

Ministry of Agriculture and Rural
Development of Hungary



Food and Agriculture Organisation
of the United Nations



Budapest Forest Enterprise of the
Ministry of Defence

FAO TCP/HUN/3003 Project:

Summary Report

Support to the design and development of innovative forest management schemes

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Introduction

This report summarises a FAO project, undertaken in Hungary over the period 2004 – 2006. As in many other countries of Central and Eastern Europe forest owners have experienced low or falling incomes from marketable products and services at the same time as public expectations in biodiversity and nature protection functions of forests have been increasing. Knowledge, experiences and confidence as well as resources are lacking in order to adapt to new challenges in the policy and market framework of forest management.

It was against this background that the Ministry of Agriculture and Rural Development of the Republic of Hungary (FVM), in a far-sighted move, sought the assistance of the Food and Agriculture Organization of the United Nations (FAO). The Budapest Forest Shareholding Company under the Ministry of Defence initiated the project. This Company was also designated by the Ministry of Agriculture to take over the National Project Coordination and support the implementation of the overall budget of 270,000 USD.

A Steering Committee composed of representatives of all major forest management stakeholder groups, met five times and provided guidance on major items related to project implementation. A final meeting of the Steering Committee and stakeholder representatives on 23 February 2007 reviewed and adapted the current Summary Report, including the outcomes and recommendations. It considered that the project had been successfully implemented.

Since that time considerable efforts have been undertaken, particularly by the Ministry of Agriculture and Rural Development of Hungary to make use of project outcomes. The section 101 of Law LIV/1996 (concerning the obligation of stumpage fee) is has been terminated by the section 457. of Law CXXVI/2007. (become effective on 1. January 2008). The project has facilitated and enhanced this process and can thus report about first implementations of recommendations.

1. Recommended principles

On the basis of project activities and outcomes, particularly the conclusions made in the various reports, during workshops and study tours (see also chapters below) the following recommendations have been drawn to be proposed to the Hungarian government and other forest management stakeholders for implementation. The extent of resources made available for the implementation of the project recommendations will determine the pace of reaching the ambitious objectives, particularly the increase in forest area managed on the basis of close-to-nature forest management.

1.1 Policy recommendations on close-to-nature forest management ¹

- a) **Balance** game density with ecological requirements for forest management and therefore:
 - Coordinate policies for game management and forest management and bundle policy institutions and instruments, for forest sustainability. Call into existence an scientifically approved game population monitoring systems;
 - Strengthen forest owners property rights in terms of decisions making on hunting respectively game management, specifically simplify legal procedures for claims on game damages; in this respect there is a potential if significantly decrease the dimension of hunting fields, (for the standard of

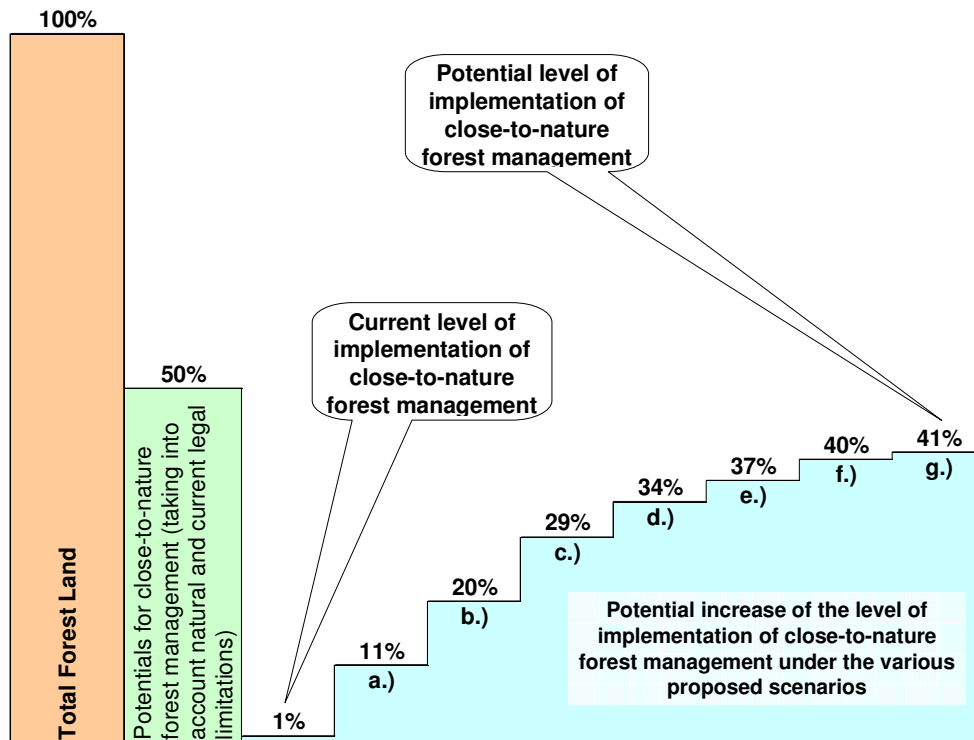
¹ Ranked according to their priority!

