Social forestry education in ASEAN

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Social forestry education in ASEAN:
An assessment of current practices and recommendations for the future

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March 2020

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Abbreviations

AIT	Asian Institute of Technology
AMS	ASEAN Member States
ASEAN	Association of Southeast Asian Nations
ASFCC	ASEAN-Swiss Partnership on Social Forestry and Climate Change
AWG-SF	ASEAN Working Group on Social Forestry
CIFOR	Center for International Forestry Research
DENR	Department of Environment and Natural Resources
FAO	Food and Agriculture Organization of the United Nations
FREDA	Forest Resource Environment Development and Conservation Association
IFSA	International Forestry Students' Association
KUFF	Kasetsart University Faculty of Forestry
MERN	Myanmar Environment Rehabilitation-conservation Network
MOOC	Massive Open Online Course
MRLG	Mekong Region Land Governance
NDC	Nationally Determined Contribution
NUoL	National University of Laos
PTT RI	Petroleum Authority of Thailand- Reforestation Institute
RECOFTC	Regional Community Forestry Training Center for Asia and the Pacific
RUPP	Royal University of Phnom Penh
SCG	Siam Cement Group
SDG	Sustainable Development Goal
SEARCA	Southeast Asian Regional Center for Graduate Study and Research in Agriculture
UFES	University of Forestry and Environmental Science
UNHAS	Universitas Hasanuddin
UPLB	University of the Philippines Los Banos
VIFORA	Vietnam Forest Owner Association
VNUF	Vietnam National University of Forestry
VNFOREST	Viet Nam Administration of Forest

Foreword

This assessment, first of its kind, gives an overview of how social forestry is taught at universities in the region and provides recommendations to improving current teaching practices.

Educators, practitioners and others interested in initiating social forestry programs at the university level will find this publication useful. It will be particularly beneficial to those institutions and educators with already established social forestry programs as well as policy makers interested in making improvements to educational legislation on social forestry.

Awareness and interest for social forestry is growing. This motivates graduates to choose academic programs teaching social forestry. Despite these main findings, the assessment suggests that placement rates in jobs related to social forestry varies for graduates of the discipline. There is also reason to believe that universities are falling short on the level of teaching and comprehension.

Nonetheless, social forestry education does not require a revolution, but rather an evolution. The assessment goes on to suggest that universities should focus on the transition out of university and provide more work experience during a students' studies. The assessment also suggests that pursuing topic-based approaches to education and promoting regional collaboration can open up opportunities to overcome many educational barriers.

This assessment fills in an important data gap that exists in today's social forestry sector and has helped different stakeholders, including universities, employers and social forestry graduates, understand one another's needs. At RECOFTC, we hope that this assessment will strengthen social forestry education and ultimately better social forestry initiatives across ASEAN Member States, creating a future where people live equitably and sustainably in and beside healthy, resilient forest landscapes.

We would like to express our gratitude to all survey respondents who shared valuable information. We also thank all participants at the regional workshop and the local community members of Ban Huai Hin Dum village who actively contributed to the research. Surin Onprom and Muhammad Alif K. Sahide offered support that went beyond their role as external reviewers of an earlier version of this report.

This publication is made possible with the support of the Swiss Agency for Development and Cooperation (SDC) through the ASEAN-Swiss Partnership on Social Forestry and Climate Change (ASFCC) program.

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Introduction

Communities living in and around forests have an important role to play in sustainable natural resource management. Over the last 40 years, governments, practitioners and other stakeholders have become increasingly aware of their importance. However, a host of dynamic factors have limited their effective participation.

The community-based approaches used by governments and organizations are known by various names, including community forestry, people-centered forestry and social forestry. For the purpose of this assessment the term social forestry is adopted.

Social forestry includes all aspects, initiatives, sciences, policies, institutions and processes intended to increase the role of local people in governing and managing resources. It has great potential to empower forest communities, leading to local social and economic benefits while assisting national conservation and sustainability efforts. Seven out of 10 countries in ASEAN have developed forestry programs with a focus on community involvement.

The role of education in social forestry

While there are multiple cases of successes, there is a consensus that the full potential of social forestry has yet to be achieved in most countries. In fact, many ASEAN countries are falling behind on their own national forestry targets, which will face even more pressure in the upcoming years.

A recent outlook study by The Food and Agriculture Organization of the United Nations (FAO) indicates that a number of factors will continue to exert pressure on forest-managing local communities. These include growing populations, increasing demand for forest products, economic growth, land use pressures and income inequality (FAO, 2019).

This means that countries seeking to move forward with social forestry programs need to be more prepared. Strong capacity and adequate funding for training are among the key areas of such a preparation. University-level education in the ASEAN region offers an opportunity to train future practitioners in social forestry principles and contribute to national agendas.

Universities provide a number of important direct and indirect functions. These include developing the students' expertise so they can contribute

to all components of a social forestry program, and research and fill in knowledge gaps in social forestry. Universities must also provide students with the necessary skills to work in the field of forestry.

Academic institutions in the region have been actively promoting social forestry through programs referred to as community forestry or participatory forest management (APFNet and AP-FECM, 2018). This indicates great potential for the future of social forestry education in the region.

The mission of higher education aligns with social forestry. Effective social forestry requires collaboration between multiple stakeholders on designing, implementing, monitoring and reviewing programs to ensure they contribute to the needs of local communities. This collaboration also ensures that countries respond to national priorities and global development targets.

FAO listed education as the second most important condition to improve technology and innovation in forestry (FAO 2019). But institutions in ASEAN still face challenges involving capacity of staff, facilities and materials (Ratanawijitrasin, 2015; Songkaeo and Yeong, 2016). Additionally, research shows that many universities in the region are failing to provide sufficiently trained practitioners for the field (APFNet and AP-FECM, 2018).

Apart from a few general studies, little research has been conducted on the status of social forestry education in ASEAN and how this education produces competent practitioners who can support community rights and the ways local people manage forests. Therefore, questions remain about the effectiveness of social forestry education programs.

About this report

For this report, RECOFTC and its partners under the ASEAN Swiss Partnership on Social Forestry and Climate Change (ASFCC) analyzed social forestry education programs in Southeast Asia. The goal was to assess their effectiveness from the perspective of adequately preparing the graduates for their work places.

The assessment represents a broad view of social forestry in education in ASEAN. It attempts to cover the position of many stakeholders, including universities, graduates and employers in different countries. This overview approach provides an opportunity to compare some differences and to

highlight the potential innovation through strong regional linkages.

An overview of program content, structure, teaching methods and student motivations was explored through programs that incorporate aspects of social forestry in seven ASEAN countries: Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Thailand and Viet Nam. These countries have universities that offer some form of social forestry program, although sometimes under different names.

Online surveys were used to collect data from university social forestry program coordinators, graduates and employers of graduates within professional forestry organizations. The data was then validated during a regional workshop on social forestry education in ASEAN.

The objectives of the study are three-fold:

- Take stock of the thematic focus, breadth of coverage and research approaches in social forestry programs at academic institutions in ASEAN Member States (AMS).

- Assess the transition between academic programs and the workplace to see whether graduates are leaving school with the knowledge and skills they need to succeed.
- Identify potential areas of improvement in academic programs and suggest innovative solutions needed to produce successful graduates and support the promotion of social forestry.

Based on these objectives, the report suggests new programmatic features for universities teaching social forestry. The report also discusses potential ways to develop training at the regional level and integrate innovative ideas back into formal national-level university programs.

The report forms the foundation for RECOFTC, its partners and other interested parties to drive forward a progressive social, environmental and economic agenda. This agenda can care for forests in the region while helping forest communities develop their own means to support conservation and improve their livelihoods.

Methodology

Data was gathered from three online surveys and a workshop. The three surveys consulted three different stakeholder groups: university coordinators of social forestry programs, graduates from these forestry programs, and employers of these graduates from a range of forestry organizations. All surveys used a mix of open and closed questions, with principal data analysis carried out using IBM SPSS statistical software, a widely used program for statistical analysis in social science.

A regional workshop was held in Bangkok, Thailand over the course of three days in November 2019. It included participants from all three survey groups. Participants had an opportunity to validate survey findings and explore key themes in greater depth.

Table 1 introduces the four methodological components of the study and how they relate to the project objectives.

Survey 1

The first survey targeted university program coordinators. It focused on undergraduate, graduate and postgraduate programs relevant to social forestry at universities in ASEAN Member States.

