

LATVIAN NATIONAL REPORT REGARDING APPLICATION OF PAYMENTS FOR ECOSYSTEM SERVICES

Introduction

This report contains information about the Latvian experience in the application of the measures that contribute to efficient use of natural resources and integrate natural ecosystems in water management. Water Framework Directive and one of its core elements - economic analysis - triggered discussion about economic value of natural resources and ecosystems, especially, water resources and aquatic ecosystems. Meanwhile, the process has just been started. Methods for assessment of environmental costs and similar issues were analysed by some projects and few experts. However, introduction of schemes of payments for ecosystem services is not a near-future priority. Firstly, Latvia is rich in forests and wetlands, has plenty of water resources of rather good quality; our geographical and climatic conditions do not cause severe floods and draughts. Therefore willingness to pay would be rather low. Secondly, sustainable use of forests, wetlands and soils as well as their protection against pollution is widely regulated by legislative, administrative and other instruments, which potential is not fully used yet. Therefore we cannot provide information about mechanisms similar to those described in the letter from Swiss Agency for the Environment, Forests and Landscape of 6 July 2005 and in the background document "*Water-related ecosystems for water management: Environmental services and financing for the protection and sustainable use of ecosystems*". However, we would like to share our experience that might be relevant and which help our country to promote efficient use of natural resources and protect wetlands and water bodies.

I Background information: Latvian specifics that determine application of economic instruments related to ecosystem services

0) General information

Total area: 64 589 km², including 62 046 km² of mainland and 2543 km² of inland waters.

Population: 2,3 million (2005).

Border Length: 1862 km, including 343 km with Estonia, 282 km with Russia, 167 km with Byelorussia and 576 km with Lithuania. The length of the coastline: 494 km.

Average Height: 87 m above sea level. 57% of the territory falls in the range < 100 m above sea level, 40,5 % of the territory: 100 – 200 m above sea level and 2,5% of the territory is higher 200 m above sea level. The Highest Point of Latvia is Gaiziņkalns: 311,6 m above sea level.

Climate: cold temperate, the rate of precipitation exceeds the rate of evaporation.

1) Plentiful water resources of rather good quality

Latvia has a wide and dense surface waters network. Lakes, rivers, channels, and artificial reservoirs cover ~ 3,9% of the territory of Latvia. There are more than 3000 lakes and about 12 400 rivers (most of them small, i.e. less than 10 km in length). The riverine network is rather dense: 0.39 km/km² on average. These numerous rivers and lakes belong to 9 main catchment areas. As it won't be reasonable to establish so many river basin districts (required by Water Framework Directive) in relatively small country, only 4 river basin districts were identified.

Total natural resources of fresh groundwater are approximately 1 400 000 m³ per day, 4 times higher than current abstraction rate and 1,5 higher than the maximum abstraction rate (accounted for in 1989). Distribution of fresh groundwater suitable for the production of drinking water is uneven all over Latvia, still there are no shortages of water supply.

Water quality in small rivers according to the biological indicator – saprobiological quality of rivers - is the following: 22.6% of small rivers belong to clean to slightly polluted quality class, but 2/3 of rivers are slightly polluted. Groundwater pollution is generally local and connected with urban areas, industrial zones and similar point sources.

2) High impact of transboundary pollution

Latvia is a downstream country: only 44 % of the total annual runoff of Latvian rivers (34,7 km³) originates in our territory. 56 % of the total runoff originates in Lithuania, Byelorussia and Russia. This causes transfer of pollution to our country and increases risk to human health and the environment. This is the reason why transboundary pollution is declared a priority problem in the environmental policy documents.

3) Large territories covered by forests and wetlands

Latvia is rich in forests and wetlands. Forests cover 45% of the Latvian territory (2 923 188 ha). It is significantly more than the European average: 33% of surface area. Almost 4,9% of the Latvian territory is covered by bogs. Agricultural land comprises 38% of the total area.

4) Low population density and low intensity of anthropogenic activities

A very low population density is also typical in Latvia. Population density is very uneven: 36 persons/ km² on the average, but there are large areas where population density is only 0 – 10 persons/ km². In 8 administrative districts an average population density is lower than 15 persons per 1 km². Population density exceeds the state average in only 1 out of 26 administrative districts (Riga district). Besides 1,58 million or 68% of Latvian population lives in urban areas, while only 0,75 million or 32% in rural areas. Therefore pressures caused by anthropogenic activities are much lower than in Central and Western European countries.

5) Long traditions of command and control approach

Economic activities were traditionally regulated by means of restrictions, limits, penalties etc. Development and application of economic and fiscal instruments commenced only after transition to market economy in the 1990s. Therefore relevant experience is limited in scope and time of application.

II Mechanisms used in Latvia

1) Natural Resources Tax

This tax was introduced in 1996. It is a tool for recovery of the environmental and resource costs. The aims of this tax are the following:

- To promote efficient use of natural resources;
- To limit pollution of the environment;
- To reduce manufacturing and sale of polluting products and/ or substances;
- To promote application of new, environmentally friendly technologies;
- To support sustainable development;
- To create a financial basis for environmental protection measures.

