluntary basis.

Protected areas legislation

In the first place it is necessary to mention the Act on Nature Protection, which has implemented the EC Directive Natura 2000 to the legislative rules of the Czech Republic.

The Act on Nature Protection contains, apart from general nature protection, the protection of specially protected areas which are of significant relevance for the conservation of certain species of plants, animals and their habitats. There are extreme efforts from the Ministry of Environment and some non-governmental organizations to restrict forest management without rational basis, without compensations. It could be classified as a dangerous trend in contradiction with property rights to compensation for restriction and with the philosophy of PES.

Act No. 334/1992, on Protection of Agricultural Land Resources, sets down obligations relating to agricultural lands and binds their use for other purposes on fee.

Act No. 115/2000, providing compensations for detriment caused by selected especially protected animals, could also be mentioned as a potential possibility of PES in the Czech legislation.

Indirectly relevant legislation

Act No. 183/2006 on Construction (hereinafter Construction Act), lays down the rules for land-use planning documentation. The land-use documentation contains, inter alia, limits for using the territory in respect of the performance of environmental services. The Construction Act sets down a process of the adoption and approval of land-use planning documentation (amendments from state authorities, non-governmental organizations and land owners).

DISCUSSION

PES terminology is applied to a wide range of very diverse situations and there is no single definition of PES. In an attempt to formally define PES and clarify the concept, Wunder (2005) proposes a set of five basic principles:

A PES scheme is as follows:

1. a voluntary transaction where;
2. a well-defined environmental service (or land use likely to provide that service);
3. is "bought" by one buyer at least;
4. from a (minimally one) provider of environmental services;
5. if, and only if, the environmental service provider ensures the environmental service provision (conditionally).

Although simple in appearance, this definition hides many technical complexities. So few existing schemes actually satisfy these conditions that a question has been raised as to whether these schemes actually exist in practice and if aiming at a perfect PES scheme makes any practical sense at all (Perrot-Maître 2006). In the Czech Republic there is neither an example of existing PES scheme nor a perfect PES scheme. On the other hand, as it is obvious from the legislation analysis, there is a suitable environment for establishing such PES schemes.

The most critical issue to be resolved in order to apply payments for ecosystem services is the question whether payments for ecosystem services are considered to be based on a tax, fee or charge, or whether they are considered to be based on market prices for a product or service (Hanh et al. 2005). This is important both in terms of what law is used to enable the payment, as well as in relation to the mechanisms how and by whom it is calculated, collected and managed.

Under current provisions, it is only the state that can set the rates of taxes, fees and charges, and all income is treated as budgetary revenue belonging to the state, at the central, regional or local level. Households, individuals and other use right holders may, however, benefit from the sale of specified ecosystem products derived from the land the state has allocated to them. In this way of thinking, it is necessary to bear in mind not only interests of stakeholders, but also a public demand on healthy environment. The Czech legislation provides possibilities how to compensate forest owners providing ecosystem services, but the compensation system is not completed in deep and does not work effectively.

If payments for ecosystem services are treated as ecosystem products that have a market value and if the right holders may sell based on the market value of ecosystem products/services, then they can be implemented on the basis of existing laws (Wunder 2005).

If payments for ecosystem services are treated as charges, fees or taxes, then additional provisions must be added to existing laws, decisions and circulars to allow providers other than government agencies to retain revenues from them.

Pros and cons of having or not having specific PES legislation

While there is no need for the constitutional recognition of PES, the constitution must not prevent the development of PES schemes. Instead, the constitution has a great potential to recognize the value of nature and/or ecosystem services, thus creating an enabling environment for PES (Greiber 2009). If PES is regulated by a specific PES law, attention must be paid to its integration in the existing legal and institutional frameworks, in particular those laws that regulate the different ecosystems.

Introducing specific PES provisions through amendments to the existing legislation requires less legal drafting and synchronization work. It also provides an opportunity to clarify or further develop existing economic instruments (Rulh et al. 2007). Efficient and effective legal frameworks for PES demand compatibility with indirectly relevant laws in order to avoid further barriers for forest-related PES initiatives. At the same time, such laws may need to be assessed either to use their full po-

tential to promote PES or to remove perverse incentives that obstruct PES (Burchi 2007).

CONCLUSION

In conclusion it is possible to state that the hypothesis that the current legal framework of the Czech Republic represents an appropriate basis for establishing payments for forest ecosystem services scheme has been proved. Current legal acts in the Czech Republic provide a good environment for a deeper work on the PES system.

There is also argumentation of forest owners associations from the Czech Republic that should be borne in mind. Forest owners argue that environmental services should be provided only if they had sufficient financial resources. The way of PES is how to guarantee it in the Czech Republic. The engagement of relevant stakeholders is one of the most important points to be taken into account in the potential preparation of special PES legislation not only in the Czech Republic.

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Received for publication September 19, 2011
Accepted after corrections January 2, 2012

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