game management) which is possible at the case of the separating the concepts of game management area and hunting area.

- b) **Introduce** close-to-nature forest management into University and College education on forest management, through a **review** of the education programmes as well as through specific research projects;
- c) **Provide** incentives to forest managers to apply close-to-nature forest management approaches through the modification of forest management plans and **encourage** the implementation of close-to-nature forest management practices, thereby fostering the initial outcomes of the current project and under its inspiration grow wider with other similar projects in a nation-wide movement.
- d) **Apply** to broader extent close-to-nature forest management in forest management planning and monitoring carried out by the forest authority, particularly through specific capacity building measures, and **simplify** regulations to be applied on forest owners in case they are interested in close-to-nature forest management;
- e) **Promote** close-to-nature-oriented forest management to the general public through media, PR campaigns and civil society organisation in the framework of National Forest Program (nfp) activities; **Organise** capacity building measures on close-to-nature forest management for state and private forest managers considering key items of the national forest program and **provide** financial support for pilot projects;
- f) **Promote** close-to-nature forest management and ecotourism in forests through international institutions, extend **co-finance** measures in the framework of the EU Rural Development Policy (2007-2013), which are related to close-to-nature forest management (e.g. Afforestation Programs and Natura 2000 payments) and **implement** the EU legislation relevant for close-to-nature forest management in Hungary;
- g) **Provide** adequate resources to elaborate a proper econometric analysis in order to further clarify the economic potentials and requirements for public incentives,

These recommendations have been transferred into policy scenarios and evaluated with regard to their expected input on a broader application of close-to-nature forest management methods. As a first step, an attempt has been made to assess how much of the forest area in Hungary could reasonably be adapted to close-to-nature forest management. Taking account of natural limitations, such as certain tree species that cannot be managed in this way and legal restrictions that apply in protected forests, it is estimated that about half of all Hungary's forest could lend itself to a close-to-nature management approach. Currently only about 1% of the forest area is managed according to close-to-nature principles.

Scheme on potentials for close-to-nature forest management and expected impacts of policy scenarios



If all the recommendations were implemented in full, the share of forest land managed according to close-to-nature principles is predicted to increase to nearly 80% of the potential, i.e. 41% of the total forest in Hungary. For the other 9%, the extra effort to switch to close-to-nature management is unlikely to be justified, on the basis of the ratio between expected output and the additional input that would be needed.

