



Financing and Co-financing investments in private forests in Slovenia - Payment for Ecosystem Services (PES) Schemeⁱ

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Brief summary of the case

60% of Slovenia is forested and 80% of forests are in private ownership. Given the public benefits of forestry, the Slovenian government wishes to support private forest management. Financing and co-financing investments in forests (from 1993) is an instrument that helps the private forest owners sustainably manage their forests according to professional plans. Forest management plans are made by Slovenia Forest Service free of charge for the owners. Investments are financed and co-financed from the budget of the Republic of Slovenia and from the European Agricultural Fund for Rural Development. The co-financing rates for tending and forest protection are mainly between 30-40 %. In the last decade, forest management in private forests was in decline, but so were the available funds. Approved funds from the state budget cover only 10% of what would be needed for the planned investments. Forestry experts describe the instrument as well designed and efficient, but insufficient. They call for a special fund dedicated to forest investments and a professionalization of work in forest regardless the ownership. Moreover, state subsidies to forestry investments should be tax exempt. There are opportunities for earmarking forestry work from certain environmental taxes and these should be explored to ensure sufficient funding for forest management that provide public goods. More civil society engagement is needed for the necessary changes.

1 Description of the design, scope and effectiveness of the instrument

1.1 Design of the instrument

Forests contribute to human wellbeing by providing ecosystem services. To name only a few, forests provide wood and biomass, carbon sequestration, erosion control, biodiversity protection, clean water supply, destination for recreation. Because of the benefits of forests for the economy, environment and citizens, the state is interested in directing the management and protection of forests. This is implemented by financing the central professional forestry institution Slovenia Forest Service and subsidizing private investments into forests.

Slovenia Forest Service provides, among other services, forestry management plans and free education for forest owners. Forest owners are invited to participate in the development of plans. They are then obliged to comply with these plans and the fundamental principles of forest treatment and management, including sustainability, close-to-nature management, and multi-purpose management (multi-purpose management means a balanced mix of ecological, productive, and social functions of forests). The state introduced subsidies for forest management to the private forest owners in 1994 to help them fulfil the planned works.

Depending on the ownership and the type of forest management intervention, investments are either fully financed or co-financed. General silviculture and forest protection work,

maintenance of habitats of wild animals and rehabilitation of the forest, are merely co-financed. Fully financed are only urgent works (e.g. bark beetle protection) and works in fragile areas (<http://www.zgs.si/?id=263>).

The level of financing or co-financing depends on the type of work carried out, the scope of activity undertaken and the importance of ecological and social functions of the forest, where the activity is carried out. The specific rates are defined in the forest management plans that are available to forest owners at the local units of the Slovenian Forest Service. Table 1 gives an overview of co-financing rates for different types of work.

Table 1: An overview of the level of co-financing in private forests by the type of work

	Co-financing Rates at Introduction	Co-financing Current Rate
Silvicultural work		
Artificial regeneration	Cost of plants	20 - 40% of the cost of plants and work paid
Natural regeneration	30 - 50% of the cost of plants and work paid	30 - 50% of the cost of plants and work paid
Forest tending	20 - 50% of total cost of plants and work paid	30 - 50% of total cost of plants and work paid
Forest protection (bark beetle, fire protection):	20 - 90% of the extra costs of preventative measures	30 - 90% of the extra costs of preventative measures
Other preventative measures	30 -90% of the cost of work and material	30 -90% of the cost of work and material
Maintenance of wildlife habitats	-	50 -70% of the cost of work and material

Source: Decree on financing and co-financing investments in forests from the RS Budget (Official Gazette RS, no. 58/94)

Source: Rules on financing and co-financing investments in forests (Official Gazette RS, no. [71/04](#)):

1.2 Drivers and barriers of the instrument

After Slovenian independence in 1991, a reorganization of the Slovenian forestry took place. Forestry experts wanted to ensure professional and sustainable forestry regardless of forest ownership. The owners, on the other hand, demanded the right to manage their forests. With private properties as small as 2.6 hectares on average per owner, allowing so many private owners to manage their forest on their own would mean an end to sustainably managed forests. But the forestry experts managed to negotiate a continuation of it through the establishment of Slovenia Forest Service and its right to develop forest management plans together with the owners. In 1993 the Forest Act was passed. Table 2 shows some of the key changes that the Forest Act brought to the private forest management. Private owners got the obligation to manage their forests and in 1994 the instrument of financing and co-financing of investment in forests was introduced to help private forest owners properly manage their forests.

