

# Roundtable Discussions on Agroforestry Education in Southeast Asia

Summary Report  
17-18 November 1994

Bogor, Indonesia



Compiled by:  
August B. Temu  
Ester Zulberti  
Chun K. Lai

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#### **What is ICRAF?**

The International Centre for Research in Agroforestry is an autonomous, non-profit organization whose goal is to help mitigate tropical deforestation, land depletion and rural poverty through improved agroforestry systems. ICRAF's objectives focus on conducting strategic and applied research in partnership with national institutions aimed at developing appropriate agroforestry technologies for more sustainable and productive land use. ICRAF operates the Agroforestry Research Networks for Africa and the African Network for Agroforestry Education and recently expanded its operations to include Latin America and Asia as well as Africa. Headquartered in Nairobi, Kenya, ICRAF is a member of the Consultative Group for International Agricultural Research and is supported by bilateral, multilateral and private donors.

#### **What is APAN?**

The Asia-Pacific Agroforestry Network is a regional FAO programme established in 1991 to facilitate collaborative agroforestry activities in the region. In 1993, APAN became one of the seven Sub-programmes of the UNDP/FAO/UNIDO FARM (Farmer-Centred Agricultural Resource Management) Programme. More specifically, APAN promotes agroforestry networking and information-sharing, conducts training, and supports field activities in 11 member countries. APAN is hosted by the Forest and Nature Conservation Research and Development Centre (FNCRDC) in Bogor, Indonesia and is jointly funded by the Government of Japan (GCP/RAS/133/JPN) and UNDP through FARM (RAS/93/064).

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## Why Discuss Agroforestry Education?

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Growing interest in agroforestry (AF) education in Southeast (SE) Asia has been documented at various meetings within and outside the region. Many recommendations have been made, but their implementation has been stifled by the absence of concrete action plans and the lack of resources. Education activities supported by the International Centre for Research in Agroforestry (ICRAF) in the region have been sporadic, opportunistic and small in scale. Individual efforts and commitments by educational institutions are largely responsible for the achievements made so far.

The need for a well-defined AF education programme in SE Asia was recognized at ICRAF's annual review of programmes and planning in September 1994. Consultations with experienced staff in the region confirmed that there is an opportunity for two international organizations with a mandate in agroforestry, namely ICRAF and the FAO-supported Asia-Pacific Agroforestry Network (APAN), to play a catalytic role in helping educational institutions in SE Asia to define AF education priorities and strategies. Contacts were made with APAN to confirm their interest in such an initiative. Six universities with strong interest in agroforestry education were identified and also contacted. They all endorsed the idea of holding roundtable discussions aimed at:

*exploring possibilities for collaboration on agroforestry education, leading to strengthening of on-going activities.*

The specific objectives of the roundtable discussions were:

- to exchange information on strengths and constraints;
- to identify areas of collaboration within each university, within each country, and within the region;
- to agree on a framework for a proposal to strengthen collaboration; and
- to define an action plan.

ICRAF and APAN jointly sponsored the roundtable discussions at Bogor, Indonesia during 17 -18 November 1994.

### **Who Participated?**

In Table 1, the list of participating institutions and individuals is presented. It was agreed in principle that other interested institutions may join the effort at a later stage.

To achieve the objectives of the consultations, one full day was spent on information exchange on the status, opportunities and constraints to AF education at the participating institutions. The second day was used to develop a framework and action plan for collaboration.

### **Setting the Stage: International Cooperation in AF Education**

*Ester Zulberti* helped set the stage for the roundtable discussions by recalling the genesis and objectives of the meeting. For each of the four objectives, she presented a useful framework to synthesize subsequent discussions. She also shared some experiences from Latin America, including a recent initiative to formulate a proposal to support an agroforestry education network of six universities in Peru. The proposal, already submitted to potential donors, will support common interests in social evaluation, MPTS, integrated land use, and experimental design and statistical analysis in agroforestry, as well as the establishment of on-station research and demonstration farms.