1.2 Legal recommendations on close-to-nature forest management

- a) Amend section 26(5) of Law LIV/1996 to provide state support for the preparation of operational plans for the purpose of introducing close-to-nature forest management. Accordingly, the new section 26(5) would read: *“The State extends support for the preparation of the operational plan, and for its modification if intended to introduce close-to-nature forest management, in the manner and with the conditions specified in a separate legal rule.”*
- b) It is suggested that under the strong restriction of the all at once exploitable timber be emancipated from the regulation and at the same time in the case of selection cutting the extremely short period of cutting cycle (max 1-2 year growth and 1-2 year cutting cycle) emancipated from the regulation as well. It is suggested also to modify the clause 81. paragraph (6) of FM 29/1997. (IV. 3.) decree by skip the passages of *“not until two years”*.
- c) It is suggested to modify – significantly simplify - authorization procedure of forestry management and significantly reduces the obligation of permission in the work of forestry management.
- d) Decouple the financing of public services from wood production incomes and explore in this respect more intensively the opportunities of public budgets for benefits

provided by close-to-nature forest management (such as avoiding of clear cuts, increased biodiversity): “Public money for public services!”.

1.3 Recommendations on ecotourism and forest recreation:

- a) **Build** on the existing natural and human resource assets and outcomes of the pilot project in Bujak and **develop** a Local Pilot Partnership Network (LPPN) on forest ecotourism, with the full engagement of the national administration, the communities and local stakeholders (tourism related entrepreneurs, NGOs, church, infrastructure etc);
- b) **Study and promote** the regional economic benefits that derive from such a Local Pilot Partnership Network on forest ecotourism, using the outcomes from the project pilot areas;
- c) **Integrate** ecotourism and forest recreation into education and training programs, through a review of the education programmes, as well as through specific research projects;
- d) **Build** further capacity in ecotourism and raise public awareness, particularly through public relations measures;
- e) **Develop** further by appropriate means accommodation and restaurant capacities for ecotourism in sufficient quality;
- f) **Strengthen** the property rights of forest owners in order to protect forests from damages due to ecotourism and forest recreation activities (extreme sports, harvesters of mushrooms and herbs etc.);

1.4 Recommendations on marketing for wood and non-wood forest products:

- a) **Develop**, in partnership with relevant stakeholders, a transparent, independent Marketing Information System (MIS) of regularly updated information on sold wood and where possible non-wood products (prices and volumes structured by qualities);
- b) **Utilize and foster** existing media disseminating explicitly information on close-to-nature forest management and forest products marketing;
- c) **Build** further capacity in marketing of wood and non-wood forest products thereby **increasing** awareness among forest owners of the importance of effective marketing and of maintaining a strong customer focus;
- d) **Promote** the environmental advantages of wood as a construction material and energy source through appropriate PR measures;
- e) **Explore** innovative solutions for forest management in terms of new, profitable forest products and recreation services;
- f) **Explore** and promote economic opportunities for primary wood processing, considering changes in product structure due to the application of the close-to-nature forest management methods;

2. Objectives and achieved outcomes

This chapter describes the objectives and various project activities, along with the outcomes. The focus of this project was on capacity building measures, pilot projects and study tours directed towards the fostering of (i) close-to-nature forest management, (ii) ecotourism and forest recreation and (iii) marketing strategies for wood and non-wood forest products.

The main objectives of this project have been to:

- **Analyse** existing and alternative silvicultural and forest harvesting systems with a view to selecting the most appropriate solution to specific circumstances;
- **Develop** multifunctional forest management models adapted to different biophysical and socio-economic conditions;
- **Develop** improved marketing strategies for wood and non-wood goods and services;
- **Strengthen** the capacity to manage forests for multiple uses, taking into account their productive and protective functions as well as recreational demands;
- **Ensure** legal consistency of the proposed changes in silviculture and forest management and the National Forest Programme.

The work plan identified three distinct work phases in the project; (i) an initial project development phase followed by (ii) the drawing up of feasibility studies and pilot testing of environmentally-friendly harvesting technologies, and, finally (iii), the development of management models and training of forest owners and managers.

