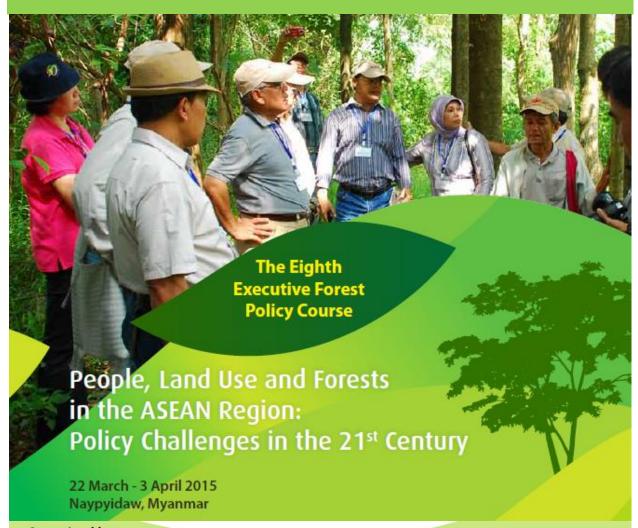
# Course Report, August 2015



# Organized by

Asia-Pacific Forest Policy Think Tank Food and Agriculture Organization of the United Nations (FAO) Forest Department, Ministry of Environmental Conservation and Forestry, Myanmar







### **Partners**























# **8<sup>TH</sup> EXECUTIVE FOREST POLICY COURSE**

**22 March – 3 April 2015** 

Nay Pyi Taw, Myanmar

# PEOPLE, LAND USE AND FORESTS IN THE ASEAN REGION: POLICY CHALLENGES IN THE 21<sup>St</sup> CENTURY

# **COURSE REPORT**



**August 2015** 

# TABLE OF CONTENTS

| 1 | Background   | 3  |
|---|--|----|
|   | <ul> <li>Introduction</li> </ul>   | 3  |
|   | <ul> <li>Objectives of the course</li> </ul>   | 3  |
|   | <ul> <li>Participation</li> </ul>  | 4  |
|   | <ul> <li>Issues addressed</li> </ul>   | 4  |
| 2 | Course programme   | 5  |
|   | Opening session  | 5  |
|   | Overall framework  | 6  |
|   | <ul> <li>Module 1: Societal changes, land use and forestry</li> </ul>  | 6  |
|   | • Module 2: The environmental dimension: Climate change, biodiversity loss and water crisis – managing forests to improve ecosystem services | 7  |
|   | Module 3: Production and trade of wood and other products  | 9  |
|   | <ul> <li>Module 4: The policy process – resolving conflicts in the use of land<br/>and forests</li> </ul>                                    | 11 |
|   | <ul> <li>Module 5: Effective communication for better forestry</li> </ul>  | 13 |
|   | <ul> <li>Module 6: Governance, accountability and transparency in the forest<br/>sector: building responsive institutions</li> </ul>         | 15 |
|   | <ul> <li>Module 7: Rebuilding the forest capital: Restoration and rehabilitation<br/>of degraded forest lands.</li> </ul>                    | 18 |
|   | <ul> <li>Module 8: Preparation of policy briefs</li> </ul>   | 20 |
|   | • Field trip   | 21 |
|   | Closing session  | 22 |
| 3 | Evaluation of the course   | 22 |
| - | General organization   | 23 |
|   | Assessment of the different modules  | 23 |
|   | Specific comments  | 25 |
|   | o Potential impacts  | 26 |
| 4 | Summary and recommendations  | 26 |
|   | ANNEXES  |    |
|   | I. List of participants  | 30 |
|   | II. List of resource persons   | 35 |
|   | III. Programme of the course   | 40 |
|   | IV. Policy briefs  | 47 |

# **BACKGROUND**

### Introduction

As elsewhere in the world forests and forestry in the ASEAN region are confronting multiple challenges in the context of rapid social, economic and environmental changes taking place globally, regionally and nationally. Stakeholders including governments, private sector, local communities and civil society organizations have to quickly adapt to the accelerating pace of change and take advantage of the emerging opportunities and prepare to deal with uncertainties. In a globalized world ecology and economics seldom respect national and sectoral boundaries. To this end, there is a need to understand the changing world and take proactive measures to craft a better future. ASEAN is one of the most dynamic and fast growing regions in the world that has built a strong foundation for economic integration. ASEAN is preparing for the multitude of changes in the context of the establishment of the ASEAN Economic Community.

As competition intensifies to meet the increasing demand for food, fibre, fuel and a wide array of ecological services required by the growing economies, forest policies will have to be continuously reviewed and reformed and forest governance systems improved to fulfil the changing aspirations of people. Building capacity to cope with the rapid changes and to craft a better future assumes considerable importance. Almost all countries have stepped up their efforts to conserve forests and to implement sustainable forest management (SFM). Some countries are on the path of forest transition, investing substantial resources for restoration and rehabilitation of degraded forests. Yet many challenges persist, requiring concerted action at all levels to make forests and forestry play a critical role in building "green economies".

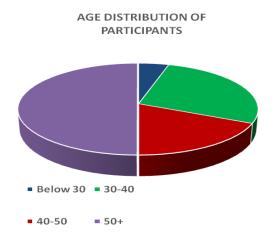
# **Objectives of the course**

Considering the need to strengthen human resource development FAO in partnership with other organizations has been has been conducting policy focused short courses starting from 2008. These courses are geared to address regional, sub-regional and national issues and to provide a coherent framework to improve policy analysis skills. It is in this context that FAO in partnership with various organizations organized the Eighth Executive Forest Policy Course, particularly focusing on the ASEAN countries. Co-hosted by the Forest Department, Ministry of Environmental Conservation and Forestry, Myanmar, the course had the following objectives:

- ❖ Analyze the implications of larger societal changes including globalization and localization and the imperatives of current and emerging issues like climate change and how society is responding to the multiple challenges.
- ❖ Assess the future scenarios for sustainable forest management in the ASEAN region, particularly focusing on their implications on policies, institutions and science and technology giving due attention to the restoration/rehabilitation of degraded forests.
- ❖ Improve the ability to critically analyze policies and programmes impacting forests and to share knowledge and experience.
- ❖ Impart knowledge and skills in the use of various tools for policy analysis helping to augment the capacity of participants to best practices in integrated land use in the pursuit of sustainable forest management;

# **Participation**

In all 24 participants from 12 countries (see Table 1) attended the course (see Annex I for the list of



participants). Although the course was initially targeted on participants from the ASEAN, as in the case of previous courses it evoked interest from participants from outside the region. Also although the course advertised as designed for senior officials, it attracted interest from a much wider group in terms age (see Fig), experience and institutional affiliation. Women accounted for almost 40 percent of the participants. This diversity in fact became an advantage and some of the younger participants got an early exposure to the critical issues in policy formulation and implementation.

**Table 1: Participants in the Eighth Forest Policy Course** 

| Country               | Number of participants |
|-----------------------|------------------------|
| Bangladesh            | 1                      |
| Cambodia <sup>1</sup> | 1                      |
| China                 | 2                      |
| India                 | 1                      |
| Indonesia             | 1                      |
| Laos                  | 3                      |
| Malaysia              | 2                      |
| Myanmar               | 4                      |
| Nepal                 | 1                      |
| Philippines           | 1                      |
| Thailand              | 3                      |
| Vietnam               | 4                      |
| Total                 | 24                     |

While most of the participants belonged to public sector

forestry departments there were also those from civil society organizations, and academic and research institutions. This diversity of experience and background provided a very rich blend enhancing the learning experience.

#### **Issues addressed**

The course was designed to provide a unique learning experience to senior officials dealing with policy analysis, formulation and implementation in the ASEAN countries. Some of the key issues that the course attempted to address include the following:

• The overarching changes that are likely to impact forests and forestry in ASEAN, and how the different scenarios are likely to unfold.

- Ongoing efforts to address environmental challenges, in particular climate change, loss of biodiversity and the water crisis and their implications on forests and forestry.
- Shifts in the demand and supply of wood and wood products and the need to improve governance to combat illegality.

<sup>&</sup>lt;sup>1</sup> Due to a family emergency the Cambodian participant had to return home immediately after the commencement of the course and therefore only 23 participants attended the course full time.

- Forest policy process that accommodates the divergent interest of different stakeholders and the challenges in resolving forest related conflicts.
- Governance challenges in the forest sector, including reinventing public forestry institutions to make them relevant to the changing times.
- Strategies and approaches to make communication more effective to secure the involvement and commitment of all stakeholders in supporting multi-functional forest management;
- Experience as regards the rehabilitation and restoration of degraded forests in the Asia-Pacific and the policy, institutional, financial and technological challenges thereof.