*August B. Temu* presented information about the African Network for Agroforestry Education (ANAFE), which is an autonomous networking supported by ICRAF, with a current membership of 70 universities from anglophone, francophone and lusophone areas of Africa. ANAFE core activities include curriculum development (using the Developing A Curriculum or DACUM approach), education workshops and seminars, human resources and institutional development, and teaching facilities development. Currently, 24 teaching materials have been submitted for publication. Future activities will include consolidating the link between education and ICRAF through student theses at AFRENA sites, and strengthening collaboration among educational institutions.

**Table 1. Participants at Roundtable Discussions on Agroforestry Education, 17-18 November 1994, Bogor, Indonesia.**

Country or Organization	University/Institution and Address	Name and Title
Indonesia	Faculty Of Agriculture Bogor Agricultural University Jl. Raya Pajajaran, Bogor	Dr. Syafrida Manuwoto, Dean
	Faculty of Forestry Bogor Agricultural University Campus Darmaga P.O. Box 168 Bogor	Dr. Dudung Darusman, Dean Ms. Leti Sundawati, Lecturer
	Faculty of Forestry Gadjah Mada University Yogyakarta 55281	Dr. M. Sambas Sabarnurdin, Associate Dean
	Faculty of Forestry Lambung Mangkurat University Jl. A. Yani Banjarbaru	Ir. M. S. Asmuri Achmad, Vice- Dean
Philippines	College of Forestry University of Philippines at Los Baños, Laguna 4031	Dr. Virgilio A. Fernandez, Dean Dr. Romulo del Castillo, Director of Agroforestry Programme
Thailand	Multiple Cropping Centre , Faculty of Agriculture, Chiang Mai University, Chiang Mai 50200	Dr. Phrek Gypmantasiri Associate Director
	Faculty of Forestry Kasetsart University Bangkok 10900	Dr. Sompetch Mungkorndin, Head, Department of Silviculture
Food and Agriculture Organization of UN (FAO)	Asia Pacific Agroforestry Network (APAN) Jl. Gunung Batu No.5 P.O. Box 481 Bogor, 16004	Chun K. Lai, Regional Coordinator of APAN
ICRAF	ICRAF Regional Office for Asia, Jl. Gunung Batu No.5 P.O. Box 161, Bogor 16001	Dr. Thomas P. Tomich, Senior Scientist, Natural Resource Economics Dr. Meine van Noordwijk, Senior Scientist, Component Interactions
	ICRAF Headquarters, United Nations Avenue, Gigiri, P.O. Box 30677, Nairobi, Kenya	Dr. Ester Zulberti, Director of Training and Information Division Dr. August B. Temu, Coordinator of Education Programme

*Chun K. Lai* presented APAN activities in support of agroforestry curriculum development in the Asia-Pacific region. Curricula are being developed for three major levels of informal and formal training in agroforestry:

- at field level for training farmers and extension workers from GOs and NGOs
- at training institutions for short-term courses
- at university level for undergraduate and graduate programmes: either through faculties of agriculture or forestry, or by creating specific agroforestry degree programmes.

APAN participated in the November 1992 workshop on Agroforestry Curriculum Development at UPLB, where the DACUM method was employed. This approach was adopted by APAN at the Regional Expert Consultation on Agroforestry and Community Forestry Curriculum Development in Asia-Pacific.

In addition, APAN has provided assistance in course syllabus and textbook development. For instance and APAN consultant worked with Chiang Mai University to help refine the MPTS course syllabus for the agroforestry systems option of the MSc Agricultural Systems programme. Agroforestry textbooks in Chinese are also being produced to meet the demand for teaching materials.

*Virgilio A. Fernandez* made a presentation on the Southeast Asian University Consortium for Graduate Education on Agriculture and Natural Resources. The Consortium was established in 1989 by five founding members, namely IPB, UGM, KU, UPM (Universiti Pertanian Malaysia) and UPLB. SEARCA serves as the secretariat. University of British Columbia, Canada and University of Queensland, Australia are associate members.