The following activities have been carried out and results achieved:

- Six weeks of consultancy mission by an international expert in ecotourism and forest recreation from the United Kingdom led to a substantive report on the potentials of ecotourism and forest recreation development as alternative income generating activities for disadvantaged rural communities, identifying key hampering factors for further diversification of forest management towards a more advanced provision of ecotourism services.
- Records from other countries, experienced in transition, have been brought in by (i) a forest products marketing specialists from Lithuania as well as (ii) a Silviculture expert from Slovakia, each through a one-month mission to Hungary. The specialists analysed the situation in Hungary and advised on nature-oriented forest management as well as on recreation services, concluding about significant potentials for new approaches in forest management in Hungary.
- National competency contributed to the project by overall 11 months consultancy on:
 - (i) Forest harvesting, aiming to identify improved silvicultural systems and criteria for their application as well as efficient, cost-effective harvesting techniques as well as to elaborate innovative multifunctional forest management schemes for different types of enterprises, adapted to divers social and economic requirements;
 - (ii) Forest economics, aiming at the development of improved marketing strategies for wood and non-wood goods and services;
 - (iii) Legal framework for the proposed forest management schemes and other measures, with the objective of proposing amendments to the legal and regulatory frameworks related to forest management, taking into account the new silviculture and forest management directions;
- Several training measures have been organised in which over 400 forest managers and administrators took part:
 - (i) Three capacity building workshops in Bujak (1day), Kiralyret (2 days) and Eger (2 days) in which about 180 forest managers, administrators, researchers and stakeholder representatives were trained in new silviculture approaches as well as forest harvesting and forest recreation/ecotourism opportunities;
 - (ii) 4-day-study tour to Slovakia with participation of 30 forest managers, administrators, researchers and stakeholder representatives, who studied experiences of Slovakian

- forest enterprises in advanced harvesting techniques as well as profitable forest ecotourism and recreation services;
- (iii) Two workshops on harvesting technologies in Lovasbereny (1 day 20 people) and in Bujak (1 day 20 people), where forest managers have been introduced to technical equipment and machinery for selective cuttings;
 - Four non-governmental organisations have been contracted to provide various services related to the implementation the project:
 - (i) Aiming for broader application of close-to-nature forest management in Hungary the World Conservation Union (IUCN) Office for Europe was contracted to collect information about national and international experiences in nature-oriented, low input forest management, to explore management potentials and policy options for broader application of this type of silviculture methods in Hungary and to publish practical guidelines and policy-relevant recommendations on nature-oriented, low input forest management in Hungary;
 - (ii) Two pilot projects on harvesting methods have been setup in Lovasbereny and Bujak by Innovation Society of Hungarian Wood Industry in order to collect economic data and to demonstrate new harvesting technologies through a documentary;
 - (iii) The Green Holidays Foundation carried out one pilot project on “Ecotourism activities in the Bujak region”, analysed the potential for ecotourism in this particular area and implemented various public relation measures;
 - (iv) A survey on the public needs and market demands from forest land use was conducted by the Institute of Forest Assets Management, University of West Hungary indicating an increase of public needs in the social and environmental functions of forests as well as in the corresponding forest services;
 - FAO provided a total input of 9 weeks of Advisory Technical Service through its own staff on (i) Forest harvesting, (ii) Forest economics, (iii) Forest resource development and (iv) Legal framework for the proposed forest management schemes and other measures.
 - IT equipment (laptop, printer, projector, digital camera and accessories) was purchased to ensure the technical implementation of the project.

Annex 1 gives a list of outcomes for this FAO project.

3. Conclusions

This chapter contains the major conclusions from the various workshops and the contracted consultants and organisations.

There are, in addition to the input from the current project, significant national capacities in Hungary, in terms of scientific records and pilot experiences, which could be made only partly available by the project. There is significant potential in the country to maintain the project outcomes in a sustainable way.

The implementation of recommendations is expected to contribute to:

- Improved biodiversity in terms of mixed (by age and tree species) forest stands;
- Improved public perception of forest management;
- Greater opportunities for recreation and ecotourism;
- Increased economic performance with impacts on state budget in terms of reduced payments for reforestation and tax income from forestry and ecotourism;
- Shift of employment opportunities from forestry to ecotourism and recreation services.

