

# **A Teacher's Guide on Markets for Agroforestry Tree Products**



***Curricular Framework and Case Study Materials***



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## Foreword

Agroforestry holds great potential in contributing to rural poverty alleviation. However, most agroforestry education programs and courses in Southeast Asia place a low emphasis on the demand aspects of agroforestry, especially the links between producers and consumers, markets, post-harvest processing and small-scale livelihood systems. In most cases, agroforestry education in the region is still biased towards production or the supply side of production. The demand aspects, if dealt with at all, are briefly discussed as a topic at best. To better understand and promote how agroforestry can contribute to alleviating poverty, faculties and students need improved competence in relation to the business aspects.

It is in this context that the World Agroforestry Centre (ICRAF)-Southeast Asia Regional Office and the Southeast Asian Network for Agroforestry Education (SEANAFE) carried out a project on Markets for Agroforestry Tree Products (MAFTP) from 2005-2007. This project aimed to develop a market-based curriculum framework and teaching materials for lecturers and students.

This “Teacher’s Guide on Markets for Agroforestry Tree Products: Curriculum Framework and Case Study Materials” is the project's major output. SEANAFE hopes this guide will stimulate interest among higher education institutions in the Southeast Asia region to review curricula to incorporate this subject matter into existing relevant courses and programs. At best, SEANAFE envisages seeing this guide being used in the eventual offering of this subject matter as a separate course.

This guide is a product of the experiences and insights of people and organizations involved in SEANAFE's MAFTP project. Country teams from Indonesia, Laos, Philippines, Thailand, and Vietnam were commissioned to conduct a market chain analysis on specific agroforestry tree products. Their research outputs became the basis for formulating an MAFTP curricular framework and case study materials as suggested teaching materials for some of the key modules of the curricular framework. This guide is divided into three part parts. Part 1 provides an overview of the project processes and outputs. Part 2 gives a contextual write up on the suggested MAFTP curricular framework, while Part 3 contains the case study materials.

The relevance and usefulness of this guide rest with its emphasis on how agroforestry marketing can help improve the livelihoods of the poor, but SEANAFE believes there is still room for its improvement.

Meine Van Noordwijk

ICRAF-SEA Regional Coordinator

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## Some Notes on Using This Guide

This guide is intended primarily for university lecturers but could also be used by extensionists and community development workers who wish to conduct training on the subject matter for members of the community and local government staff.

It is divided into three major parts, namely: 1) The SEANAFE's Markets for Agroforestry Tree Products Project; 2) The SEANAFE's Markets for Agroforestry Tree Products Curricular Framework; and 3) Country Case Study Materials.

Part 1 provides a brief background on the SEANAFE MAFTP project enumerating the salient processes through which this guide was generated. It also highlights the team and participatory approaches adopted and the major outputs produced by the project.

Part 2 explains the context in which the SEANAFE MAFTP curricular framework fits with the agroforestry education scenario in the region, its process approach, and key themes, including suggested descriptions, methods of teaching, and reference materials.

Part 3 presents the country cases and offers ways to effectively use them for teaching MAFTP. It provides suggestions for encouraging critical thinking among students, including guide questions and discussions, suggested teaching activities and further reading. This, however, should not limit the users but are encouraged instead to further explore the other potential applications of the cases as teaching materials.

The curricular framework does not claim to be complete and comprehensive. However, SEANAFE considers it adequate to help enhance the knowledge and skills of students and other users in order to develop sustainable agroforestry enterprises that would improve the quality of life among farm families. In the same way, the case study materials do not cover all aspects of the market chain that may arise during student discussions or assignments. Further, the cases cover marketing issues at different levels, i.e. community, district, and provincial levels. For this reason, users are encouraged to use the materials as they wish to achieve the learning objectives they set in their teaching sessions, for example, by making considered assumptions about information absent from the cases study.

The guide presupposes that users have considerable experience in using case studies as a teaching method. First timers of this approach are encouraged to read the Notes for Teachers well in advance before giving the case study material to their students. The effectiveness of the case study material relies on how well the users have grounded themselves on its suggested use and internalized the basic information therein. Full copies of the country research are available from the ICRAF website as reference materials.

## Acronyms

AFTP	Agroforestry Tree Product
APFSOS	Asia-Pacific Forestry Sector Outlook Study
ICRAF	World Agroforestry Centre (formerly International Centre for Research in Agroforestry)
GTZ	German Development Foundation
INAFAE	Indonesian Network for Agroforestry Education
LaoNAFE	Lao Network for Agroforestry Education
MAFTP	Markets for Agroforestry Tree Products
NAFRI	National Agriculture and Forestry Research Institute
PAFERN	Philippine Agroforestry Education and Research Network
SEA	Southeast Asia
SEANAFAE	Southeast Asian Network for Agroforestry Education
Sida	Swedish International Development Cooperation Agency
SNV	The Netherlands Development Organization
ThaiNAFE	Thailand Network for Agroforestry Education
VNAFAE	Vietnam Network for Agroforestry Education



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# 1. The SEANAFE's Markets for Agroforestry Tree Products Project

The second phase of the Southeast Asian Network for Agroforestry Education (SEANAFE) project was designed to enable educators from more than 80 universities and colleges in Southeast Asia to share knowledge and develop learning tools that address the interface between environmental conservation and poverty alleviation. It recognizes that the complex interface between these two areas must be handled in a holistic and integrated way if the project is to help millions of small-scale farmers to benefit from commercial markets and, at the same time, help them to manage local landscapes. Thus, the SEANAFE Phase 2 project is guided by the overarching goal of educating Southeast Asia's next generation of educators, scientists, and political leaders, on the importance of these issues and building their capacity. It particularly focuses on those currently enrolled in forestry and agriculture universities so that they can enact effective policies and programs in the future. SEANAFE, through funding support from the Swedish International Development Cooperation Agency (Sida), organized its Phase 2 set of activities around a series of well-defined regional projects for implementation from May 2005 to April 2009. These themed projects include: (a) Markets for Agroforestry Tree Products (MAFTP); (b) Agroforestry Landscape Analyses (AFLA); and (c) Forestry and Environmental Policies (FEP).