The consortium has four objectives:

- to provide highly trained graduates in agriculture and natural resources in Southeast Asia
- to enhance cooperation among agricultural universities
- to utilize more fully and efficiently the scarce academic facilities and expertise
- to hasten institutional development through freer exchange of information, facilities and expertise.

Programme components include: graduate student exchanges, faculty exchanges, research fellowships, and professorial chairs. Policies and guidelines governing the achievement of the above



objectives have been formulated and are being implemented. Memoranda of Understanding have also been signed between UPM, KU and UPLB, and between UPLB and Southwest Forestry College (P.R. China).

Donor agencies supporting the consortium are SEARCA, Winrock International, AIDAB and ASEAN-Canada.

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## Status of AF Education at Participating Institutions

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Participants presented detailed information on the teaching of agroforestry at their universities. Salient points are summarized below.

### **Bogor Agricultural University, Faculty of Agriculture**

(by *Syafrida Manuwoto* and *Satyawan Sunito*, Indonesia)

#### **General Information**

A new regulation on higher education in Indonesia was passed in 1990 (National Higher Education Regulation PP-30) under which education, research and public service are recognized as complementary functions of national universities. This has opened new avenues for collaboration.

The faculty of agriculture has five departments: agronomy; soil sciences; plant pest and diseases; agricultural and social economy; and community nutrition and family resources. It has access to six research centers managed by the university's research institute. Although the faculty teaches many courses related to agroforestry there is no agroforestry subject *per se*. It is estimated that about 10% of the courses offered at undergraduate level touch on agroforestry. The faculty is eager to be assisted to incorporate agroforestry teaching in four of its departments.

#### **Research**

The faculty does not have agroforestry research, but would be interested to first develop faculty expertise in agroforestry.

### **Bogor Agricultural University, Faculty of Forestry**

(by *Dudung Darusman* and *Leti Sundawati*, Indonesia)

Social forestry was introduced into the undergraduate curriculum in the early 1980s. By the end of the decade, agroforestry had become a

part of the social forestry course. Social forestry is taught in the departments of forest management and forest yield technology. In a newly developed curriculum (1995-98) agroforestry will be available as an elective subject with 3 credit hours. The new syllabus is presented below:

- Introduction:
  - The history of agroforestry
  - Definition and concepts of agroforestry
- Agroforestry System and Practices:
  - Classification of agroforestry
  - Shifting cultivation and improved fallow
  - Taungya
  - Homegardens
  - Plantation crop combination
  - Alley cropping
  - Other agroforestry systems and practices
- Agroforestry species:
  - General principles of plant productivity
  - Effects of trees on soils
  - Nutrient cycling and soil organic matter
  - Nitrogen fixation
  - Soil conservation
- Design and evaluation of agroforestry:
  - The diagnosis and design (D&D) method
  - Field experiments in agroforestry
  - On-farm research
  - Economic consideration
  - Socio-cultural consideration
  - Evaluation of agroforestry systems.

## **Gadjah Mada University, Faculty of Forestry**

(by *Sambas Sabarnurdin*, Indonesia)

### **General Information**

The faculty offers programmes leading to bachelor of science in forestry, master of science and doctor of philosophy. Students of forestry are trained in biological, physical and social sciences.

Communication skills are also taught. The faculty has 4 field campuses and 2 research sites.

### **Undergraduate Programme (BSc Forestry)**

This programme has 150 credit hours in four specializations, namely forest management, silviculture, forest products technology, and forest and natural resource conservation.

Agroforestry is taught for the undergraduates who have completed at least 80 credit hours including silviculture. The 30 lecture hours on AF cover:

- Introduction
- Classification of agroforestry
- Agroforestry systems in the tropics
- Existing agroforestry technologies
- Component interactions
- Soils and agroforestry
- Socio-economic aspects of agroforestry
- Diagnosis and designing agroforestry projects
- Evaluation of agroforestry.

