Noble Hardwoods Network

Report of the fourth meeting—4–6 September 1999—Gmunden, Austria and the fifth meeting—17–19 May 2001—Blessington, Ireland

J. Turok, G. Eriksson, K. Russell and S. Borelli, compilers
Summary of the fourth meeting (Gmunden, Austria)

**European long-term gene conservation strategies**
Two new strategy documents were presented (*Alnus* spp. by Davorin Kajba and *Juglans* spp. by Josefa Fernandez). They provided an overview of the current status of knowledge, objectives and methods used for gene conservation. These documents aim at assisting countries in the development of their national strategies for Noble Hardwoods. Eric Collin submitted a revised European strategy on elms, which was adopted by the Network. All the three strategy documents will be published in the Report of the meeting. They will be completed by the authors and sent (electronic version and printed copy) to the EUFORGEN Secretariat before 15 October 1999.

**Technical guidelines**
The outline of all chapters (see Report of the previous meeting) was discussed in working groups and agreed upon by the plenary (Annex 2). It was agreed to add a chapter on silvicultural management of Noble Hardwoods (Peter Rotach). G. Eriksson, J. Kleinschmit and J. Turok will compile and edit the advanced draft version that will be sent for comments and suggestions to all Network members by the end of 1999. The Technical Guidelines will be completed and printed during the year 2000.

**Progress made in national gene conservation**
Introductory country reports from Armenia, Ireland, Luxembourg and Norway were presented. Brief round-the-table updates on the progress made in each country since the last meeting (June 1998), were provided by all participants. The reports presented at the meeting will be sent to the Secretariat by 15 October 1999. The following main highlights should be mentioned in the country updates: inventories, legislation, research, practical implementation, coordination at the national level, public awareness. Relevant data should be presented in additional table(s)—see Annex 3. In order to facilitate discussion at the next Network meeting, country updates will be requested, compiled and distributed by the Secretariat before the next meeting.

**Inventories and documentation**
It was agreed that common minimum information on Noble Hardwoods genetic resources should be shared among countries. Network members acknowledged the agreed list of descriptors. A group composed of Jochen Kleinschmit, Eric Collin and Karen Russell will prepare a concept note with the objectives of the information system stated and the coding characters specified. This will be circulated to Network members for comments and suggestions before 30 September 1999. The concept note will be included in the Report of the meeting. The Secretariat will make the requested minimum information accessible on the Internet before 31 March 2000.

**Bibliography**
Prototype of a home page was presented and the concept of publishing joint bibliography on the Internet endorsed. A taxonomic table will be added. Network members from countries that have not yet sent references will inform the Secretariat about the status of their compilation. The Secretariat will circulate a note (before 30 September 1999) reminding all Network members to send references in the specified format, or to send an update if the references have already been submitted.

---

*This workplan was adopted at the end of the fourth Network meeting.*
Research
Several presentations on research topics of interest to the Network were made. EU-funded research projects, ongoing or under preparation, were mentioned.

Miscellaneous
It was suggested that the next Network meeting be held in spring 2001 in Ireland. Several themes were proposed for discussion at that meeting: the role of species hybridization in gene conservation (Eric Collin), links between gene conservation, tree breeding and utilization (Jochen Kleinschmit, Brigitte Demesure and Tor Myking), health status of Noble Hardwoods resources in Europe and exchange of genetic material. It was felt that the first theme should be given priority attention at the next meeting. The tentative agenda will be sent in due course.
Summary of the fifth meeting (Blessington, Ireland)

**Opening of the meeting**

Diarmuid McAree, Chief Forestry Inspector of the Irish Forest Service welcomed the participants to Ireland and wished them a successful meeting. Currently, 9% of Ireland is forested but the plan is to increase this proportion to 17% over the next 30 years, with 30% of this being broadleaves. He also indicated that hybridization of ash is a problem and hybrids are currently being removed. Dutch elm disease is a concern and alder is also experiencing problems with *Phytophthora*. Rowan and birch are other priority species for Ireland. The availability of reproductive material (particularly acorns) is also a priority of the Forest Service.

To have all timber produced in Ireland from sustainable forest management is another objective together with conservation and enhancement of native resources. A new scheme for conserving or recreating 30,000 ha of native woodlands is being launched under the New Native Woodlands Scheme that has multiple objectives.

In fact, forestry is seen as a good way of creating employment and establishing a sustainable production system for future generations. Wildlife management, creation of bio-corridors for reducing fragmentation and carbon sequestration are also included among the aims.