# **COURSE PROGRAMME**

The Eighth Executive Forest Policy Course consisted of eight modules providing an opportunity to learn, discuss and share key issues related to forest policy formulation and implementation in a changing society. Group discussions/ group work formed a key component of the entire course. Although the focus was on the ASEAN countries, the course adopted a broader framework drawing upon forests and forestry beyond the ASEAN. This is particularly so considering the impact of globalization on the ASEAN economies and its consequences on forests and forestry. Details of the modules and the different sessions under each module are outlined below:

### **Opening session**



The course was opened by His Excellency U Win Tun, Union Minister for Environmental Conservation and Forestry, Myanmar and attended by key government officials, FAO Representative to Myanmar and representatives of the course partners. The Minister expressed his appreciation to FAO and the other course partners for choosing Myanmar, in particular Nay Pyi Taw as the venue of the Course. He also stressed the importance of the course, especially in providing a broader perspective of emerging

opportunities and challenges and the opportunity it provides for sharing knowledge and experience of the participants from different countries.

Speakers of the inaugural session appreciated FAO for its leadership in coordinating the Course and Department of Forest of Myanmar for hosting the programme. It was informed that the Executive Forest

Policy Course was designed to improve capacity in forest policy analysis, development and implementation as recommended by Asia-Pacific Forestry Commission in 2007. To date, seven such courses have been organized in different countries involving more than 100 senior officials, decision makers and forest managers from over 25 countries.



#### **Overall framework**

CTS Nair provided an overview of the course and how the different modules/ sessions have been designed. Right at the outset it was emphasized that discussions sharing the diverse expertise and experience of the participants will form the foundation of the course. Soft copies of relevant articles and reports were provided to the participants (see **ANNEX IV**). In addition to the lectures by experts who helped to provide an overview of the issues considerable thrust was given for group discussions, role playing and group work. Throughout the various sessions participants were encouraged to intervene and to raise questions and share their views. The presentations made by various resource persons are available at the APAFRI website and a CD containing soft copies of all presentations has been provided to all the participants.

A brief description of the presentations under different modules and the key issues are outlined below:

# Module 1: Societal changes, land use and forestry

This module focused on the current and emerging changes in forestry in the context of larger societal changes and how they are impacting forestry at the national and regional levels. Drawing upon the findings of the Asia-Pacific Outlook Study completed in 2010 and taking into account the subsequent key developments, this module prepared the base to assess the larger picture of forestry evolving in the region. This consisted of four presentations including group discussions as indicated below:

- Forests and forestry in Myanmar: Meeting the challenges in the 21<sup>st</sup> century Nyi Nyi Kyaw.
- Green economy in ASEAN and its effects on forests Hadi Pasaribu
- Drivers of change and their implications on forests and forestry Patrick Durst
- Societal changes and the future of forests and forestry CTS Nair

Nyi Nyi Kyaw, Director General, Forest Department, Myanmar provided an overview of forests and



forestry management in Myanmar. Forest management policies and strategies in Myanmar have been going through a transformation process to promote private sector investments, community participation and provision of ecological services, in particular biodiversity conservation and watershed protection. The Director General outlined how forestry is adapting to fulfil the broader economic and social objectives.

Hadi Pasaribu, Executive Director, AFoCo Secretariat dealt with the following issues in his presentation:

- Green economy: Initiatives and concept;
- Forest and green economy: ASEAN perspective;

- AFoCo's vision and mission; and
- Options to promote green economy in the ASEAN

In particular Pasaribu underscored the importance of (a) rehabilitating the vast extent of degraded lands as a means of rebuilding the natural capital, (b) fully tapping the potential of non-timber forest products, and (c) promoting the provision of ecological services including through PES systems.



Patrick Durst outlined how forests and forestry are being affected and driven by factors outside the forest sector. It was noted that what happens outside the forest sector will have much more profound impacts on forestry than what is happening within the sector. The key take home messages from his presentation and the group discussion during the session are:

- ☐ Small and big changes will create a very different world in the future;
- ☐ Obviously society's demands on forests are changing continuously;
- ☐ What happens to forests and forestry will be largely decided by what happens outside the sector;
- ☐ Policies, legislation, institutions and technologies will have to help society in adapting to the larger societal changes;

CTS Nair explained that human society is highly heterogeneous and different segments of society value forests differently which make forest policy formulation process complex. In many countries the society is composed of pre-agrarian, agrarian, iindustrial and post-industrial societies. These societies are also evolving from one economic stage to another. Understanding the differences in societies and how they change over time become important to understand how policies need to be crafted to deal with the changing nature of resource use and to address potential conflicts. A "society-centric" rather than a "forest-centric" approach is required to make policies relevant to the larger changes.

These sessions including discussions and group work enabled the participants to understand the larger changes taking place in society and the need for an 'out of box thinking' in developing and implementing land use and forest policies. It was emphasized that socio-economic environment is changing at a fast pace and many of the problems in forestry stem from the inability to proactively deal with such changes.

# Module 2: The environmental dimension: Climate change, biodiversity loss and water crisis – managing forests to improve ecosystem services

In almost all countries environmental concerns are receiving increasing attention, especially in the context of continued loss of biological diversity, climate change on account of global warming, decline in the quantity and quality of water and increasing land degradation. In many countries wood production has been drastically scaled down or even stopped completely and more of the forests have been set aside as protected area. There have been a proliferation of national and international policies and legislation, giving primacy to the provision of forest derived environmental services. This module focused on some of the critical aspects of provision of forest-derived ecological services especially in the formulation and implementation of forest policies and the challenges in establishing trade-offs between the protection and

production objectives. The following presentations provided an overview of forest related environmental issues and their implications on forest policy formulation and implementation.

- 1. Climate change and forests: What has been done and what more needs to be done Jennifer Conje
- 2. Forests and water: Myths and realities- Yurdi Yasmi
- 3. International agreements and national forest policies **Jennifer Conje**
- 4. Market instruments and environmental services : Future of PES CTS Nair
- 5. REDD+ Developing policies and measures Ben Vickers

Jennifer Conje outlined the impact of climate change on forests with a video presentation and then she explained how climate change issues have been mainstreamed in forest policies and what more needs to be done. These were further elaborated drawing upon the US Forest Service roadmap for addressing climate change which has three components – (a) assess (risk/vulnerability, policy, knowledge gaps, and management gaps), (b) engage (education, science – management partnerships, alliances) and (c) manage (adaptation, mitigation, sustainable consumption). At the end of the presentation a group exercise was done to assess how climate change issues have been integrated in the national forest programmes.

Yurdi's presentation started with a group work on forests – water relationship, with each group providing 3 to 4 statements on the participants understanding of the issue. Following this the presentation outlined the popular narratives and the scientific basis of these narratives. It was noted that there is a disconnect between the popular narrative and the science of forest-water relationship and many of the popular narratives have become myths. The presentation and discussions highlighted the need for making forest policies more science based avoiding generalisations and ensuring that location/ site-specific factors are taken into account in developing policies and plans.

In another presentation Jennifer Conje outlined the changes taking place in the international environmental policy landscape and how it is becoming fragmented, especially in the context of multiple global, regional and bilateral initiatives. It was noted that increasingly policies are being shaped/influenced by civil society organizations and private sector and not necessarily by governments. Forests and forestry are discussed in multiple fora and the increasing obligations are straining the national implementation capacities. Apart from mainstream environmental issues – climate change, biodiversity conservation, land degradation and desertification, etc. – forestry also figures in several other areas including food security, trade, human rights/ rights of indigenous people and so on making the forest policy landscape extremely complex.

Focusing on the issue of valuing ecological services and developing systems for payment for ecological services CTS Nair outlined the current state of knowledge and the challenges in pursuing a market based approach to address the various environmental problems. It was pointed out that payment for environmental services are largely policy driven and are vulnerable to policy changes. The volatility of carbon prices also suggests the limitations of a market dependent approach to the provision of ecological services. It was noted that as such the scope for enhancing resources for SFM through PES is very limited. Even in many industrial and post-industrial societies PES markets still remain undeveloped. In the afternoon, Ben Vickers made a detailed presentation on REDD+ mechanisms. The underlying principle is that developing countries are to receive performance-based incentives (payments) for reducing emissions of greenhouse gases (CO<sub>2</sub>) from forest lands and industrialised countries have to provide adequate and predictable finance to support the payments. Countries, not projects, voluntarily

report to the UNFCCC, and national bodies receive the incentives. However, so far there is no dedicated fund allocated under the convention. It is expected that REDD + will be included in the Paris agreement and be a part of green climate fund portfolio.

REDD+ has 4 Elements namely i) National Strategy or Action Plan, ii) National Forest Monitoring System (NFMS), iii) Safeguards Information System (SIS) and iv) Forest Reference (Emission) Level (FREL/FRL). It was explained that REDD+ Readiness offers an opportunity for countries to develop objective, achievable, result-oriented strategies for investment in forest and land use sectors. REDD+ results-based payments will only fund those parts of the strategies that demonstrably result in emission reductions. Ben Vickers shared the findings of a 2013/14 study conducted by the UN-REDD Programme as regards country REDD+ readiness in selected Asia-Pacific countries.