### **Postgraduate Programme**

Agroforestry is compulsory for students majoring in silviculture or forest management. Students majoring in other subjects may also take agroforestry as an elective. The agroforestry syllabus includes:

- Introduction
- Tropical forest and forestry
- Agroforestry as a production system
- Sustainability of agroforestry systems
- Management and tree improvement for agroforestry
- Tree-crop interface
- Soil conservation in agroforestry
- Social Forestry and the role of women in agroforestry
- Economics of agroforestry
- Diagnosis and design
- Experiments in agroforestry
- Extension
- Class discussions.

### **Research**

There are 11 on-going research activities with agroforestry content.

### **Constraints**

There is a desire to expand the agroforestry course in the undergraduate curriculum, but whether or not agroforestry should be treated as a separate field of specialization is still under debate. The staff need to strengthen their experiences in agroforestry especially through research and access to educational materials.

## **Lambung Mangkurat University, Faculty of Forestry**

(by *Asmuri Achmad*, Indonesia)

### **General Information**

Agroforestry has been taught in the faculty since 1987, under the department of forest management. The department has five major programmes: forest economics, watershed management, forest planning, silviculture and agroforestry. Agroforestry is divided into two subjects: social forestry and protection of shifting cultivation. Both courses are offered in the fourth year of study. Agroforestry is an elective subject for students majoring in silviculture. There is no postgraduate course in agroforestry.

### **Constraints**

Inadequate staff training is the main constraint. Others are lack of educational materials, and lack of research experience. Funds are needed to support staff training and to procure/develop educational materials.

## **Chiang Mai University, Faculty of Agriculture**

(by *Phrek Gypmantisiri*, Thailand)

### **General Information**

In principle, agroforestry has been accepted for inclusion in the teaching programme. However, there is a debate on how to organize the subject to fit into the traditional disciplines of agriculture and forestry. The faculty considers agroforestry playing a role in reinforcing the systems approach in the management of agricultural enterprises. Some aspects of agribusiness are also being considered for incorporation into the curricula. The faculty is contemplating the establishment of a department of forestry. If established, the new department will handle agroforestry education. Meanwhile, all

agroforestry aspects are being handled by the Multiple Cropping Centre, which is attached to the faculty.

### **Undergraduate Programme**

Agroforestry *per se* not taught in the undergraduate programme.

### **Postgraduate Programme**

The international MSc Agricultural Systems programme has three options/specializations: agricultural production systems; agricultural management and development; and agroforestry systems (newly developed option). The programme requires students to carry out field research that may take 6-12 months.

### **Research**

The faculty is strong in on-farm research, nutrient assessment and socio-economic research. Decision support facilities available include GIS, crop modeling and remote sensing products.

### **Constraints**

There is a shortage of teaching staff with agroforestry competence. Teaching materials are needed. On-station type of research needs to be developed and funded. The faculty is seeking close collaboration with the faculty of forestry at Kasetsart University.

## **Kasetsart University, Faculty of Forestry**

(by *Sompetch Mungkorndin*, Thailand)

### **General Information**

The faculty is divided into six departments:

- Forest Management
- Forest Biology
- Forest Products
- Silviculture
- Forest Engineering
- Watershed Management.

Two more departments are being established, namely wildlife and range sciences and parks and recreation.

The department of silviculture is responsible for handling courses in agroforestry.

### **Undergraduate Programme (BSc Forestry)**

Students majoring in social forestry or forest resources are required to take principles of agroforestry. This is a comprehensive course covering definition of terms, classification of technologies, tree-crop-livestock combinations, ecological aspects, and socio-economic aspects of agroforestry. About 60 students enroll for the course annually. In addition, the students are required to attend a four-week social forestry programme in the field offered during the summer vacation.

