

## Danish reforestation project - Odense

### Location

**Country:** Denmark

**Scale:** local

**Region:** Odense

### Compensated /improved ecosystem services

Protection of groundwater quality and quantity

### Management

A PES scheme is based on the state policy to double the country's forest area within a sixty to hundred years' time period. In this case, public water companies have entered into a contract with public land owners (the Danish state and local municipalities) who change their forest management practices, or engage in large scale afforestation projects in watershed areas so that they preserve water quality. One such afforestation project has been initiated, for example, in 2001 near Odense, Denmark's third largest city. The Danish Forest and Nature Agency has cooperated with Odense municipality and the local waterworks to establish more than 2.000 hectares of new forest close to Odense. This new forest shall strengthen the recreational possibilities as well as protect the important drinking water resources located in this area.

The time frame of these agreement is 30 years, since groundwater abstraction licenses usually run for the same period of time. As the licenses can be extended, the financial agreements can also be extended. In general, a periodical review of the contracts is carried out every 5 years.

### Stakeholders

#### **Sellers or service providers:**

- The Danish state and the local municipalities which provide this service through their public forests

#### **Buyers and beneficiaries of services:**

- Private water consumers who pay a levy and thus buy the environmental service of water purification

#### **Intermediaries:**

- The water supply companies or waterworks corporations play the role as an intermediary working together with the state and the local municipalities in order to develop and implement afforestation plans

### Timeline

**Establishment year:** 2001

**Time horizon:** long term

**Status of PES:** active scheme

### **Availability of economic data**

Within the scheme between the waterworks company and the state about € 2 million per year is paid to buy agricultural land and start afforestation. The farm land can be bought at around € 10-15 per hectare and afforestation costs may be another € 5.000. For changing the diversity of existing forests, up to € 100 per hectare has been paid to forest owners, depending on the particular contract. In order to fund these activities, based on the Water Supply Act a levy on the water price is charged to the water consumers. The money raised is dedicated to and invested in afforestation projects with the state and municipalities implementing them in public forests.

### **References / Source of information**

C. Van Ham, G. Jansse, and M. Gaworska. 2009. Final report study on the Economic value of groundwater and biodiversity in European forests. 90 p.  
[http://ec.europa.eu/environment/forests/pdf/grounwater\\_report.pdf](http://ec.europa.eu/environment/forests/pdf/grounwater_report.pdf)