

The small-scale forestry group 1986–2006: an overview on the group activities during the last 20 years

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Abstract This paper documents the history of the first 20 years of the Small-scale Forestry Group of the International Union of forest Research Organisations (IUFRO). The origins of the Small-scale Forestry Group can be traced back to the ‘Five Year Report 1982–1986, IUFRO Division 3 Forest Operations and Techniques’ where ‘Division 3 took the initiative to intensify research in the area of Small-scale Forestry by promoting a new project group P 3.04 ...’. In 1986 this group was founded during the IUFRO World Congress in Ljubljana. The emergence of the Small-scale Forestry Group reflects the expanding interest in small-scale forestry as a field of study and its increasing social and economic importance. This paper describes and critically assesses the how the Group has developed during the last 20 years, and reviews the activities which have been undertaken, and makes some forecasts about the future of the Group. The key impression is that the Group has been remarkably active, and has achieved much more than could have been predicted at the time it was formed.

Keywords IUFRO · Forest history · Research themes · Small-scale Forestry

Introduction

As noted on its Web site, the International Union of Forest Research Organisations is a global network for forest science cooperation, uniting more than 15,000 scientists in almost 700 Member Organizations in over 110 countries. The stated mission of IUFRO is ‘to promote the coordination of

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and the international cooperation in scientific studies embracing the whole field of research related to forests and trees for the well-being of forests and the people that depend on them'. The stated vision 'is of science-based sustainable management of the world's forest resources for economic, environmental and social benefits'.

IUFRO is open to all individuals and organizations dedicated to forest and forest products research and related disciplines. It is a non-profit, non-governmental and non-discriminatory organization with a long tradition dating back to 1892. IUFRO attains its objectives by networking activities including the generation, exchange and dissemination of scientific knowledge, the provision of access to relevant information, and the assistance to scientists and institutions to strengthen their research capacities. Members include research organizations, universities and individual scientists, NGOs, decision-making authorities, forest landowners and other people who depend on forests.

IUFRO has a number of different types of groups and subgroups, basically referred to as Research Groups and Working Groups, each having their own coordinator and membership list. Over time the number of working groups and the range of activities has expanded. The groups come together at a World Congress every 5 years, the most recent being in Brisbane, Australia, in August 2005.

The need for a group dealing specifically with small-scale forestry was first raised in the 'Five Year Report 1982–1986, IUFRO Division 3 Forest Operations and Techniques' where 'Division 3 took the initiative to intensify research in the area of Small-scale Forestry by promoting a new project group P 3.04...'. Group 3.08.00—Small-scale Forestry—was officially founded and had its first meeting during the 1986 IUFRO World Congress in Ljubljana. (Bol 1986).

The Small-scale Forestry Group has now completed 20 years of operation. It has been coordinated by Dr Helmut Brandl from Freiburg in Germany over 1986–1996, then Pentti Hyttinen from Finland over 1996–2006, and is now coordinated by Dr John Herbohn of The University of Queensland in Brisbane, Australia. This journal was commenced by the Group in 2002. The Small-scale Forestry Group has been a particularly active, with well-attended conferences in most years, occasionally as joint meetings with other IUFRO groups.

The history of the Small-scale Forestry Group is a reflection of the evolution of interest in the management of non-industrial plantations as a form of multiple-use and sometimes peri-urban forestry, with a large number of owners having a variety of objectives. It is a reflection of the view that small-scale forestry is different to industrial forestry, a theme in the first issue of *Small-scale Forest Economics, Management and Policy*.

This paper describes and critically assesses the way the group has developed during the last 20 years and focuses on the following aspects:

1. Development for founding the Group, and small-scale forestry definitions
2. The meetings, and themes and venues, of the Group.
3. The range of research fields and issues that have been dealt with. The papers presented at each conference are analysed according to their

- relationship to the traditional research fields, including forest economics, forest policy (including social environmental aspects), forest technology and extension activities.
4. The international spreading of the Group (a story of expansion).
 5. Cooperation with other IUFRO groups, for example Group 6.11.02—Forestry and Rural Development in Industrialised Countries.
 6. The foundation of a journal related to the Group, initially known as *Small-scale Forestry Economics, Management and Policy*, but renamed for this issue, the first published by Springer, as *Small-scale Forestry*.
 7. Outlook: Research challenges for the Group in the future

Development for Founding the Group and Definitions

Scientific research work with forests and forestry in the focus started in the early 19th century in Germany and central Europe. For a long period there seemed to be no need to establish special research approaches for different types of ownership or for different forest size classes. Forestry and forest research had been conducted in most countries by the public sector on public lands, in the New World (USA, Australia) also by industrial companies on large-scale natural forest areas or plantations. On the other hand, private non-industrial and small-scale management of forests has been dominant in Central and Western Europe and Japan (Hyttinen 2004). In the research community this type of forestry had been neglected for a long time. One important reason is connected with some peculiarities of this type of forestry.