Table 2: The key elements of forest management and funding before and after 1993

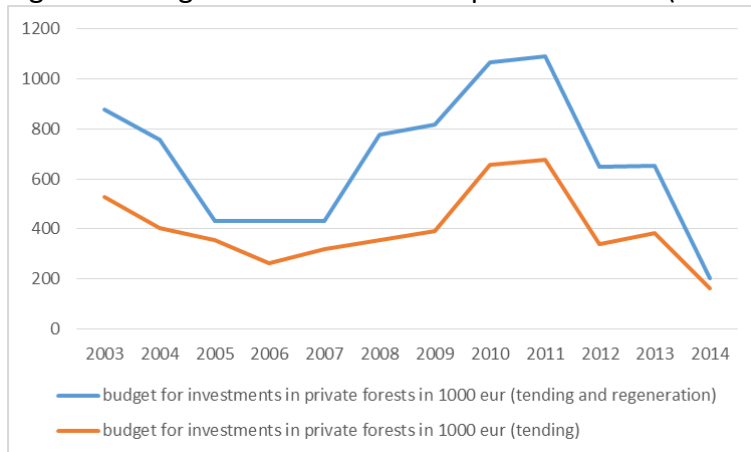
	Before the Forest Act in 1993	After the Forest Act in 1993, Rules on financing and co-financing investments in forests
What is the source of funds for private forest management?	<p>Fund dedicated to forest management</p> <p>The difference between the purchase and sale price of timber was around 30%. The difference in price was earmarked for the management of private forests. A part of these funds was dedicated to 'biological amortization' - tending and protection works in private forests.</p>	<p>General budget and the European Agricultural Fund for Rural Development</p> <p>The Forest Act in Article 48 stipulates that the funds for investment in forests are provided on a basis of a Program of investments in forests. The latter is prepared by the Slovenia Forest Service on a basis of the National forest program.</p>
Are/Were the funds sufficient to fulfill the forest management plans?	Yes	No
Who is in charge to execute the work in private forests?	The State Forest Service (professional teams)	Forest owners

1.3 Revenue collection and use

When the Slovenia Forest Service receives the RS budget funds from the Ministry of Finance, it transfers them to beneficiaries within three days. These are private forest owners, their associations and tenants of private forests that carry out work in public interest consistent with the forest management plans.

According to Veselic (2016) and Grecs (2013) from the Slovenia Forest Service, the funds are not sufficient to cover all the work planned. Slovenian Forest Service annual reports provide similar information. The 2014 Annual Report states that in 2014, EUR 0.16 million was paid from the budget for investments in tending to forests. Tending works were performed over 4,477 ha, which represents only 11% of the planned works according to the forest management plans (SFS, Annual report 2014, p.5). In 2014, there was a large proportion of forest damaged in natural disaster caused by ice rain. Already modest funds that were planned for private forest tending were cut and used for the intensification of work on the rehabilitation of damaged forests. Figure 1 shows the resources for investments in forests from 2003 to 2014.

