

Afforestation in the Baltic Sea Region – Experience, Current Activities and Future Trends

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Some months ago, on October 2-3 in Vilnius, Lithuania there was held the first international conference on afforestation in the Baltic States. The conference was organized by the **Ministry of Environment of the Republic of Lithuania and Lithuanian/Danish Project "Afforestation of Abandoned Agricultural Land Based on Sustainable Land Use Planning and Environmentally Sound Forest Management"**. As can be seen from the title – "Afforestation in the Baltic Sea Region – Experience, Current Activities, and Future Trends" – main interest of the conference was concentrated on the Baltic Sea Region, however, guests from other regions were invited as well. Main objective of the conference was to gather together all the relevant stakeholders and facilitate sharing of the thoughts and experiences among them. Awareness rising is one of the key instruments in forming a positive attitude towards afforestation of all concerned parties, which is subsequently crucial in accomplishing the actual afforestation in the field.

Presentations in the conference were held from lunch to lunch. Total number of participants exceeded 90 individuals, which consisted of politicians, forestry, environmental, and agricultural decision makers from all levels, representatives of timber processing industries, agricultural and forest land owners, scientists, NGOs, forestry practitioners and etc. The conference was opened by **Arūnas Kundrotas** - Minister of Environment of the Republic of Lithuania. Press conference, which took part during the first coffee break, besides the minister, was also attended by **Prof. Albertas Vasiliauskas**, Vice Minister of Environment, Lithuania; **Dr. Valdas Vaičiūnas**, Director of Department of Forests and Protected Areas under the Ministry of Environment, Lithuania; **Janis Birgells**, Director of the Department of Forest Policy and Strategy, Latvian Ministry of Agriculture; and **Andres Talijarv**, Director General of the Forest Department, Estonian Ministry of Environment.

Global role of afforestation

Presentations were divided into two separate sections. During the first part of the conference global role of afforestation was discussed. Keynote speaker – **Dr. Per Angelstam** from Swedish Agricultural University and World Wide Fund for Nature International office discussed the role of afforestation in landscape ecology and green infrastructure planning. The speaker indicated that currently in developing natural resources we are obliged to combine production and social needs with environmental considerations. Maintenance of sustainable ecosystems in managed landscapes requires conservation of biological diversity. The process of sustainable development encompasses the whole set of thresholds, beyond which survival of individual species and their communities becomes endangered. Landscape fragmentation, area, size and shape of individual habitats and forest patches are all important factors, the quantitative and qualitative indicators of which play a

crucial role in maintenance of species diversity. In the circumstances, when human utilization of natural resources has not exceeded the threshold values of the above factors, **conservation** of existing landscape elements is a proper solution. However, in some cases, due to the long history of human use of natural resources, overexploitation took place and threshold values were exceeded. In those circumstances the only possible solution for conservation of biological diversity and sustainable development in general is **restoration** of lost habitats and landscape patterns on a larger scale. This is, according to the speaker, when afforestation becomes a very important instrument. While afforesting abandoned or marginal agricultural land we can establish corridors and increase forest connectivity in the landscapes, change the size and shape of forest patches or restore lacking habitats of specific tree species and their mixture.

Unfortunately, the above activities of re-designing the landscapes require enormous financial resources. However, in the conditions of market economy, everyone realizes that money must be earned before it is spent. In sustainable forest development all aspects – economic, environmental and social - must be equally treated. Therefore, also in discussing afforestation possibilities we should consider costs and benefits of this activity and potential return to the investment. **Jim B. Carle**, Senior forestry officer from Forestry Department of Food and Agriculture Organisation discussed the status and trends in global **forest plantation development**. The speaker indicated that although accounting only for 5% of global forest cover, forest plantations were estimated in the year 2000 to supply about 35% of global roundwood. This figure is anticipated to increase up to 44% by 2020. In some countries forest plantation production already contributes the majority of industrial wood supply. As continuing discussions on economic aspects of afforestation process, **Inesis Kiriķis**, World Bank Senior Environmental specialist, presented on the engagement of the World Bank in the process of **CO₂ sequestration**. As a multilateral development agency, the World Bank is committed to improvement of environmental conditions in its member countries. Assisting the borrower countries in implementing of the United Nations Framework Convention on Climate Change and its Kyoto protocol is one of the challenges in achieving that goal. There exist several avenues for financing the projects resulting in reduction of greenhouse gases: 1) Regular lending; 2) Global Environment Facility (GEF) assisted; and 3) Prototype Carbon Fund (PCF) assisted projects. The PCF is willing to support projects designed to produce emission reductions fully consistent with the Kyoto Protocol and the emerging framework for Joint Implementation (JI) and the Clean Development Mechanism (CDM). The major emphasis, according to the speaker, will be placed on renewable energy and energy efficiency projects, which have a great potential for replication and for reducing climate change at a reasonable cost. **Louise Aukland**, Forestry Programme Co-ordinator at EcoSecurities Ltd., England, complemented to the preceding present-

tation and described the **carbon project cycle**, detailing what project developers need to do in order to benefit from this newly emerging market. The presentation was illustrated with a number of case studies of carbon forestry projects worldwide. Another important source to become familiar with for those interested in afforestation, according to **John Phelan** from Woodland Managers Limited, Ireland, is European Union funds. To the large extent thanks to the EU financial support schemes for afforestation, forest cover in Ireland has increased from 2% in 1945 to currently 9% of the national land area. Presenting the lessons from Irish experience, the speaker stressed that at national level priorities should be clearly specified and maintained, and land policies harmonised, instead of competing with each other.