Specific conclusions are:

3.1 On close-to-nature forest management

- Public expectations in terms of the social and environmental benefits from forests (such as recreation, biodiversity, nature protection, mitigation of erosion, provision of fresh water etc.) are increasing significantly, while the economic viability of wood production is tending to decline;
- There is general public acceptance that public services need to be adequately funded. The widely held view among the public at large is that such funding should be mainly through public budgets, rather than from individual receipts from marketable forest products and services. Forest owners complain about a fee for water management they have to pay;
- Nature-oriented forest management relies on the greater use of natural processes and may contribute to:
 - Additional economic incomes and
 - Social and environmental services on the basis of adequate public funding;
- Both state and private forests in Hungary offer significant potential for close-to-nature forest management in terms of both the legal framework and natural site conditions. The potential is estimated at nearly half the forest area, or about one million hectares.
- The proposed programme of forest expansion in Hungary could be achieved to a large extent by following close-to-nature forest management principles, e.g. through natural succession, supported by planting of indigenous tree species.
- Close-to-nature forest management can refer to a variety of environmental and social advantages. Among others close-to-nature forest management:
 - Ensures continuous cover with significant increment and high quality wood and avoids costs for regeneration;
 - Increases forest biodiversity, considering societal needs, shifting from monocultures to mixed stands with wider range of tree species and ages/sizes;
 - Considers the special importance in suburban forests with high social demand in recreation;
 - Increases the stability of forests and reduces the stress on forest stands arising from climate change;
 - Raises income opportunities (in spite of slightly higher harvesting costs) by avoiding premature felling and logging of only individual trees, which have reached economic

- value and leave the forest after selective cutting for natural regeneration; though the scale of savings depends heavily on the degree to which the forest will regenerate naturally with the minimum of input;
- Reduces the visual impact of forestry operations with benefits for the landscape and tourism and thus improves public perception of forest management;
 - Serves as ecological corridors and stepping stones for biodiversity;
 - Indeed state forest management, within its competence and until more appropriate legal background is established - through practising the law – is trying and has tried to apply close-to-nature forest management e.g.: through intermediate management forms towards selection cutting with specified harvesting age. With regard to the shift towards selective cutting, the senior management of the forest authorities agreed upon a common standpoint in connection with “management questions of the selection cutting” until the appropriate legal background is established.
 - Currently, however, several factors are hindering forest owners/ managers from making a switch towards nature-oriented forest management:
 - Present execution of the legal framework through the forest management does not consider the natural and economic potentials of close-to-nature forest management sufficiently;
 - The social and environmental advantages of close-to-nature forest management need adequate funding, which at least partly, could be secured through adequate implementation of the measures of the EU Rural Development Policy (2007-2013) in Hungary;
 - Based on the request of forest owners the 10-year forest management plans can be modified with the consent of the forest authorities. But making changes to earlier approved 10-year management plans is costly and time-consuming for forest owners, deterring from seeking approval for the amendments required to switch to close-to-nature forest management;
 - While there are scientific as well as some single practical experiences on close-to-nature forest management in Hungary available, in broad terms there seems a shortage in academic and practical knowledge about the economic and environmental advantages of this specific silviculture approach as well as a lack of capacities for enlarged implementation. The professional notions of the close-to-nature forest management, including that of forestry university education is not yet unified, so there is a lack in professional conformity on this subject;
 - Game densities in many cases are too high for efficient implementation of nature-oriented forest management. The number of game is estimated by different approaches according to the varying interests of hunters respectively forest owners and managers. The game bearing capacity of an area is changing over time and the estimation of game population is highly dependant on the methods applied. The lack of coordination between game management and forest management is seen as one major obstacle to overcome the current imbalance between game density and close-to-nature forest management, which risks undermining the economic and environmental advantages of switching to close-to-nature forestry;
 - Extending rotation lengths could result in a transition period of reduced removals with a corresponding reduction in medium-term income. This “stretching” of incomes from wood production should be factored into forest management forecasts so that the impacts of the implementation of close-to-nature forest can be assessed in advance.