He concluded by saying that the work of EUFORGEN is highly appreciated by the Irish Forest Service and is considered as a very cost effective international mechanism. Jozef Turok thanked him for his words of encouragement and briefly introduced the programme of the meeting.

Prof. Gösta Eriksson, Chair of the Network could not attend and it was proposed that selected Network members moderate the different sessions of the meeting.

**Progress made in countries**

Twenty-four countries (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Russian Federation, Slovakia, Slovenia, Switzerland, Turkey, United Kingdom and Ukraine) attended the meeting and three more were unable to attend (Armenia, Spain and Sweden). Turkey attended for the first time.

All countries briefly presented the progress made since the last meeting (held in September 1999) on inventories, legislation, research, practical implementation, coordination at national level and public awareness. Many of the participating countries carried out inventories and several new populations of Noble Hardwoods were identified. In some cases, maps were also produced. Regarding legislation, it appears that many countries are in the process of discussing and implementing or adopting EU Directive 1999/105/EC concerning trade and certification of forest reproductive material.

A number of collaborative research projects using both molecular and traditional quantitative techniques are ongoing. Specific results were presented in later sessions. New seed orchards for Noble Hardwood species have been established in a few countries. In general, it appears that coordination at national level continues to develop and it was recognized that further effort is needed.

Public awareness initiatives of the different countries were highlighted. These range from nationwide efforts such as the ‘Tree of the year’ to more localized training programmes, directed at forest practitioners and managers. Further discussion on public awareness took place in a later session.

Peter Rotach gave a comprehensive presentation on a project on Rare Noble Hardwoods in Switzerland, which could provide as a useful model for similar initiatives in other countries. The main objective was the promotion of rare species in forestry activities. The
project included 10 different species. A first important step was the identification of core populations and gene pools, assessing the extent of fragmentation, and genetic and demographic risks. All information collected through inventories was digitized and mapped and priority populations were identified.

Motivation and training were essential components of the project and a large number of foresters were included in the activities both receiving training and providing feedback. Realistic strategies and priorities were identified based on the results of the inventories and incorporating the additional information from local practitioners. Technical guidelines directed at forest practitioners were produced for all species and also included region-specific information to increase local relevance. (the guidelines can be ordered for SF 12 per copy through http://www.admin.ch/edmz with the order number 310.094d for the German version and the order number 310.094f for the French version). A second phase of the project will be starting this year.

Murat Alan gave a full report on the conservation status of Noble Hardwoods in Turkey. He gave an overview of the general situation in his country. In particular, he highlighted the high biodiversity of Turkey and its importance as centre of origin for many species. He also proposed to include five new species in the list of Noble Hardwoods, i.e. Liquidambar orientalis, Alnus orientalis, Pterocarya fraxinifolia, Platanus orientalis, Ostrya carpinifolia. These will be incorporated in the Network’s list, which will be updated on the Internet.

**Seminar: The role of species hybridization in gene conservation**

Eric Collin made a presentation on the role of species hybridization and illustrated the different scientific and ‘philosophical’ aspects of hybridization. He also provided different definitions of the ‘species’ concept and examples of different types of hybridization.

He indicated that general understanding of the dynamics of the ecosystem and of how the natural environment is constantly evolving is limited. Depending on circumstances, hybridization can be viewed as a negative, neutral or positive event in evolutionary terms. There is a need to clearly distinguish between hybridization of naturally occurring species and introduced species. Molecular studies can be very useful in the identification of the level of hybridization and/or introgression. In any case, ‘methods should match objectives’.

He concluded that time and space are key elements in defining whether hybridization is acceptable, depending on individual perceptions. In any case, man has an important role in accelerating the process through mass seed transportation and habitat manipulation. It was clear that, in many countries, the divide between introduced and naturalized species is not well defined and is somewhat discretionary.

Eric Collin proposed to select some populations within gene conservation networks in which hybridization occurs and monitor their evolution. He will provide a written contribution to be added to the Report of the meeting, which will summarize his presentation and capture the views expressed during the discussion.

**Technical guidelines**

The outcomes of the first Inter-Network meeting of Chairs of the EUFORGEN Networks were presented (held in October 2000). The role of the Inter-Network Group is to harmonize priorities and coordinate activities among the five Networks, in order to share experience and avoid duplication of efforts. With regard to the technical guidelines, the Inter-Network Group agreed that a general document on the objectives, principles and methods of forest genetic conservation should be prepared within EUFORGEN, as a basis for the species-specific guidelines that could be developed as separate modules. This general document is being prepared with inputs from all Networks.