The MAFTP project was conceived in recognition of the fact that the area of marketing is not being sufficiently taught in forestry and agricultural programs and courses in most universities and colleges in Southeast Asia (SEA). Less emphasis is being placed on the links between producers and consumers, markets, post-harvest processing, and small-scale livelihood systems. Thus, the project was an attempt to fully understand the wide range of socioeconomic aspects of marketing agroforestry products that improve and ensure the gainful participation of smallholder farmers in improving their livelihoods.

Generally, the project's goal was to increase the knowledge and skills among agroforestry lecturers and graduates in SEA on MAFTP with emphasis on how such markets can improve the livelihoods of the poor. It had the following specific objectives:

1. Review and understand the principles for smallholders' gainful participation in markets for agroforestry tree products;
2. Identify and characterize key types of markets for agroforestry tree products in SEA;
3. Strengthen the teaching of markets for agroforestry tree products in universities and colleges in SEA, through developing teaching materials and curriculum modules in English and national languages; and
4. Enhance the teaching capacity in universities and colleges regarding the marketing of agroforestry tree products.

Under the MAFTP project, country teams were formed to help accomplish these objectives. Each consisted of at least four members from SEANAFE member institutions. For a two-year period, the teams undertook several activities in two project phases as shown in Figure 1. The MAFTP project, as a capacity building activity of SEANAFE, adopted the team and participatory approaches to:

- Enhance experiential learning of the country team members on MAFTP and applying this knowledge and experience while undertaking various activities of the project, culminating in writing the case materials and curricular framework;
- Capitalize on the opportunity for participatory curriculum development among the country teams, as a result of sharing insights and experiences during the project's second workshop;
- Maximize consensus building among country teams to heighten ownership of the project outputs toward enhanced advocacy on MAFTP.

For Phase 1, the MAFTP project activities included conducting two training sessions / workshops and the development of the curricular framework and country case studies on selected agroforestry tree products. The first regional training cum planning workshop was conducted on 21-26 November 2005 in Bangkok, Thailand. The training component updated team members on recent research results, tools and methods relating to agroforestry marketing. The workshop component enabled the country teams to formulate proposal outlines for their case studies, including the objectives and hypotheses, and set the activities and guidelines for implementing Phase 1 of the project. The country teams then submitted their case study proposals and revised them based on comments and suggestions by the SEANAFE Technical Adviser (TA). Contracts were signed with the respective institutions of the country team leaders in late 2005 and early 2006 with the final proposals as attachments. The teams tested what they had learnt during the training cum workshop by conducting market chain analyses on cashew nuts in Indonesia and Vietnam, bamboo in Laos, coconut in the Philippines, and pararubber in Thailand. These country case studies were aimed at providing content for the development of the curricular framework and teaching materials on the subject matter.

On 6-7 March 2006, SEANAFE saw the need to organize an extra meeting of the team leaders to harmonize the work of the teams. Together with the SEANAFE TA, three resource persons, namely: Joost Foppes of SNV; Joel Tukan, formerly of ICRAF; and Michael Victor, Information and Communication adviser to NAFRI, provided more technical input into the work of the five country team leaders during the meeting in Laos. The meeting clarified the differences between conducting research and case studies, and reiterated to the country teams the use of project results primarily for teaching BS level courses. In this meeting, the team leaders also discussed and developed outlines for their case study reports.

Six months after conducting their cases studies, the teams met again in Chiangmai, Thailand on 15-18 August 2006. This second regional workshop was aimed at presenting and comparing research results and experiences, formulating the MAFTP curricular framework and converting the case studies into appropriate teaching materials. In developing the curricular framework, the teams identified the common issues and concerns surfaced in their respective national research case study reports. These issues and concerns were then categorized accordingly and constituted the key modules of the curricular framework. Other key modules, though not discussed fully in the country reports, were also added to the curricular framework as deemed necessary by the teams.

The wide variations on how the national research case study reports were produced, however, posed difficulty in converting them into teaching materials. Thus, the country teams were requested to identify at least three strengths of their case studies in relation to the key themes of the MAFTP curriculum framework. Then, the teams developed teaching frameworks for the key modules they identified. These teaching frameworks contained the issues and learning points on the key module theme based on the case study that would be developed eventually, guide questions for discussing the issues and learning points, and the suggested teaching methods to use. The workshop officially completed Phase 1 of the MAFTP Project.