Universities were selected by RECOFTC in collaboration with ASFCC partners, particularly the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA). The selection targeted the strongest social forestry-related programs and was based on the number of

credit hours and the rates of student enrollment. The survey covered seven universities in seven participating countries and a total of 10 programs. There were 15 responses.

Some programs, including those at Kasetsart University, Universitas Hasanuddin, National University of Laos and Vietnam National University of Forestry, are specifically geared towards social forestry. Others are generically titled as forestry but with social forestry given significant attention. Five surveys related to Bachelor in Forestry programs in the Philippines. These were cross-checked and standardized to count as one response where necessary.

The survey collected information from program coordinators or qualified representatives on:

- The university, including the faculty, departments and names of programs teaching social forestry
- The content of social forestry-related programs, including the most relevant course modules, areas of expertise and the desired knowledge or skillsets for graduates
- Student enrolment, including gender-based participation, and students' placement after graduation
- Teaching and assessment methods in the classroom and in the field, in particular, measuring direct contact with forest communities
- Partnerships with forestry organizations outside the university
- Changes to, and challenges for, the programs

Table 1. Stakeholder groups under consultation in social forestry education assessment

Methodological component	Stakeholder group	Component contribution to study objectives (1=taking stock of social forestry programs; 2=transition to the workplace; 3=areas to improve)
Survey 1: Universities	Coordinators and designers of the academic programs oriented to social forestry	Objectives 1 & 3
Survey 2: Graduates	Direct beneficiaries of the social forestry programs	Objective 1, 2 & 3
Survey 3: Employers	Forestry sector employers of graduates	Objective 2 & 3
Survey 4: Regional workshop	Mix of university representatives, graduates and employers	Validation of survey data on objectives 1 & 2; further exploration on objective 3

Source: RECOFTC 2020

Table 2. Institutions, programs and specified course modules identified for assessment

University survey respondents

Country	University	Programs	Level of Degree
Cambodia	Royal University of Phnom Penh	Community Development Forestry and Forest Management	Bachelor Bachelor
Thailand	Kasetsart University	Social Forestry Tropical Forestry	Bachelor Master
Indonesia	Universitas Hasanuddin	Community Forestry Community Forestry Forestry	Bachelor Master PhD
Lao PDR	National University of Laos	Community Forestry and Rural Development	Bachelor
Myanmar	University of Forestry and Environmental Science, Yezin	Forestry	Bachelor
Philippines	University of Philippines Los Baños	Forestry	Bachelor
Viet Nam	Vietnam National University of Forestry	Social Forestry	Bachelor

Source: RECOFTC 2020

Survey 2

The second survey targeted graduates from the universities listed in Table 2. Responses from 158 graduates were acquired from all seven target countries, with a gender division of 55% male to 45% female.

The vast majority of students (83.5%) have obtained a bachelor degree, with only three respondents completing a PhD (Figure 1). Only one graduate was studying outside their country, and 59% of respondents graduated from their most recent study between 2014 and 2017.

The survey collected information on:

- Educational background
- Knowledge and skill sets gained from academic degree
- Employment status and experiences finding work after graduation
- Perspectives on how to improve social forestry programs

Survey 3

The third survey targeted employers of social forestry graduates. The 16 respondents were identified by RECOFTC and ASFCC partners,

covering a mix of government agencies, NGOs, CSOs and the private sector[1] (Table 3).

Out of the 16 organizations, 11 have social forestry programs or employ social forestry graduates. Five organizations do not currently have specific

Figure 1. Level of degree obtained by graduate survey respondents
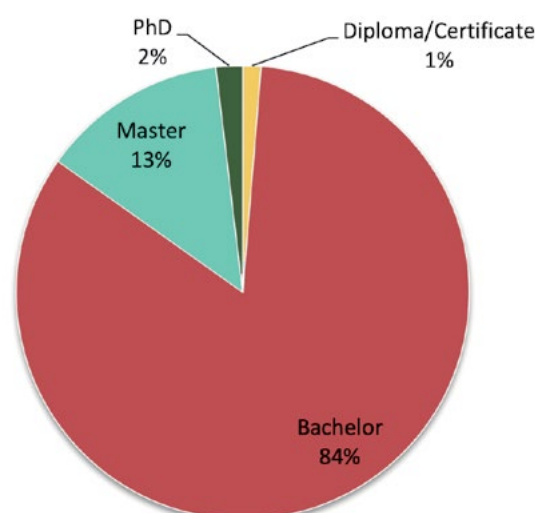
Source: RECOFTC 2020

Table 3. Organizations responding to the online employer survey

Employers with social forestry programs or employing social forestry students

Country	Organization	Organization Type
Thailand	Raks Thai Foundation	NGO
	The Siam Forestry Co., Ltd. (Siam Cement Group - SCG)	Private sector
	Seub NakaSathien Foundation	NGO
	PTT Reforestation Institute	Private sector
Myanmar	Forest Resource Environment Development and Conservation Association (FREDA)	NGO
	Forest Department, Community Forestry Unit	Government agency
	Myanmar Environment Rehabilitation-conservation Network (MERN)	NGO
Indonesia	Kemitraan (Partnership for Governance Reform)	NGO
	Center for International Forestry Research	Research institute
Lao PDR	Department of Forestry	Government agency
Vietnam	Vietnam Forest Owner Association (VIFORA)	NGO

Employers without social forestry programs at time of survey response or not employing social forestry students

Country	Organization	Organization Type
Cambodia	National Social Security Fund, Ministry of Labour and Vocational Training	Government agency
Vietnam	Forest Protection Department, Viet Nam Administration of Forestry (VNFOREST)	Government agency
Lao PDR/ Region	Mekong Region Land Governance (MRLG) project	Regional donor
Lao PDR	WWF Laos	NGO
	Stora Enso Lao	Private sector

Source: RECOFTC 2020

social forestry programs or employ social forestry graduates, but have done so in the past or maintain an interest in the area. In their cases, certain responses, such as generic worker skills, were taken into account.

Respondents from each organization work on a variety of topics, including social forestry legislation and the design, implementation and monitoring of social forestry programs at the national and community level. Other respondents

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[1] Some of the private sector actors are not involved in forestry or social forestry as a part of their core business. However, they were invited to particpate in the survey because they conduct projects related to social forestry, such as reforestation and other projects involving local communities, as a part of their corporate social responsibility programs.

have experience designing and delivering capacity development programs.

The survey collected information from organizations on:

- Their organization, including the type of organization (government agency, university, research institute, NGOs and private sector)
- Extent to which social forestry is practised
- Academic background of employees, and knowledge and skill sets of those hired relating to competencies identified by RECOFTC
- Recruitment policies and strategies
- Views on university training in providing the necessary workers for the organization, including recommendations for improvement
- Partnerships with academic institutions

Regional workshop

Once the surveys were completed, a provisional assessment of results was used to help frame a Regional Workshop on Social Forestry Education in ASEAN. This three-day event was held from 11-13 November 2019 in Bangkok, Thailand.

The objectives of the workshop were to:

- Share and validate findings from the surveys, seeking additional feedback
- Use the findings to discuss trends in social forestry programs around the ASEAN region
- Brainstorm ideas for more effective and impactful social forestry academic programs

The workshop was attended by 22 participants representing universities, graduates and employers from all seven countries targeted in the study. Observations and discussion points from the workshop are woven into the survey findings presented in the next section of this report.

The approach outlined above has its limitations. Perhaps most significantly, as a broad study covering the ASEAN region, the specific contexts of individual countries and institutions cannot be discussed in great detail.

Other limitations include the limited number of responses for all three online surveys. Although the information obtained from the surveys was corroborated by the workshop participants, further data is needed to validate the results.

Survey 2 carries a country bias with 65 percent of responses from Myanmar. The findings have been carefully monitored to note any bias to Myanmar, but an extensive representation from around the region would strengthen the study. This is particularly true with Survey 3, which had only 11 respondents currently employing social forestry graduates.

Therefore, the recommendations drawn from the findings should be seen as guiding points for further exploration. The study is significant in setting out a frame for social forestry in education and suggesting innovative ways to create progressive programs. However, it should not be seen as a definitive, detailed pathway. A more in-depth study will need to be conducted to build on the results discussed below and account for specific challenges in social forestry education.