3.2 On Ecotourism and forest recreation:

- Ecotourism and forest recreation may bring little direct return, but the downstream benefits may be considerable, leading to an increase in overall visitor spending in a region and

generating higher employment, an increased tax, e.g. from overnight accommodation and other spending;

- There may be an improvement in the health and well-being of the visitors, leading to a reduction in health care costs, which is perhaps more difficult to show. However, these are not quick returns, and state administrations at the national and local levels need to take a long-term initiative to overcome the lack of immediate commercial returns;
- Each pilot area requires a detailed analysis in terms of potentials for international, domestic and local day-tourism potentials. Most provincial forest areas in Hungary as well as the pilot areas are of domestic and local importance;
- There is a clear market demand for forest recreation from domestic tourists and day visitors in Hungary and this can be expected to continue to grow;
- The pilot sites offer, to differing degrees, potential for forest recreation but all need investment in infrastructure and marketing before that potential can be realised. Inventories and budgeted development plans for pilot areas would identify the scale of investment needed and would also allow the downstream or indirect economic impacts to be assessed;
- It is unlikely that the required investment could be found from existing budgets or entirely from private capital. The visitor survey showed that most (70%) forest visitors believed that the state administrations (e.g. communities) should be the main investor in ecotourism infrastructure, followed by efforts from forest owner and local entrepreneurs;
- It is not only the infrastructure improvements that need to be funded but also the ongoing maintenance. Most owners, however, have little incentive to invest resources as the returns from increased visitor spending rarely enter their pockets. The data on visitor spending indicate that there is little scope to generate direct income from visitors;
- Ecotourism and forest recreation require targeted marketing, through a common approach of many local stakeholders in the form of corporate identity. The development of innovative commercial partnerships is seen as a key tool. Such a network of ecotourism stakeholders should also address the fair sharing of responsibilities and additional benefits;
- International experiences show that the state has to be the main source for infrastructure costs and to some extent the maintenance costs if growth in forest visitor number is to be encouraged.

3.3 On marketing strategies for wood and non-wood forest products

- The structure and quality of wood products produced by forest managers is driven significantly by the silviculture methods used in the forests, rather than reflecting what the customers demand;
- While the use of wood for energy generation has increased in recent years and is now over 1 million m³, future changes in overall demand and supply of roundwood as well as in its structure are assumed to stay marginal, though, among forest owners and managers, there are expectations for increasing wood prices;
- Although a proper econometric analysis could not yet be provided through the project, it can be assumed that competitiveness of wood products has a general tendency to decline, mainly due to increasing imports and competition from other materials;
- The lack of marketing strategies as well as systematic information on volumes sold or prices achieved is seen as a fundamental weakness and contributes to a situation where, in the absence of a reasonable base for realistic price setting, forest owners often fail to secure a fair price for their produce, damaging profitability and future investment;
- Wood and its environmental advantages are not yet adequately recognised by the public;
- Readiness of the public to pay for simple access to forest is low, while there are market potentials for recreation services when using innovative approaches;

4. Practical guidelines

This chapter aims to provide some practical guidelines for forest owners and managers interested in close-to-nature forest management, forest recreation measures and the marketing of forest products and services.

4.1 On close-to-nature forest management:

The current chapter focuses on the description of major methods to be applied in even aged, monoculture stands, where the intention of the forest manager is to transfer such “conservative” stands into “close to natural” stands with diversity in age classes and possibly tree species, corresponding to natural growth at a particular forest site. The application of close-to-nature forest management methods can start immediately, while the process of transformation of a particular stand will require about a rotation period.

The current chapter cannot replace a professional evaluation of the potential for natural generation at the particular stand which is required in order to answer such questions as: (i) Are there enough germinable seeds available? (ii) Are there already signs that natural generation is happening in available spaces? (iii) Will game densities allow the growth of seedlings with acceptable levels of damage?