The transition period between the MAFTP project Phases 1 and 2 focused on refining the outputs of Phase 1 and enabling the country teams to develop their proposals for Phase 2 implementation. As agreed during the second regional workshop, SEANAFE hired an external consultant to fully develop the teaching frameworks into a format and scope appropriate for teaching and translation (hereafter referred to as teaching case study materials) into local languages of the country teams. Between November 2006 and January 2007, drafts of the teaching case study materials were given to the country teams for comments and validation. The country teams were also requested to fill in the information gaps and revise the teaching case study materials based on the comments and suggestions of the external consultant and SEANAFE TA. By February 2007, the SEANAFE TA came up with the repackaged versions of the case study materials and distributed them to the team leaders for approval for translation.

The MAFTP project's Phase 2 primarily consisted of translation of the teaching case study materials into local languages of the country teams and conducting in-country training on the use of the project outputs. Before officially launching the MAFTP project's Phase 2, SEANAFE organized another team leaders' meeting on 8-10 March 2007 in Bogor, Indonesia. This meeting aimed to: 1) revisit and finalize the scope of the key

themes of the MAFTP curricular framework; 2) finalize the country case study materials for translation in the local languages of SEANAFE member countries; 3) finalize the country team proposals for Phase 2 implementation; 4) agree on the major processes and basic activities that each country team would undertake for the project's Phase 2, including the design of in-country training; 5) agree on the country teams' terms of reference in implementing the project's Phase 2 activities; 6) orient the country teams on some practical tips for organizing and implementing an in-country training course on MAFTP; and 7) agree on the timetable of activity implementation of the project. Contracts were served to the country teams to carry out Phase 2 activities of the project from April to October 2007. In the case of the Philippines, translation of the case study materials into national language was not carried out since the medium of instruction in universities and colleges is English.

A total of 109 lecturers, researchers, and extensionists from 72 learning organizations, mostly SEANAFE members, benefited from the in-country training. Details are as follows:

**Philippines:** 28 faculty members from 28 member institutions of the Philippine Agroforestry Education and Research Network (PAFERN) on 29-31 May 2007 at the Training Center for Tropical Resources and Ecosystems Sustainability (TREES), University of the Philippines Los Banos (UPLB), Laguna.

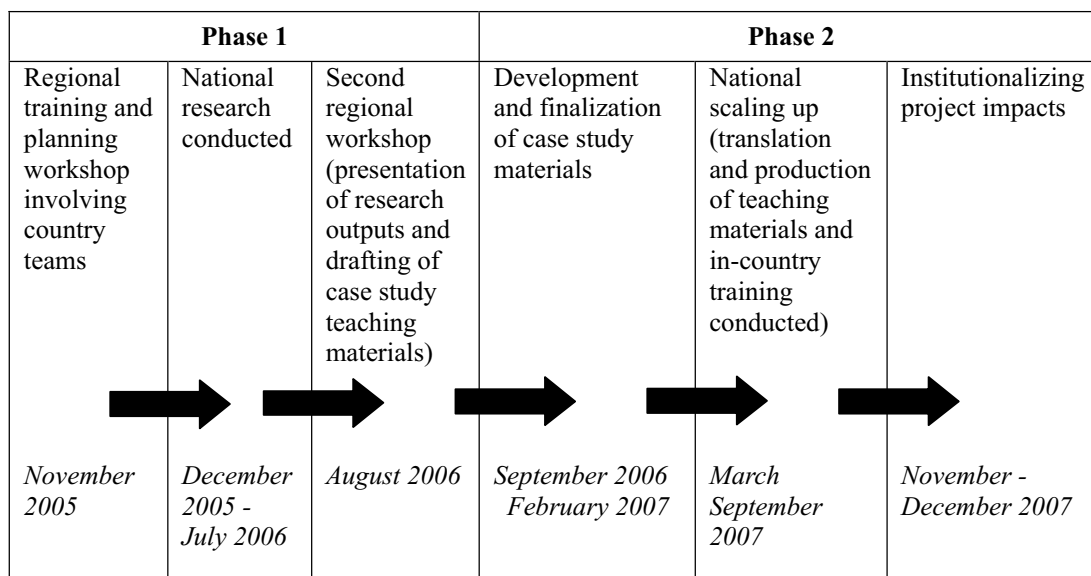
**Indonesia:** 21 faculty members from 16 member institutions of the Indonesian Network for Agroforestry Education (INAFE) on 25-27 July 2007 at Institut Pertanian Bogor, Bogor.

**Laos:** 20 faculty members from 10 member institutions of the Laos Network for Agroforestry Education (LaoNAFE) on 13-15 August 2007 at Vangvieng, Vientiane

**Vietnam:** 19 faculty members from eight member institutions of the Vietnam Network for Agroforestry Education (VNAFE) on 28-31 August 2007 at Dam San Hotel, Buon Ma Thuot City.

**Thailand:** 21 faculty members, researchers and extensionists from 10 member institutions of ThaiNAFE and invited research (4) and extension (1) agencies in Thailand on 5-7 September 2007 at Chiang Mai University, Chiang Mai.

Through SEANAFE national networks, the project outputs are expected to be mainstreamed among SEANAFE member institutions. Where possible, support to the country teams will be given to conduct policy advocacy on the recommendations they formulated to address the issues identified in their respective research.



**Figure 1.** SEANAFE MAFTP Project flow of activities





## 2. The SEANAFE's Curricular Framework on Markets for Agroforestry Tree Products

### Introduction

A curriculum can be developed using many different approaches. Whichever way one chooses however, the common and essential component is identification of the needs of the target learners. This need is found in various contextual settings surrounding the target learners.