Figure 1: Budget for investments in private forests (in 1000 EUR) by year

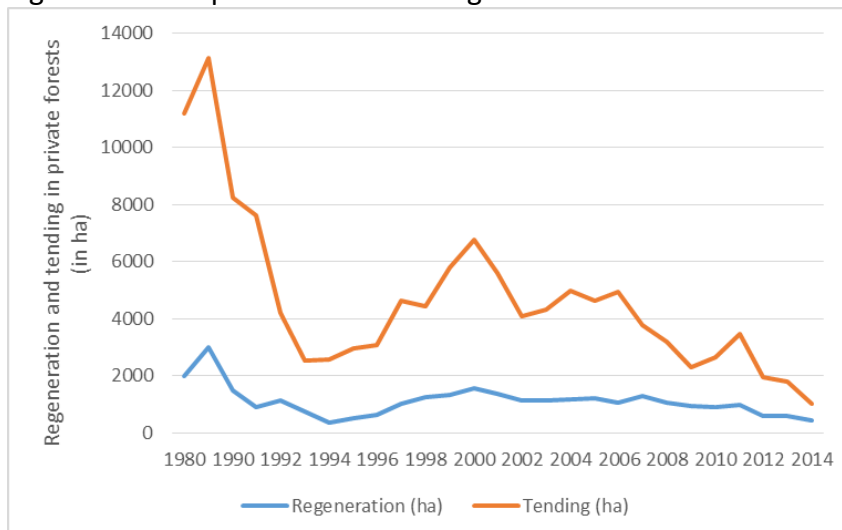


Source: Slovenia Forest Service annual reports 2004 - 2014

1.4 Environmental impacts and effectiveness

Figure 2 shows a silviculture (tending and regeneration) work in the private forests in ha from 1980 to 2014. Before 1993 (when the new Forest Act came into force), there were enough funds (earmarked) available from 'biological amortization' (see 1.2) to cover the planned work. After 1993, however, when the new system of financing took place, there is a clear fall in performance, which means that the instrument is not effective. There are two main reasons: 1. the state has failed to provide enough funds from the state budget to cover the planned work (Veselic, 2016; Grecs, 2013), 2. Many of the private owners are incapable or not interested to perform the work (before 1993 all work was done by professional teams of State Forest Service) (Grecs, 2013; SFS Annual report 2014, p. 6).

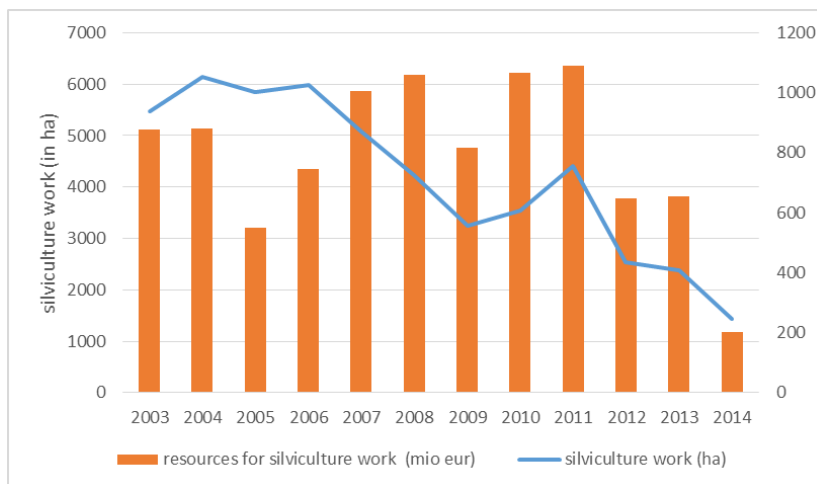
Figure 2: Fall in private forest management after 1993



Source: SURS (<http://www.stat.si>), Krc et al., 2015

In the last decade, the realization of works in private forests is in close conjunction with the available funds. Figure 3 shows the tending and regeneration work performed in private forests in relation to the approved funds.

Figure 3: Silviculture work in private forests and resources from 2003 to 2014



Source: Slovenia Forest Service annual reports 2004 - 2014

Some of the private forest owners are not willing to execute the planned work. It is not clear whether that is a result of poor knowledge, indifference regarding the state of their forest, or whether the share of co-financing (usually 30-40% for the silvicultural work) is too low for them. On the other hand, there are 10-20% of private forest owners that would execute the planned work in their forests regardless of financing (interview Veselič, 2016). For many private owners, the share of co-financing is a good motive to exercise the work (Greccs, 2013 and interview Veselič 2016). The utilization of the approved budget for financing and co-financing investments in forests was almost 100% in the last decade.