Three elective courses in agroforestry are also offered: applied agroforestry; agricultural components in social forestry; and management of agroforestry.

### **Postgraduate Programme**

Agroforestry is not taught in the postgraduate programme, but individual students may take research in agroforestry for their theses.

### **Research**

Because of its regency, agroforestry research in Thailand is scattered in various organizations, among them the Royal Forest Department, Forest Industry Organization, Thai Plywood Co. Limited, private organizations and NGOs. Several agroforestry-related projects funded by FAO, ICRAF, Winrock International and the Ford Foundation are conducted by universities.

### **Constraints**

Of the 66 staff members in the faculty, only one has been trained intensively in agroforestry. A second lecturer has been assigned to teach agroforestry, but he needs further training.

Attachment of agroforestry to the department of silviculture has caused some problems and plans are underway to shift it to the department of forest management. Thus agroforestry lacks a proper home.

Lack of educational materials is another constraint. Much of the available materials are general publications not designed to serve as textbooks. There are very few materials available in the language of instruction, so teachers have to translate from the few publications available in English.

Since agroforestry is inter-disciplinary, cooperation between faculties and departments in teaching it is needed. So far such

arrangements have not been made and are not easy to achieve in the present university structure.

## **University of the Philippines at Los Baños, Faculty of Forestry**

(by *Romulo del Castillo*, the Philippines)

### **General Information**

There is a university-wide programme known as UPLB Agroforestry Programme (UAP) established to strengthen inter-departmental activities in instruction, research and extension. The programme was established in 1990 and has full-time staff who provide support for curriculum planning and development. UPLB runs short courses for extension staff/development workers from government and NGOs as well as for trainers.

### **Undergraduate Programme**

UPLB has made major strides in agroforestry education and research. In the undergraduate programme, three departments offer courses in agroforestry, including:

- Department of silviculture and forest influences-Fundamentals of agroforestry (3 credit units)
- Department of social forestry socio-economics of agroforestry (3 credit units)

The courses are integrative and compulsory. In the newly revised BS (Forestry) curriculum, agroforestry will occupy 27 (17%) of the 157 credit units. Among the new courses are: Agroforestry systems in the Philippines; and site diagnosis and design of agroforestry.

### **Postgraduate Programme**

Two postgraduate courses are offered by the department of social forestry: *i*) Agroforestry management practice (3 credit units), and *ii*) Swidden farming systems (3 credit units).

Elsewhere in the university, the principles and practices of agroforestry have been integrated into some subjects such as horticulture, agronomy, forest resources management and environmental science. Opportunities are available for postgraduate students to slant their thesis research towards agroforestry. At least 37 studies in agroforestry have been conducted by UPLB students (32 at MSc and 5 at PhD level). A course leading to a postgraduate diploma in agroforestry is being developed. A master of agroforestry and master of science in agroforestry is also being considered.



## **Constraints**

The approach to the teaching of agroforestry should be multi-disciplinary. This has not been achieved for various technical and institutional reasons. Thus agroforestry lacks a natural home discipline. Other constraints are the lack of critical mass of educators trained in the subject, inadequate facilities and educational materials and bureaucratic problems in processing curricula. Professional licensing is worth a special mention. Experts in agroforestry still have difficult studying on their own. They have to be licensed as either foresters or agronomists and for that they must possess the requisite qualifications.

## **Major Observations**

From the roundtable presentations and discussions, the following major points emerged:

- There is strong interest among universities to collaborate in advancing AF education.
- Forestry faculties have started to incorporate AF in their curricula while agriculture faculties generally had the impression that AF is more a part of forestry. This is partly due to the fact that AF has been focused on public lands. That impression has changed and agriculture faculties are considering the review of their curricula to incorporate AF
- In Indonesia there are agriculture faculties that have departments of forestry. They have a good setting for the growth of AF education. In the Philippines, there are agriculture and forestry associations which meet regularly. Such fora can be used to discuss AF education. In some universities, inter-disciplinary communication even within the same university is weak and AF provides good opportunities for agriculture and forestry staff to collaborate.
- There is a general shortage of staff with competence to teach AF.
- For the success of postgraduate education in AF it is necessary for educators and students to participate actively in AF research, and for researchers to contribute to educational programmes.
- All the universities have available land for experimentation and demonstration.