Findings

The current status of social forestry education

Programs

All targeted bachelor programs teaching social forestry are four years, while graduate and postgraduate programs are two to three years. The number of students entering bachelor programs in the last intake varied significantly: between 15 and 30 in Lao PDR and Cambodian institutions, 140 at the University of Philippines Los Baños, and 220 at Universitas Hasanuddin, Indonesia. This wide range indicates a need to be cautious when comparing programs, as teaching conditions can vary based on the number of students enrolled.

According to the university survey, the number of female students in social forestry-related programs is high. Most universities have a female intake between 50% and 70%. Vietnam National University of Forestry (40%), the Community Rural Development bachelor program in RUPP, Cambodia (13%), and the University of Forestry and Environmental Science, Yezin (10%) had a lower intake of female students compared to the other universities in the survey.

Content

University survey respondents were presented with a list of 12 general forestry topics. They were asked to consider whether or not the following general topics on forestry were taught in the targeted social-forestry related programs.

- Sustainable forest management
- Silviculture
- Forest product use, including wood science, pulp and paper
- Forest ecology and biodiversity conservation
- Wildlife and range management
- Parks, recreation and nature-based tourism
- Watershed management
- Social forestry
- Environmental management
- Forest engineering and technologies, including mapping
- Urban forestry
- Natural resources management involving multiple resources such as forest, land and water

Table 4 highlights the most and least common topics included in programs, a listing which workshop participants were successful in predicting.

At the top, social forestry can be discounted due to its inevitable presence within selected programs for the study. Further discussion on a topic-based approach versus an issues-based approach will follow in the next section.

A total of 73% of respondents reported that social forestry was integrated across their programs. 73 percent of respondents also shared that social forestry was taught as a specific course.

Some respondents reported that many students may specialize in other majors but will still learn some elements of social forestry. For example, all students following the BSc in forestry at Kasetsart University, Thailand must take the course module Introduction to Social Forestry. In the Indonesian, Lao PDR and Philippines bachelor programs, nine courses relate to social forestry, with at least five

Table 4. General forestry topics offered within social forestry programs (responses from 11 programs)

Most common topics	Proportion of universities offering topic
Social forestry	100%
Forest ecology and biodiversity conservation	100%
Sustainable forest management	100%
Silviculture	72.7%
Watershed management	72.7%
Natural resources management	72.7%
Least common topics	**Proportion of universities offering topic**
Wildlife and range management	27.3%
Urban forestry	27.3%
Environmental management	36.4%

Source: RECOFTC 2020

mandatory in each case. In the Vietnamese and Cambodian programs, between three and five courses relate to social forestry, although a high proportion of these are mandatory. At Kasetsart University, 13 were identified, with five mandatory.

An important aspect of social forestry education is field-based training. Kasetsart University's 'Community-based forest management' module is useful for a field-based approach to learning about social forestry together with communities. This course module for third- and fourth-year students from the BSc social forestry program focuses on local ecological knowledge and community institutions as they relate to forest resource management.

The module has six to 15 students. It includes a two-day community visit to learn about issues on the ground, including the role of women and the complexity of land relations in a Thai context. It might not be applicable to programs with a large number of students, such the Universitas Hasanuddin, which has more than 200.

This module provides an example of how field-based study both complements and deepens students' understanding of theory. It also demonstrates how progressive ideas of learning

can fit into formalized university systems, catering to a specified frame of content time, assessment and credit.

Competencies among graduates

A competency framework was used to measure the perceived effectiveness of social forestry programs. This framework brings together areas of knowledge and skillsets needed for graduates of social forestry programs working in forestry and engaging with communities and other stakeholders who manage forests. RECOFTC engaged 20 regional social forestry experts to develop 14 competencies (Annex I). To complement the competency framework, a set of six specialized skillsets was used as a further measure for graduates (Annex I).

For each competency, three surveys assessed the level of learning at university, the level of skill demanded in the workplace, and the capacity of graduates in the work force. The results are expressed in terms of basic, intermediate, advanced or not covered.

Universities reported to what extent they provided knowledge to the graduates on the relevant topics. Graduates reported their perceived level

Figure 2. Perceptions of competencies from universities, graduates and employers

Source: RECOFTC 2020
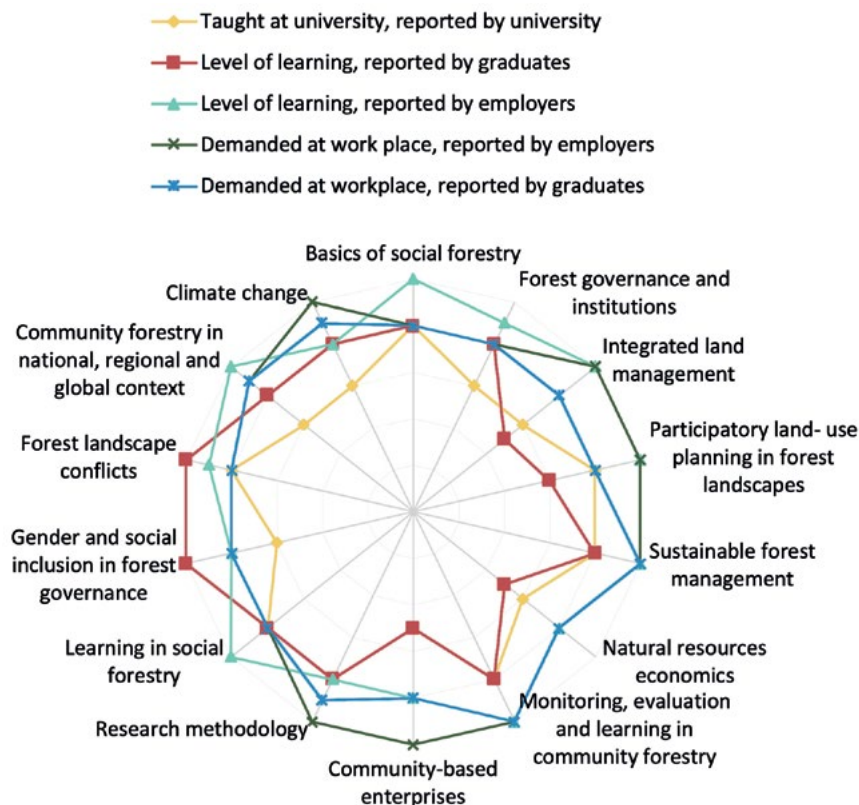
of learning at the time of graduation and the perceived demand at the work place. Employers shared expected level of knowledge from the graduates as well was what the graduates possess.

Without detailing each individual competence, certain trends are as follows:

University program coordinators were more likely to identify a lower level than graduates. This may be a reflection of their perception that bachelor programs (eight out of 11 surveyed programs) represent a lower level.

On the whole, graduates perceived a higher level of each social forestry competence demanded in the workplace compared to the level of learning (11 of the 14 competencies). However, the standard identified by employers for all 14 competencies standing at intermediate or advanced is even higher. This potentially could represent a gap between the level universities are producing and the workplace demand, hindering the ability of new graduates to find work.

Graduates generally claimed they have improved many skills since leaving school. However, employers identified a higher level possessed by graduates for each social forestry competency than graduates perceived themselves. It is heartening that employers recognize a high level of knowledge and skill set in the social forestry graduates to whom they give jobs.

Only for the competencies 'research methodology' and 'climate change' was the standard possessed by social forestry graduates deemed lower than that demanded. With student research a core feature of many programs, this might represent an area where evaluation on present practices is needed. The results here are based on a small sample and suggest that graduates are meeting the needs of the workplace.

For the skill sets for social forestry, a similar exercise was carried out for the series of six skill sets shown in Annex I: facilitation, project management, negotiation, use of information technology, effective communication and critical thinking and problem solving.

Overall, the level of learning and capacity by students was placed at the intermediate level for all skill sets, with no diversity due to the level of the degree. The workplace demand was predominantly deemed around the advanced level for both graduates and employers.

Nearly all employed graduates claimed they had improved in their skills on the job. With no significant variation between skillsets found here, the findings point towards the fact that they are all very important if graduates are to succeed when they enter the job market.

Employers and graduates were also asked to name knowledge or skillsets not specified in the lists above. Graduates highlighted a range of specialized topics relating their own individual interests, including wood-related science or elephant conservation. Graduates also expressed interest in gaining leadership skills and learning how to work with statistics and computer software such as Geographic Information System (GIS) or database systems.