### Module 3: Production and trade of wood and other products

Historically wood production has been the main focus of forest management in most of the countries and ASEAN has been an important source of industrial wood supplies. However increasingly forest policies are giving greater thrust to the provision of ecological services and wood production has been scaled down by way of logging bans and setting aside more forests as protected areas. At the same time there has been an expansion of processing, especially pulp and paper and furniture. The module aimed to focus on the shifting patterns of production and trade of wood and wood products and how this is impacting forest policies. The key topics addressed under the module are:

- 1. Production and trade of wood and wood products in the ASEAN Dennis Neilson
- 2. Changing pattern of forest products trade ASEAN and global trends Tetra Yanuariadi
- 3. Forest law enforcement, governance and trade: Recent developments in the ASEAN Tim Dawson
- 4. Forest certification and VPA: Where are we now and where are we heading to? Bruno Cammaert
- 5. Technologies for tracking illegal timber- Kent Elliot

Mr. Dennis Neilson outlined the broad trends in the production and trade of wood and wood products in the ASEAN. South East Asia (SEA) has 19% of global tropical forests and the largest supplier of tropical forest products to global markets. For some of the key countries oil palm and rubber have already become more important than forest products in terms of export income. China's imports of lumber from Southeast Asia are primarily rubber wood and other plantation species. Up to 80% of Malaysian furniture is now rubber wood.



Major issues in wood based industries and business are corruption, shifting policies, land claims by indigenous people, limited incentives, local government interference and lack of credit. Policies of most of the ASEAN countries in encouraging and nurturing wood processing and exports are less favourable than South American counties such as Brazil and Chile. Furthermore, SEA trade figures suffer from credibility problems. In many cases the quantity reported to have been imported is far more than what has been recorded as exported by the

exporting countries. Obviously illegality is a major problem that undermines genuine business initiatives.

Tetra Yanuariadi provided a clear picture of the trends in the production and trade of tropical timber and timber products focusing on the role of tropical forests in the global context, trends in production and trade, implications of log export bans, market access for tropical timber and competitiveness of tropical timber. Trends in timber production and trade indicate that availability and quality of large-diameter tropical hardwood logs of primary wood species are declining. Major trade flows for primary tropical timber products have been shifting from traditional markets like the EU, USA and Japan to emerging and developing markets like China, India and Vietnam. Exports of SPWP comprising wooden furniture and parts, builders' woodwork, other secondary processed products and mouldings have surpassed those of primary tropical timber products.



Tetra Yanuariadi also outlined the many challenges in tropical timber trade. Impediments to market access encompass both tariff and non-tariff measures. Inconsistent and frequent changes in policies in producing countries create uncertainty and loss of confidence among the buyers. List of requirements in tropical timber trade are long and expanding which surely will have a bearing on the international trade in tropical timber.

The presentation on FLEGT and recent developments in the ASEAN by Tim Dawson outlined the evolution of FLEGT and VPA and the ASEAN cooperation in the forest sector. Providing the details of the seven elements in the FLEGT action plan, Tim Dawson explained how the different components jointly contribute to improved forest governance taking care of both the demand and supply side of wood and wood products. Legality is being defined in a broader perspective and the VPAs are seen as an entry point to encourage sustainable forest management.

EU has been trying to implement FLEGT Voluntary Partnership Agreements since some time in Asia. However, implementation of FLEGT & VPA initiatives is not even. No country has got FLEGT licences yet. Different countries are in different stages. For example, China and India are in FLEGT dialogue stage where as Indonesia is in the system development stage. Formal negotiations is under way in Vietnam and Malaysia where as in Philippines it Introduction to VAPs stage. EFGT VAP process is lengthy but necessary which also goes beyond addressing illegal logging and contribute to Forest, Law, Governance, Trade issues. Tim Dawson concluded his presentation listing the following for discussion:

- ❖ Legal timber is becoming a standard requirement in many large markets What challenges do small-scale operators still face in accessing and supplying legal timber and how to address these?
- ❖ VPAs are providing space for national discussions on governance issues, and giving civil society a voice in the process What forest governance issues would benefit from regional multistakeholder discussions and how could this be realised?
- ❖ Concerns about forest loss increasingly focus on conversion to other uses What can we learn/take from FLEGT to help address wider land-use governance issues?

Kent Elliott highlighted the ongoing efforts to combat illegal logging. It was noted that 15 to 30 percent of the volume of globally traded timber valued at USD 30 to USD 100 billion is illegally obtained. In

many tropical timber producing countries the volume of illegally procured timber could be as much as 50 to 90 percent of the total production. Illegality need to be distinguished at two levels, namely in the forests when logging is done illegally and the tracking the movement of such illegally obtained timber. Kent Elliott gave an overview of the range of technologies aimed to distinguish illegal timber from legal ones. Available technologies include:

- Automated wood identification;
- Timber tagging;
- DNA finger printing;
- Forest monitoring through remote sensing and through participatory approaches.

Encouraging existing institutions to deploy new technologies, especially integrating them into existing systems remains a major challenge.

# Module 4: The policy process – resolving conflicts in the use of land and forests

This module addressed a number of critical issues involved in policy formulation, especially focusing on how key initiatives have been implemented as in the case of Korea. Important presentations included:

- 1. Policy process: Theory and practice **Jennifer Conje**
- 2. Restoration of degraded forests through social movements: The Korean experience of accomplishing forest transition **Don Koo Lee**
- 3. Managing forest conflicts- Yurdi Yasmi
- 4. Improved coordination and resolution of land use conflicts: The one-map initiative in Indonesia **Kent Elliott**

Jennifer Conje explained the processes of policy making which goes through four stages—policy analysis, policy development, policy implementation and policy monitoring and evaluation. Additionally, there are four steps in policy development: understanding the policy issue or problem, exploring possible options for resolving the problem, weighing up the costs and benefits of each; and then, making a rational



choice about the best option. However, it was noted that in reality policy-making is often non-linear. It is incremental and complex and the political and bureaucratic context have an overwhelming influence on what kind of policies are formulated. Identification of the problems seems to be the core of the process and in most cases improper problem identification remains the root cause of most policy failures. Firm political commitment, transparency of decision making process, multi-stakeholder engagement, recognition of customary laws and traditional rights and knowledge are key factors contributing to effective policy formulation and implementation.

Dr Don Koo Lee shared the inspiring experience of Korea in implementing forest rehabilitation and restoration and reversing deforestation and degradation and thus accomplishing forest transition. At the end of the Korean War, the forests in the country were in a highly depleted and degraded state. Increasing

demand for woodfuel further accentuated the problem. In response to this Korea initiated a massive programme mobilising the public to undertake a forest restoration/ rehabilitation programme. Some 12 billion trees (or an area of 2.1 million ha) have been planted and nurtured increasing the forest growing stock from 6 m³/ha in 1953 to 126 m³/ha in 2010. The main drivers that contributed to the success are:

- 1. Governance, in particular the stringent implementation of forest law and the establishment of the Korean Forest Service in 1967;
- 2. People's willingness, enabling all the Koreans to participate in the rehabilitation efforts;
- 3. Strong leadership, with the President making reforestation as a key national mission;
- 4. Saemoul spirit, based on diligence, cooperation and self-help;
- 5. Economic growth.



Don Koo Lee also outlined the on-going efforts to implement the green growth strategy and the role of forests in such a strategy. As an industrial and post- industrial society much of the thrust is to use forests for their environmental services, in particular amenity values. The Fifth Forest National Plan (2008-2017) aims to establish the foundation for green growth by increasing forest resources, contributing to green welfare by creating green spaces and develop green leadership to meet international needs. A whole array of activities has been envisaged to strengthen the link between forests and people. AFOCo –

Asean Forest Cooperation Organization (AFoCo) spearheaded by Korea has imbibed the same philosophy (see Figure above).

The Korean experience suggests that forestry policies should be regularly reoriented and be consistent



changing with the societal needs and priorities. Forests have been associated every stage of life (from cradle to grave). Now forests have been managed as health assets (healing recreation villages, etc.) where 77 percent of people undergoing longterm healthcare prefer to in the healing forests. Don Koo Lee

also highlighted that the shift has strong economic justification. An investment of USD 2.00 billion per year is generating economic value estimated to be about USD 100 billion.

The presentation on forest conflicts by Yurdi Yasmi focused on the following:

• Causes of conflicts;

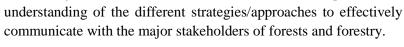
- Severity of forest related conflicts;
- The different phases of conflicts; and
- Policy responses

Obviously conflicts stem from the differences in the perception of diverse stakeholders as most have their own views as to how forests should be used/ managed. In the absence of consensus, some of the stakeholders feel that their interests are not met. Forest related conflicts are particularly serious in Asia, where about 75 percent of forests are reported to be affected by violent conflicts. Yurdi provided an overview of the different phases of conflicts and underscored the need to take de-escalation steps in the early stages itself. He also outlined the various responses to address conflicts of which tenure reform, devolution and measures to involve local communities in forest management as important.

Kent Elliott of US Forest Service shared the experience of the One-Map-Initiative in Indonesia as one of the tools to improve coordination and resolution of land use conflicts. Preparation of land use map by different agencies based on their own needs without considering the interest and mandate of others has been creating difficulty in planning and implementation of various development programmes. Also the One-Map-Initiative creates opportunity for different stakeholders to sit together and discuss and decide which area would be allocated for which purpose (conservation, concession, plantation, miming, infrastructure, conversion to framing and settlement etc.). This helps to resolve differences before starting activities on the ground. The comprehensive map can be a good tool for planners and policy makers to make decisions and allocate resources ensuring that what they propose is not in conflict with the interests of other users/ stakeholders. Obviously this requires strong horizontal and vertical integration which is sometimes difficult or nearly impossible. The Indonesian experience suggests that the task is neither quick nor easy due to its complex process and need to involve many players with diverse objectives and priorities.