Research on small-scale forests and their owners is confronted with a series of difficulties. In larger forest estates or privately-owned enterprises a researcher who intends carrying out scientific investigations normally can be sure to find a set of data and information based on periodical inventories (e.g., area, age, tree-composition, standing volume, increment of stands), management plans (e.g., allowable cut), regular bookkeeping and accountancy on a yearly basis.

Small privately owned forest holdings with a size below 200 ha normally cannot offer such basic information to a researcher who will carry out specific investigations on topics dealing with this type of forests and of forest ownership. Thus it became necessary for the Forest Research Institute of Baden-Württemberg to establish a ‘Farm Forest Accountancy Network’ in 1972 to gather, analyse and publish a large set of data on the structural, natural and economic situation of this type of forest ownership in Germany. Another great hindrance for research work was and remains the great number of forest owners and their highly skeptical or negative attitude towards researchers and their interests.

Due to these negative preconditions, research on small-scale forestry started late, long after the first great eruption of forest research in the last decades of the 19th century. The need for cooperation between the different researchers and research institutions also on an international level led in this

first phase to the foundation of the International Union of Forest Research Organizations in 1892 in Berlin–Eberswalde, Germany.

Schraml provided an informative overview on the historical development of small-scale forest owner research in Germany in a paper presented at the symposium of the Small-scale Forestry Group in Gengenbach in 2002 (Schraml 2004). Schraml pointed out that an impulse from outside was necessary to first direct the political and then the scientific interest towards small-scale private forest holdings. Such impulses had been for example the shortage in timber after the first and second world wars and also the energy crisis arising from oil price increases in the mid-1970s. The repeated question was how to motivate forest owners to use and to market more timber from their forests (Schraml 2004, p. 82).

It took until the 1980s for interest of the forest research community to increase on a wide range of topics about farm forestry. Not only did the topics reflect a broader field of interest but also the researchers represented a wider background. Next to foresters and forest researchers, also legal experts, historians, political scientists, economists and researchers on forest labour science as an ergonomic science developed an interest in the small-scale private forestry sector (Schraml 2004, p. 84).

The growing research efforts as well as the publication of new results and knowledge found also response on an international level. IUFRO can be considered as the optimal platform to facilitate information exchange between researchers dealing with small-scale forests and their owners. Consequently, the Leader of Division 3 of IUFRO, Prof. Marten Bol ‘took the initiative to intensify research in the area of Small-scale Forestry by promoting a new project group P 3.04’ in the years before 1986 (Bol 1986). This group was established with agreement and in cooperation with the leaders of Divisions 4 and 6 of IUFRO. At this first meeting in Ljubljana in 1986 about 30 researchers from 10 countries signed a paper in which they declared their willingness to participate in the work of the group. Twenty years later the IUFRO group ‘Small-scale Forestry’ has approximately 700 members—including scientists, extension professionals, policy-makers, decision-makers and post-graduate students—in almost 50 countries from all over the world.

In terms of definitions, for the self-assessment of the Group it was important to have an agreement on ‘What is small-scale?’ (See Harrison 2002, Harrison et al. 2002). In Germany and then in the European Union, a convention was established, where all ownership units of less than 200 ha are in the category ‘small-scale’. For special purposes, for example to separate very small woodlots where timber cutting is not constantly possible every year, ‘very small forest holdings’ with a limit at 5 ha has been defined.

But from a global perspective the statement of Hyttinen (2004) is relevant: ‘It is apparent that small-scale forestry means different things in different parts of the world. There is no simple nor consistent definition of what constitutes small-scale forestry. A farmer operating with a woodlot of 5 ha would certainly be a small-scale forest owner, whereas an industrial company with thousands of hectares would be large. But, in between these examples, there

exists a wide variety of sizes that can be considered either small or large depending on the viewpoint taken’.

Hyttinen (2004) also pointed out that there is no comparable nor consistent statistical information about the amount of small-scale forests in different countries and continents, reporting UN-ECE/FAO statistics that private forest ownership plays a significant role especially in Japan (59% of the forest area is privately owned), Europe (55%), North America (37%) and New Zealand (31%). He further noted the need to make a distinction between small-scale forestry and private forestry, because private does not always mean small.