Quite a few graduate respondents mentioned the need for improving local language skills for working in communities and upgrading English capabilities for working in international settings. After graduating from a bachelor in forestry, one student from Myanmar then followed a master program in English language before finding work in the social forestry sector.

Employers expressed an interest in hiring people with specialized computer software knowledge. In addition, knowledge on social issues relating to social forestry, such as gender or indigenous rights, were flagged. This is interesting, because social topics were given less precedent in university and graduate surveys.

Teaching and assessment methods

University program coordinators were asked to rank teaching methods according to their degree of use in the program. The following overall ranking emerged:

1. Class-based work
2. Student group work
3. Student research
4. Field trips
5. Technical work
6. Internship
7. Online work

Following this list, traditional class-based work remains the primary core mode of instruction. Students are given opportunities to lead their own work, whether in groups or through individual research. Universities report that providing internships for work experience is a low priority.

Respondents claimed that students would have direct contact with forest communities during their studies (in 90% of programs covered in this study), particularly through field trips and research, and potentially through an internship. However, class sizes can impact the ability for universities to organize such contact.

For example, in the workshop, a representative for Kasetsart University spoke of the challenges she faced organizing a field trip for a 100 students. Other programs also have annual intakes of more

than one hundred. Arranging field trips for such large numbers remains a considerable challenge.

Motivations for study

More than half of graduates (57.6%) chose their study because of their environmental interest in forest, and their desire to contribute to conservation needs (57%). Other significant motivations were to work in forest management (45.6%), and to directly help support forest communities (49.4%).

Only 4.4% of respondents identified a career in forestry as a means to finding a high-paid job. This suggests that respondents understand the financial prospects in the forestry sector.

Respondents and workshop participants indicated that there is an increased awareness and interest in social forestry. One representative from the National University of Laos explained that applications were rising in social forestry while decreasing in other forestry courses. At other institutions, including the Universitas Hasanuddin, student numbers have risen significantly, from 100 in 2010 to 171 to 2018.

Transition from the classroom to the workplace

Ability to find work

University program coordinators were asked for details on students and their ability to find social forestry jobs after graduation. The resulting data

was not consistent enough to make a detailed comparison between countries. Even where extensive information was provided for bachelor programs between the years 2010 and 2018, variations can be found in placement rate.

The University of Forestry and Environmental Science, Yezin and the National University of Laos had a placement rate of 80% to 90% compared to 55% for Universitas Hasanuddin. The percentage of graduates who found their work relevant to social forestry also varied. For example, 20% of graduates in Laos found work related to social forestry compared to 50% for Universitas Hasanuddin and 70% in Yezin.

The only consistent trend was that these percentages do not vary with any significance over time, so graduates are not finding it easier to get jobs in social forestry. The lack of singular trends suggests the need for further exploration into each country context for a greater understanding of graduate success in the social forestry job market.

Beyond the findings above, the graduate survey traced current employment status (Figure 3). A majority of graduates (63%) have found employment in their own field of study while 25.4% are either unemployed or still studying. Of those employed in forestry (99 cases), a majority (67%) have found work with a government agency while 18% work for an NGO, CSO or community-based organization (CBO) (Figure 4).

In the Philippines, a higher proportion of employed graduates (five out of 15) have found work in a university or research institute. A total of 88% of

Figure 3. Current employment status from graduate survey
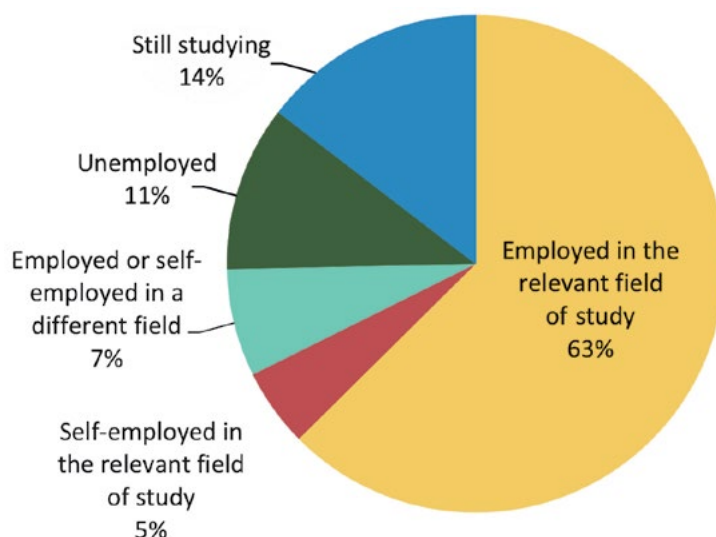
Source: RECOFTC 2020
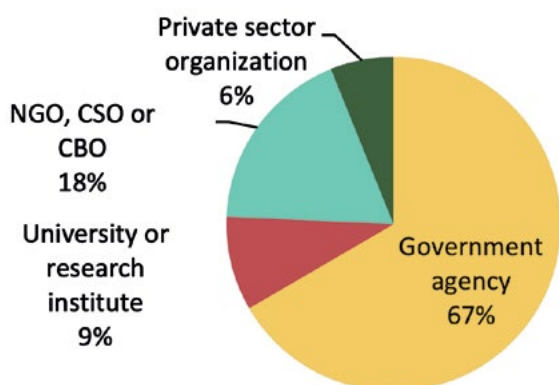
Source: RECOFTC 2020

employed graduates who were surveyed started their job in 2016 or later.

Nine out of the 16 forestry organizations interviewed for this study offer specialist positions in social forestry. In eight cases they have employed social forestry graduates. On the whole, this ranges between one and five employees, although the Vietnam Forest Owner Association (VIFORA) employs 20 social forestry graduates.

The Forest Resource Environment Development and Conservation Association (FREDA) Myanmar and the Department of Forestry Lao PDR both reported that they recruited employees to their social forestry positions who were not social forestry graduates.

Looking at the transition between the classroom and the workplace, 68.4% of graduates surveyed reported that they had experienced challenges finding a job after graduation. This number includes graduates who have since found work, as well as those still unemployed. Two reasons were reported:

- Employers were looking for experience, which the graduates did not possess (41% respondents). The figure was relatively high for respondents from Cambodia, Myanmar and Viet Nam.
- The job market is very competitive (33% all respondents). This was particularly emphasized by Indonesian graduates.

This fits the notion that graduates were generally satisfied with their education. The challenge was finding an opportunity to start climbing the career ladder without prior professional experience.

Performance of graduates

Employers who have hired social forestry graduates (eight organizations) were asked to assess their performance in the workplace (Figure 5). On the whole, social forestry graduates were seen as equal to or better than other types of employees on a range of workplace practices. They learn the job more quickly, are more productive, can see the bigger picture in their work and are faster at winning the trust of local communities. This is a useful indicator, although a larger sample would be needed to verify the findings.

Figure 5. Perceived performance of social forestry graduates compared to other employees (percentage of employers)
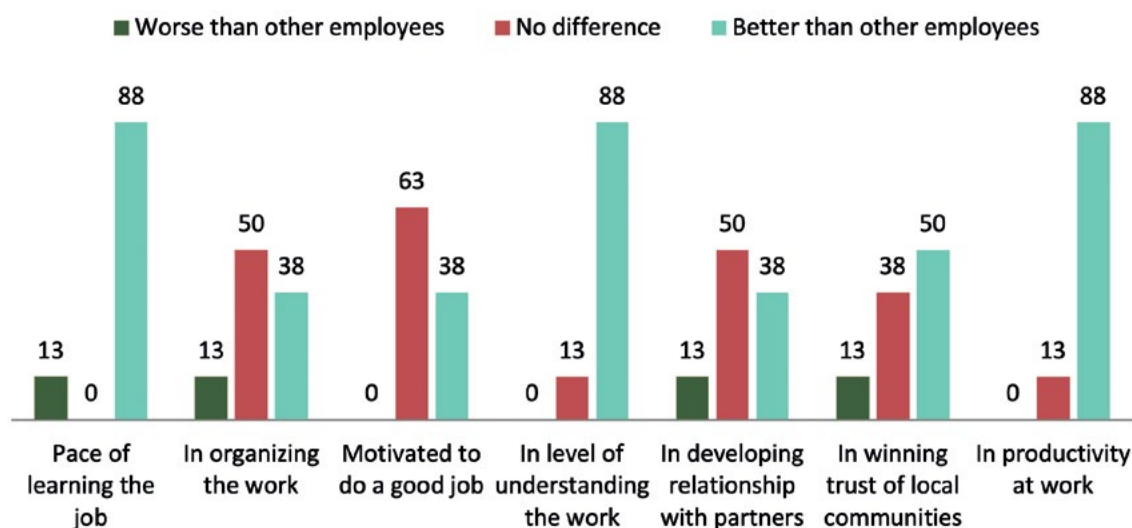
Source: RECOFTC 2020

Work experience

A degree in social forestry is not the only requirement for employers looking for new recruits. Four organizations expressed a clear preference for graduates with a forestry degree, with four others preferring graduates with any development-related degree.