# **Module 5: Effective communication for better forestry**

Effective communication plays a critical role in the development and implementation of forest policies; however in the top-down approach that prevailed for a long time, communication remained a neglected aspect. Increasing demand on forests for a wide array of goods and services in the context of diverse perceptions and needs of people warrant significant improvements in the communication skills of policy makers and planners. Establishment of trade-offs between competing demands and resolving conflicts would require excellent communication/ negotiation skills. This module aimed to provide an





Caroline Liou, Manager, Strategic Communication, RECOFTC provided a comprehensive account of the key issues involved in effective communication, through three interconnected presentations outlining (a) the changing concepts and approaches to communication and their implications on forestry, (b) the future of forestry communication in a networked world, and (c) making the messages in policy briefs stick. She also made the session more informal, interactive and informative through role playing, group works and discussion.



A game on information flow conducted by Yurdi helped the participants to understand how information gets distorted from one recipient to another along the communication chain. Longer the communication chain, the more the chances of misrepresentation of information. Prior to the preparation of any communication materials, identification and development of a clear communication objective/s is necessary. Similarly, a SMART (Specific, Measurable, Achievable, Realistic and Time-bound) communication objective is the foundation of any effective communication

planning.

Research, setting of objectives, defining audiences, developing key messages/call to action, budget and timing, tools, pre-testing, evaluation are the main eight elements of a good communication strategy. Yet pre-testing and evaluation have been rarely carried out in most of the communication planning process.

Key ingredients for an effective communication are messages, audience, medium, and time. Similarly, different kinds of approaches can be effective in achieving different objectives. For example awareness on most issues can be enhanced through one way communication like radio/TV programmes. However, if the objective is to mobilise participation/ empowerment of people, a two-way approach is necessary, enabling interaction and dialogue. Long reports loaded with information may not be effective in attracting attention and mobilising action on the ground, and what is important is to provide messages that will stick and catalyse action. It is important to know that people remember 10 percent what they hear, 15 percent of what they read and 80 percent of what they see.

The session also helped participants to prepare policy briefs based on a clear understanding of its objective, target audience, contents and structure. There is always limited time to convey policy messages to policy makers. A policy brief can be effective if its objective is clear and the messages are short, simple and straight forward. The elements of 'stickiness' – which includes social currency, triggers, emotion, public, practical value, stories - should be identified and used in the preparation of communication materials including policy briefs.

The session also examined the role of social media, a category of on-line media where people are talking, participating, sharing, networking, and bookmarking. Around the globe, social media tools have helped to fuel social movements. Social media has been shown to strengthen social actors' ability to challenge and change power relations in society, providing platforms for debate, reflection, influencing and mobilizing people.

Forestry communication in a networked world would depend on the effective use of social media such as face book, google+, YouTube, twitter, global forest watch, etc. Social media will also influence forestry policy making and forestry communication as it empowers people by creating opportunities to voice their opinion quickly, widely and openly. Social media has certain characteristics that other media do not.

However, social media tools are not a substitute for real-world action, but a way to supplement and strengthen it. Social media has the potential to improve forestry communications in Asia, especially in areas like real-time forest monitoring, connecting smallholders to market prices; and mobilising people for forestry activities.

# Module 6: Governance, accountability and transparency in the forest sector: building responsive institutions:

As resource use conflicts intensify and informal and illegal transactions increase governance and accountability are severely compromised. Forest sector in almost all countries are prone to problems stemming from poor governance and accountability. However the public is demanding better accountability and transparency and it is imperative that these are improved. The module focused on the challenges and ongoing national and international efforts to improve forest governance through the following sessions:

1. Governance challenges in the forest sector -

**CTS Nair** 

**2.** Future of public forestry institutions –

Tony La Viña

3. SAARC area cross-border timber trade, regional mechanisms and trade links with Myanmar: Some results – Sepul K Barua and Dhananjay Kumar

4. Leadership in public institutions - Tony La Viña

CTS Nair's presentation provided an overview of governance challenges focusing on the definition of governance, examples of good and bad governance, principles and pillars of good governance, measurement of governance and governance improvement. Bad governance in forestry has contributed to illegal logging, land encroachment, illegal wildlife trade, wildland arson, tax evasion, corruption, money laundering, inefficient management of forests and so on. Often rules and regulations intended to improve

governance have also created opportunities for corruption accentuating governance problems.

The key messages from his presentation are:

- ☐ Governance challenges are expected to become more severe in the coming decades as pressure on natural resources increase.
- Governance is becoming more inclusive: Communities, private sector including corporate players need to have a greater say in the formulation of policies.
- ☐ There is a need to redefine and improve the regulatory framework to provide a level playing field and develop effective mechanisms to arbitrate differences/ conflicts.
- ☐ The system of checks and balances needs strengthening; and
- ☐ Improve the access to information and openness (For example citizen's right to information, E. Governance)

Tony La Viña provided an in-depth assessment of the challenges confronting public forestry institutions focusing on how they have evolved, the challenges that are compelling them to change, the inevitability

of reinventing them, and the issues that need to be considered in change management. There are strong compulsions on the traditional "command-and-control organizations" to shift to "coordinate, communicate and connect" modes of operation. Many new players are entering the forest space, challenging the role of traditional organizations, sometimes even questioning their very existence itself. There have been waves of change that enabled new stakeholders to enter the forestry space forcing forestry institutions to change. Considering the rapid pace of changes, the forestry agencies have no option other than reinventing themselves. It is imperative to develop as convenor/ facilitator organizations to shepherd all inputs involving all stakeholders and to be in the forefront of change.

Forest problems are linked to many national, regional and global issues. In most of the developing countries the current structure of the forestry institutions are not appropriate to meet the current and future challenges. There is an exponential change in knowledge, science and technology, both in hard sciences like biology and in such areas as communications. Similarly new issues in environment (biodiversity and climate change), economic trends (trade), and governance (transparency and accountability), social issues (gender, diversity, equity, multi-disciplinary etc.) are emerging. The forestry institutions need to imbibe and mainstream these changes to stay relevant and effective.

Remaining relevant will require a multidisciplinary approach, non-hierarchal management structures, inclusive, transparent and accountable governance mechanisms, clear recognition of the rights of communities and indigenous people and competent leadership to steer the change process. The presentation outlined the following to pursue change in a systematic manner:

- Change management strategy must be deliberately adopted;
- Vision and mission need to be redefined;
- Policy and legal reforms are unavoidable;
- Organizational analysis needs to be undertaken through a participatory process;
- Structures need to be reconsidered, again through a participatory process; and
- Change should be brought about adopting a phased approach.

Tony La Viña also provided an illuminative presentation on leadership in public forestry institutions. Most problems are "wicked problems" which tend to be systemic, interrelated encompassing multiple dimensions and are of real-time nature offering little scope for trial and error. What is required is adaptive leadership, able to have a holistic understanding of the problems, capable of intervening simultaneously on many fronts and able to develop long term capacity. Some of the qualities of successful leadership are:

- Ability to have a "balcony" perspective, distancing from the fray and observing how the actions are impacting the whole system;
- Ethical thinking;
- Focus, rigour and delivery;
- Learning ability; and
- Ability to build consensus.

A leader need to have multiple capabilities and should be able to function as (a) servant, (b) enabler and (c) artist as indicated in table 2 below:

| Table 2: Multiple competence of leaders                              |  |   |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|
| Qualities  | Leader as servant  | Leader as enabler   | Leader as artist   |  |  |  |  |  |  |
| Anchored flexibility   | Politically savvy but grounded in integrity, honesty and service | Enables teambuilding, motivating, communicating and facilitating for bureaucratic reform  | Humility and appreciation for teamwork; Open to new ways of thinking   |  |  |  |  |  |  |
| Critical thinking and action   | Change management  | Skilled in systemic<br>analysis and strategic<br>thinking; Adept in data<br>interpretation for decision-<br>making; Skilled in<br>organizational, financial<br>and resource management;<br>Manages change process | Multi-disciplinary orientation and perspective; Reform- oriented; Appreciation of the need for diagnostic knowledge and skills to inform and enable action |  |  |  |  |  |  |
| Calibrated provocation   | Conflict management and resolution; Issue management             | Resolves and manages conflicts  | Maintains integrity of vision despite realities  |  |  |  |  |  |  |
| Commitment to social justice and humanization of social institutions | Knowledge of ethics,<br>moral reasoning process                  | Ability to discern and reflect  | Applies rigor and discipline in working for public good  |  |  |  |  |  |  |
| Inclusive/ participative decisiveness                                | Sense of initiative and responsibility                           | Demands excellence and<br>higher levels of<br>expectations and<br>performance   | Proactive  |  |  |  |  |  |  |

Sepul Barua and Dhanajaya Kumar presented the initial findings of their study on SAARC area cross-border timber trade and trade linkages with Myanmar. The study was undertaken with the objective of assessing (a) wood products flow, timber trade and forestry issues in the SAARC region and (b) SAARC region's timber trade links with Myanmar.