1.5 Other impacts

There are no assessments of economic and social impacts of the subsidies for the investments in private forests. But considering that the instrument is a part of the system of sustainable forest management, it appears to be fair from an intergenerational perspective. Moreover, sustainably managed forests provide ecosystem services that go beyond the direct benefits of the respective forest owner.

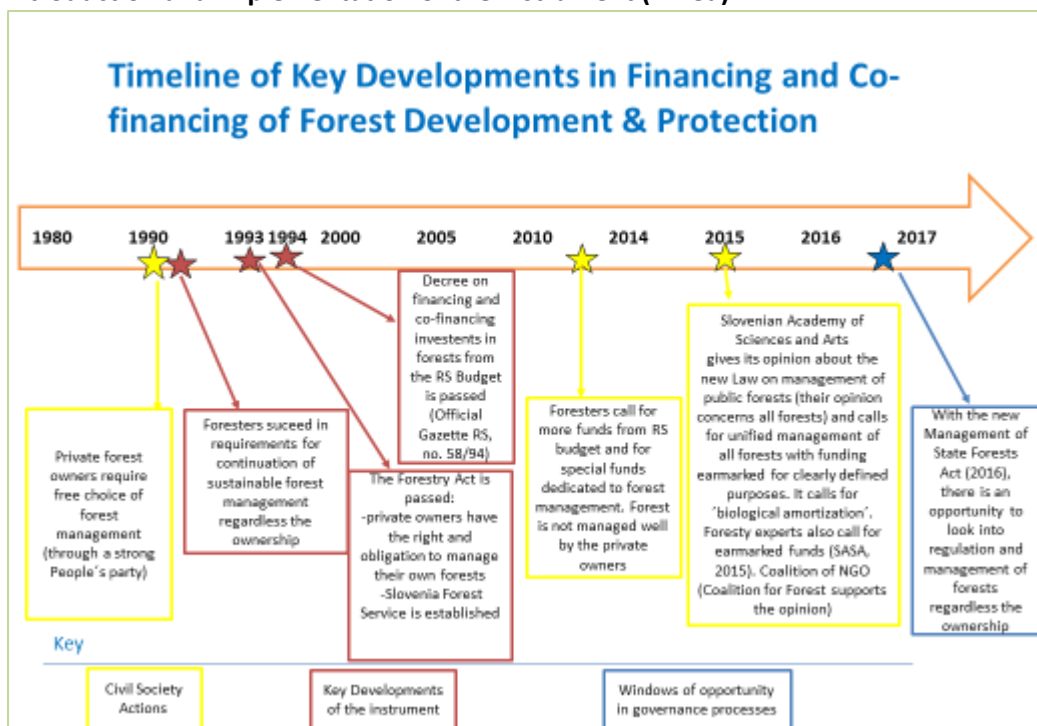
2 Stakeholder engagement

After Slovenian independence in 1991, a reorganization of the Slovenian forestry took place. The reorganization evolved over several years in which a vivid debate mainly between the forestry experts and the new government took place. Forestry experts tried to maintain well-organized, professional and sustainable forestry regardless the forest ownership. The Government, on the other hand, was more concerned with the rights to manage forests privately. Farmers, a significant group of private forest owners, had a large influence on government through the Slovenian People's Party. Private forest owners had a very negative attitude towards foresters especially due to decades of legislated mandatory sale of timber to the State. Therefore, the foresters were in an extremely hard position to negotiate other issues like maintenance of sustainable forestry and a budget for it. In 1993 the Forest Act was passed. Foresters managed to negotiate a continuation of sustainable forest management, but the way private forests are managed and how this work is financed were changed. Slovenia Forest Service was established as a professional institution in charge of forest management plans and other services. Private forest owners became in charge to carry out

the planned investments. Co-financing was provided for these investments from the state budget.