Ten organizations reported they looked for some sort of work experience. The issue of work experience is complex because experience can mean different things to different people and depending on their country. It might involve passive exposure in the field, meeting with stakeholders or involvement in social forestry projects with organizations or communities through student research projects or internships. Experience of working with local communities in the field to gain a better understanding of social forestry issues may not mean the same thing as experience of working with an organization.

Despite the varying definitions of what experience might mean, it remains critical to support graduate success in finding jobs, for which universities should take an active role. The topic is given further consideration in the following section on areas for improvement.

Partnerships between academia and forestry organizations

To learn more about work experience options for social forestry graduates, academic institutions were asked for information about their partnerships with forestry organizations. From the university survey, eight out of 10 programs have established partnerships with organizations working in social forestry. All eight programs connected with both government agencies and NGOs or CSOs, seven have partnered with CBOs, and five with other university or research institutes.

University program coordinators and employers were asked for details on the partnerships they have developed. University respondents collectively provided information on 33 different cases, while six forestry organizations named 18 partners. The types of activities conducted in these partnerships are recorded in Figure 6. In both cases, it seems that work focuses on the partnership institutions, particularly in the implementation of joint work, research and training exchanges between staff.

The direct involvement of students through teaching and internships is less prevalent, but this does not mean that there are no opportunities here. It is possible that organizational interaction through joint projects or research can also include students, offering them a platform to get experience and contact with forest organizations.

Another question for employers addressed their aims to develop partnerships further, and was acknowledged in 14 out of the 18 cases. Engagement of staff, including professors, in joint programs, research and events such as training were of greater interest than direct student activities through teaching, internships, fieldwork and employment.

Figure 6. Aspects of partnership between academic institutions and forestry organizations

Source: RECOFTC 2020
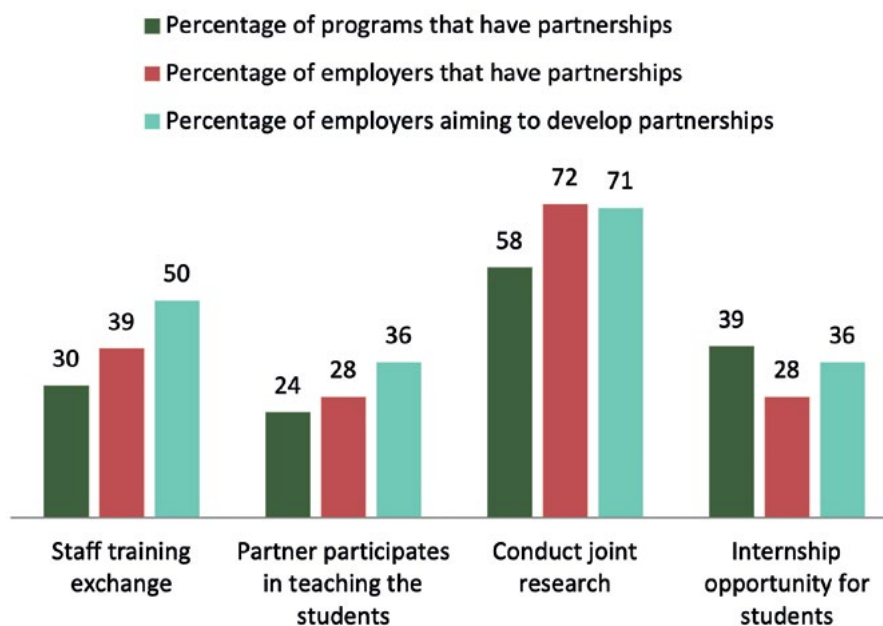
During the workshop, more information was sought about the nature of these partnerships. The types of contracts vary across the region. For example, where a government may be involved, the need for a Memorandum of Understanding or Agreement (MoU/MoA) may limit the opportunities for student involvement. This is especially true when the memorandums are written by people unconnected to student concerns, as highlighted by Lao PDR and Myanmar participants in the workshop.

The Philippines provides one example where partnership was integrated into the university's social forestry curriculum. In 2006, the University of Philippines Los Baños signed a five year MoA with the Forestry Management Bureau of the Department of Environment and Natural Resources (DENR). The College of Forestry and Natural Resources linked the relationship to its undergraduate forestry curriculum.

As part of the practicum component in the program, DENR hosts students to undertake field studies and on-the-job training in environmental science and management, forestry and natural resources conservation. Even though the MoA technically ended in 2011, the relationship runs smoothly and the partnership continues.

Areas for improvement

Priority areas

University coordinators acknowledged that they faced challenges soliciting adequate funds to smoothly run the program and attracting high-quality faculty members and high-performing students.

Workshop participants reported that no extra funding was allocated to universities teaching the subject even when governments ambitiously raised their social forestry targets. For example, Indonesia raised its targets from 2.5 m ha to 12.7 m ha in 2015. This could be construed as a failure to acknowledge the importance of investing education in meeting such targets. However, a lack of funding is a common challenge not exclusive to social forestry. Rather than dwell on such familiar restrictions, the workshop and this study attempts to look towards innovation in programs.

Workshop discussions frequently returned to the difficulty of incorporating all the elements needed for a strong social forestry education. These elements, include in-depth analysis on particular topics, skills, teaching methods, experiences and attitudes.

University staff and academic forestry departments often do not have the capacity to impart a wide range of knowledge to students. A large university

certainly might be able to do so, but there are challenges coordinating between faculties and departments, which is not a common practice in ASEAN. The greater the number of stakeholders involved, the greater the challenge to achieve collective decisions on program structures.

University program coordinators and graduates from the survey agreed that the topics most needing improvement include sustainable forest management, social forestry and natural resources management. This suggests that university programs might not be delivering high-quality content to students in these topic areas.

However, the general responses of graduates in the survey do not reflect a negative perspective. It appears that students are highlighting the importance of these core topics in forestry education. They are also recognizing and supporting their strong presence throughout programs in the region and demanding high standards for a decent education. The call for improvement is perhaps more one of desire for quality rather than an overt criticism of universities, although further study would be needed to confirm this finding.

During the workshop, the topic of gender was frequently addressed. This cross-cutting issue is relevant to social forestry program content, student and staff recruitment, and opportunities for women in the workplace and in social forestry projects.

From the university survey, the signs are positive for the recruitment of female students, with most institutions reaching well over 50% for the last intake. Employers frequently mentioned the need to recruit graduates who could address social issues in community projects, including gender-related issues.

However, in the graduate survey, of eight social forestry sub-topics, 'gender and social inclusion in social forestry' received significantly less interest (8.9%) than the other seven sub-topics, which received around 12% to 15% interest. This rather disappointing finding highlights the need to keep reminding people about the importance of gender issues, and that it is central to creating participation and empowerment.

In responding to program challenges, university coordinators highlighted three main areas where change has taken place over the past five years (Figure 7). Amending the curriculum was by far the most common area of change across the different programs, followed by increased collaboration with partners and more focus on research.