As mentioned in earlier parts of this guide, the Markets for Agroforestry Tree Products (MAFTP) project was an attempt by SEANAFE to generate a curricular framework, including teaching materials, using a case study approach. As such, the framework integrates the experiences and insights of various people and organizations involved in the project. Except for in-country training sessions conducted between May and September 2007 to orient 109 lecturers of SEANAFE member institutions about the framework, the project has not been through the implementation and evaluation stages of the curriculum development cycle. Thus, the framework is open to further development, pilot testing, and evaluation, to ensure it meets the needs of potential users. The current framework is, however, useful as it is to equip target learners with a holistic view of how small-scale agroforestry entrepreneurs can gainfully participate in markets.

The MAFTP curricular framework is complemented by teaching case study materials to help teach the themes and topics contained in Part 3 of this guide. Some general guidance on implementation of this curricular framework is provided in this section.

### The Contextual Setting

Four contextual settings help in understanding and appreciating the formulation of the SEANAFE MAFTP curricular framework. These are: a) the status of, and demand for forest and non-timber forest products (NTFP); b) link between poverty reduction and forest conservation and sustainable livelihoods; c) marketing issues and concerns surfaced by country researches on the chosen MAFTP; and d) the major educational needs of forestry institutions in the Southeast Asia region.

#### A. The demand for forest and non-timber forest products and services in Southeast Asia.

The Asia-Pacific Forestry Sector Outlook Study (APFSOS, 1998) shows that the demand for a full range of forest and non-timber forest products (NTFP), including services, is generally increasing, both in complexity and scope, throughout the region.

With regard to forest products, Asia, together with North America and Europe, is considered as both a major producer and a consumer. An abundant supply of forest products, as well as a large consumer market, characterize this region. However, recent statistics have shown that the region, despite its ample forest resource endowment, is still a net importer (Table 1).

China, Japan, Malaysia and Indonesia are the region's major producers of wood products, while Japan, China, Korea, Indonesia and Taiwan dominate paper and paper board production.

In Southeast Asia, Malaysia and Indonesia have both utilized their significant forest resources and are involved in sizeable export industries of forest products. However, the 1997 Asian economic crisis greatly affected and reduced demand for forest products in the region.

While China is not considered part of Southeast Asia, it is one of the economic drivers as far as importation of forest products is concerned. China has strong economic growth and low per capita endowment of wood, as well prevailing policy constraints on domestic production from natural and plantation forests (Sun, et al., 2007).

**Table 1.** Asia's share of global production and consumption of forest products by type and percentage.

<b>Forest Products</b>	<b>Production (%)</b>	<b>Consumption (%)</b>
Industrial wood	18	22
Lumber/wood panels	24	27
Pulp	21	26
Paper and Paperboard	29	32

Of the Southeast Asian countries, Indonesia, Malaysia, Thailand, Myanmar, Cambodia and Laos are exporting hardwood logs and lumber. Only Indonesia, Malaysia and Cambodia are exporting plywood and only Indonesia and Thailand are exporting pulp using various entry points into China.

NTFP at the local level include food, fodder, medicines and building materials such as bamboo and rattan. They comprise an important aspect of forest production. The APFSOS reported that Southeast Asia, as part of the Asia-Pacific region, accounts for up to 40 percent of the world's NTFP exports and this provides employment to a significant sector of its population. Indonesia's rattan industry alone engages about 200,000 local people, while more than 320,000 Vietnamese are involved in NTFP production. However, the real contribution of the NTFP sector in employment and income generation remains underestimated and vague even today.

While the demand for forest products and NTFPs is increasing, forest lands are rapidly shrinking and deforestation is the main cause. According to FAO in its Global Forest Resources Assessment 2005 (as cited in Greenfacts), deforestation or conversion of forests to agricultural land is continuing at an alarmingly high rate. The same source added that forest area decreased worldwide by 0.22% per year in the period 1990-2000 and 0.18% per year between 2000 and 2005.

In Southeast Asia, about 190 million hectares of forest cover were lost in less than a century (1900-1989). A case in point is Indonesia, which accounts for 10 percent of the world's tropical rainforests, and where over one million hectares of forest are cut each year. The rapid reduction of Asia's natural forest lands reflects the failure of conventional management systems to ensure the survival of these diverse and important ecosystems. In the past, governments in search of foreign exchange revenue have encouraged rapid timber exploitation and leased vast areas to private companies controlled by multinationals and politically and economically powerful people.

With pressure on forests and NTFPs from a rapidly increasing world population, there is certainly a need for new arrangements concerning access and management, including processing and marketing. This necessitates a clearer understanding of the roles of all stakeholders, including educational institutions that are responsible for producing the next generation of policy makers, researchers and entrepreneurs; the people who will make far-reaching decisions on the future state of forest products and NTFPs.

## B. The Link between Poverty Reduction and Forest Conservation and Sustainable Livelihoods

While the industry sector has a lot to account for in the rapid destruction of forest cover, the same can be said of smallholder families dependent on forest for livelihoods. Of the eighty percent smallholder farmers in Asia (with less than 0.6 ha), a great percentage are into mixed species cultivation or agroforestry operating at low level of productivity and diminishing soil fertility regime (De Costa and Sangakkara, 2006; Kumar 2006). This group of smallholder farmers usually represent the more impoverished sector of the rural economy.