There are many sources in Hungary for interested owners and managers to get more specific information. Please refer to the list of Project Publications and Reports (Annex 1) as well as Publications and web links related to close-to-nature forest management, ecotourism and forest products marketing (Annex 2).

More specifically, the following guidelines on nature-oriented forest management might be useful:

- The preferable approach of close-to-nature forest management is a selective cutting of high quality trunks in mature stands bringing light to the soil and by this allowing the natural growth of seeds from indigenous tree species, which are available at the ground or promoting the growth of a secondary layer of indigenous tree species;
- Avoiding silviculture techniques, which would impact natural growth processes, such as the use of chemicals for example, is a basic principle of close-to-nature forest management;
- In Hungary, good silviculture results could be expected mainly during a shift of humid, fertile, mature oak and beech stands:
 - Oak is a light-demanding tree species, relatively intolerant of shade, inclined to produce large eccentric crowns, a strong light seeker and prone to form crooked stems. In dense stands with not enough light there is a danger of forming very slim and narrow stems. Another of oak’s disadvantages is its weak reaction to opening up crown space in the tree canopy, which may allow too much light to reach the ground surface, resulting in heavy growth of undesirable shrubby vegetation and the production of stem-shoots (epicormics) on target trees, leading to a loss of stem quality. For oak stands, where the objective is to produce high quality stems, it is very important to preserve an auxiliary layer of lower trees (e.g. hornbeam or lime);
 - Beech is a shade tolerant tree species forming compact young growth by natural regeneration with high ability to self-regulate seedling or stem density. Young seedlings can survive and grow under almost closed canopy conditions in quite small gaps. After opening of a space, beech is very responsive and tends to fill it. Mature beech trees can suffer from red heart and bark necroses (“burning”) if exposure to direct sunlight is too sudden.
- With regard to harvesting:

- According to the current law, the first step is the approval of a management plan through the State Forest Service, which allows the forest owner or manager to make selective cuttings;
- Trees for selective cutting, as well as skidding paths, need to be marked preferably with the assistance of professionals with knowledge and experience in close-to-nature forest management. Harvesting should be carried out carefully in order to avoid damage on remaining trees;
- The use of schematic harvesting strips, smaller logging equipment (tractors and cable cranes) as well as skidding by horses can lead to less damage on remaining trees and lower pressure on soils; It is recommended to establish a permanent network of skidding and access lines;
- The number of selectively cut trunks (respectively the size of an opened spot in the crown layer) should in mature stands start with one or two trees and be developed carefully depending on the development of undesired ground vegetation (weeds) as well as the success in natural regeneration, respectively the promotion of a secondary layer;
- Selective harvesting measures could be repeated after an interval of about 5 -10 years;
- In non-mature stands, harvesting should aim for negative selection, focusing on the gradual removal of poorer quality trees with the goal of improving the structure of the remaining stand and increasing its stability; the economic output might be poorer than in mature stands, due to the lower quality of the selectively harvested wood;
- Dead wood should remain in the forest to avoid costs for utilisation and to provide the base for biodiversity in forest flora and fauna;

4.2 On ecotourism development:

- A detailed inventory should be prepared for any target area, organising a simple local/regional survey on ecotourism need by visitors, identifying and marking on a map the assets or features that are likely to be of greatest interest to visitors; Availability of tourism accommodation and hospitality services around the forests should be reviewed; This map should be the starting point for preparing a strategic plan setting out planned developments, with costs and timing;
- A network with partners should be established, who are able to help develop the visitor potential, such as the local councils, schools, tourism offices and local societies, all of whom might be able to help in marketing the recreation opportunities in a certain local region;
- Before any target area is developed it needs to be given a sense of identity and this can be achieved by the use of welcoming signs, giving at least the name of the forest and how to contact the local managers; Marketing is an essential element in making visitors aware of new facilities and this needs to be considered and built in to any business plan;
- A business plan is an essential first phase before any significant investment is made (e.g.: for a fishing lake) and this needs to set out the justification for the investment, which might need some market research to identify the likely scale of demand and potential income; The business plan will need to explain how the costs of ongoing maintenance will be met.