It is surprising that little emphasis was placed directly on developing human capacity, considering that concerns were raised by universities about

Figure 7. University responses on how to address program challenges
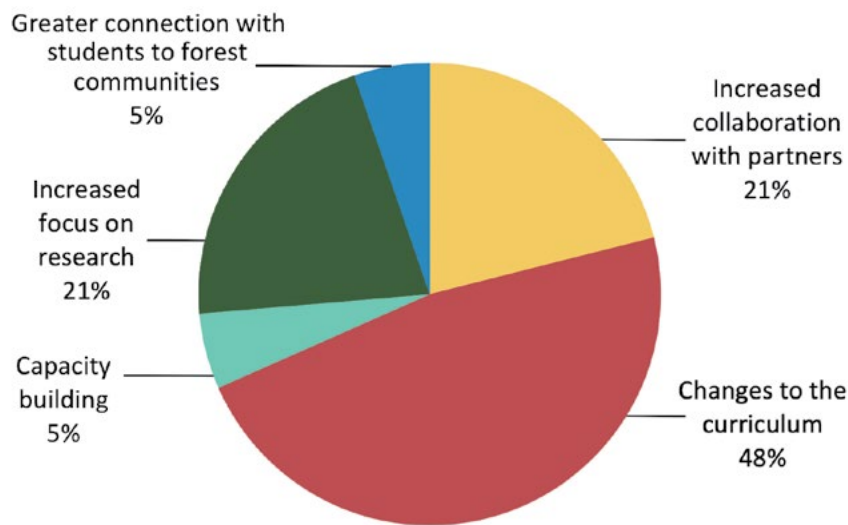
Source: RECOFTC 2020

attracting high-quality students and staff. There is also little response to the financial difficulties of maintaining programs, although that could be influenced by the fact that respondents are not directly involved in that particular role.

Innovative solutions

During the workshop, time was allotted to develop innovative ideas for social forestry programs at universities and to offer graduates better opportunities to transition into the workplace. Various ideas were put forward to help incorporate the range of knowledge, skills and experiences that students need (Annex II).

Informal modes of education

Not all work has to be integrated into a formal educational program. There are many ways for students to gain skills, knowledge and experience through informal means.

For example, a representative from Universitas Hasanuddin Indonesia talked about the emergence of a 'taskforce for social forestry' as a successful emerging student organization. This informal group maintained close connections with university staff and local NGOs, offering its own bridge between the classroom and the workplace.

A student from the Asian Institute of Technology, Bangkok spoke of building a 'common space' for graduates, potential students and experts to improve capacities for working in the field. As well as encouraging informal exchange, it could also include training programs for young professionals once or twice a year. This initiative is expected to facilitate learning from peers after graduation. It

has the potential to help graduates become aware of the gaps in knowledge and skills they possess, what their work context requires, and how to make collective efforts to address them.

Issues-based approach

A constant challenge for students, not just those in forestry, is taking academic theory from the classroom and applying it in the field. The high-end conceptual world can often feel quite distant from real-world challenges. Framing social forestry programs around the latest issues on the ground could help provide a focus for the direct application of theory, a boundary for the topics learned, and a window for students to understand current trends.

For example, what are the particular issues between communities and other stakeholders? What are the actual effects of policy on the ground? What are the present environmental challenges facing forests?

Posing these types of questions could be particularly helpful in developing expertise on social forestry related issues, such as gender inequality and climate impacts on local communities. It could help with research methodology, which is reported as insufficient by some employers responding to the survey. It could also contribute to the production of relevant knowledge which is reported to be scant in the region (Hajjar et al., 2016). These issues are critical for improving the effectiveness of social forestry programs.

Regional exchange

Achieving successful regional exchange is a challenge. Nevertheless, it has great value in

helping partners with progressive ideas on social forestry brainstorm and develop new innovations. Innovations can then be fed back into their programs.

There is the possibility that successful exchange could reflect favourably on a university's reputation, encouraging its greater inclusion into formalized academic practices and systems. Inspired by the workshop, participants from the Philippines, Indonesia and Lao PDR all expressed interest in conducting reviews of their own national systems of social forestry education. Although differing in precise aims, from a curriculum review to the direct design of new program elements, regional coordination of such work could be extremely productive for all sides. It could allow for alternative perspectives and the introduction of new modes from different countries.

Another idea centred on the creation of Massive Open Online Courses (MOOC) for young professionals in social forestry. This could be a good way to connect graduates with current issues around the ASEAN region, looking beyond their own countries to innovation and inspiration on a wider scale.

During the workshop, interest shifted from needing context to understand the specific dynamics at work in each country, to exploring a common cause where the aims of participants were not detached from each other. Such exchange at regional level would provide graduates with exposure to the challenges and the innovations of implementing social forestry programs to achieve diverse objectives.

It is important that countries in the region have diverse types of social forestry programs reflected in differing rights to local communities, objectives and institutional arrangements (RECOFTC and AWG-SF, 2017). The multi-country and regional exchanges have the potential to widen knowledge among the graduates about different elements of social forestry and about approaches they can adapt and apply to their work. It also has the potential to improve students' English language skills, which some listed as their priority for performing better in their work context.

A more optimistic scenario is a regional level collaboration among the graduates in learning and addressing the social forestry related issues and opportunities they collectively face. The exchange can also take place at university level for collaboration to collectively improve their programs. It could be potentially facilitated by the ASEAN University Network Quality Assurance, in which universities such as Universitas Hasanuddin are already involved (Ratanawijitrasin, 2015).

Discussion on social forestry education in ASEAN

Social forestry education remains reasonably strong

As an initial overview on social forestry in education around the ASEAN region, many of the study findings reflect a positive state of affairs. Awareness of, and interest in, social forestry is increasing. There is an opportunity to take advantage of this growth by developing programs around the region.

Social forestry is presented in different ways, whether as specific mandatory course modules or through integration of the concept within other modules. This offers opportunities not only for those who wish to specialize in the topic, but also awareness and knowledge for those specializing in other areas of forestry.

Although graduates demand improvements to core forestry courses, they seem to approve of the basic content structure of their education. There is a healthy proportion of women studying social forestry programs in most countries of the region. Further study would be useful to see how this translates into the workplace. It could also help determine whether women are achieving high-level jobs and how diversity is helping to reduce gender inequality, which is high in the region (ILO, 2018; Choi, 2019).

It seems that most graduates are eventually finding work in their field of study. The message from employers is positive. It gives a high rating to the knowledge and skills of social forestry graduates, placing their work performance level on par with or higher than other employees. This is particularly important given the declining numbers of people participating in the labor force across region (ILO, 2018). Within this context, the development of programs should involve evolution rather than revolution.

Persistent challenges

There are a number of challenges in social forestry education that are generic, in that they are found throughout academia in the ASEAN region and beyond (Songkaeo and Yeong, 2016). Challenges include having enough financing to build and maintain quality programs, and the need to sometimes conform to rigid institutional systems, reaching from university to government mandates. These two issues combine where we see significant government interest in social forestry. However, it is not reflected in the financial support and guidance given to universities to produce social forestry practitioners.

This report proposes that there are many other opportunities for progressive ideas and actions that bypass these problematic issues. It is better to work on these ideas, which might at a later moment even help with improved financing or institutional flexibility.

A clear challenge involves the broad range of needs students require to become social forestry professionals. These include the topics forming the content of programs, skillsets, educational methods, experiences and attitudes. There are also associated subjects important for the forester, such as learning languages to operate in local or international settings (Low, 2019).

Balancing curriculum

It is clear that despite the importance of all these elements, not everything can be taught in universities. A balance must be found between giving students the broad range of education needed to succeed in the workplace and allowing them to follow specialist interests.

Educational approaches vary and reflect different forestry systems in countries around ASEAN, whether referring to specified environmental classifications or governance structures. The commonalities around these challenges are not so far apart. The workshop demonstrated that innovative ideas travel well across national boundaries.

There is also the pragmatic reality that students will always have a day-to-day concern about their grades. This report stresses that students are acutely aware of the competitive nature of the employment market and are motivated to seek out and help shape a quality training package.

An issues-based approach ensures programs are geared to focus on what is happening on the ground at the present moment. For example, in high-conflict or post-conflict areas, an understanding of the conditions around which violent struggles emerge is vital for forestry practitioners (Dhiaulhaq et al. 2014). It will help them contribute to policies and projects that also support peace-building processes.

An issues-based approach also provides a frame by which theory may be applied, allowing an easier connection between conceptual learning and practical field-based work. This link between theory and practice is critical for training practitioners to react and adapt to dynamic real-world challenges in their work. Challenges include changes triggered by increasing populations, increasing demands of forest products, urbanization, migration and the expansion of economies (FAO, 2019). These changes not only increase pressures on forest, but will also have severe climate impacts. Disasters such as pest outbreaks, drought, flooding and forest fires all contribute to income inequality and poverty (ibid).

Opportunities for education to contribute more

There is growing pressure to expand the scope of social forestry. It is a result of ambitious social forestry targets of governments and the adoption of the social forestry approach for achieving diverse objectives, including conservation, gender equity and poverty alleviation. This pressure suggests that the importance of social forestry programs is likely to increase in the future in the face of expected changes in the region (FAO, 2019). This will have an influence on social forestry education, although it is difficult to predict the nature of the impact with the limited data available on social forestry in the region (Hajjar et al., 2016).