National experience in afforestation

Last presentation of the first day provided a connection with the speeches of the second part of the conference, which was closer to the field and covered information on national experiences in afforestation. John Phelan more widely discussed how Ireland benefited from EU funds, while speakers on the second day presented how afforestation was carried out using national political and economic instruments. **Karsten Raab**, Director of Danish Forestry Extension, keynote speaker for this part of the conference, discussed national **afforestation policies and incentives in Denmark**. 12 years ago it was decided in the Danish parliament to double the forest cover of the country. The target was to afforest some 4-5.000 hectares of agricultural land per year. The reasons for the above decision were, *inter alia*:

- Denmark having to import about 2/3 of its consumption of wooden products;
- Surplus in the agricultural production;
- EU-policies for setting aside agricultural land;
- Environmental benefits in form of securing e.g. clean ground water, CO₂ sequestration;
- Landscape aesthetics; and
- Creation of more "wild" nature.

Production aspects where mostly in focus at the beginning. However, now the environmental benefits are dominating, when it comes to for or against afforestation. Spatial planning for afforestation has been carried out nation wide based on generally accepted criteria resulting in establishment of three zones: 1) where afforestation is highly wanted; 2) prohibited; and 3) an intermediate zone. Subsidies and grants for private projects are determined based on the zone an actual afforestation project will take place in. Of course, as the speaker concluded, success of the afforestation scheme will in the end depend on whether private investors consider it a sound investment. Such tools as taxes, easier access to purchase agricultural land, settlement obligations and many more have not been tested in Denmark so far. **Prof. Edvardas Riepišas** reviewed the process of **afforestation of agricultural land in Lithuania**. The speaker provided some quantitative information on experience, described present activities and touched upon future plans. According to professor, there are four major problems in afforesting marginal agricultural lands in Lithuania:

- Organisational (ongoing land reform, unclear criteria for selection of potential areas for afforestation, complicated legal procedures related to afforestation, and etc.);

- Financial (unclear procedures for subsidising planting activities and maintenance of young trees);
- Technological (experience of establishing plantations using various means and methods is not sufficiently summarised, complicated procedures for protection of plantations against insects, game species, disease and competing vegetation, lack of modern equipment);
- Human capacity (lack of self-dependency and individual initiatives).

In order to overcome the above obstacles, it is crucial that the State, in the nearest future, would prepare the program for increasing national forest cover. This program should list means and measures for transforming agricultural to forest land, and subsequently – possibilities for implementing an action plan. **Dr. Jan Lukaszewicz** from Department of Silviculture at Forest Research Institute, Poland reviewed the **Polish experience in afforestation** over the last 50 years. **Andres Taliyarv**, Director General of Forest Department at Ministry of Environment, Estonia, continued presentations with discussion on **afforestation of abandoned agricultural lands in Estonia** taking into consideration landscape values and biodiversity. The speaker indicated that since very little is known about afforestation of abandoned agricultural land with deciduous tree species in Estonian conditions, in 1999 an Estonian/Swedish co-operation project was started. As a result, 14 experimental plantations of deciduous tree species were established in different parts of Estonia. The above plantations now present an excellent field laboratory in planning further afforestation activities in Estonia and neighbouring countries. **Agris Meilerts**, from "Latvijas Finieris" completely changed the picture drawn by the previous presentations, where the State was seen as a main actor or driving force in afforestation initiatives. This speaker presented a **large-scale private afforestation initiative in Latvia**, which is carried out in a form of birch planting project by "Latvijas Finieris". Since the company is highly dependent on availability of birch trees and problems with raw material supply in the future were foreseen, and as influenced by many other factors, it was decided to initiate the above project. So far, in the period 1999-2001, 340 hectares of abandoned farmlands were afforested according to the project. The last presenter, **Rita Palčiauskaite** from State Land Survey Institute of Lithuania, discussed the **setting of the balance between ecological, economic and social values of afforestation in Lithuania** – where, why and what forests we need. The speaker stressed that currently in Lithuania we have available data for creating a land resource informational system and legal framework for territorial planning. The above data include information on soils, land value, fauna, water basins, land use, recreational resources, cultural heritage, biodiversity, distribution of inhabitants, social interests, and other. General plan of Lithuania has already been prepared and land management schemes for forest distribution in regions started.

In the afternoon of the second day of the conference, the excursion was organized to project pilot areas in Utena region, where participants of the conference were introduced to activities of the project. Two pilot areas were visited – one located in the state, and other – private land. Achievements and drawbacks in the fields of legal processes and practical afforestation were discussed.