Hyttinen (2004) argued that the terms ‘small-scale forestry’, ‘non-industrial private forestry’, ‘family forestry’ and ‘farm forestry’ are parallel and they are used synonymously to separate the type of forestry from industrial or public large-scale forestry. Small-scale forestry differs in many ways from large-scale forestry, for example, in aspects such as motivations for the establishment and management of forests, social and economic objectives of forestry, and the likely markets for wood and non-wood forest products.

Despite of these difficulties in arriving at uniform definitions, all the researchers in the Group have had no problems finding a platform to make sure that they are talking about the same type of forests and forest ownership.

Meetings of the Group

During the 20 years of its existence 18 meetings of the Group took place. A Group meeting has been integrated within each IUFRO World Conference since 1986 (1990, 1995, 2000, 2005), also in the IUFRO conference on the occasion of the 100-year anniversary of IUFRO in 1992 in Berlin and Eberswalde.

Twelve separate meetings have been organized by members of the Group, as listed in Table 1. Two were joint meetings with Group 6.11.02 ‘Forestry and Rural Development: Industrialized Countries’ and members of the Small-scale Forestry Group were invited to attend a special meeting of group S 6.07 ‘Forest History’.

It is quite remarkable how often a member of the Group, mostly a research organization, offered to be the host for a group meeting. It is not a matter of course that persons or research organizations are willing to take the burden of the organizational work for such a meeting with 50–110 participants. This includes not only the perfect preparation of the meeting and the excursions but also editing the proceedings. There is reason to believe that the attractiveness of this special research field and also of the widespread and important scientific results, presented in the papers, posters or by oral contributions during the meetings, gave enough motivation for group members to act as a host for a meeting. As commented by one reviewer of this paper, many people are motivated to host a meeting because they have gained a great deal from attending past meetings; the group has created an environment that

Table 1 Meetings years, locations, themes and participant numbers

Year	Place/country	General topic or theme	No. of participants
1986	Ljubiana (former Yugoslavia)	Foundation of the Small-scale Forestry group during the XVIII IUFRO World Conference	Approx. 30
1988	Freiburg (Germany)	Economic and Political Aspects of Farm Forestry	58
1989	Helsinki (Finland)	Profitability of Private Forestry (workshop)	10
1990	Montreal (Canada)	XIX IUFRO World Conference	Approx. 30
1991	Freiburg (Germany)	History of Small-scale Forestry; History of Farm Forestry – a joint meeting with the Forest History Group, IUFRO S 6.07	50
1992	Berlin/ Eberswalde (Germany)	Economic results from private forests in international comparison and adapted forest machinery for the work in Small-scale forest units. Meeting for the 100-years anniversary of IUFRO	Approx. 25
1993	Fredericton (Canada)	Forestry and Rural Development in Industrialized Countries; Where are We Going? – a joint meeting with Group 6.11.02	Approx. 60
1994	Krakow (Poland)	Private Forestry: Changes and Challenges of Countries in Transition	44
1995	Tampere (Finland)	Small-scale Forestry: Present Problems and Prospects for the Future, XX IUFRO World Conference	42
1997	Kyoto (Japan)	Sustainable Management of Small-scale Forestry	113
1998	Vancouver (Canada)	Integrating Environmental Values into Small-scale Forestry	46
2000	Cairns (Australia)	Developing Policies to Encourage Small-Scale Forestry	Approx. 70
2000	Kuala Lumpur (Malaysia)	XXI IUFRO World Conference	Approx. 30
2001	Joensuu (Finland)	Economic Sustainability of Small-scale Forestry	84
2002	Gengenbach (Germany)	Contributions of Family-Farm Enterprises to Sustainable Rural Development—a joint meeting with Group 6.11.02 ‘Forestry and Rural Development in Industrialized Countries’	Approx. 90
2004	Pullman (USA)	Human Dimensions of Family, Farm and Community Forestry	Approx. 110
2005	Vilnius (Lithuania)	Small-scale Forestry in a Changing Environment	Approx. 65
2005	Brisbane (Australia)	XXII IUFRO World Conference	Approx. 45

encourages participation of members over the long term and these people want to put something back into the group.

The scientific outcome of the meetings which is documented in the proceedings has reached a very high level. For interested researches the

proceedings can be seen as a comprehensive source for information, worked out and presented by a worldwide network of researchers.