4.3 On marketing of wood and non-wood forest products:

- The marketing of wood and non-wood forest products should start from the expected development of market demand; some elements of such an analysis are available

from the current project (see Annex 1) and as well as from published research outcomes;

- Consider raising labour costs forest managers should invest in up-to-date equipment (such as small forwarder, winches, horses) to save production costs; nature-oriented forest management can contribute to economic income, though specifics in particular stands need to be analysed beforehand;
- For specialized forest products and services (e.g. hunting, fishing in specialized areas, high value niche products, like truffles), use (i) vertical integration to sell the high added value niche products and (ii) direct sales to increase profits;
- Use non-wood forest products & services, already demanded in market (for instance, hunting, accommodation etc.) to create gravity centres for other, supplementary forest products and services; Multifunctional use of forests could be increased if the marketing channels of supplementary goods from the forest will be more developed and accessible;
- Key success factors are: partnership, cooperation. In many contexts the real constraint is not the lack of natural capital, but that of entrepreneurship.

With regard to any further information on the project outcomes please refer to the TCP webpage at http://www.fao.org/regional/SEUR/tcp_en.htm or contact the FAO secretariat by email fao-seur@fao.org.

Annex 1: Publications and Reports

Outcomes of Consultants:

Clark, D.: (2006): Report on Potential for Eco-tourism and Forest Recreation in Three Pilot Forests Managed by the Budapest Forest Shareholding Company (33 p.)

Bruchánik, R. (2006): Report on Close to nature silviculture (42 p.)

Gaizutis, A. (2005): Report on Forest Products Marketing (29 p.)

Gaizutis, A. (2006): Report on Forest Products Marketing (29 p.)

Solti, I. (2005): Report on Assessment of future wood supply and demand (28 p.)

Solti, I. (2006): Report on Economic assessment of silviculture options (35 p.)

Kerestes , G. (2005): Examination of Tree Harvesting Technologies Used in the Project Area (33 p.)

Kerestes , G. (2006): Logging Technologies to be applied in the Project Area (41 p.)

Pákozdi, E.: (2006): Report on the Legal Framework (22 p.)

Pákozdi, E.: (2006): Complementary Report (7 p.)

Outcomes of Letters of Agreement:

PROSILVA (2006): Brochure: Prosilva (Hungarian - 20 p.)

IUCN (2007): Brochure: Selection Cuttings: Ideas, practical guidelines (86 p.)

INNOVATION SOCIETY OF HUNGARIAN WOOD INDUSTRY (2006): Report on Pilot spots on harvesting measures related to nature-oriented forestry management, Concept (14 p.)

INNOVATION SOCIETY OF HUNGARIAN WOOD INDUSTRY (2006): Report on Pilot spots on harvesting measures related to nature-oriented (51 p.) and

INNOVATION SOCIETY OF HUNGARIAN WOOD INDUSTRY (2006): DVD on Pilot Projects on Harvesting

UNIVERSITY OF WEST HUNGARY (2006): Report on Forest Ecotouristical Research in Hungary (50 p.)

GREEN HOLIDAYS FOUNDATION (2006): Report on Ecotourism Activities in the Bujak Region (60 p.)

Contributions in kind:

Varga, B. (2006): DVD on Folyamatos erdőborítás (Hungarian)

Varga, B. (2006): Information about the field trip to Slovakia (Hungarian, 4 p.)

Annex 2: Literature sources and web links

Publications in Hungarian:

ASZALÓS R.- BARTHA D.- BODONCZI L.- BÖLÖNI J.- KENDERES K.-ÓDOR P.- STANDOVÁR T.- SZMORAD F.- TÍMÁR G. (2005): A magyarországi erdők természetességének vizsgálata-I-V. Erdészeti Lapok 140 (5-10): 152-154, 198-201, 226-229, 259-261, 285-289.

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