In the last decade, the funds approved from the state budget for financing and co-financing investments in forests were never sufficient. Lately, there have been some engagements from the civil society that aim for a change in the source of funding. Foresters, Slovenian Academy of Sciences and Arts and a coalition of NGOs (Coalition for Forest) all pointed to a decline in forest management in the last decade. They call the government to introduce a special fund dedicated to forest management and professionalization of works in forests. The new Management of State Forests Act (2016) was the latest trigger that mobilized the NGOs to a certain extend. In the first proposal of the new law, the profitability of the public forest management company was set as the only goal of the company. The NGOs complained and demanded priority for other goals like sustainably managed forests. This was also an opportunity for them to comment on poor funding available for forest management and proposed 'biological amortization' as a suitable way of funding. It basically means a dedicated fund that would provide enough funds for tending, protection and regeneration of forests.

Schematic view of the involvement of civil society (in yellow) and policy-makers (in blue) in the introduction and implementation of the instrument (in red)



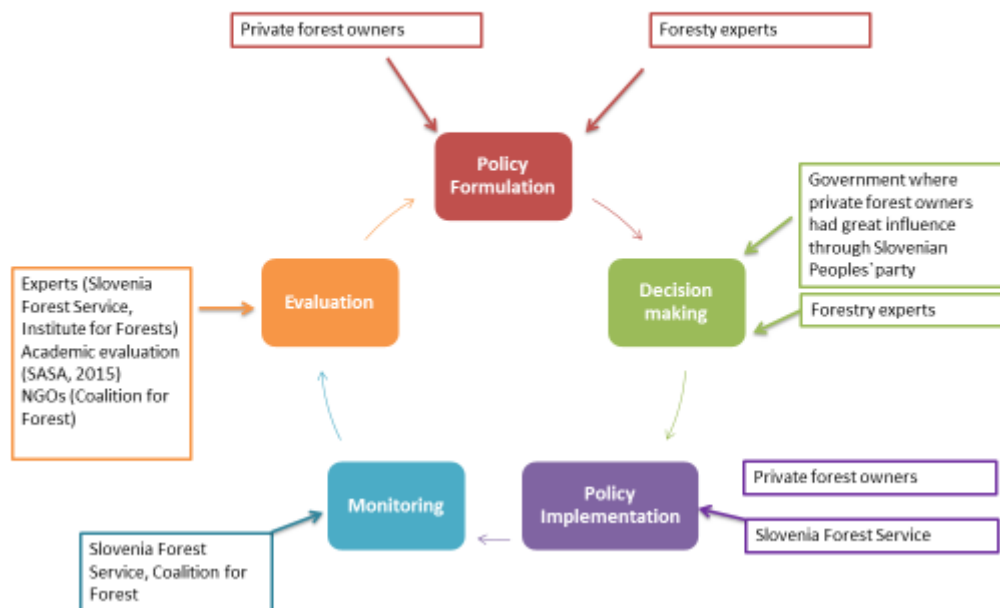
3 Windows of opportunity

The instrument Financing and co-financing investments in private forests in Slovenia was introduced after the Forest Act was passed and changes were made to forest management system and its funding . The main actors in forest management negotiations were private forest owners and forestry experts. The government decision was heavily influenced by Peoples' party that put forward the private owners' interests. But the experts managed to negotiate sustainable forestry regardless the ownership of forests. Slovenia Forest Service

was established and its experts were able to implement the sustainable strategy in public forests and partly in private forests. Slovenia Forest Service provides besides management plans, education and certain works to the owners also monitoring of investments in forests and the funds used. Evaluation of investments in forests is also done by Slovenia Forest Service and the coalition of NGOs (Coalition for Forest). In 2016, the new Management of State Forests Act was passed. The forestry experts, academia and NGOs used the opportunity to comment on declining forest management. Academy of Sciences and Arts was the only representative of the civil society that demands sufficient funding for forest management in future and a dedicated fund for investments into forests.

Schematic overview of windows of opportunity throughout the policy cycle of Financing and co-financing investments in private forests in Slovenia

Civil society engagement with the instrument



4 Insights into future potential/reform

4.1 Actual Planned reforms and stakeholder engagement

There are no actual planned reforms in private forest management. There are comments on declining forest management coming from the civil society and some suggestions for better funding from the experts (Greccs, 2013) and academia (SASA, 2015), but there is no substantial civil society engagement. Government has failed to propose changes to the private forest management.