India is by far the biggest timber importer and on the whole SAARC countries have huge and rapidly growing trade deficit with Myanmar. Industrial roundwood was the key product imported from Myanmar. SAARC countries have provisions to establish chain of custody and also law to counter illegal harvesting, transportation and trade. Exports of logs have been banned in all the countries and, except Myanmar, all countries are net importers of timber. Certification is not being considered seriously since barring Myanmar no other country is exporting a sizeable quantity of timber and timber products. None of the forest policies in SAARC countries are addressing illegal cross-country timber trade, however, the custom acts have provisions for border checks, mostly focused on revenue collection. Open and porous

land border along India with most countries is a major cause for illegal cross-country trade and harvesting.

All SAARC nations are signatories of SAFTA Agreement and most timber products are included in it. However, so far its impact on boosting timber products trade in the region has been limited. Indo -ASEAN Free Trade Area Agreement includes most timber products which help to boost India's roundwood and sawn-timber import from ASEAN countries, though it could possibly hurt India's domestic paper industry. So far it is not clear what will be the impacts of Myanmar log export ban on the SAARC region. There are various options, including sourcing timber from other countries or shifting wood processing units to Myanmar. It is also unclear whether this could increase illegal timber trade.

### Module 7: Rebuilding the forest capital: Restoration and rehabilitation of degraded forest lands.

This module, spread over two days, focused on many of the key issues involved in restoration and rehabilitation of the vast tracts of forest lands in the ASEAN and other countries. The following presentations provided a good overview of the issues and facilitated in-depth discussion:

- 1. Restoration and rehabilitation of degraded lands: An overview of the global and ASEAN situation-David Lamb.
- 2. Rehabilitation efforts in the Asia-Pacific: Lessons from experience hitherto Unna Chokkalingam
- 3. The landscape approach to rehabilitation of degraded forests -
- **4.** Ecosystem approach to forest rehabilitation: Theory and practice –
- 5. Financing forest rehabilitation-
- 6. Policy and institutional issues in ecosystem rehabilitation-
- 7. Science and technology of forest rehabilitation:

**David Lamb** 

**David Lamb** 

**CTS Nair** 

**Unna Chokkalingam** 

**CTS Nair** 

Rehabilitation broadly encompasses all types of afforestation, reforestation, plantations, enrichment planting, assisted natural regeneration, agroforestry and forest landscape restoration. Forest rehabilitation

# Box 1: Key messages on rehabilitation (From David Lamb's presentation)

- Reforestation is a relatively recent land use activity.
- In future:
  - more emphasis on reforestation ecosystem services and not just timber products
  - Greater role for smallholders
- This may need new forms of reforestation.
- Opportunities for reforestation will vary:
  - Some places more difficult
  - Other places more attractive
- Reforestation is not always beneficial can sometimes have costs.

in the Asia - Pacific is primarily in response to deforestation & degradation of resources, timber shortages, environmental problems, local community needs, and increasingly for climate change mitigation and adaptation.

Large-scale reforestation began in the early 20<sup>th</sup> century, mainly to increase the supply of timber and improve employment in rural areas. However. currently reforestation and restoration objectives have changed with provision environmental services gaining importance (see Box 1). There is increased interest amongst smallholders for multi-species plantings and increasing interest in

rehabilitation for ecosystem services as well as for timber production. The countries (China, India, Korea, Vietnam, Brazil etc) implementing large scale rehabilitation/reforestation initiatives have been giving more emphasis to ecosystem services. Reforestation/restoration has also been promoted by international agencies and organisations to pursue global environmental goals such as reduction of climate change impacts, biodiversity conservation and combating desertification.

Importance of landscape based approach has been growing in the rehabilitation and restoration of degraded forest lands. It has been generally accepted that landscape based approach provides better opportunity to manage trade – offs, especially to optimise environmental and economic benefits from restoration activities.

Despite the need to rehabilitate large areas, multiple challenges exist on the policy, finance, knowledge and technology related fronts. There are also risks in undertaking large-scale reforestation and restoration due to chances of land grabbing by private companies or elites, conversion of natural landscapes into exotic monoculture plantation (*Pinus*, *Eucalyptus*, *Acacia*, *Poplar*, *Tectona etc*) etc. Right policy environment such as strong political will and leadership, clear supportive policies & legal framework, stable policy environment, clear tenure rights & other critical incentives, adaptive to emerging lessons, effective implementation, effective enforcement are necessary for the success of rehabilitation of degraded forest lands. This was brought out very clearly from the Korean experience of forest rehabilitation as highlighted in the presentation by Don Koo Lee.

Resource mobilization remains a major issue for most of rehabilitation programmes. So far, most of the resources for forest rehabilitation/ restoration programs have been coming directly or indirectly from the governments or bilateral and multilateral agencies. However, sustainable flow of public funding in rehabilitation is always uncertain. Realising the limitations of annual budgetary support many governments have established dedicated funds to support rehabilitation and conservation efforts. Increasingly in recent years private sector is playing an important role in rehabilitation/ restoration of degraded forests. However, private sector investment is largely focused on wood production and there are very few instances of private investment for multipurpose rehabilitation. Climate change and PES-related opportunities and requirements are rising. But resource mobilisation through PES will continue to face many challenges as markets for environmental services still remains undeveloped and many conceptual and practical problems remain unresolved.

Based on the work done during the last many decades, there is a fairly good understanding of technical aspects of rehabilitation. However, knowledge about restoration to multifunctional forests and farm lands (for example home gardens) is still very limited. The silvicultural systems adopted hitherto may not be suitable for future needs because the current plantation model is good for producing timber on an industrial scale and hence may not be appropriate for reforestation by small farmers and for providing ecosystem services (e.g. erosion control, watershed protection). Furthermore, the social science dimension, critical in the adoption and application of silvicultural knowledge is largely missing.

Many changes have been occurring in forest restoration. In the future restoration activities will be shifted from site based to landscape based approach, priorities will be more on ecosystem services than timber production; and role of small holders and communities will be more important than government and private sector. Thus policy, institutional and financial instruments and technologies and science should be prepared to address these changing priorities and approaches. Most importantly, forest managers should be able to convince policy makers and communicate effectively with wider stakeholders about the needs and importance of degraded forest land restoration.

### **Module 8: Preparation of policy briefs**

In almost all countries policy makers are confronting the problem of taking decisions on complex issues and will have digest a wide array of information from diverse sources within a very short time. Often there is an overload of information as also misinformation by vested interests who would like decisions that safeguard their interests. It is in this context that senior officials have to master the technique of drafting clear, concise, short, factually accurate policy briefs that help policy makers to take timely decisions on critical issues. This module was designed to enhance the capacity of the participants to draft policy briefs on topical forestry issues.

On the first day of the course the participants were briefed about the importance of drafting policy briefs,

# **BOX 2:** Steps involved in drafting policy briefs

- Identification of topic on which the policy brief has to be prepared.
- Listing of critical decision issues: Generally policy briefs address issues on which decisions have to be taken or views/ opinions are to be formulated.
- Assemble and analyse available information.
- Identify the various options and their implications on society and the different groups.
- Short list implementable options
- Provide recommendations
- 1. Sustainable management of peat lands;
- 2. Improving the livelihood of local communities living in and near forest areas;
- 3. Promotion of family forestry: Reducing poverty through locally managed forests;
- 4. Making forest rehabilitation work for the people; and
- 5. Community based forest fire management

The different groups adopted a step-by-step approach in drafting the policy briefs and were regularly guided in the process. On the last day of the Course the participants presented the policy briefs and the

various groups were briefed about the overall quality of the policy briefs. The final drafts of the policy briefs are attached as ANNEX V. The policy brief preparation process participants a good opportunity to think critically about the issues that are important, write succinctly communicate effectively. The selection of the policy brief topics indicates that sustainable forest management will be difficult to achieve without active participation of local communities. On



the whole this exercise provided a good understanding of how policy briefs need to be drafted and many considered this as one of the most useful components of the policy course.

the process to be adopted (see Box 2) and were provided with an indicative structure of policy brief. The participants were divided into 5 groups and each group was requested to list three possible topics. These were discussed and finally each group selected one topic for preparation of policy briefs. The following are the topics on which the participants prepared the policy briefs.

# Field trips

The Myanmar Forest Department organised two field trips on 26 March and 29 March to provide an idea of the state of forests and forestry in Myanmar with the first one to the Yedashe Township, Toungoo District and the second to the wood processing industries near Nay Pyi Taw. During the first field trip the participants visited township forest nursery, teak plantations (under the Forest Department as also by private sector, which is becoming an important player in the plantation sector), teak seed production area and the Phokyar Elephant Camp. The visit provided a glimpse of forestry activities in Myanmar.