The outcomes of the Inter-Network Group meeting were discussed at length in order to harmonize them with the original concept of the technical guidelines for Noble Hardwoods
(see Summary of fourth Network meeting, held in 1999), which consisted of widely occurring species/situations, rarely occurring species/situations, plus case studies on elms and chestnut.

It was agreed that a separate chapter on the concept of rarity should be added to the general document, and that species modules for Noble Hardwoods should be produced as follows:

- *Acer pseudoplatanus* (M. Rusanen and T. Myking)
- *Sorbus torminalis* (B. Demesure)
- *Sorbus domestica* (P. Rotach)
- *Ulmus* sp. (E. Collin)
- *Prunus avium* (K. Russell)
- *Castanea sativa* (F. Lopez)
- *Fraxinus excelsior* (A. Pliura and M. Heuertz)
- *Malus sylvestris* and *Pyrus pyraster* (R. Stephan)
- *Alnus glutinosa* (J. Gracan)
- *Tilia cordata* (J. Jensen)
- *Liquidambar orientalis* (M. Alan)

Each module should be no longer than 4 printed pages, including illustrations etc. The final text should, therefore, be limited to 1200 words. Each module will be composed of the following components: standard introduction paragraph, distribution map (native and naturalized distribution will be highlighted in different colours), biology and ecology of the species, threats to genetic diversity, genetic knowledge, importance and use, and guidelines for genetic conservation and use. The guidelines will consist of a sequence of actions, or steps, ordered according to their technical and economic feasibility, which are required to ensure the conservation and sustainable use of genetic resources within the species’ distribution areas in Europe.

The target audience, as agreed at previous Network meetings, includes forest officers and agencies responsible for applied forest genetic conservation in each country. The sheets will be first produced in English, but the template of each will be made available to Network members, who will be responsible for their translation and adaptation to national conditions. The modules will include relevant graphs, figures and illustrations. References for further reading will be included at the end of each module. There will also be a blank box (half-page) in the template, which should be used for specific information related to the individual country. All Network members will search for appropriate illustrations and provide them directly to the authors as soon as possible. Essential photos would include botanical features and habit, plus other illustrative material.

The Secretariat will send the standard introduction paragraph and distribution maps for each species or group of species to Network members for comments before 31 August 2001. All authors will send draft modules to the Secretariat before 30 November 2001. The Secretariat will edit the modules for language and consistency and will circulate them through the EUFORGEN listserver for broader consultation before 31 December 2001. The authors may seek inputs or review of the draft modules from other Network members and other specialists as appropriate. The first species modules will be printed before the next Network meeting.

**Information and documentation**

**Report of the fourth and fifth Network meetings**

The format of country reports was discussed and it was agreed that these would be published in a printed version together with material produced for the previous meeting. The Internet web page (http://www.ipgri.cgiar.org/networks/euforgen/euf_home.htm) will contain the full version of the introductory country reports and the current progress reports.
The table attached to the country update will only reflect the current situation of *in situ* and *ex situ* conservation measures (i.e. total figures). It is the participant’s responsibility to ensure that the electronic version of all reports is made available to the Secretariat. Participants were encouraged to visit the web page and check the content relevant to them. Missing material should be sent to the Secretariat by 15 June 2001.

**EUFORGEN bibliography**

The EUFORGEN online bibliography was presented and discussed. It was agreed that, to make grey literature accessible, a contact address needs to be provided. Permission from the contributors to use their names will be sought. The Secretariat will add a field for ‘contact’ to the existing Access format and circulate it through the listserver. The issue of what type of references the database should contain was also raised and there was general agreement that contributions should concentrate on grey literature. However, the existing references to refereed journals will be maintained. An introductory text will be added to explain the content of the bibliography and its focus on grey literature. A link to the IPGRI Library website, which includes links to other reference databases, will also be added.

**Information platform**

The new web page of the IPGRI Regional Office for Europe was presented and the link to national programmes highlighted. At present, the only information provided are details of the National Coordinators and the results of a survey conducted in 1998. In order to make these pages more informative, Network members were encouraged to provide links relevant to their national activities on forest genetic resources to be added to the country pages. To facilitate contacts, it is also proposed to provide details of participants to the last meetings of the five EUFORGEN Networks.

**Public awareness**

The recommendations of the Inter-Network meeting were briefly presented. A general EUFORGEN brochure is currently under preparation and will be available shortly.

Network members were strongly encouraged to promote genetic conservation at national level and to produce, adapt and use EUFORGEN material as appropriate. The opportunity to take advantage of existing initiatives, particularly those of conservation organizations, which could be more effective in promoting the conservation of forest genetic resources, should not be underestimated.