Individuals and legal entities shall pay the tax for:

- Extraction and use of taxable natural resources (soil, sand, gravel, clay, rocks, gypsite, limestone, dolomite, peat, sapropelite, medicinal mud, **surface water and groundwater**);
- Emission of polluting substances into **water**, air (including greenhouse gasses), soil;
- Use of the entrails of the Earth, for instance, for gas storage;
- Waste disposal and incineration;
- Environmentally hazardous goods (lubricants, tyres, batteries, ozone depleting substances, oil filters, Mercury bulbs);
- Packaging of goods;
- Disposable cups, plates, forks and similar goods;
- Use of radioactive substances;
- End-of-life vehicles.

The tax rates differ for various natural resources, polluting substances and hazardous goods, depending on their characteristics. There are also tax exemptions (for instance, background pollution is not taxable). All individuals and legal entities shall receive a permit (authorisation) for the activity, involving taxable natural resources, pollutants or hazardous goods. The amount of the tax is calculated on the basis of data about real extraction of natural resources, pollution emitted etc. The methodology for calculation is described in the Law and governmental regulations.

With regards to extraction of water and water pollution: 40% of the tax goes to the State budget, but 60% - to the environmental protection budget of that local authority, where extraction and use of water resources or emissions take place. The tax revenues shall be used to fund projects and measures, which are associated with environmental protection, preservation of biological diversity, monitoring of the environment, waste management, and research or renewal of natural resources. In 2003, the total tax income for water abstraction was 1,8 million Euro, but for water pollution 1,19 million Euro.

2) Protective belts

Protective belts are areas (zones), which protect natural and human-made objects from undesirable external effects, ensure their exploitation and safety or protect the environment and humans from harmful effects of some object. Current system of Latvian protective belts has been established in the late 1990s, however, it originates from the Soviet times, when similar belts were established along a coastline and all watercourses above 10 km in length.

With regards to water protection, the following protective belts are established in Latvia:

- 1) Baltic Sea and Riga Gulf coastal protective belt. Its purposes are to decrease pollution of the Baltic Sea, to preserve forests along the coastline and their natural functions, to prevent soil erosion, to protect coastal landscapes, and to ensure conservation of coastal resources;
- 2) Surface water body protective belts are established for the following purposes: to decrease pollution of the aquatic environment, to prevent erosion, to restrict economic activity in the territories, which are periodically flooded, as well as to preserve characteristic landscapes. The size of the protective belt depends on the river length or surface area of lake;
- 3) Protective belts around water abstraction points are established to ensure the protection and renewal of water resources; to reduce or eliminate pollution of water abstracted for consumption during the period while well is in operation (at least 25 years);
- 4) Protective belts around bogs are established to preserve biological diversity and to stabilise water regime in the transition zone between the forest and the bog. The size of the protective belt depends on the total area of the bog.

Latvian legislation (laws, governmental regulations and binding rules of local governments) lays down general conditions and specific restrictions to be obeyed in the protective belts, as well as precise methodology for their establishment. General conditions determine accessibility of the objects within particular protective belt. Examples of specific restrictions within protective belts around water bodies are the following: it is prohibited to place there storage facilities for forage, mineral fertilisers, plant protection products, fuel, hazardous chemical substances or chemical products, waste disposal sites and waste dumps. It is also prohibited to perform clear-cut in 50 metres wide zones. It is prohibited to construct buildings in the territories, where flooding may occur at least once in a hundred years, etc.

Generally, the abovementioned protective belts shall be maintained in order by the landowner at his own expense, if it is not otherwise provided for in the legislation. Public authorities, local governments and owners of the relevant objects control the status of protective belts and enforcement of legislation. Fines and penalties apply if some of legal requirements are breached.

2) Good agricultural practice and Agri-environmental measures

During the Soviet times, agriculture was a significant source of water pollution. Latvian agriculture was even included in the list of hot spots (serious pollution sources) of the Helsinki Convention in 1992. However, due to economic changes in the 1990s and Latvian decision to apply for the EU membership situation has significantly improved. Soviet collective farming system collapsed. Now we have rather extensive agricultural production with limited number of large-scale producers. The evidence of the improved situation is removal of Latvian agriculture from the Helsinki Convention hot-spots list.

However, diffuse pollution, especially nutrients, still has significant impact on water status in 3 main river basin districts. Implementation of the EU Nitrates Directive 91/ 676/EEC and application of good agricultural practise, as well as participation in the EU Agri-environmental measures are the main measures applied today. As they are operated for a very short period only, more time is needed to learn about the effects of these measures and about the need for additional economic instruments.

III Questions and needs regarding schemes of payments for ecosystem services

Initial economic analysis carried out in 2004 – early-2005 for the purposes of the Water Framework Directive prove, that there is a huge need for learning about methods, models, schemes etc. suitable for assessment of environmental costs, cost-benefit analysis, valuation and quantification of ecosystem services, assessment of social aspects related to these costs and services etc. We have just a few experts working with these topics and also they need further guidance and assistance from more experienced specialists.

We would be happy to learn about the practical experience in the application of such payment schemes, especially, about the most efficient instruments, their advantages and constraints, rising of public awareness, ensuring of sustainability of such schemes.

As already mentioned, transboundary pollution is a major concern in Latvia. Therefore we would like to learn, whether such economic instruments have been applied in the international

context and, if yes, how successful they were. The matter of our special interest is mechanisms and schemes used for co-operation with the non-EU countries.

As Water Framework Directive has a great impact on water management countries, it would be very useful to discuss the links between schemes of payments for ecosystem services and river basin management plans and programmes of measures.