Some of the key observations can be summarized as below:

- Forest nurseries, although small, are well managed with several useful plants. Nurseries are mainly to
  provide seedlings to local people free of cost. Currently forest department is not maintaining large
  nurseries, since the government has been leasing out degraded forest lands to private sector.
- The Yedashe Township area was a well vegetated area with good teak forests. Now the area is heavily degraded and encroached by people. It was informed that some forty thousand acres of forest land is under encroachment by local people.
- Needs of the local people have been considered by distributing the products from the early thinnings of teak plantations free of cost.
- Teak Seed Production Area is being maintained well clearly marking the plus trees. Plus trees were also demarcated with different colour to be used for research purpose. It is important to note that local people are allowed to collect seeds from the orchard which they sell to the forest department.
- The policy of leasing degraded forest land for private sector investment in teak plantations is a significant development. However there is a need to consider the long term economic viability of short rotation plantations especially if teak is to be sold in global markets in competition with emerging producers (especially Latin America).
- Social safeguards in forestry management activities such as free distribution of seedlings, thinning
  products, collection and purchasing teak seeds from local people, provision of local employment in
  private plantation areas, etc. are laudable.
- Shifting the use of elephants from timber extraction to ecotourism activities is an impressive initiative. Chances of Pho Kyar Elephant Eco-tourism Camp becoming a popular ecotourism



- destination are good considering its scenic value, long and interesting history and nearness to national capital.
- Rehabilitation of forest encroachers through community forestry scheme seems an interesting initiative. Each family is allowed to farm 3-5 acres of forest land and they are allowed to use the area for agricultural crops on the condition of keeping a minimum 125 forest trees per acre.

On 29 March the participants visited Shew Tha Pyay Co. Ltd and the Pyinmana Wood Carving Centre in Naypyitaw. This visit gave them an opportunity to know status of wood processing industry in Myanmar. During the interaction with the general manager of the company, participants obtained an idea about the source and types of wood used, environmental and social safeguards such as labour welfare, health and safety, pollution etc, technology and equipment used, types of production and annual production, marketing issues, profitability and future plans, etc. The unit visited is a family enterprise producing furniture, door panels, etc. almost entirely for local use, mainly in schools and government offices. The participants were informed that most of the wood processing units are shifting to less known species in view of dwindling supply and increasing cost of teak.

Recent ban on the export of round wood/unprocessed wood and booming construction activities can create significant opportunities to wood processing business. This could attract foreign investments in wood processing business in Myanmar. However, it was pointed out that there is a need to make a systematic assessment of the net impact of log export bans drawing upon the experience of such bans in other countries. There are instances were export bans have not always led to positive impacts.

The visit to Pyinmana Wood Carving Centre indicated the potential to use local skills in building vibrant small scale enterprises. Here again the underlying issue will be improvements in the policy, legal and institutional environment providing an enabling environment for the development of such enterprises.

### **Closing session**



extending all the help to make the course a very successful event.

The closing session was held on 2 April during which Nyi Nyi Kyaw, Director General, Forest Department awarded certificates to the participants. In his closing address Nyi Nyi Kyaw thanked FAO and the co-organizers for organizing the policy course Myanmar and congratulated participants for successfully completing the course. On behalf of the course organizers Yurdi Yasmi, CTS Nair and Sim Heok Choh thanked Myanmar for

### **EVALUATION OF THE COURSE**

At the conclusion of the course, a questionnaire was distributed to all the participants (questionnaire attached as **Annex VII**) seeking their feedback on the course. In addition to requesting the participants to

grade the different components of the course (from very good to very poor), they were requested to give comments on what they found most useful, what parts of the course they found least useful and suggestions to improve the course in future. Key findings of the assessment made by the course participants are summarised below:

# **General organization**

Participants evaluated the overall organization of the course based on the following criteria:

- 1. Information received on the course;
- 2. Information on general arrangements;
- 3. Accommodation arrangements;
- 4. Meals, breaks and general comfort provided;
- 5. Venue arrangements; and
- 6. Opportunities for interacting with other participants.

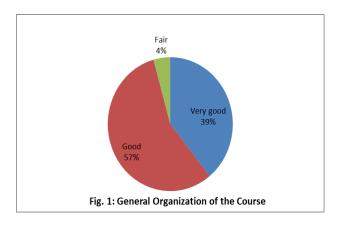
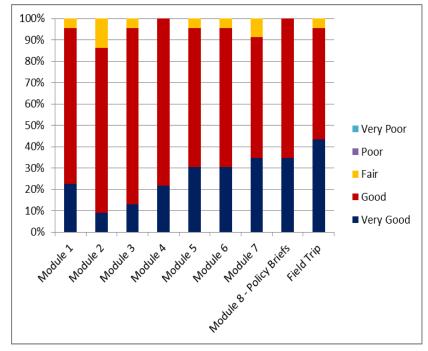


Fig 1 indicates the assessment of the participants as regards the overall organization of the course. It is to be noted that 96 percent of the participants rated the overall arrangements as very good (39 percent) or good (57 percent). No participant has evaluated any component of the arrangements as poor or very poor.

# **Assessment of the different modules**

| Table 3. Assessment of different modules |  |  |      |      |      |              |       |  |
|--|--|--|------|------|------|--------------|-------|--|
|  |  | Number of participants evaluating the module as: |      |      |      |              |       |  |
| S.No                                     | Module   | Very<br>good                                     | Good | Fair | Poor | Very<br>poor | Total |  |
| 1  | Societal changes, land use and forestry  | 5  | 16   | 1    | 0    | 0            | 22    |  |
| 2  | The environmental dimension: Climate change, biodiversity loss and water crisis                      | 2  | 17   | 3    | 0    | 0            | 22    |  |
| 3  | The future of wood production, processing and trade  | 3  | 19   | 1    | 0    | 0            | 23    |  |
| 4  | The policy process   | 5  | 18   | 0    | 0    | 0            | 23    |  |
| 5  | Effective communication for better forestry  | 7  | 15   | 1    | 0    | 0            | 23    |  |
| 6  | Governance, accountability and transparency in the forest sector – Building responsive institutions. | 7  | 15   | 1    | 0    | 0            | 23    |  |
| 7  | Rebuilding the forest capital: Restoration and rehabilitation of degraded forest lands               | 8  | 13   | 2    | 0    | 0            | 23    |  |
| 8  | Drafting policy briefs   | 8  | 15   | 0    | 0    | 0            | 23    |  |
| 9  | Field trip   | 10   | 12   | 1    | 0    | 0            | 23    |  |

Table 3 above gives an indication that overall the participants were highly satisfied with the different modules offered during the course. No one has assigned an overall grade of poor or very poor to any of

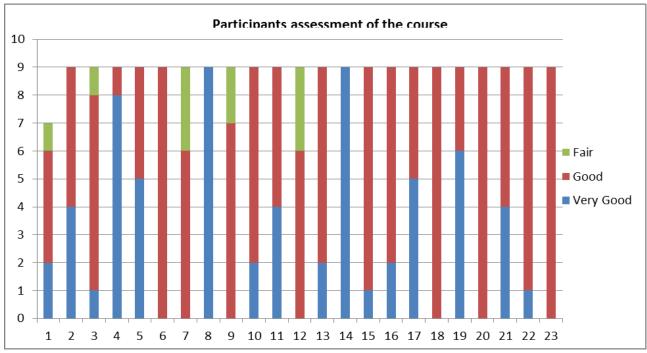


the modules. More than 82 percent of the participants have evaluated all the modules as very good or good. Among the different modules the policy process (Item 4) and drafting policy briefs (Item 8) seem to be the most liked by participants 100 percent of with participants judging them as very good. Governance, good or accountability and transparency and effective communications for better forestry are another two modules receiving high rating with 95 percent of participants considering them as very good or good. Also the

participants expressed a high level of satisfaction as regards the field trip.

# Assessment of different components of the course by participants

Putting together the grades that each of the 23 participants have assigned to the different components of the course provides an overall picture of how the course has been perceived (see Figure below). Some of the conclusions that can be drawn from this are:



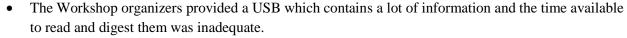
- Eighteen participants (or 78 percent of the participants) rated all elements of the course as very good or good;
- Of the 23 participants five rated some of the modules as fair.
- Two of the participants rated all the modules/ components as very good.
- At the aggregate level 95 percent of the rating comes under the category of very good (27 percent) and good (68 percent) while only 5 percent comes under the category of fair.
- No participant has rated any of the components of the course as "poor" or "very poor".

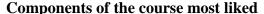
From the above it is clear that overall the course was very well received. Of course there is still scope for improvement so that the grading assigned moves up. Especially there seems to be scope for improving modules 2, 3 and possibly 7.

# **Specific comments**

In addition to rating the quality of the different modules/ sessions, the participants provided specific comments as indicated below:

- The course work and other arrangements were very useful in drafting the policy briefs;
- Course work provided a good opportunity to learn about the policies in other countries;
- Learned a lot which could be adopted to the work I am doing;
- The course work arrangements were good and useful. Guidance provided by resource persons was most useful;
- One or two days should be allotted entirely to the drafting of policy briefs.