The link between poverty, conservation and sustainable livelihood has long been an issue. There is a recognition that conservation efforts will be more effective if carried out with participation of the smallholders especially with demonstrated impact on livelihoods and poverty reduction. Sustainability of

livelihoods from agroforestry are greatly dependent on marketability of the products. However, unlike commodity crops that have readily available but relatively uncompromising market, the market for some agroforestry products is not always apparent (USDA 2003). Oftentimes, smallholders have to actively engage in marketing activities to ensure sustainability of livelihood. In between production and marketing, smallholder farmers may have to do value adding (storage, processing, etc.) to enhance chances of finding and accessing markets for their produce.

### C. Markets for Agroforestry Tree Products Scenario: Some Insights from selected Country Cases

On further analysis of the country research case studies, the issues and concerns related to the marketing of specific AFTP chosen appear to fall within five categories. They include: a) socio-economic; b) enabling environment; c) production systems and conservation practices; d) value adding (including post-harvest); and e) other market related concerns (Table 2).

The limited income, owing to the small size of landholdings and consequently low production levels, is the most cited socio-economic issue on the part of farmer-producers in all five cases. The lack of technical capacity among producers to improve production systems as well as the weak enabling environment, characterized by ill-prepared policies and regulations, do not help and in fact drive marginalized small forest gatherers/producers into illegal trade. If at all, there are few who have surplus to bring to the market. Farmers' inadequate post-harvest capacity affects the quality of their product and value adding potential. This limits their ability to command better prices for their produce which is compounded by their poor access to markets and market information. The lack of product and quality standard (or if present, the lack of knowledge thereof) further constrains farmers in gaining a viable livelihood from forest and agroforestry related activities. The country cases underscore the overwhelming impact of inappropriate or wanting enabling environments (policies and regulations). The more these marginalize smallholder upland farmers, the further they delimit their access to markets and possible integration into agroforestry chains.

### D. Some Major Needs of Learning Institutions in Southeast Asia

SEANAFE, with 84 member institutions in five SEA countries, demonstrates that the region is not at all lacking in terms of universities and colleges offering forestry and related courses. Although the importance of forests and the forestry sector is increasing, the capacity of forestry institutions to provide quality education is declining as demonstrated by highly reduced enrolments in most countries. This could be attributed to the quality and relevance of curricular programs and teaching materials that the learning institutions provide. In most cases, curricula and teaching materials are outdated. Learning institutions lack either the resources, expertise, and to some extent the political will, to engage in in-depth curricular development and review in light of new societal perspectives.

This scenario has not only affected the image of the forestry profession, but also narrowed the employability of graduates. Unless faculty members engage in capacity-building activities such as training and research, curricular offerings will not improve which also means there will be no improvement in the quality and number of teaching materials. It is in this area that mechanisms for regional and national collaboration among learning institutions, such as SEANAFE, prove relevant as they enable the sharing of experiences and resources. The SEANAFE MAFTP Project is a clear example of this.

## The MAFTP Curricular Framework

This section discusses the distinct features, thematic coverage and modules of the MAFTP curricular framework. As earlier mentioned, the framework incorporates issues distilled from current regional and country situations, which can best be addressed in terms of choice and mix of themes, and how it is proposed they be handled. The framework is envisioned to strengthen and enhance the capacity of learners to respond to the changing environment and lead to a sustainable process for agroforestry marketing. Figure 2 shows the MAFTP curricular framework.

**Table 2.** Issues and concerns on marketing selected agroforestry tree products in SEANAFE member countries: insights from country research case studies

	Country Issues and Concerns				
	Socio Economic	Enabling Environment	Production Systems and conservation Practices & Behaviour	Value adding (including post harvest)	Products & Markets
<b>Philippines (coconut &amp; by products)</b>	<ul style="list-style-type: none"> <li>limited income</li> <li>low &amp; highly fluctuating prices</li> </ul>	<ul style="list-style-type: none"> <li>poor regulation of standards</li> <li>Inadequate farm-to-market roads</li> </ul>	<ul style="list-style-type: none"> <li>low farm productivity;</li> <li>small marketable surplus</li> <li>Inadequate replanting</li> <li>Avoidance of regulatory checks</li> </ul>	<ul style="list-style-type: none"> <li>limited value-addition and marketing options.</li> <li>Poor post-harvest handling practices</li> <li>Poor timing of harvest</li> <li>Outdated copra processing technology</li> <li>Limited and poor copra storage facilities</li> </ul>	<ul style="list-style-type: none"> <li>inadequate access to favorable markets</li> <li>limited product development.</li> <li>Poor and inconsistent product</li> <li>Lack of technical and entrepreneurial skills</li> <li>Limited quality control</li> <li>Poor linkage with higher-level markets</li> <li>Limited product development</li> </ul>
<b>Laos (bamboo)</b>	<ul style="list-style-type: none"> <li>poverty</li> <li>low bargaining power of farmer-producers</li> <li>engagement in illegal &amp; unsustainable activities of farmer-producers to gain additional income.</li> </ul>	<ul style="list-style-type: none"> <li>unfavorable trade regulation (forest protection policy) reduces farmers incomes from sales (which opens a venue for illegal trade).</li> <li>multiple taxes &amp; other fees further lower farmers income</li> <li>service charges at village/district levels lead to lower prices</li> </ul>	<ul style="list-style-type: none"> <li>low awareness on conservation practices decreased the production and supply of bamboo</li> </ul>		<ul style="list-style-type: none"> <li>Limited market information and marketing skills forced farmers to sell products according to the low prices dictated by traders</li> </ul>
<b>Vietnam (cashew)</b>	<ul style="list-style-type: none"> <li>Low incomes of small scale farmers, especially the ethnic people,</li> </ul>	<ul style="list-style-type: none"> <li>unfavorable biophysical and socioeconomic conditions constrain the marketing of cashew nuts at better price</li> <li>lack of market consultations and government policies on market price information</li> </ul>	(The study also found that production scale did not affect the farm gate price)	<ul style="list-style-type: none"> <li>lack of storage and drying facilities</li> </ul>	<ul style="list-style-type: none"> <li>long market chain and dominated by the middle man</li> <li>price fluctuation</li> <li>farmers remained in debt thus forced to sell at low price</li> <li>access to reliable information is minimal</li> </ul>
<b>Indonesia (cashew)</b>	<ul style="list-style-type: none"> <li>low level of education of farmer-producers</li> <li>small landholdings</li> <li>Low bargaining power of farmers</li> </ul>			<ul style="list-style-type: none"> <li>grading system only by physical integrity of ( % of broken kernels) hence age, size, color moisture content or flavor are left out</li> </ul>	<ul style="list-style-type: none"> <li>poor packaging resulting to frequent product damage</li> <li>no branding &amp; promotion due to financial constrains &amp; lack of experience</li> <li>Limited market information and sources</li> </ul>
<b>Thailand (rubber)</b>	<ul style="list-style-type: none"> <li>small-scale producers, relatively poor in capital &amp; are susceptible to shocks in rubber prices.</li> </ul>				<ul style="list-style-type: none"> <li>Some producers have formed cooperatives to sell rubber, However, group action is not widely practiced compared with individual selling</li> </ul>