A special factor for the success of all these meetings should not to be forgotten, namely the excursions, organized as both ‘in-conference tours’ and ‘post-conference-tours’. These excursions are especially in the forestry discipline an additional source for knowledge and information which cannot be underestimated. It gives many opportunities to see the real situation and the problems faced by the management of privately owned small-scale forests. Also much additional information on landscape, historical development, settlement and about ‘the country and its people’ is provided to the participants. These excursions enable the participants from foreign countries to gain a clear and real picture of the living conditions, and the different possibilities and problems occurring with the management of forest holdings. Furthermore, an opportunity is provided for intensive contacts between all participants during these excursions.

The meetings of the Group have also been strongly influenced by the office-holders (Coordinators and Deputy Coordinators) and their activities. It is quite remarkable that in the first 20 years only two Coordinators were in duty. Each of them could act during the full time which is allowed by IUFRO, this being two 5-year terms. For the future there are also sound prospects to maintain this continuity. The new Coordinator, John Herbohn, has previously served as a deputy coordinator, and has been highly active in this position. The organizational structure of the Group documents also the shift to a wider opening on the international level (Table 2).

Research Fields and Topics of the Presented Papers

The landscape of research fields and topics for research projects in Small-scale Forestry are quite different to those of other IUFRO groups. Normally, the working field of a Research Group has a narrow and clear definition. For

Table 2 Office-holders of the group, 1986–2010

Period (and number of the group)	Coordinator	Deputy coordinator
1986–1990 (P. 3.04.00)	N. Heding, Denmark (till 1987) Helmut Brandl, Germany (since 1987)	W.H. Emmingham, USA Helmut Brandl, Germany (till 1987)
1990–1995 (P 3.04.00)	Helmut Brandl, Germany	J. Militon, France J. Swartström, Sweden
1995–2000 (3.08.00)	Pentti Hyttinen, Finland	Y. Murashima, Japan H.U. Sinner, Germany
2000–2005 (3.08.00)	Pentti Hyttinen, Finland	John Herbohn, Australia Ikuko Ota, Japan
2005–2010 (3.08.00)	John Herbohn, Australia	Johan Barstad, Norway David Baumgartner, USA Ikuko Ota, Japan

example, in 1986 in Division 3 'Forest Operations and Techniques' groups existed such as 'Tree harvesting', 'Centralized tree processing', 'Stand establishment operations', 'Forest operations under mountainous condition' and 'Ergonomics in the timber industry'. In contrast to such a clear focus on a specific forest discipline or technique, a great variety of topics is constitutional for the 'Small-scale Forestry Group'. The focus on a special type of woodland owners opens the possibility that every forest discipline which is doing research work in connection with non-industrial private woodland owners and their forests can use the meetings of the Small-scale Forestry Group as a platform to present their research and the problems with which the researchers have been confronted.

The great variety of themes makes it difficult to give an overview or, even an impression, on both subject matter and research results of presented and published papers. The list of all presented or published papers reached a number of more than 450. The only way to come to some statements on the contents of the papers is to structure them in categories. After a first checking, the following categories have been chosen:

1. General aspects of small-scale forestry
2. Forest economics
 - 2.1 Analysis of the economic situation
 - 2.2 Economic instruments to improve the economic situation
3. Forest policy
 - 3.1 General aspects, legislation, taxation, administration, governance
 - 3.2 Cooperation, associations
 - 3.3 Incentives, extension services
4. Community forestry
5. Social aspects, human dimensions
6. Ecological and environmental aspects
7. Forest techniques and marketing
8. Agroforestry
9. Management, forest inventory and planning, silviculture, afforestation
10. Forest history

The results of this type of an analysis are reported in Tables 3 and 4. Papers dealing with general aspects of farm forestry have been presented at nearly every meeting. Normally the hosting institution or representatives of the country present an overview on the situation of small-scale forestry in the country or in a region. Also, general problems of this type of ownership have been topics for papers.