Participants were requested to indicate the course components they most liked. Obviously the preferences were not consistent reflecting the varying perception of the individuals attending the course. Some of the most liked components are:

- 1. Preparation of the policy briefs;
- 2. Policy process;
- 3. Restoration and rehabilitation of degraded forests;
- 4. Governance, accountability and transparency;
- 5. Effective communications;
- 6. Field trip





# Components least liked

The participants also gave an indication of the course components that were least liked as indicated below:

- On the whole the course was too dense and there were too many presentations;
- SAARC forest products trade;
- REDD+ and climate change;
- FLEGT, Forest Certification, VPA
- Future of wood production

# Suggestions about future courses

The participants were requested to provide their suggestions in improving future policy courses and many provided their views as indicated below:

- 1. The course should focus on policy formulation.
- 2. The time for lectures and their numbers should be reduced and more time allowed for discussion.
- 3. There should be more discussion on land use and how countries are pursuing the policy process.
- 4. There is a need to share more of the experience relating to policy process in developing countries.
- 5. The course should include presentation skills

### Potential impacts of the course

The participants were requested to indicate what they will do differently taking into account what they have learned during the course. Some of the responses to this are indicated below:

- Will look at forestry from a broader perspective and adopt a broad-based approach in dealing with forestry issues;
- Will contribute in a better way to the on-going forest policy formulation process;
- Prepare a draft decree to strengthen rehabilitation of degraded forests,
- Will think carefully and bring in all aspects in decision-making;
- Will prepare policy briefs in a better way.

### SUMMARY AND RECOMMENDATIONS

On the whole the Eighth Executive Forest Policy Course could also be rated as a highly successful event as in the case of the Sixth and Seventh Policy Courses held in 2013 and 2014 respectively. Almost all the participants and resource persons expressed their satisfaction and appreciated the opportunity they obtained to share their experience, learn about recent developments, assess critically the emerging opportunities and challenges and identify what may be done to improve the situation. The interactive format adopted has been extremely effective generating considerable enthusiasm and commitment among the participants. Several factors have contributed to the effectiveness of the programme as indicated below:

1. Participants were informed in advance on the nature of the course underscoring that the course will be largely based on sharing their experience. This in a way mentally prepared the participants and some actually identified problems for discussion and drafting the policy briefs prior to their arrival.

- A very good mix of participants with differing profiles of experience (both in terms of the length and diversity of experience). A combination of long experience of some of the senior participants combined with the enthusiasm of younger groups created a very dynamic environment.
- 3. Highly experienced resource persons;
- 4. Excellent facilities provided by the Myanmar Forest Department and the flawless logistical arrangements made by APAFRI.
- 5. Strong support from sponsors with 100 percent of the participants being funded by various agencies.

# Continuation of the policy course

The Executive Forest Policy Course has evolved as a very useful initiative providing a unique opportunity for sharing knowledge and experience and updating forestry professionals on key developments that impact forest policies at the global, regional and national levels. The fact that several organizations have come forward to sponsor participants is a clear indication of how the course is perceived by the participants as also by the various organizations. Almost all participants clearly indicated a high level of satisfaction with the course. No other organization is providing such an opportunity to discuss various critical issues in a comprehensive manner. Hence there is a strong justification for continuation of the Executive Forest Policy Course as a regular annual programme.

# Need for an in-depth evaluation

Having said this it is important to undertake an in-depth evaluation of the last three courses to identify what needs to be done to improve the course, including the topics to be covered, the approach to conducting the course, and the system of evaluation of each course. An auto-evaluation including a sample survey of the participants who attended the course focusing on the impact of the course on them would be of help to identify the areas that need improvement.

### Some suggestions for improvement

Some of the areas that require some rethinking are indicated below:

- There is scope for reducing the number of resource persons and their presentations. As such there is a feeling that a large number of presentations by different resource persons are overloading the absorptive capacity of the participants, especially as this reduces the time for in-depth discussions. Also in some cases the linkage between the different presentations is not quite clear.
- With a smaller number of resource persons a more issue focused approach could be adopted. As such
  the range of issues brought out seldom permits in-depth discussion and many issues are not subjected
  to detailed analysis. Obviously a more structured approach to discuss the various issues will be
  helpful to improve the policy analysis capabilities.
- Experience hitherto indicates the high level of usefulness of the policy brief preparation exercise. There is considerable scope for improving this component, revisiting the approach adopted and giving more time as gas been suggested by some of the participants. Improvements could be brought about as indicated below:
  - O Hitherto course participants had to identify the topics themselves and this took considerable time. In the real world situation policy briefs are to be prepared on topics/ issues as required by the decision makers. Hence it is advantageous to develop a short list of issues/ topics in

- advance and allow the participants to choose from this list, rather than allowing them to invent the topic.
- O Provide necessary reading materials for the selected topics/ issues. Once the topics have been pre-identified, it should not be a problem to prepare the essential reading materials and provide them to the participants.
- Allocate adequate time for the preparation of policy briefs. As such this gets relegated to the
  last session by which time the participant's energy and enthusiasm starts tapering off.
  Probably there is justification to allocate more "prime-time" for this important exercise.

# **ANNEXES**

# **ANNEX I**

# LIST OF PARTICIPANTS



# Ms Wang Hong

Director of Finance

Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

(APFNet

6 Floor, Baoneng Building A, No.12, Fu Tong Dong Da Jie

Wang Jing Area, Chaoyang District, Beijing 100102

P. R. China

Phone: 86-10-84215796 Fax: 86-10-84216958

Email: wang\_hong@apfnet.cn



# Ms Pan Yao

Program Officer

APFNet Kunming Training Center

300# Bailongsi, Kunming City 650224, Yunnan Province

P.R. China

Phone: (0871) 6386 2840 Email: apfnetktc@apfnet.cn



### Ms. Nay Sikhoeun

Forest Demarcation Registration and Forestland Use

Cambodia

Email: naysikhoeun@gmail.com



### Mr. Sumantri

Deputy Director of Forest Fire Control for Programs and Evaluation Ministry of Environment and Forestry, The Republic of Indonesia

Indonesia

Phone: 62-21-5704618, 62-812 1332524

Email: tri9ng@yahoo.com



# Phomma Pathoummavong

Acting Head of Forest Technique Standard Division

Department of Forestry

Lao PDR

Phone: 856-20 55601729, off 856-21222534 Email: p.pathoummavong@yahoo.com



### Mr. Mohammed Kassim Bin Wasli

Assistant Director of Management & Planning Division

Forestry HQs, 8th. Flr., Wisma Sumber Alam, Stadium Road, 93660 Kuching,

Sarawak Malaysia

Phone: 06-082-319232

Email:mohdkw@sarawak.gov.my



# Ms. Fe C. Oliveros

Chief, Forest Policy Section

Forest Management Bureau-Department of Environment and Natural Resources

**Philippines** 

Phone: +63-2-926 2141 Fax: +63-2-928 9313

Email: fe\_carpio@yahoo.com



#### Mr. Korn Manassrisuksi

Director of Forest Geo-Informatics Division

Forest Land Management Bureau, RFD

Thailand

Phone: +66-81-485 0554 Email: korn45@gmail.com



# Mr. Le Van Cuong

Vice Head

Division of Natural Resources and Environment Economics

Vietnam

Phone: 84 975 546983

Email: cuonglv.fsiv@gmail.com



# Mr. Kyaw Kyaw Lwin

Director

No. 39, Forest Department, Nay Pyi Taw

Myanmar

Phone: 95 9 2001393

Email: kyawkyawlwin189@gmail.com



### Dr (Ms.) Kinnalone Phommasack

**Deputy Director** 

REDD+ Office, Department of Forestry, MAF, Thaddam Road, Chanthabuly

District, Vientiane

Lao PDR

Phone: (856)20 2200 6777 Fax: (856) 21 563 002

Email: kinnalone.ph@gmail.com



# Mr. Balu Perumal HOD Conservation Malaysian Nature Society JKR 641, Jalan Kelantan Bukit Persekutuan 50480 Kuala Lumpur

Malaysia

Phone: 03-22873304/9422

Fax: 03-22878773

Email: hod.conservation@mns.org.my



### **Ms.Tanirat Tanawat**

Project Manager

Thailand Environment Institute (TEI) 16/151 Muang Thong Thani, Bond Street

Bangpood, Pakkred Nonthaburi 11120

Phone: (+66) 2 5033333 ext 213

Email: tanirat@tei.or.th, tanirat.tana@gmail.com



# Ms. Duong Thi Lien

**Project Coordinator** 

Research Institute for Sustainable Forest Management and Forest Certification

(SFMI)

114 Hoang Quoc Viet Str. Cau Giay District, Hanoi

Vietnam

Phone: 84 915 003935

Email: duongtlien@gmail.com



# Dr Omprakash Madguni

Faculty, Ecosystem and Env. Management Indian Institute of Forest Management

Nehrunagar, P. Box: 357 Bhopal, Pin: 462003

India

Phone: +917 55241 4756 (Resi.), +917 55277 5716 (Off.) Email: prakash@iifm.ac.in, omprakashiifm@gmail.com



# **Ms Sidavone Chanthavong**

Assistant to National Project Coordinator

SUFORD Scaling-up Project

Ministry of Agriculture and Forestry, Forestry Department

Lao PDR

Mobile: +856 20 54846221

Email: sidavone.chanthavong@yahoo.com



Mr Tawatchai Rattanasorn

Programme Manager IUCN Thailand 63, Soi Prompong Sukhumvit Soi 39, Wattana 10110 Bangkok