## Distinct Features

The MAFTP curricular framework adopts a 'process approach' where the emphasis is on broadening the perceptions of learners so as to enable them to conceptualize relevant issues in agroforestry. The process approach is essentially a translation of theoretical insights and knowledge into tools which can be applied to the current or eventual professional situation of the learners. The learners are expected to gain an in-depth understanding of agroforestry as a system, articulate issues, and suggest solutions in relation to their prospective jobs, particularly marketing, after graduation.

What sets the framework apart from other agroforestry curricula that exist in the region, is that it provides a learning premise where regional and country development interfaces are viewed and assessed within the context of global challenges. More importantly, it tackles the basics of product and enterprise development, grounded on the concepts of markets and marketing without neglecting sustainability concerns (i.e. social, economic and environmental).

The framework can also be said to be multidisciplinary as it attempts to interface the technical and marketing concepts within the context of agroforestry chains and interspersed with emerging issues in globalizing economies with changing market demands and structures.

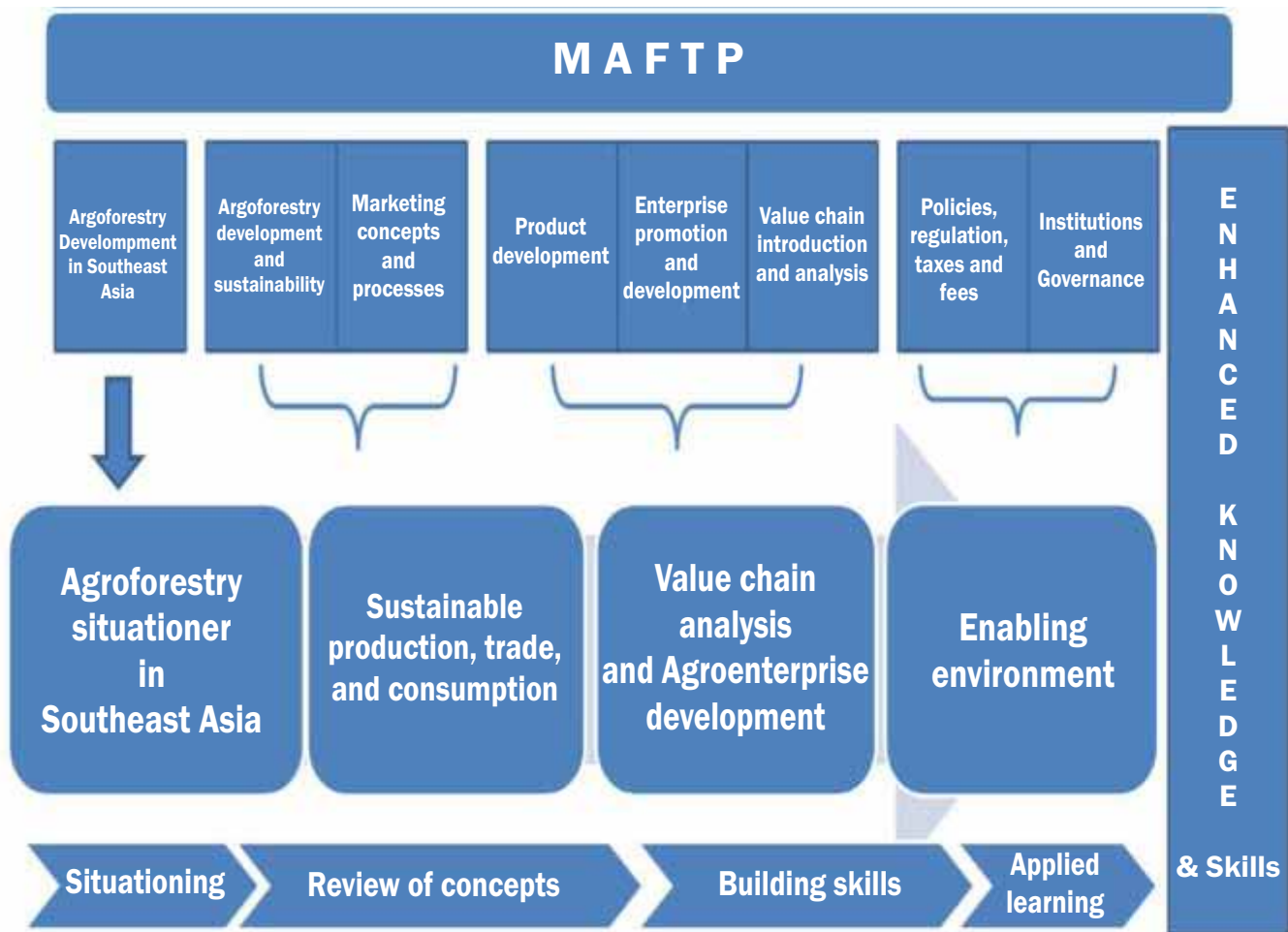


Figure 2. The SEANAFE MAFTP Curriculum Framework

## Contents

The thematic areas covered by the MAFTP curricular framework include:

1. Agroforestry Situation in Southeast Asia;
2. Sustainable Agroforestry Production, Trade and Consumption in Southeast Asia;
3. Value Chain Analysis and Agroenterprise Development; and
4. Enabling Environment for Agroforestry Marketing.

**Theme 1** sets the tone of the course; providing an overview of the state of agroforestry in the region including its potential and challenges in light of emerging global concerns.

**Theme 2** consists of two subthemes, namely: a) agroforestry development and sustainability; and b) marketing concepts and processes. The first sub-theme will discuss agroforestry as a development sector and the subsectors comprising it, including markets and development potential. An assessment of the roles and responsibilities of various actors in the sector in ensuring development and sustainability of agroforestry will also be discussed in light of current and potential challenges, including gender issues. The second subtheme provides an introduction to basic marketing concepts and their relevance to the agroforestry endeavor, the changing agroforestry scenarios and how they impact on the livelihoods of smallholders and communities. It also outlines some basic steps in marketing agroforestry products through market research, marketing plan preparation, implementation, and evaluation.

The marketing theories tackled under Theme 2 are preparatory concepts that will lead to a better understanding of market structure, conduct and behavior “personified” under Theme 3.

