

Double green energy from traditional coppice stands in The Netherlands

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Traditional oak and ash coppices used to provide numerous useful products, including bark for tanneries and fire wood for bakeries. When these markets disappeared, most of the coppice stands have been replaced by high forests, at the costs of the specific natural values which coppices do provide. The emerging renewable energy market could create a new outlet for the woody biomass from coppices. The project's aim was to set up and demonstrate the validity of a "double green" supply chain, including the harvest, logistics, cominution and delivery of the coppice biomass at the gate of a power plant. Double green refers to the green energy generated but also to the positive ecological effects when coppice management is restored to a regular cutting cycle. A new Dutch subsidy program makes it the more appealing for forest owners to put their woodlands back into a coppice management regime. A number of practical problems related to harvesting and logistics still remains to be solved.

History

By the end of the last century coppice management in The Netherlands included almost all woodlands (260,000 ha). It's economic viability, however, quickly declined and many coppices have been replaced by high forests of by arable land. Early 1980s the total area of coppiced woodlands amounted less than 3,000 ha. The present area of actively managed coppice woodlands in The Netherlands is 1500 ha only. Nevertheless, this limited area is considered very important for the unique nature conservation and cultural values it represents. The coppice stubs (or 'stools') greatly vary in size, age, form and vitality. They house a number of rare species such as mosses, epiphytes, fungi and insects. At a landscape level coppice stands may contribute significantly to the overall biodiversity, provide shelter to wildlife and game and form an extended interior woodland edge, with corresponding plant and bird communities. Especially ash coppices are highly appreciated by nature conservation groups. To maintain their unique characteristics, these woodland must be exposed to a regular cutting cycle. However, coppicing is a labour intensive management system, which very few forest owners are willing to pay.

New subsidy program

The Dutch government has realised the value of coppice stands, and has offered a generous payment scheme to reform woodlands back to coppice and to manage them accordingly. To be eligible for a grant 60% percent of the area shout be occupied by coppice stools older than 25 years. The amount of the annual payment is related to the tree species: oak coppice yields US\$ 200,-/ha; ash coppice is worth US\$ 1000,-/ha. These amount correspond with the practical management costs, the wetter woodland being more difficult to exploit.

Biomass supply chain

The deployment of bioenergy may provide an outlet to the biomass which coppice stands produce. A pilot study was done to set up and demonstrate the validity of a new supply chain, which includes the harvest and logistics of the coppiced biomass to a power plant, in the form of wood chips. Many forest owners are keen to this possibility, allowing them to receive the government payment and to get rid of the harvested material at the same time. For the emerging renewable energy market, this sympathetic resource of biomass can be used as a marketing and PR tool in their communications with private customers of green power, under the slogan: "Double green energy from coppiced woodlands". They are even willing to pay a little extra for this particular steam of biomass, provided that a sufficiently large volume can be contracted on an annual basis. The pilot project's aim is to provide a common outlet and bring parties together. Information brochures and a handbook will be issued to stimulate the implementation of this supply chain and to provide practical information.