Sven de Vries reported on the discussion that was held in the Social Broadleaves Network and on the process of creating an interesting and effective poster. There was general agreement that a set (3-4) of posters on Noble Hardwoods would be useful for raising public awareness on the importance of their conservation. The posters would have to use an attractive photo(s) and contain a simple and clear message. It was agreed that Sven de Vries, Tor Myking and Natalia Demidova would develop the message to be included on the posters. An initial draft will be provided to the Secretariat and *circulated to the Network for discussion at the next meeting*.

It was decided to create a slide collection on CD-ROM to be used by the Network for publications, public awareness, presentations etc., and Bart de Cuyper kindly offered to act as a focal point. It was agreed to acknowledge the source of images every time they are used. Instructions for contributions to the collection will be circulated by the Secretariat before 31 May 2001 and Network members are encouraged to provide slides to Bart de Cuyper by 30 September 2001.
**Research overview**

**CYTOFOR**
Brigitte Demesure presented the current activities and results from the multi-species EU-funded project, which will end in June 2001. Nine countries were involved in the project and the activities concentrated on 22 species of 7 different families (14 trees, 7 shrubs and one epiphyte).

The project had a number of objectives, and included phylogenetic studies, history (postglacial migration routes), hybridization between species, linking ecological and population genetic studies, which will have practical implications for forest management. The tools included chloroplast DNA markers for phylogenetic studies. Postglacial migration routes were studied for all species and possible refugia were identified. Recolonization patterns were found to be quite different for the various species, and for some species, no obvious refugia could be defined. Geographical distances and genetic distances for the different species were compared. Distribution patterns of haplotypes appear to be strongly related to the biology of the species or history of the populations. *Sorbus torminalis* showed no geographic structure whereas the patterns for *Ulmus* were comparable to those for *Quercus* showing a clear geographic pattern in Europe.

Final results of the project will be available in a number of papers to be published in different journals. More information can be found at <http://www.pierroton.inra.fr/Cytofor/Introduction.html>.

**CASCADE**
Alfas Plutra presented the EU-funded CASCADE project that focuses on evaluation of genetic diversity at adaptive traits and genetic markers in *Castanea sativa* in relation to evolutionary factors and human impact and on the formulation of long-term conservation strategies. Twelve institutions from Greece, France, Italy, Spain, Sweden and UK participate in this project.

The project includes six work packages that cover different research issues and socio-economic aspects of gene conservation. Preliminary results from studies of adaptive traits through phytotron studies, progeny trials and QTL analysis with different molecular markers were presented. (http://soi.cnr.it/~chestnut/home.html).

**ResGen78—Conservation of Elm Genetic Resources**
Eric Collin presented this project funded by the EU in the framework of the Genetic Resources programme of EU Regulation 1467/94. The project was based on existing *ex situ* collections of European elms (*Ulmus glabra*, *U. minor*, *U. laevis*). It includes 14 partners in 9 countries. The different partners provided different expertise such as molecular markers, cryopreservation, entomology and pathology. The project included six steps: (1) inventories and databases; (2) molecular characterization for taxonomy (nuclear DNA) and mapping migration routes (cpDNA); (3) testing tolerance to Dutch elm disease and identification of adaptive and ornamental traits; (4) building a core collection; (5) maintenance of the core collection; and (6) dissemination of results. More information can be found at http://www.cemagref.fr/English/ex/rural-areas/Elms/Elms02.htm

**Genetic Resources of Broadleaved Forest Trees Species in Southeastern Europe**
Myriam Heuertz presented the objectives of the second Phase of the project and emphasized the complementarities between *in situ* and *ex situ* conservation, as well as capacity building and exchange of scientists between the countries involved and other countries in Europe. The project is carried out in Bulgaria, Moldova, Romania and Ukraine in cooperation with Luxembourg. Species covered by the project include oak, beech, ash and maple. Activities include inventories of genetic resources, production of distribution maps and identification of seed stands. Joint micropropagation experiments were carried out and training on molecular genetics was provided.
Emil Popov presented the results of the inventories of *Fraxinus* sp. and *Acer* sp. in Bulgaria.

**Phylogeography of Fraxinus sp. in Europe**
Myriam Heuertz presented the results of a research effort that aimed at analyzing cpDNA of *Fraxinus excelsior* with regard to its phylogeography in Europe. Chloroplast microsatellite markers were used. A large number of populations and individuals were sampled across Europe. Haplotype distribution was mapped and main differentiation zones and migration routes were identified. The genetic data were congruent with fossil pollen data. Similar work was carried for *Fraxinus angustifolia* and *F. ornus*. The possibility for identifying origin of non-autochthonous populations was emphasized.