- Existing staff recruitment procedures permit staff educated in a given discipline to be employed in other related disciplines.
- For the teaching of AF to be meaningful, it is necessary to assess the demand and markets for AF graduates in the countries involved. For a successful postgraduate programme it is necessary to have a critical number of students.
- There is a shortage of resource materials for teaching AF.
- In the existing forestry and agricultural programmes coverage of social sciences is weak.
- There is a need to take an inventory of agroforestry projects and activities in the region in order to identify opportunities for field practicals and develop locally relevant case studies.

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## What Next?

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**“We can do it better together”** was the consensus of the participants. If the universities work together and share resources and experiences, they can achieve much more in a cost-effective manner and in shorter time than if they go it alone. To support AF education, the universities produced a framework for a project proposal to combine their efforts and to attract donor support. Specific areas of collaboration were identified. A letter expressing the universities’ **common commitment** (see Appendix) was developed and signed by representatives of the universities. It has been circulated among potential donors.

### The Proposal

#### Title

Inter-university Programme for Strengthening Agroforestry Education in Southeast Asia.

#### Goal

The long-term goal of the Programme is to build human resource capacity within implementing universities by enhancing the knowledge and skills required to plan, develop and manage agroforestry education programmes in Southeast Asia.

#### Objectives, Activities and Outputs

The universities identified the specific objectives, activities and outputs shown in Table 2.

### Action Plan

An action plan and time frame for proposal development was agreed upon (see Table 3), with UPLB designated as the lead for developing the first draft of the proposal.

**Table 2. Inter-university Proposal Framework.**

Objectives	Activities	Outputs
<p>1. To synthesize and disseminate agroforestry information relevant to education, research and development programmes conducted in the six implementing universities</p>	<p>1.1 Survey of educational institutions, their teaching force, curricular programmes, and supportive projects in research and development</p> <p>1.2 Collect and evaluate available resource and teaching materials</p>	<ul style="list-style-type: none"> <li>• A directory of agroforestry education opportunities, curricula and resource persons</li> <li>• An annotated bibliography of resource materials for teaching agroforestry in Southeast Asia</li> </ul>
<p>2. To assess the human resource development needs in agroforestry in Indonesia, Thailand and the Philippines; and possibly other countries in the region</p>	<p>2.1 Survey existing and projected human resource needs</p> <p>2.2 Identify institutions that can assist in human resource development for agroforestry</p>	<ul style="list-style-type: none"> <li>• An action plan on human resource development in agroforestry</li> </ul>
<p>3. To develop/adapt curricula, teaching materials and facilities to support university-level agroforestry education programmes</p>	<p>3.1 Organize 2 curriculum development workshops</p> <p>3.2 Produce teaching materials by teams of educators and trainers (e.g. manuals, slides)</p> <p>3.3 Upgrade teaching facilities particularly field laboratories</p>	<ul style="list-style-type: none"> <li>• Improved agroforestry curricula in the implementing universities</li> <li>• Enriched experiences in curriculum development for at least 30 educators</li> <li>• Production and distribution of a set of manuals and visual media in selected topics</li> <li>• Improved teaching facilities</li> </ul>
<p>4. To upgrade the agroforestry teaching knowledge and skills among educators</p>	<p>4.1 Offer short-term courses in agroforestry training and research for educators</p> <p>4.2 Offer fellowships for post-graduate studies (MSc)</p>	<ul style="list-style-type: none"> <li>• At least 40 educators will have been trained</li> <li>• At least 6 educators will have completed MSc in agroforestry and/or related fields</li> </ul>
<p>5. To raise awareness among policy makers in these universities on agroforestry priorities and developments</p>	<p>5.1 Organize workshops, seminars and field observation trips for policy makers</p> <p>5.2 Produce information campaign bulletins aimed at policy makers</p>	<ul style="list-style-type: none"> <li>• Endorsement of agroforestry policies and curricula</li> <li>• Increased interest of policy makers in research and development projects with agroforestry components</li> </ul>
<p>6. To strengthen linkages and networking among education, research and development institutions involved in agroforestry at the national and regional levels</p>	<p>6.1 Facilitate faculty exchanges</p> <p>6.2 Involve researchers and development workers in educational programmes</p>	<ul style="list-style-type: none"> <li>• At least 6 faculty exchanges will have been completed</li> <li>• At least 12 agroforestry researchers and development workers will have participated in agroforestry training</li> </ul>