The pressures exerted on social forestry programs can be partly addressed by ensuring dynamism in academic programs teaching social forestry. It can be done by improving the system to review and adapt the programs. This includes maximizing the five-year review process that universities in many countries in the region such as Thailand are practicing. Evidence-based review and forward-looking revision of academic programs has the potential to enable universities to respond to most of the changes in the region.

There are many ways of learning a trade, and formal university training is one particular form. Rather than cover all aspects of social forestry, programs can link to additional ways in which students can develop. These include informal networks, student groups, training packages and discussion forums, which also connect to the wider working world. There is also potential for regional exchange.

External short intensive courses can help students' development during or after their main studies, aided by advances in information technology. The key is to embrace such innovations, provide input where necessary and help make them visible so the students can take full advantage of the opportunities.

Another important feature for social forestry programs is how they can suitably prepare students to make the transition from classroom to workplace. Although most students are eventually finding work, they do find this a challenging process, particularly with the difficulty of gaining work experience and dealing with a competitive job market. It is important that they understand the institutional world into which they are entering, from legal and policy mandates to organizational practices, so they can effectively develop and apply their skills.

Universities need to help students acquire the experience and skills they need to gain an advantage when ascending the career ladder. Experience can mean many different things, including field work with communities, applying knowledge through self-motivated research, and getting to know forestry organizations through internships. Universities also must encourage positive attitudes and help build character in students so they have the confidence they need to enter the work place and apply their knowledge and skills.

One way to help improve students' work experience is through increased exposure via partnerships between academic institutions and forestry organizations. The evidence from this study is that institutional and staff interests through research and training trump the involvement of students in such partnerships. There are opportunities for greater inclusion here, in a way that adds value to the relationship.

Some employers suggest that work experience is more important than a social forestry degree, and so could help students acquire it. This makes sense when considering that social forestry graduates perform better in the workplace. There seems to be a mutual benefit for the employer here.

There is much to learn from the specific conditions around social forestry education in each country of interest, which lies outside the scope of this report. Class size can have a significant impact on the form and content of a course, and can vary from dozens to hundreds in different institutions.

Opportunities for regional collaboration

During the workshop, a sense of difference between countries gradually shifted to an appreciation of similar aims. While there will not be a one-size-fits-all ideal for a social forestry program, there are still many innovations that will cross over national borders. Regional exchange provides a good means to brainstorm, think outside specific country or institutional conditions, and take inspiration from the experiences of others (Altbach and Teichler, 2001).

For example, the Kasetsart University course module discussed earlier might not work directly in all programs around the region but there are many interesting elements that could be used. Co-working spaces or online trainings are good ways to share new ideas and learn from the experiences of others at various geographical and institutional levels. There is no reason why these new ideas cannot then be sold back to 'conservative' educational structures. A successful initiative that promotes the university's reputation will not necessarily be rejected. Exchange credits or other formalized program developments can easily emerge from less formalized beginnings.

Another consequence of improving regional linkages is the possibility of consolidating efforts around regional and international forest-related goals and targets. These include the Sustainable Development Goals, poverty alleviation targets, climate commitments and ASEAN-level mandates for forests.

It has already been established that social forestry can have a vital role in these areas (RECOFTC, 2016). Linking to these goals increases the chance that new program ideas will receive institutional approval. These are areas where student involvement can assist training with vital knowledge and experience, while also contributing to efforts to meet such targets.

A word of warning should be added here. The university survey highlights only a basic level of learning for gender and social inclusion, community forestry in national, regional and global context, and climate change. All these topics relate closely to the targets mentioned above and yet potentially are receiving a lower priority status in formal programs. Further research would be needed to verify such a finding. It is possible that new informal regional linkages could help promote such topics and create ties between training in forestry and international efforts to combat environmental, economic and social issues that link to forests.

Recommendations

Building on the study findings and discussion, a set of recommendations for further action is proposed. It is important to keep in mind the study limitations, particularly the small sample of forestry organizations. For this reason, the recommendations are meant to help stimulate further research, dialogue and action to bridge knowledge gaps and conceive sound innovations to develop social forestry programs.

Overall, the plans for action highlighted here are more aspirational than offering a specific roadmap for program development. The best next steps would involve maintaining contact between stakeholders involved in the workshop. During the workshop, various suggestions were put forward for projects that consolidate regional linkages. Many of these are mentioned in the innovative ideas section and a fuller list is provided in Annex II.

Under guidance from RECOFTC, there are opportunities to try out some of these innovations and encourage universities, graduates and employers to experiment outside of formal training and work programs. Overall, from this broad view of social forestry education in the ASEAN region these recommendations can offer a frame for further investigation, country-based reviews and planning for innovations between countries.

Social forestry programs

- There are many positive aspects to social forestry education in ASEAN. An overhaul of the system is not needed, but there is space for improvement building on what already exists.
- An issues-based approach can help programs be shaped around what is currently happening on the ground. Professors could use this to apply theoretical teaching, connect to practical needs, and prepare the student for dynamic real-world scenarios.
- There are different types of training, including formal and informal, extended study and short-courses, and academic and vocational. These can all help students be successful in social forestry. Universities must actively engage with alternative forms of education to save costs and help students fill gaps in their formal learning.

Transition to the workplace

- Social forestry programs need to help students successfully negotiate the transition from classroom to workplace. Gaining work experience is critical to this transition, although the type of experience needed will differ based on the workplace and the country. This could include community-based work, research or bureaucratic work within a forestry organization.
- Employers could benefit by providing more opportunities for students to gain work experience. Some employers reported that work experience is as important as a social forestry degree.
- Partnerships between universities and forestry organizations often focus on staff training and joint research rather than student involvement. Ensuring greater student inclusion could have benefits for all sides.

Regional collaboration

- Each country has its own specific education and forestry system. The common goal to improve forestry systems by involving local communities is strong in all countries. Regional linkages that include universities and other stakeholders can help foster and pilot innovative ideas for training, with successful projects later incorporated into formal academic programs. Sharing experiences from around the region can add to innovation.
- Working at regional level is a good platform for engaging with ASEAN and international development goals, including the Sustainable Development Goals, poverty alleviation and climate commitments. Social forestry projects that involve training for social forestry students and graduates could help countries reach such targets.

References

Altbach, P.G. and Teichler, U., 2001. Internationalization and exchanges in a globalized university. Journal of Studies in international Education, 5(1), pp.5-25.

APFNet andAP-FECM, 2018. Growing Higher Forestry Education in a Changing World: Analysis of Higher Forestry Education in the Asia-Pacific Region. Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet), Asia-Pacific Forestry Education Coordination Mechanism (AP-FECM), Beijing.

Choi, N., 2019. Women's political pathways in Southeast Asia. *International Feminist Journal of Politics, 21*(2), pp.224-248.

De Jong, W., Pokorny, B., Katila, P., Galloway, G. and Pacheco, P., 2018. Community Forestry and the Sustainable Development Goals: A Two Way Street. Forests 9, 6, 331.

Dhiaulhaq, A., Gritten, D. and De Bruyn, T., 2014. Mediating forest conflicts in Southeast Asia. *RECOFTC Issue Paper*, (2).

FAO, 2019. Forest Futures - Sustainable pathways for forests, landscapes and people in the Asia-Pacific region. Asia-Pacific Forest Sector Outlook Study III. Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok.

FAO, 2011. Southeast Asian forests and forestry to 2020: Sub-regional report of the second Asia-Pacific forestry sector outlook study. Asia-Pacific Forestry Commission, Food and Agriculture Organization of the United Nations Regional Office for Asia and the Pacific, Bangkok.

FAO, 2015. Global Forest Resource Assessment 2015. Rome, Italy, Food and Agriculture Organization of the United Nations.

Gilmour, D., 2016. Forty years of community-based forestry: A review of its extent and effectiveness. Food and Agriculture Organization of the United Nations, Rome.

Hajjar, R., Oldekop, J.A., Cronkleton, P., Etue, E., Newton, P., Russel, A.J., Tjajadi, J.S., Zhou, W. and Agrawal, A., 2016. The data not collected on community forestry. Conservation Biology, 30(6), pp.1357-1362.

ILO, 2018. Asia-Pacific employment and social outlook 2018: advancing decent work for sustainable development. ILO Regional Office for Asia and the Pacific, Bangkok.