**Theme 3** aims to enhance the understanding, appreciation and skills of learners on product development, value chain analysis and agroenterprise development. The product development subtheme will specifically discuss principles and processes from the initial concept to determining product form (i.e. nature, size, packaging etc.) with emphasis on emerging quality standards and product certification requirements; integrating environmental consciousness versus pricing schemes and positioning strategies. The value chain analysis subtheme will introduce basic concepts such as: product flow and value adding per chain stakeholder; information flow and nature of decisions in coordinating chains; the nature and extent of relationships within the chain that govern processes and behaviors of all concerned. It will also touch on chain assessment, leading to identification of strong and weak links as a basis for chain intervention and enhancement. This also covers the ways and means of enhancing integration and positioning of agroforestry chains. The agroenterprise development subtheme, on the other hand, will provide an overview of the basic concepts of enterprise and entrepreneurship, including the process of identifying opportunities, developing ideas into realities, and the rigors of business planning. Product development necessitates a clear understanding of the market for which it is intended for. Thus, knowledge of the commodity chain and the value adding that transpires along it will lead to a better product concept that needs to be developed.

**Theme 4** focuses on the enabling environment of a sustainable agroforestry-based enterprise. It aims to illustrate the degree of responsibility of different institutions involved and how their good or poor governance affects the individual and collective performances of enterprises within a given agroforestry chain.

The design of the entire curriculum is expected to lead to enhanced knowledge and skills of the learners in developing sustainable agroforestry enterprises that would improve quality of life.

Details of the objectives, desired learning outcomes, suggested tools and methods, duration and coverage, for each of the subthemes are found in Table 3. Table 4, on the other hand, contains the suggested reading materials.



## Suggested Course Duration and Schedule

The course entails one regular semester consisting of 52 hours of learning discussion and an additional five days (minimum) field exposure and store visits (Table 5). This equates to around 16 weeks in a period of four months for classroom discussion and an additional week for field/study visits.

It is also possible to include an interim activity or project, at the end of the course, which involves conducting agroforestry market research and presenting this to a panel of professors and invited private sector industry players. This activity will be a venue for validating the concepts learned and could act as a motivating factor for the participants to engage or establish an agroforestry enterprise.

An elective subject on Organization of a Small Agroforestry Enterprise can be an extension subject for those participants who are particularly interested or have a long term plan to establish their own agroforestry enterprise.