4.2 Suggestions for future reforms – instrument design and civil society engagement

The instrument of financing and co-financing Investments in private forests seem to be designed well to the point where the private forest owners have an interest to manage their forests. Where the owners have no interest, the investments are missing. They are also missing where there is an interest, but no funding. Therefore, the instrument should be complemented with professionalization of works and a special fund for private forest investments.

In cases, where the planned work was not done, the professionals would take over, the costs would be covered from the fund up to the co-financing part and the rest would be charged to the owners. Another possibility is to professionalize all the necessary works in all forests and finance them from the dedicated fund. Only merely recommended works would be co-financed in such case (Greccs, 2013).

Experts at the Slovenian Forestry Institute (interview Veselič, Rantaša), Slovenian Forest Service (Greccs, 2013), academics (SASA, 2015), NGOs (Coalition for Forest) state the lack of funds provided from the RS budget as the biggest obstacle to investments in private forests. For a successful implementation of the co-financing instrument an adequate, stable and permanent source of funds is needed. Funding should be earmarked for specific works in forest development and protection.

Greccs (2013) proposes environmental taxes as an important source of financing, because of the benefits of the forest for the environment. Forest provides carbon sequestration, therefore a share of CO₂ and motor vehicle tax could be earmarked for the forest management. It also provides a clear water, which is a good reason to earmark a part of the collected funds from the Environmental tax for wastewater collection and treatment, Water reimbursement fee and Payment for water rights. He also suggests tax relief¹ for investments in sustainable forest management as an encouragement for better forest management.

A good source of funding could be a Climate Change Fund that receives revenue from the sale of emission allowances to airlines in the public auction.

In 2015, revenues from the sale of emission allowances were EUR 24.4 million. In 2016, there will be 3, 2 million tons of CO₂ on the auction, which means 19, 2 million euro at the average price of 5 euro/ton of CO₂ (Climate Change Funding Programme for 2016). Climate Change Fund decides every year on the use of resources and decisions are close to random. At the average price of 5 euro/ton of CO₂, funds to cover the financing and co-financing in private forests would be more than sufficient. However, it would not be a stable source of financing due to a fluctuating price of CO₂ allowances and amount of CO₂ offered on auction by the state.

¹ An amendment of the Income Tax Act in 2010 changed the method of taxation of funds received for investment in forests. Half of the funds received for investment in forests are taxable. Only funds for tending and protection works carried out in forests are included in the tax base. Other financed and co-financed work is exempt from taxation.

(www.zgs.si, Personal Income Tax Act: Official Gazette RS, no. 13/11)

There are only four environmental fees that are earmarked in Slovenia: Environmental fee on landfilling with scrap motor vehicles, Environmental fee on the use of lubricating oils and fluids, Environmental fee for wastewater collection and treatment and Water reimbursement fee. All others have no earmarking. There is a need for a better system of environmental taxation and there is a space for earmarking to provide assets to properly manage Slovenian greatest wealth – its forests.

4.3 Suggestions for replicability

In Slovenia, the average private forest property is very small; every fourth Slovenian is a forest owner. The instrument demands an engagement of the owners into forest management, which is not reasonable to expect from all the owners at such a large number of them. In countries where private forest properties are relatively larger and the number of owners is relatively smaller, the co-financing of investments in private forests could have better prospects. To be replicated in another county, instrument would need to be complemented with professional works where needed and a special fund for forest investments. Moreover, a professional unit like Slovenia Forest Service that follows the principles of sustainable forestry is needed to provide the guidance and plans for forest management.

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ⁱ This case study was prepared as part of the study 'Capacity building, programmatic development and communication in the field of environmental taxation and budgetary reform', carried out for DG Environment of the European Commission during 2016-2017 (European Commission Service Contract No 07.027729/2015/718767/SER/ENV.F.1) and led by the Institute for European Environmental Policy (www.ieep.eu). This manuscript was completed in December 2016.