Kasetsart University, 2014. Faculty of Forestry - Kasetsart University [WWW Document]. URL http://www.forest.ku.ac.th/webdev3/submenudetail.php?submenuid=56&lang=en (accessed 10.22.19).

Low, E.L., 2019. English in Southeast Asia. *The Handbook of World Englishes*, pp.135-158.

Ratanawijitrasin, S., 2015. The evolving landscape of South-East Asian higher education and the challenges of governance. In The European higher education area (pp. 221-238). Springer, Cham.

RECOFTC and AWG-SF, 2017. Social forestry and climate change in the ASEAN region. RECOFTC – The Center for People and Forests, Bangkok, Thailand.

RECOFTC, 2016. Optimizing the role of community forestry to achieve the Sustainable Development Goals through the ASEAN Cooperation on Food, Agriculture and Forestry (Policy brief). RECOFTC – The Center for People and Forests, Bangkok, Thailand.

Songkaeo, T. and Yeong, L.H., 2016. Defining higher education issues and challenges in southeast Asia/ASEAN within the international context. *The Head Foundation*.

Temu, A.B., Rudebjer, P.G., Kiyiapi, J. and Lierop, P. van, 2005. Forestry education in Sub-Saharan Africa and Southeast Asia: Trends, myths and realities, FONP Working Paper. Food and Agriculture Organization of the United Nations (FAO), African Network for Agroforestry Education (ANAFE), Southeast Asian Network for Agroforestry Education (SEANAFE).

WBCSD, 2019. Forest Sector SDG Roadmap. World Business Council for Sustainable Development, Geneva, Switzerland.

Annex I: Desired competencies among graduates of social forestry programs

Competencies for professionals in social forestry

Basics of social forestry

- Understand the background and conceptual aspects of social forestry principles
- Understand the rights and responsibilities, as well as the interdependency of people and forests that need to be considered in forest management

Forest governance and institutions

- Understand the concepts, principles and actors in forest landscapes decision making
- Understand the policies, laws, process and organizational structures for social forestry
- Analyse the political economy of engagement and decision making in forest landscapes

Integrated landscape management

- Understand the concepts and principles of multiple land use
- Use the tools and approaches to integrate management of multiple land uses

Participatory land use planning in forest landscapes

- Understand the tools, techniques and processes, including GIS and remote sensing, needed for participatory land use planning

Sustainable forest management

- Understand the theoretical and practical aspects of growing and managing forests and how these aspects can ensure a sustained supply of forest products and services
- Differentiate between the many technical topics, such as silviculture, forest protection, forest harvesting, biometrics and use them in the management of forests

Natural resources economics

- Apply economic principles in natural resource management and decision making

Monitoring, evaluation and learning in social forestry

- Track changes in the lives of people, forests and environment and interaction between people and forests
- Develop monitoring framework in project
- Measure the progress and provide feedback to management

Community forest enterprises

- Understand the fundamentals of value addition and marketing of community forest products and services
- Understand the building blocks of community forest enterprises
- Conduct market analysis employing participatory methodologies

Research methodology

- Design participatory action research models
- Collect data employing participatory tools
- Analyse and communicate research findings for impact

Learning in social forestry

- Identify opportunities, problems and solutions through facilitation, platforms and other learning styles
- Develop capacity of local communities in managing forests through experiential learning

Intersectionality and inclusion in forest governance

- Understand the theoretical and practical foundations of intersectionality and how it relates to forest governance
- Use tools to better understand overlapping identities and experiences of a person or group of people and address that in forest governance

Forest landscape conflicts

- Understand concepts related to forest landscape conflict
- Identify, analyse and address conflicts in forest landscapes

Social forestry in national, regional and global context

- Understand national plans in ASEAN
- Understand climate change frameworks and linkages with social forestry
- Understand the Sustainable Development Goals and linkages with social forestry

Climate Change

- Understand the role of social forestry in climate mitigation and adaptation
- Connect global and national frameworks on community-based climate change adaptation
- Understand community-based climate adaptation planning

Skill sets for professionals in social forestry

Facilitation

- Ability to ask the right questions
- Plan agendas
- Design group processes
- Manage group dynamics
- Create an inclusive environment at events
- Stay neutral

Project management

- Leadership
- Coordination
- Team work
- Time management
- Planning
- Risk management

Negotiation

- Active listening
- Ability to understand common interests
- Weigh different options
- Have patience
- Control emotions
- Communicate clearly

Use of information technology

- Familiarity with basic computer and mobile based technologies and programs
- Ability to apply them in work

Effective communication

- Develop and deliver clear, organized and convincing verbal and written messages

Critical thinking and problem solving

- Evaluate situations
- Use logical and systematic thinking
- Identify options
- Provide best possible solution

Annex II: A list of actions proposed by workshop participants to strengthen social forestry in education in ASEAN

Action	Collaborative partners	Proposed by
Develop integrated curriculum for teaching social forestry in ASEAN	Universities in ASEAN	Mr. Choeun Kimseng (Royal University of Phnom Penh -RUPP)
Updating program through: • Discussion in group meeting of experts • Program development, including the design of field work • Implementation and evaluation	Within University Hassanudin (UNHAS) and Royal University of Phnom Penh (RUPP)	Mr. Muhammad Alif Kaimuddin Sahide (UNHAS) and Mr. Choeun Kimseng (RUPP)
Revise B.Sc. program on social forestry reviewing current program and organizing a consultation	National University of Laos (NUoL)	Mr. Somvang Phimmavong (NUoL)
Design a youth targeted, interactive Massive Online Open Course (MOOC) of 4-6 weeks on social forestry	International Forestry Students' Association (IFSA), RECOFTC and universities	Ms. Shofi Fauziyyah (IFSA)
Organize a youth camp on social forestry for IFSA KUFF club members	Kasetsart University Faculty of Forestry (KUFF), IFSA, RECOFTC	Mr. Surin Onprom (KUFF)
Develop a curriculum on social forestry enterprises at undergraduate level for universities in ASEAN	KUFF, NUOL and University of Forestry and Environmental Science (UFES)	Ms. Khaing Khaing Soe (UFES)
Research collaboration between universities teaching social forestry in ASEAN	Universities in ASEAN	Mr. Choeun Kimseng (RUPP)
Conduct research on the status of social forestry education at different forestry schools in the Philippines	University of the Philippines Los Banos (UPLB)	Ms. Rose Jane J. Peras (UPLB)
Publish a special issue on social forestry in the Philippines on Forest and Society, a journal maintained by UNHAS	UPLB and UNHAS	Mr. Muhammad Alif Kaimuddin Sahide (UNHAS) and Ms. Rose Jane J. Peras (UPLB)
Integrate social forestry-related research publications in university curriculum	Center for International Forestry Research (CIFOR) and universities in ASEAN	Mr. Bimo Dwi Satrio (CIFOR)
Partner with universities or faculty members to conduct research in social forestry and policy network	CIFOR and universities in ASEAN	Mr. Bimo Dwi Satrio (CIFOR)
Partner with universities to provide internships for graduates	UFES, KUFF, Myanmar Environmental Rehabilitation-Conservation Network (MERN)	Mr. Than Soe Oo (MERN)
Create a common space through training and workshops for forestry graduates, students and experts in ASEAN to strengthen their capacity	Asian Institute of Technology (AIT), RECOFTC and other interested institutions	Ms. Megha Bajaj (AIT)
Organize field trips for exchanging experiences between students of social forestry and local communities supported by PTT Reforestation Institute	KUFF and PTT Reforestation Institute (PTT-RI)	Ms. Rachanee Pothitan (KUFF) and Ms. Nachanok Ridmontree (PTT RI)

Source: RECOFTC 2020

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At RECOFTC, we believe in a future where people live equitably and sustainably in and beside healthy, resilient forests. We take a long-term, landscape-based and inclusive approach to supporting local communities to secure their land and resource rights, stop deforestation, find alternative livelihoods and foster gender equity. We are the only non-profit organization of our kind in Asia and the Pacific. We have more than 30 years of experience working with people and forests, and have built trusting relationships with partners at all levels. Our influence and partnerships extend from multilateral institutions to governments, private sector and local communities. Our innovations, knowledge and initiatives enable countries to foster good forest governance, mitigate and adapt to climate change, and achieve the Sustainable Development Goals of the United Nations 2030 Agenda.

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