Some data from a geneflow study of *Fraxinus* in southeastern Europe were also presented. Sampling was carried out on 10 stands in Bulgaria and one stand in Romania. Nuclear microsatellite markers were used for characterization. The results were used for calculation of neighbourhood size but contrasting results were found at different scales within populations. Therefore, further investigation is needed.

**Improving Fraxinus productivity for European needs by testing, selection, propagation of improved genetic resources (RAP)**
Gerry Douglas of Teagasc, Ireland presented this new EU-funded project that addresses genetic diversity, breeding, sexual and vegetative propagation and other aspects of ash productivity. Existing provenance trials will be analyzed and new provenance trials will be established in six countries.

Bottlenecks for production and utilization of genetically improved material will be identified and evaluated through social studies involving all stakeholders. The chain of influence will be characterized and impacts on certification will be demonstrated. Demonstration plots will be established.

**National Council for Forest Research and Development, Ireland (COFORD)**
Eugene Hendrick, director of COFORD, provided an overview of the history of the institution and its strategic objectives. The role of COFORD is to coordinate and fund national forestry research in Ireland. The new research programme (2000-2006), is funded by the Irish Government under the National Development Plan. Forest genetics and breeding is one of the subject areas. There are six priority species (*Quercus robur*, *Q. petraea*, *Fraxinus excelsior*, *Acer pseudoplatanus*, *Betula pendula*, *B. pubescens*). Strategic actions include inventories of these species, designation of *in situ* conservation areas and selection of seed collection areas. Within forest genetics there will be capacity building and increased cooperation with EUFORGEN Networks was highlighted. In Ireland, several different research organizations (Coillte, Teagasc, University College Dublin, Trinity College Dublin and Duchas) are involved in forest genetics and breeding (http://www.coford.ie).

**Research needs and priorities and dissemination of results**
The problem of *Phytophthora* damage to *Alnus glutinosa* was raised and it appears that this is a common concern in many countries. The disease is also damaging other tree species and seems to be gradually spreading. Some research is being carried out in Germany and United Kingdom. It was proposed to invite a phytopathologist to one of the forthcoming meetings. Hybridization was also thought to be a research priority and it was hoped that there would better information on mating systems (i.e. of *Fraxinus*, *Sorbus*) available in the near future. There appears to be scope for a research project on hybridization of fruit trees, however it was currently not possible to identify more concrete possibilities.

The need for research funding opportunities for east European countries was raised. Several relevant programmes and projects of the European Union were mentioned. IPGRI will make
available results of a preliminary survey on research funding opportunities conducted in European countries. Bilateral contacts were encouraged among Network members that can provide a further basis for research cooperation.

A request for cooperation and support for genetic research on *Liquidambar* in Turkey was also made.

**Election of the Chair and Vice Chair**

On behalf of the Network, Sven de Vries expressed the gratitude of the group to Gösta Eriksson for his leadership and the outstanding input he made to the creation and operation of the Noble Hardwoods Network and conveyed best wishes for his prompt recovery. Jochen Kleinschmit, who acted as Vice Chair of the Network, was also thanked for his excellent contribution. It was proposed that Mari Rusanen and Peter Rotach would be the next Chair and Vice Chair of the Network. The Network endorsed the proposal.

**Adoption of the report**

The participants adopted the summary report of the meeting.

**Date and place of the next meeting**

An official offer to host the next Network meeting was received from Armenia. Portugal also kindly offered to organize the meeting. The participants appreciated both offers. The potential impact of a Network meeting in Armenia on advancing genetic conservation in the mandate group of species was discussed and the participants expressed their preference for the next meeting to be held in that country. If, for some reasons, this first choice should not be feasible, then the meeting would be held in Portugal. It was proposed that the meeting should take place in early June 2002.

A proposal was also put forward that one of the forthcoming meetings be held in the United Kingdom in conjunction with a meeting of the Fruits Working Group of the European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR). The participants expressed their strong interest in a joint meeting on issues related to complementary conservation strategies in species with both forestry and horticultural importance.

**Any other business**

It was proposed that a concise summary of the Network’s activities, which was recently published in the journal Investigación Agraria (INIA, Spain), could be included in the printed Report of the fourth and fifth Network meetings. The Secretariat will confirm the feasibility of including English version of the summary in the Report.