**Table 3.** Details of the SEANAFAE MAFTP curricular framework.

Themes, Subthemes & suggested Duration	Brief Description	Objectives	Desired Learning Outcomes	Suggested Tools and Methods
<p><b>Theme 1:</b> State and Trends on Agroforestry Development in Southeast Asia 4 hours</p>	<p>An overview of the current state of agroforestry in the SEA region, its role in economic development, and the opportunities and challenges confronting it given current global concerns</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● gain awareness on the emerging issues of the sector</li> <li>● broaden their understanding of the dynamics of the sector themes and subthemes</li> <li>● enhance their technological skills in addressing the issues of the sector</li> </ul>	<p>Students are able to situate their own organization and/or country's position within the context of regional agroforestry development and articulate issues confronting the sector and critically start formulating solutions</p>	<ul style="list-style-type: none"> <li>● Mini Lectures</li> <li>● Panel discussion</li> <li>● Group Debate</li> </ul>
<p><b>Theme 2:</b> Sustainable Agroforestry Production, Trade and Consumption <b>Subtheme 2.1</b> Agroforestry Development and Sustainability 4 hours</p>	<p>Reconciling market and environmental challenges in response to sustainable production and consumption through a review of concepts, practices, and models on agroforestry markets and marketing, including the varying multistakeholders and the roles they play in the process in the light of gender sensitivities.</p> <p>An overview of agroforestry as a development sector, and the subsectors comprising it including markets and development potentials affecting the sector. An assessment of the roles and responsibilities of various actors of the sector in ensuring development and sustainability of agroforestry will also be discussed in the light of current and potential challenges including gender issues.</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● be familiarized with agroforestry sector stakeholders and their resource base and products</li> <li>● reconcile market and environmental challenges in response to sustainable production and consumption</li> </ul>	<p>Students are able to articulate conflict areas between environmental and economic functions of the agroforestry sector in the light of sustainability and taking the points of view of all stakeholders</p>	<ul style="list-style-type: none"> <li>● Lecture-discussions</li> <li>● Comparative scenario analysis</li> </ul>



Table 3. Details of the SEANAFA MAFTP curricular framework. (continuation)

Theme & Subthemes	Brief Description and	Objectives	Desired Learning Outcomes	Suggested Tools and Methods
<p><b>Subtheme 2.2:</b> Marketing Concepts and Processes 10 hours</p>	<p>Introduction to basic marketing concepts and their relevance to agroforestry endeavor, the changing agroforestry scenarios and how they impact on the livelihoods of smallholders and communities, and some basic steps in marketing agroforestry products through market research, marketing plan preparation, implementation, and reevaluation</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● appreciate basic marketing concepts in relation to agroforestry products</li> <li>● understand the impacts of changing agroforestry scenarios on the livelihoods of smallholders and communities</li> <li>● develop a working knowledge on preparing a marketing plan</li> </ul>	<p>Students become conversant on basic marketing concepts and issues as applied to agroforestry setting and be able to prepare a simple marketing plan</p>	<ul style="list-style-type: none"> <li>● Lecture-discussions</li> <li>● Group exercise on market research and marketing plan development</li> <li>● Field visit to relevant agroforestry projects</li> <li>● SWOT analysis</li> <li>● Short case study analysis</li> </ul>
<p><b>Theme 3:</b> Value Chain Analysis and Agroforestry Enterprise Development</p>	<p>An appreciation of the value chain concepts and processes as well as the various chain participants adding value to the product as it passes through the chain, understanding of the importance of agroenterprise development and promotion, constant production innovation and quality assurance towards sustaining agroforestry chains</p>			
<p><b>Subtheme 3.1</b> Value Chain Analysis 10 hours</p>	<p>Introduction to basic concepts such as product flow and value adding per chain stakeholder, information flow and nature of decisions in coordinating chains, the nature and extent of relationships within the chain governing processes and behaviors; Chain assessment leading to identification of strong and weak links as basis for chain intervention and enhancement, and ways and means of enhancing integration to and position in agroforestry chains.</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● Assess the strong and weak links in the market chain toward introducing appropriate interventions</li> <li>● Identify ways and means of enhancing integration to and position of smallholders in agroforestry market chains</li> </ul>	<p>Students are able to describe market chain concepts, processes, participants behavior and how information flow and points of control affect the same</p>	<ul style="list-style-type: none"> <li>● Lecture-discussions</li> <li>● Case study analysis</li> <li>● Field visits</li> </ul>

**Table 3.** Details of the SEANAFA MAFTP curricular framework. (continuation)

Theme & Subthemes	Brief Description and	Objectives	Desired Learning Outcomes	Suggested Tools and Methods
<p><b>Subtheme 3.2:</b> Agroforestry Enterprise Development 8 hours</p>	<p>Overview of the basic concepts of enterprise and entrepreneurship including the process of identifying opportunities, developing ideas into realities and the rigors of business planning</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● Acquire working knowledge on designing and developing a road map in establishing a viable enterprise supportive of smallholders integration into agroforestry chains</li> </ul>	<p>Students are able to acquire an enterprise mindset and skills in business plan preparation</p>	<ul style="list-style-type: none"> <li>● Lecture-discussions</li> <li>● Case study analysis</li> <li>● Field visit to relevant agroforestry projects</li> </ul>
<p><b>Subtheme 3.3:</b> Product Development 8 hours</p>	<p>Overview of the principles and processes from concept to determining product form (i.e., nature, size, packaging, etc.) with emphasis on emerging quality standards and product certification requirements integrating environmental consciousness versus pricing schemes and positioning strategies.</p>	<p>To enable students to:</p> <ul style="list-style-type: none"> <li>● Acquire working knowledge and skills on product development and its accompanying processes</li> <li>● Relate environmental concerns as early as conceptualization and product planning</li> </ul>	<p>Students become aware and knowledgeable on the rigors and challenges of product development and its accompanying process and translate product ideas into tangible enterprise plans</p>	<ul style="list-style-type: none"> <li>● Lecture-discussions</li> <li>● Environmental scanning exercises</li> <li>● Product and market research exercises</li> </ul>