**Table 3. Action Plan.**

Who	Will do what	When
ICRAF APAN APAN	Summary report of meeting <ul style="list-style-type: none"> <li>• Draft</li> <li>• Revision and printing</li> <li>• Distribution</li> </ul>	February 1995 March 1995 April 1995
UPLB  APAN APAN	Proposal development: <ul style="list-style-type: none"> <li>• First draft proposal and discussion with APAN</li> <li>• Circulation to universities and ICRAF</li> <li>• Incorporating comments and finalizing proposal</li> </ul>	March 1995  March 1995 April 1995
APAN IPB (to draft) ICRAF (to mail) ICRAF  ICRAF	Contact with donors: <ul style="list-style-type: none"> <li>• forestry sector and donors</li> <li>• Common commitment letter to donors to establish interest</li> <li>• Compilation of donor responses</li> <li>• Send final proposal to interested donors</li> </ul>	1995 November 1994  November 1994 to April 1995 April/May 1995
IPB, UGM, ULM, CMU, KUFF, UPLB	Securing commitment from participating universities	November 1994 to April 1995

**Common Commitment to Support Agroforestry  
Higher Education in Southeast Asia**

Bogor, 18th November 1994

**D**uring a two-day roundtable discussion in Bogor, representatives of six universities met with ICRAF and APAN colleagues on how to promote and develop agroforestry education in the region. The six universities were: University of the Philippines at Los Baños (UPLB), Chiang Mai University and Kasetsart University in Thailand, Institut Pertanian Bogor (IPB), Universitas Gadjah Mada (UGM) and Universitas Lambung Mangkurat (UNLAM) in Indonesia.

We felt a common need for developing agroforestry as part of our university programme, bridging the traditional gaps between agriculture and forestry, in view of the needs of sustainable land use in the 21st century. Our common commitment is to develop more integrated and stronger agroforestry education in our respective universities by the year 2000.

To achieve that goal, we formulated a framework for a proposal with four objectives:

1. To **synthesize information** on agroforestry education, research and extension,
2. To **determine needs** and demands for human resources in agroforestry,
3. To **develop and strengthen agroforestry programmes** at our universities, and
4. To **facilitate agroforestry institutional development** and sustainability.

Initial steps towards implementation of this programme will be based on the existing resources of the various partners, but with additional support we would be able to develop further, and link with and benefit other programmes and universities in the region.

Through this letter, which is being sent to a number of potential donors, we would like to find out whether your organization is interested in supporting this effort. If so, please let us know what the required procedures and deadlines are to submit a formal proposal to your organization.

Please respond to Dr. Ester Zulberti, ICRAF, Nairobi, Kenya,  
FAX +254-2-521001

On behalf of the six universities:

<b>UPLB</b>	<b>CMU</b>	<b>KU</b>	<b>IPB</b>	<b>UGM</b>	<b>UNLAM</b>
Virgilio Fernandez	Phrek Gypmantisari	Sompetch Mungkorndin	Syafrida Manuwoto	Sambas Sabarnurdin	Asmuri Achmad