

Frameworks and Mechanisms for New Markets for Biodiversity Products and Services

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Biodiversity is, among other reasons, declining worldwide because our global economy hardly accounts for all the services and products it provides. In order to halt global biodiversity loss Non-Governmental Organizations (NGOs), governments, civil society groups and private companies are therefore not only focusing on direct regulation anymore, but increasingly on the potential market value of biodiversity. A concept that has received considerable attention in the past decade is *payments for ecosystem services* (PES) and subsequent *markets for ecosystem services*. By having beneficiaries pay for the ecosystem services and products they enjoy, the necessary capital can be generated to persuade ecosystem service providers (e.g. farmers or other landowners) to conserve them. Market failure is being reduced in this way, because biodiversity is (to a certain extent) accounted for in the market.

Various mechanisms have been developed in the Netherlands that captures the PES notion to a certain extent. Some of them are shortly highlighted below:

- ❖ First of all, the Dutch Government announced a plan in 1990 to halt the loss of biodiversity: the National Ecological Network. This plan aims to improve the quality of Dutch flora and fauna by increasing the area under nature from 460,000 ha (in 1990) to 730,000 ha (in 2018). In order to achieve this goal, the government is not only buying up land and converting it back to nature, but has also developed a financial system to encourage farmers and other private landowners to transform their land use in favor of nature conservation in exchange for a payment. In effect these payments represent a major subsidy (or public PES) scheme. The beneficiaries in this case are the Dutch community, who will be able to live in a greener environment with more possibilities to recreate and enjoy nature. The service providers in this case are Dutch farmers and other landowners who are switching their land use in favor of nature development. Total anticipated budget between 2007 – 2013 is € 3.2 billion. The Dutch Fund for Nature Development (DFND) acts as cash manager, streamlining these payments, and as investor, providing loans to private landowners.
- ❖ A totally different kind of mechanism in terms of scale and nature concerns the *Forest Certificates Fund*, operated by the Dutch Fund for Nature Development. It is a mechanism to stimulate afforestation. A one-time payment of €4000/ha is provided to landowners who switch their land use in favor of sustainable forestry. In exchange the DFND receives the right

to sell the CO₂-credits for a period of 50 years. The organization is currently in the process of developing the product that is going to be sold on the (Dutch) *voluntary* carbon market.

- ❖ A third mechanism, which is worthwhile to highlight concerns a *green fiscal policy* by the Dutch government to stimulate private investors to invest in so-called *green investment funds*. Projects like wind and solar energy, ecological greenhouses, and nature development can receive a 'green certificate', which enables these projects access to low interest loans from green investment funds. The funds are managed by commercial banks like ABN AMRO, Rabobank and Fortis. Expected investment return for private investors lies in the range of 2%. In addition private investors receive tax exempt on their income and wealth tax up to 2.5%. Total profits therefore lie in the range of 4.5%. Total invested capital in green investment funds totals € 800 million, of which € 40 million was project category 'forestry, nature and landscape'.
- ❖ A third product which the DFND offers to its clients is a low interest loan for firm relocation away from sensitive nature areas. Such a low interest loan is being offered as part of a bigger loan from a commercial bank (with a market interest rate) to better stimulate firm relocation.
- ❖ A last financial mechanism that I like to highlight is the concept 'Red-for-Green'. The idea behind this mechanism is that housing ('red') has to pay for nature development ('green'). In practice this means that part of the revenue from the sale of houses will be used to finance nature.

As one can see, the financial products and mechanisms that are highlighted above are very different in terms of scale, nature, and development phase. However they do point to the fact that the possibilities to develop markets for biodiversity are quite extensive. Something to keep in mind though is that although certain of these schemes are focused on the private sector (e.g. Forest Certificates Fund) the government often plays a crucial role by creating the favorable conditions for these markets to flourish, such as start-up capital or new rules and regulations.