The first meetings were dominated by economic and political issues. This is in accordance with the results of the business meeting during the first official

Table 3 Presented papers per category at the meetings (absolute numbers)

Category	Year	1	2.1	2.2	3.1	3.2	3.3	4	5	6	7	8	9	10	Total
Freiburg	1988	5	4		3	4							3		19
Helsinki	1989	2	5												7
Montreal	1990		5	1		2					6		1		15
Freiburg	1991	3			1		1					6	1	24	36
Berlin	1992	4	6			1					4		2		17
Fredericton	1993	6	5	1	3	1	1	4			2		2		25
Krakow	1994	7	3	4	2	2	4	2					1		25
Tampere	1995	3	5	5		2	1	1			2		4		23
Kyoto	1997	4	1	4	2	6	1	2		4	3		2		29
Vancouver	1998	1	1		3	1	1			9	1		9		26
Cairns	2000	5	3	3	5	2	6		5	4	5	3	7		48
Kuala Lumpur	2000		1	1							2		1		5
Joensuu	2001	7	3	3	1	1	4	1	2	1			1		24
Gengenbach	2002	7	1	1	2	4	2	2	9		3	1	4	1	37
Pullman	2004	7	2	1	2	6	4	7	16	3	4	4	8		64
Vilnius	2005	5	2	3	7	4		1	11	2	2		5	1	43
Brisbane	2005	2			2	2	2	1	12		3		1		25
Total		68	47	27	33	38	27	21	55	23	37	14	52	26	468

Table 4 Presented papers per category at the meetings (percentage distribution)

Category	Year	1	2.1	2.2	3.1	3.2	3.3	4	5	6	7	8	9	10	Total
Freiburg	1988	26	21		16	21							16		100
Helsinki	1989	29	71												100
Montreal	1990		33	7		13				40			7		100
Freiburg	1991	8			3		3					17	3	66	100
Berlin	1992	24	35			6					23		12		100
Fredericton	1993	24	20	4	12	4	4	16			8		8		100
Krakow	1994	28	12	16	8	8	16	8					4		100
Tampere	1995	13	22	22		9	4	4			9		17		100
Kyoto	1997	14	3	14	7	21	3	7		14	10		7		100
Vancouver	1998	4	4		12	4	4			34	4		34		100
Cairns	2000	11	6	6	10	4	13		11	8	10	6	15		100
Kuala Lumpur	2000		20	20							40		20		100
Joensuu	2001	29	13	13	4	4	17	4	8	4			4		100
Gengenbach	2002	19	3	3	5	11	5	5	24		8	3	11	3	100
Pullman	2004	11	3	2	3	9	6	11	25	5	6	6	13		100
Vilnius	2005	12	5	7	16	9		2	25	5	5		12	2	100
Brisbane	2005	8			8	8	8	4	48		12		4		100
Total		15	10	6	7	8	6	4	12	5	8	3	11	5	100

group meeting in 1988 at Freiburg. Looking at the great variety of possible topics to deal with, the group agreed to concentrate the objectives of the group work on a few main aspects. The reason can be found during the short business meeting, where it was agreed that ‘Scientific exchange on problems of private forest management can only be achieved if the economic income situation in the individual countries is known. ... all measures in forest policy terms of promotion of small-scale forestry are based on the economic

situation, in particular the income and price structure in timber production' (Brandl 1989).

Following these suggestions the next meeting in Helsinki (in 1989) was organized as a workshop meeting of experts with 10 participants. As a main result 'Guidelines for the presentation of data about the profitability of private forestry' were developed and distributed to the members of the group. According to these guidelines, papers were presented at the meetings at Montreal (1990, International 1990), Berlin (1992, Brandl 1993b) and Fredericton (1993, Simpson 1993), in which the economic situation of small-scale forest owners was described. An international comparison between Austria, Finland, Germany and Japan on the economic situation was carried out as well. After the meeting in Tampere (1995, Brandl 1996), this economic issue lost importance while the significance of other topics increased. Political aspects and within them mainly questions of cooperation and association played a role in nearly every meeting.

The widely spread aspects of forest management, forest inventory and planning, silviculture and afforestation have been a subject of papers in most meetings. Forest techniques and marketing came up as topics in Montreal 1990, mainly pushed by Swedish forest researchers who carried out research on adapted techniques for small-scale forest units. In later meetings also, papers dealing with aspects of timber markets and marketing have been presented. With the meeting at Fredericton (1993, Simpson 1993), community forestry came up as a new topic and also played a role in later meetings. Papers dealing with environmental and ecological aspects have been presented since Kyoto (1997, Murashima 1997) with a peak in Vancouver (in 1998) according to the general topic of this meeting.

With the meeting at Cairns (2000, Herbohn et al 2001) a shift of research interests can be observed. New topics on social aspects occurred. Not only hard facts on forests and bookkeeping data were of interest but also the personality of the forest owner with his personal goals, attitudes and behaviour became subject of research focus. Therefore also the methodical approach had changed to sociological surveys and enquiries as instruments of research work. The meetings since Gengenbach (2002, Forstwissenschaftliche 2004) show the increasing importance of this topic.