Adolf Korczyk and Richard Stephan announced that they would be retiring in the near future and therefore would not be able to join next meeting. They expressed their satisfaction with having been associated with this Network and wished everybody successful continuation of activities.

**Conclusions and closure of the meeting**

The Secretariat and the Network members expressed their gratitude to the local organizers for the excellent arrangements and organization.

The newly elected Chair closed the meeting.
Agenda

Fourth EUFORGEN Noble Hardwoods Network meeting
Gmunden, Austria, 4-6 September 1999

Friday 3 September
Arrival, transfer from Vienna Airport to Gmunden, registration, dinner

Saturday 4 September
1. Opening of the meeting
   Welcome (Host country and Chair of the Network)
   Introduction and format of the meeting (EUFORGEN Coordinator)
   Adoption of the agenda and nomination of rapporteurs

2. European long-term gene conservation strategies on Noble Hardwoods
   Presentation of *Alnus* spp. strategy (J. Gracan)
   Presentation of *Juglans regia* strategy (R. Alía)
   Discussion

3. Technical Guidelines for gene conservation and management of Noble Hardwoods
   Discussion of the draft text in chapters:
   Introduction (G. Eriksson, J. Kleinschmit and J. Turok)
   Evolutionary genetics and forest tree gene conservation (G. Eriksson)
   Gene conservation of Noble Hardwoods in situations where they occur
   widespread (M. Rusanen, A. Pliura and J. Jensen)
   Gene conservation of Noble Hardwoods in situations where they occur rarely (B.
   Demesure, R. Stephan and J. Kleinschmit)
   Case study: Multipurpose Noble Hardwoods – chestnut and walnut (J. Fernández
   and R. Alía)
   Case study: Gene conservation of elms and possibly other species that require
   special treatment (E. Collin)
   Descriptors (J. Jensen)
   Conclusion (G. Eriksson, J. Kleinschmit and J. Turok)

4. Network’s Bibliography - review of the progress made

Sunday 5 September

5. Field trip

6. Public awareness
   Brief round-the-table updates on public awareness activities in each country
   Joint public awareness initiatives of the Network

Monday 6 September

7. Progress made in the national gene conservation strategies
   Brief round-the-table country updates
   Introductory reports from newly attending countries
8. Inventories and documentation of Noble Hardwoods genetic resources
   Brief round-the-table updates on national inventories and databases/ documentation systems
   Development of the Network's Internet home page; Internet resources; common minimum information standards

9. Research
   Overview of ongoing research projects (A. Prokazin)
   Collaboration with other international projects and activities on Noble Hardwoods
   Development and submission of project proposals for funding to the EU Fifth Framework Programme
   Discussion: Identification of common research needs

10. Miscellaneous
    Distribution of Network publications
    Date and place of next meeting
    Any other business

11. Conclusions

   **Tuesday 7 September**

   Departure of participants
Fifth EUFORGEN Noble Hardwoods Network meeting
Blessington, Ireland 17-19 May 2001

Wednesday 16 May

Arrival of participants to Dublin and transfer to Blessington

Thursday 17 May

1. Opening of the meeting:
   1.1. Welcome (Host country and Chair of the Noble Hardwoods Network)
   1.2. Introduction (IPGRI)
   1.3. Adoption of the agenda and nomination of rapporteurs

2. Country reports
   2.1. Country updates (brief highlights)
   2.2. Introductory country reports from newly attending countries

3. Seminar: The role of species hybridization in gene conservation
   3.1. Presentation
   3.2. Discussion

4. European long-term strategies for gene conservation and management of Noble Hardwoods
   4.1. Harmonization of existing strategies
   4.2. Adoption at the national level
   4.3. Effective dissemination and implementation at the European level

Friday 18 May

5. Technical guidelines
   5.1. Results of the InterNetwork meeting
   5.2. EUFORGEN general principles of Forest Gene Conservation
   5.3. Noble Hardwoods “case studies”

6. Inventories and Documentation
   6.1. Application of minimum information standards
   6.2. Information platform on the Internet
   6.3. Bibliography

7. Public awareness
   7.1. Current EUFORGEN public awareness initiatives
   7.2. Public awareness activities of the NH Network

8. Research
   8.1. Overview of ongoing projects and their results
   8.2. Research needs
   8.3. Role of the network in the dissemination of results
Saturday 19 May

Morning:

9. Field trip

Afternoon:

10. Adoption of the report
11. Date and place of next meeting
12. Any other business

Sunday 20 May

Transfer to Dublin and departure of participants
List of participants*

Mr Karen Ter Ghazaryan (Gmunden only)
Forest Research and Experimental Center
15 Lusarovich Street
4th floor, GARUN
Yerevan 370015
 Armenia
Tel: +374 2 562974
Fax: + 1 978 926 64 76 (US)
Email: freenet.am

Mr Ferdinand Müller
Institute of Silviculture
Federal Forestry Research Center
Hauptstrasse 7
1140 Wien
Austria
Tel: +43 1 87838 2206
Fax: +43 1 87838 2250
Email: ferdinand. bva.bmlf.gv.at

Mr Bart De Cuyper
Institute for Forestry & Game Management
Duboislaan 14
1560 Hoeilaart
Belgium
Tel: +32 2 6570386
Fax: +32 2 6579682
Email: bart. in.vlaanderen.be

Mr Emil Popov (Blessington only)
Forest Research Institute
Kliment Ohridski Blvd. 132
1756 Sofia
Bulgaria
Tel: +359 2 9620442
Fax: +359 2 9620447
Email: bulnet.bg

Mr Davorin Kajba (Gmunden only)
Faculty of Forestry
Svetosimunska 25
10 000 Zagreb
Croatia
Tel: 385-1-230 22 68
Fax: 385-1-218 616
Email: davorin. zg.tel.hr

Mr Joso Gracan (Blessington only)
Forest Research Institute
Cvjetno naselje 41
10 450 Jastrebarsko
Croatia
Tel: +385 1 6381022
Fax: +385 1 6281493
Email: jaska.sumins.hr

Mr Václav Buriánek (Gmunden only)
Forestry and Game Management Research Institute
Strnady
15604 Praha 4
Czech Republic
Tel: 420-2-57921643
Fax: 420-2-57921444
Email: vulhm.cz

Mr Lubomir Salek (Blessington only)
LESPROJEKT Kromeriz s.r.o.
Kotojedska 1044
76701 Kromeriz
Czech Republic
Tel: +420 634 335547
Fax: +420 634 333828
Email: lesprojekt km.cz

Mr Jan Svejgaard Jensen
Forest and Landscape Research Inst
Hørsholm Kongevej 11
2970 Hørsholm
Denmark
Tel: +45 45 763200
Fax: +45 45 763233
Email: fsl.dk

Mr Ülo Tamm
Forest Research Institute
Kreutzwaldi 5
51014 Tartu
Estonia
Tel: +372 7 422346
Fax: +372 7 421053
Email: eau.ee

Ms Mari Rusanen
Forest Research Institute
Box 18,
01301 Vantaa
Finland
Tel: +358 9 8570 5542
Fax: +358 9 8570 5711
Email: mari. metla.fi

Ms Brigitte Demesure
Conservatoire Génétique des Arbres
Forestiers, ONF
Centre INRA
45160 Ardon
France
Tel: +33 2 38414808
Fax: +33 2 38417899
Email: orleans.inra.fr

*Participants to both meetings unless otherwise stated
Mr Jochen Kleinschmit (Gmunden only)
Lower Saxony Forest Research Institute
Dpt Forest Resources
34355 Escherode
Germany
Tel: 49-5543-940810
Fax: 49-5543-940861
Email: nfv-t-online.de

Mr Richard Stephan (Blessington only)
Institute for Forest Genetics and Tree Breeding
Sieker Landstrasse
22927 Grosshansdorf
Germany
Tel: +49 4102 696144
Fax: +49 4102 696200
Email: holz.uni-hamburg.de

Mr László Nagy
Forest Research Institute
Várkerulet 30/A
9600 Sárvár
Hungary
Tel: 36-95-320 070
Fax: 36-95-320 252
Email: reemail.c3.hu

Mr Michael Lally (Gmunden)
Coillte Research & Development
Newtown Mount Kennedy
Co. Wicklow
Ireland
Tel: 353-1-2011111
Fax: 353-1-2011199
Email: lally_coillte.ie

Mr John Fennessy (Blessington only)
Coillte Teoranta
Tree Improvement Center
Kilmacurra Park
Kilbride, Wicklow Park
Ireland
Tel: +353 404 482 82
Fax: +353 404 483 77
Email: fennessy_coillte.ie

Mr Alfas Plûra
Lithuanian Forest Research Institute
4312 Girionys Kaunas reg.
Lithuania
Tel: +370 7 547245
Fax: +370 7 547446
Email: mi.lt

