



Report

Cost-benefit analysis case study visit: Turku

Time: 26 November 2013

Place: Turku, Finland

The establishment of agricultural buffer zones to prevent nutrients from entering water bodies is one of the five case studies in the CITYWATER cost-benefit analysis study. In the visit participated project expert **Ms. Eliisa Puntila** from the City of Helsinki.

The visit to Turku was made to learn more about the land leasing of the city and the buffer zones in established on rent fields. The City of Turku owns agricultural land and rents it to local farmers, and has included a special condition of establishing buffer zones to the river-by fields in the rent contracts from 2005. The agricultural case study of buffer zones includes two rent fields by rivers in Turku. One is located by river Aurajoki and the buffer zone was established in 2000, and the other by river Vähäjoki and it was established in 2013. The buffer zones prevent erosion and nutrient leaching into the river water from the cultivated field.

The visit consisted of meeting at Turku Municipal Property Corporation office, lunch and visit on the site to see the buffer zones. The meeting was attended by farm inspector **Mr. Timo Sirkiä**, who is responsible for the renting of the city owned fields, farmers **Mr. Ilkka Savolainen** and **Mr. Saku Kirstilä** (Picture 1), as well as environmental director **Mr. Olli-Pekka Mäki** and project coordinator **Ms. Anna Räisänen**. In the meeting the Life+ financed CITYWATER project and the CBA study were introduced to the attendees. The presentation were followed by discussion, which considered mainly the potential impacts on farmers profitability and what costs and benefits are relevant in their cases, for example the utilization of the hay in feeding the cattle or in bio-energy production, the rent price of the buffer zone area compared to the cultivated area under the special condition and the agricultural subsidies.



Picture 1. From the left farmers Mr. Ilkka Savolainen and Mr. Saku Kirstilä and Mr. Timo Sirkiä from the City of Turku

After the lunch the visit continued with tour in the fields. At first we went to see the case field by the river Aurajoki (Picture 2). The buffer zone was 50-85 metre wide, covering the entire slope part of the field by the river side and about fourth of the total field area. A part of the buffer zone area functioned a few decades ago as a research area where runoff experiments were performed. There were couple of silage bales in the field, made by a local cattle farmer. The farmer who rents the field allows the cattle farmer to utilize the hay grown in the buffer zone for free of charge, which at the same time reduces the required management work for farmer.



Picture 2. The case field by the river Aurajoki has 50-85 metres wide buffer zone

Then we went to see the buffer zone on the case field by the river Vähäjoki (Picture 3), a smaller water course flowing to the river Aurajoki. The buffer zone was established in the spring, so it was

rather new. It was not yet completely vegetated, because the seeds were not properly germinated due to the drought. The establishment will be repeated in the next spring. The width of the buffer zone covered about a third of the width of the slope, and the area of the buffer zone covered about the fifth of the total field area. The grade of the slope was much higher than in the other case field.



Picture 3. The case field by the river Vähäjoki has recently established approximately 20 metre wide buffer zone

Text and photos: Eliisa Punttila