Summing up all papers over these 20 years, the political aspects with 21% of papers heads the ranking. This shows that society looks with great interest on this type of ownership. The potential of these forests to supply economic, social and environmental benefits to society is a great driver for research work in this field. Also the political intention to promote small-scale private forestry stimulates research work, mainly in the direction of help for cooperation and associations, and for the building up of extension services or to give reasons for incentives. In second place in the ranking are the economic aspects of small-scale forestry (17%). This is due to the decision of the first meeting to focus the work of the group on this direction. With 15%, general aspects are well represented.

Management aspects (11%) are directly followed by research on social problems (10%). Forest techniques and marketing are represented at most of the meetings but not at a remarkable level (8%). Only few contributions can be found on history (6%), community forestry (4%), environmental aspects (5%) and agroforestry (3%).

The most remarkable result of this statistical analysis is the shift of research from hard facts (timber volume, income, expenditure) to soft facts including attitudes, behaviour and goals of the forest owners. This shift finds its most prominent expression in the general topic of the meeting in Pullman (2004, Baumgartner 2004), namely ‘Human Dimensions of Family, Farm and Community Forestry’.

The International Spreading of the Group

The Group had been founded with a clear orientation towards the problems of privately owned small-scale forests in industrialized or developed countries. At the foundation meeting of in Freiburg (1988, Brandl 1989), the classical European countries with a high share of private forest owners including Finland, Norway, Sweden, Denmark, Austria, Switzerland, Germany, France, United Kingdom, Ireland, Italy and Spain were represented. From countries outside of Europe researchers came from Canada, the USA and Japan.

The restriction on developed countries had been confirmed at the meeting in Berlin and Eberswalde (1992, Brandl 1993b). In the report of the business meeting of the Group this is explained as follows: ‘It was made the suggestion to open the activities of the Group also for problems of developing countries with forest activities in small-scale forestry, especially agroforestry and economic problems. This proposal was discussed with other office-holders of IUFRO (leaders of divisions 3 and 4). The opinion was that ‘a special program exists for the developing countries (SPDC). This program should integrate the problems of private forestry and small-scale forestry’ (Brandl 1993b, p. 5). In the same report a proposal from the business meeting of division 3 is mentioned, in the proposal for ‘The organization of a group meeting 1992 in a country of Eastern Europe to deal with the special problems there’.

The Small-scale Forestry Group followed this appeal and was successful in finding hosts in Poland. Thus the very successful meeting in Krakow (1994, Brandl 1995) could be organized in 1994. It was the first time that a greater number of researchers from these so-called ‘countries in transition’ were able to attend this meeting—also thanks to considerable financial support from the IUFRO Special Program ‘SPDC’ (Coordinator Brian Payne). In consequence, nine meeting papers from these countries were presented.

Researchers from developing countries appear relatively late in the participants list of the meetings due to the above-mentioned restrictions. With the meetings in Vancouver (in 1998) and Cairns (in 2000) the list of represented developing countries increased rapidly. Nowadays, each continent is represented and the group is an integral part of the ‘global village’.

If the presented papers are differentiated by the topics dealing with problems and research results in developed countries, in developing countries and countries in transition, there is a slight difference to the statistic regarding the country of origin of the participants (Table 5). The reason is that researchers from developed countries carry out research projects in developing countries, for example researchers from Australia in Papua New Guinea. This is the reason why at the meetings in Cairns (2000) so many papers on research work and research results in developing countries were presented.

In spite of this opening, the papers on problems in developed countries remain dominant. The tables show only one exception: the meeting in 1991 in Freiburg, dealing with the history of small-scale forestry and of farm forests, had a large number of participants and also of papers from developing countries. The reason for this was that thanks to remarkable financial support participants from developing countries could be paid a great part of their traveling costs. Thus researchers from Bangladesh, China, India and Nepal were able to participate.