Ms Myriam Heuertz
CREBS Research Unit
C.R.P. Gabriel Lippmann
162 av. de la Faïencerie
1511 Luxembourg
Luxembourg
Tel: +352 470261439
Fax: +352 470261389
Email: crpgl.lu

Mr Gheorghe Postolache (Blessington only)
Institute of Botany
Padurii 18
2002 Chisinau
Moldova
Tel: 373-2- 523553
Email: asm.md

Mr Sven M.G. de Vries
ALTERRA Green World Research
PO BOX 47
6700 AA Wageningen
Netherlands
Tel: +31 317 477 841
Fax: +31 317 424 988
Email: s.m.g.alterra.wag.ur.nl

Mr Tor Myking
Norwegian Forest Research Institute
Hoegskoleveien 12
1432 Aas,
Norway
Tel: +47 64 949043
Fax: +47 64 949280
Email: tor.nisk.no

Ms Maria Carolina Varela
Estação Florestal Nacional, INIA
Edificio do Procalifer Quinta do Marquês
2784 505 Oeiras
Portugal
Tel: +351 1 4415763
Fax: +351 1 4415660
Email: mariacarolina_lix.pt

Ms Natalia Demidova
Northern Research Institute of Forestry
Nikitov 13
Arkhangelsk 163062
Russian Federation
Tel: +7 8182 416246
Fax: +7 8182 412587
Email: forestry.sts.ru

Mr Roman Longauer (Blessington only)
Forest Research Institute
T.G. Masaryka 22
96092 Zvolen
Slovakia
Tel: +421 855 5314327
Fax: +421 855 5321883
Email: roman.ris.sk
Ms Hojka Kraigher
Slovenian Forestry Institute
Vescna Pot 2
1000 Ljubljana

Slovenia
Tel: +386 1 2007820
Fax: +386 1 2573589
Email: hojka. gozdis.si

Ms Josefa Fernández López (Gmunden only)
Centro de Investigaciones Forestales de Lourizán
 Apartado 127
36080 Pontevedra

Spain
Tel: +34 986 85 64 00
Fax: +34 986 85 64 20
Email: nia.es

Mr Gösta Eriksson (Gmunden only)
Department of Forest Genetics
Swedish University of Agric. Sciences
Box 7027
750 07 Uppsala

Sweden
Tel: +46 18 671240
Fax: +46 18 672718
Email: gosta. sgen.slu.se

Mr Peter Rotach
Swiss Federal Institute of Technology
Ramistrasse 101
8092 Zürich

Switzerland
Tel: +41 1 6323210
Fax: +41 1 6321033
Email: waho.ethz.ch

Mr Murat Alan (Blessington only)
Forest Tree Seed and Tree Breeding Research Directorate
PO Box 11
06560 Gazi , Ankara

Turkey
Tel. +90 312 2126519
Fax +90 312 212690
Email: yahoo.com

Ms Olga S. Mazhula (Gmunden only)
Laboratory of Forest Tree Breeding
Ukrainian Research Institute of Forestry
310024 Kharkiv

Ukraine
Tel: 380-572-431549
Fax: 380-572-432520
Email: u-fri.kharkov.com

Mr Roman Volosyanchuk
Ukrainian Research Institute of Forestry & Forest Melioration
Pushkinska, 86
Kharkiv 61024
Ukraine
Tel: +380 572 431549
Fax: +380 572 432520
Email: uriffm.com.ua

Ms Karen Russell
Horticulture Research International
East Malling
West Malling
Kent ME 19 6BJ

United Kingdom
Tel: +44 1732 843833
Fax: +44 1732 521557
Email: karen. hri.ac.uk

EUFORGEN Secretariat/IPGRI

Mr Jozef Turok
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Rome, Italy
Tel: +39 066118250
Fax: +39 0661979661
Email: j. cgiar.org

Mr Simone Borelli (Blessington only)
Via dei Tre Denari 472/a
00057 Maccarese (Fiumicino)
Rome, Italy
Tel: +39 0661182
Fax: +39 0661979661
Email: s. cgiar.org

Observers

Mr Eric Collin
CEMAGREF
Groupement de Nogent-sur-Vernisson
Domaine des Barres
45290 Nogent-sur-Vernisson

France
Tel: 33-2-38 95 03 55
Fax: 33-2-38 95 03 46
Email: eric. nogent.cemagref.fr

Mr Eric Collin
CEMAGREF
Groupement de Nogent-sur-Vernisson
Domaine des Barres
45290 Nogent-sur-Vernisson

France
Tel: 33-2-38 95 03 55
Fax: 33-2-38 95 03 46
Email: eric. nogent.cemagref.fr