Regarding the frequency of participation as shown in Table 6, the highest rate was reached by Finland with 15 meetings with participants from this country, followed by Germany (14), Japan (13), Sweden (13), Canada (12), Austria (11), Ireland (10), UK (10), USA (9), France (7), and Slovenia (6). Since Kyoto 1997, researchers from Australia took part in the meetings, and since Cairns 2000 they played a leading role in the Group. Researchers of the

Table 5 Meetings and amount of papers dealing with problems in developed countries, developing countries or countries in transition^a

Year	Place	Total no. of presentations	Developed countries		Developing countries		Countries in transition	
			Number	%	Number	%	Number	%
1988	Freiburg	19	19	100				
1989	Helsinki	7	7	100				
1990	Montreal	15	14	93	1	7		
1991	Freiburg	36	21	58	11	31	4	11
1992	Berlin	17	14	82	2	12	1	6
1993	Fredericton	25	23	92	1	4	1	4
1994	Krakow	25	17	68			8	32
1995	T ampere	23	20	87			3	13
1997	Kyoto	29	25	86	1	4	3	10
1998	Vancouver	26	25	96	1	1		
2000	Cairns	48	39	81	9	19		
2001	Joensuu	24	21	88			3	12
2002	Gengenbach	37	35	95	2	5		
2004	Pullman	64	43	67	17	27	4	6
2005	Vilnius	43	29	67	2	5	12	28
2005	Brisbane	25	18	72	4	16	3	12
Total or average		463	370	80	51	11	42	9

^a No information was available to the author concerning the papers of Group members at the Kaula Lumpur World Congress in 2000

Table 6 Meetings and the countries of the origin of the participants

Participant origin	1988	1989	1990	1991	1992	1993	1994	1995	1997	1998	2000	2000	2000	2001	2002	2004	2005	2005	Participation	
	Freiburg	Helssinki	Montreal	Freiburg	Berlin	Fredricton	Krakow	Tampere	Kyoto	Vancouver	Cairns	Kaula Lumpur	Joensuu	Gengenbach	Pullman	Brisbane	Participation			
Australia																			8	
Austria	x			x				x		x				x					x	11
Bangladesh				x															x	4
Belgium				x															x	4
Bulgaria																			x	3
Canada																			x	12
China																			x	2
Costa Rica																				1
Croatia																				2
Czechoslovakia																				1
Czech Republic																			x	2
Denmark																			x	5
Dominican Republic																				1
Estoni																				1
Finland																				15
France																				1
Germany																				14
Honduras																				1
Hungary																				2
India																				5
Iran																				1
Ireland																				10
Italy																				2
Japan																				13
Kenya																				1
Korea																				3
Lithuania																				2
Luxembourg																				5
Malaysia																				2
Myanmar																				1

Table 6 continued

Participant origin	1988	1989	1990	1991	1992	1993	1994	1995	1997	1998	2000	2000	2000	2001	2002	2004	2005	2005	Participation
Nepal									x						x				1
Netherlands				x						x									3
New Zealand									x	x									3
Nicaragua														x					1
Nigeria																x			1
Northern Ireland	x							x											2
Norway							x		x	x								x	9
Panama				x															1
Papua New Guinea													x						2
Paraguay																			1
Philippines																		x	4
Poland							x												3
Portugal																			1
Slovak Republic																			1
Slovenia																			6
Spain																			1
Sri Lanka																			2
Sweden				x															14
Switzerland																			1
Taiwan																			1
Thailand																			1
Turkey																			1
Uganda																			1
United Kingdom																			11
USA																			10
USSR (Russia)																			2

other countries in Table 6 are found more or less occasionally in the list of participants.

Cooperation with other Iufro Groups

First contacts on a personal level could be established with members of the IUFRO Group 6.11.02 'Forestry and rural development in industrialized countries' during an international FAO/ECE/ILO 'Seminar on extension activities for owners of small woodlands' in Fredericton, Canada, on September 26th to 29th, 1987. At the business meeting of the group at Berlin (1992), an invitation to the group was presented by Hans Scholz from Canada, to participate in an IUFRO Symposium at Fredericton, Canada, in September 1993 with the theme 'Forestry and rural development in industrialized countries', organized by the group 6.11.02 with the identical name. It was decided 'to accept this invitation with its program and to offer this symposium as a joint meeting to all members of the group Small-scale Forestry'. The main reason was and is until now that the topics of this and later meeting are similar to those of the Small-scale Forestry Group, so that occasional joint meetings make sense.

Other joint meetings have been organized in Kyoto in Japan (1997) and in Gengenbach, Germany (2002). The exchange between the two groups is also practiced when separate meetings are planned—by mutual information on date, place and general topics. Due to a personal connection to the IUFRO Group 6.07 'Forest History', the coordinator of the Small-scale Forestry Group organized a meeting for the members of the History Group in 1991 in Freiburg, to which also members of the Small-scale Forestry Group were invited.

The Foundation of a New Journal Dedicated to Small-scale Forestry

Since the appearance of the Small-scale Forestry Group in the scientific domain as an organized research group of IUFRO in 1986 the development of this group can be characterized as a success story, as the above sections demonstrate. The attractiveness of the meetings within short intervals (12–18 months) and the quality of the papers presented and of the proceedings helped build up a worldwide network of highly interested and qualified researchers. This successful development has not come to an end yet. During the symposium of the group in Cairns, Australia (2000), a gap was identified. Until then no scientific journal existed which is dedicated to the publication of research articles relating to small-scale forestry. The idea was born to fill this niche by establishing a new specific scientific journal.

In August 2002, Vol. 1 No. 1 of the journal *Small-scale Forest Economics, Management and Policy* was produced. The main preparatory work had been done by Dr. John Herbohn (Managing Director of the journal) and Dr. Steve

Harrison (Editor in Chief), as pointed out by Pentti Hyttinen as IUFRO 3.08.00 'Small-scale Forestry' Coordinator in his 'Introducing the New Journal' written as a preface in the inaugural issue.

Important sponsors such as The University of Queensland, The University of Joensuu and the Society of American Foresters Private Forestry Working Party had made the launch possible. The purpose and the conception of the journal can be found very clearly described by Steve Harrison, John Herbohn and Anssi Niskanen in their article 'Non-industrial, Smallholder, Small-scale and Family Forestry: What's in a name?' in the first issue. In the following years the journal developed to a success-story in itself. The first plan was to edit 2–3 issues per year but the number increased to 4 per year while continuing to be of high quality.

At the beginning of 1986, nobody would have formulated the expectation that research in such a complex field as small-scale forestry would encounter such a high interest for the described meetings which offer the possibility to exchange information on research problems, continue research efforts and disseminate research results. Furthermore, it became the basis for the existence of a rigorous scientific journal, related to articles on small-scale forestry.

Outlook: Research Challenges for the Group in the Future

There are two main aspects which in the author's opinion have influenced and which will continue to influence forestry research work in the future, and be a focus of the IUFRO Small-scale Forestry Group. These are (1) the demands and the needs of the society, directed to forests and forestry as a whole, including also small-scale forestry, and (2) problems which occur inside this type of forests and forestry and which need efforts of research activities to be solved.

The Demands and Needs of the Society

One great challenge for forests and forestry of increasing importance is the role of forests and their products in the transfer of energy systems from limited, non-renewable sources to renewable or sun-based sources. This aspect opens a wide field of research needs, such as the effective and economic use of timber for modern heating systems, the transfer of biomass to bio-energy or the promotion of timber as a low energy product in comparison with steel, concrete or aluminium as material for construction purposes with large ecological advantages.

Another great challenge is the reduction of greenhouse gas emissions in national economic systems. The question is, in which way and to what extent forests and forestry can contribute to this task. To evaluate the carbon sequestration values of forests and how to manage forests for carbon are open fields for more research activities (e.g., see Hyttinen 2004). Naturally the sustainable supply with other goods and services including biodiversity,

recreation and water-supply remain topical. The question of how small-scale forests and their owners are forced to contribute and how they can be compensated will need also further research efforts.

Another great task is the adaptation of the design of research projects to the specific conditions of small-scale forests and forestry. As a precondition, research work with a sociological design is needed to gain more knowledge about the attitudes, the living-conditions and the objectives of the forest owners themselves.

It should be not forgotten that the transfer and the implementation of research results in this type of ownership is a difficult and long-term task which needs separate and specific efforts with scientific guidance.

Problems Inside this type of Forests

Many aspects which are now in the focus of research will remain topical. So for example one highly important socio-economic aspect related to small-scale forestry is the income from forests. This can play an important role in maintaining a sound social structure in rural areas (Hyttinen 2004).

One great challenge in the future is likely to be finding ways to overcome the disadvantages of a very small, scattered and fragmentary ownership structure. The fact is that a single owner cannot make use of his property rights on a small strip of forest land. Also, the society will receive less goods and services from areas with a very small-scale land ownership structure. The question is if it is possible to find ways for a common use of a greater forest area with no consideration for individual boundaries. Solutions might be found also in the transfer of individual ownership to common ownership where the single owner is owner of a share of the united area.

The last question leads to the overwhelming question for the future: how can the property rights of the forest owners be secured and on the other side how the expectations of the society can be met. To find a balance between these two poles will be a constant task for research and for practice.

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