Thailand

Tel: + 66 81 972 0472

Email: Tawatchai.rattanasorn@iucn.org



# Ms. Vu Thi Bich Hop

**Executive Director** 

Center for Sustainable Rural Development (SRD)

No 56, Lane 19/9 Kim Dong street, Hoang Mai district, Hanoi

Vietnam

Phone: (84-4) 39 43 66 78 ext: 306 (Office)

Email: hop@srd.org.vn



# **Md Tariqul Islam**

Assistant Chief Conservator of Forests Development Planning Unit,

Office of the Chief Conservator of Forests,

Banbhalean, Agargaon, Dhaka 1207

Bangladesh

Phone: 88 02 818147

Email: tarik.forest@gmail.com



#### Mr Mohan KC

**Assistant Forest Officer** 

**REDD Implementation Center** 

Ministry of Forest and Soil Conservation

Nepal

Phone: +977 985 1130557

Email: mohankc.forestry@gmail.com, mohankc@mofsc\_redd.gov.np



# U Bo Ni

Director

Forest Department

**MOECAF** 

Myanmar

Phone: 095164731, 067405115 Email: uboni.mgv@gmail.com



### Ms Vu Le Y Voan

Vice-Director of International Cooperation Department (ICD) of VNFU,

Facilitator of FFF in Vietnam

Viet Nam Farmers' Union(VNFU)

No 9 Ton That Thuyet street

Ha Noi

Vietnam

Tel:0084-4-37958043

Fax: 0084-4-37958049

# Email: voanvnfu@yahoo.com



# Mr. Than Soe Oo

Programme Manager

Myanmar Environment Rehabilitation-conservation Network (MERN), Member of Community Forestry National Working Group (CFNWG) Room 302, Building 212-213, Sabal Marga Street, Hanthar Yeikmon Housing,

Ward 5, Kamayut Township, Yangon

Myanmar

Phone: 095-9-33608339, 095-9-440 33065

Email: thansoeoo2011@gmail.com



# U Mahn Win Tin

General Manager (Extraction) Myanmar Timber Enterprise

Gyogone, Imsein Township, Yangon

Myanmar

Phone: 095-09-5252796

Email: dgmext\_mte@moecaf.gov.mm

# **ANNEX II**

# LIST OF RESOURCE PERSONS



# Franz-Eugen Arnold

REDD+ Technical Adviser (NFMS & RELs)

FAO of the United Nations

Forest Department, Building No. 39

Nay Pyi Taw

Myanmar

Mobile: 09 260 378 269 Email: franz.arnold@fao.org



# Sepul Kanti Barua

Consultant- Forest Economics and Policy

Indufor Oy, Töölönkatu 11 A

FI-00100 Helsinki

Finland

Phone: +358 9 684 0110 Mobile: +358 50 564 4218 Fax: +358 9 135 2552

Email: sepul.barua@indufor.fi



# Prabhu Budhathoki

Chief Technical Adviser

FAO Representation in Bangladesh

House #37, Road #8

Dhanmondi Residential Area

Dhaka-1205

Bangladesh

Phone: +88 02 811 8015-8 Fax: +88 02 811 3446

Email: prabhu.budhathoki@fao.org



# **Bruno Cammaert**

Forestry Officer

EU FAO FLEGT Programme, Asia-Pacific FAO Regional Office for Asia and the Pacific

39 Phra Athit Road

Bangkok 10200

Thailand

Phone: +66 2 6970000 Ext. 4260 Email: Bruno.Cammaert@fao.org



#### **Unna Chokkalingam**

Senior Forestry and REDD+ Expert

Jakarta Indonesia

Mobile: +62 8118123274

Email: u.chokkalingam@gmail.com

Skype: unnach



#### Jennifer Conje

Senior Policy Advisor US Forest Service 1 Thomas Circle, NW Suite 400

Washington, DC 20005 USA Phone: +1 202 644 4624

Email: jconje@fs.fed.us



#### Tim Dawson

Senior FLEGT Expert

European Forest Institute (EFI)

c/o Embassy of Finland

5<sup>th</sup> Floor, Wisma Chinese Chamber

258 Jalan Ampang, 50450 Kuala Lumpur

Malaysia

Mobile: +60 12 367 0269

Fax: +603 42511245

Email: tim.dawson@efi.int



#### **Patrick Durst**

Senior Forestry Officer

FAO of the United Nations

Regional Office for Asia and the Pacific 39 Phra Atit Road, Bangkok 10200

Thailand

Phone: +66 2 6974000

Fax: +66 2 6974000

Email: patrick.durst@fao.org



## **Kent Elliott**

Asia Program Specialist

USDA Forest Service

**International Programs** 

1 Thomas Circle, NW, Suite 400

Washington, DC 20005

Phone: +1 202 644 4571

Fax: +1 202 644 4603

Email: kmelliott@fs.fed.us



## Dhananjaya Kumar

**Managing Director** 

NH Consulting PVT. LTD.

104 D, 2<sup>nd</sup> Floor, Shanti Kunj Main, Gate No. 2

Ram Mandir Marg, Vasant Kunj

New Delhi – 110070

India

Phone: +91 9818505713

Email: nhc10@hotmail.com



#### Antonio Gabriel M. La Viña

Dean, Ateneo School of Government

Ateneo De Manila University

Pacifico Ortiz Hall, Katipunan Ave, QC 1108

**Philippines** 

Tel:(+632) 426 4279

Mobile: (+63-928) 503 51 54

Fax: (+632) 426 5997

Email: tonylavs@gmail.com



#### **David Lamb**

University of Queensland

Brisbane

Australia

Phone: +617 33786547

Email: d.lamb@uq.edu.au



#### Don Koo Lee

**Endowed Chair Person** 

Park Chung Hee School of Policy & Saemaul

Yeungnam University

280 Daehak-ro, Gyeongsan

Gyeongsangbuk-do 712-749

Republic of Korea

Phone: +82-53-810 1318

Fax: +82-53-810 2055

Email: leedk@snu.ac.kr, donkoolee@ynu.ac.kr



#### **Caroline Liou**

Manager, Strategic Communication

**RECOFTC** 

P.O. Box 1111, Kasertsart Post Office

Bangkok 10903

Thailand

Phone: +66 (0) 2 940 5700 Ext. 1236

Fax: +66 (0) 2 561 4880

Email: caroline.liou@recoftc.org



#### **CTS Nair**

Sivagiri

Muthukad Puthenveedu

P:O Naduvath

Wandoor, Kerala 679328

India

Phone: 91-4931249495 Cell: 91-9995305542

Email: ctsnair47@gmail.com



## Dennis Nielson

Director

DANA Limited P.O. Box 392

Rotorua

New Zealand

Phone: +64 7 3492764 Fax: +64 7 3492763 Email: dana@dana.co.nz



#### Nyi Nyi Kyaw

**Director General** 

Forest Department

Ministry of Environmental Conservation and Forestry

Building No. 39, Nay Pyi Taw

Myanmar

Tel: +95 67 405400

Fax: +95 67 405427

Email: nnkforest@gmail.com



#### **Hadisusanto Pasaribu**

**Executive Director** 

ASEAN-ROK Forest Cooperation Secretariat

8<sup>th</sup> Floor, 9 Gukhoe-daero 62-gil

Yeongdeungpo-gu

Seoul 150-874

Republic of Korea

Phone: +82-2-785-8962

Email: contact@afocosec.org



#### Sim Heok Choh

**Executive Secretary** 

Asia Pacific Association of Forestry Research Institutions (APAFRI)

c/o Forest Research Institute of Malaysia (FRIM)

52109 Kepong, Selangor

Malaysia

Phone: +603 62797536

Email: simhc@frim.gov.my, sim@apafri.org



## **Thaung Naing Oo**

Director, Forest Research Institute Yezin

Ministry of Environmental Conservation and Forestry

Bldg (39), Forest Department

Nay Pyi Taw

Phone: +95 67 416524 Fax: +95 67 416523

Email: tnoo71@gmail.com



#### Ben Vickers

Regional Programme Officer

**UN-REDD** 

FAO of the United Nations

Regional Office for Asia and the Pacific

39 Phra Atit Road, Bangkok 10200

Thailand

Phone: +66 2 697 400 ext. 4301

Email: ben.vickers@fao.org



#### Tetra Yanuariadi

Projects Manager

Division of Trade and Industry

International Tropical Timber Organization (ITTO)

International Organizations Center, 5<sup>th</sup> Floor

Pacifico-Yokohama, 1-1-1, Minato-Mirai

Nishi-Ku, Yokohama 220-0012

Japan

Phone: +81 (0) 45-223-1110

Fax: +81 (0) 45-223-111



## Yurdi Yasmi

Forestry Officer (Policy)

FAO of the United Nations

Regional Office for Asia and the Pacific

39 Phra Atit Road, Bangkok 10200

Thailand

Phone: +66 2 697 4000 ext. 4136

Fax: +66 2 697 4445

Email: Yurdi.Yasmi@fao.org

Eighth Executive Forest Policy Course, 22 March – 3 April 2015, Nay Pyi Taw, Myanmar People, Land use and Forests in the ASEAN:

Policy Challenges in the 21<sup>st</sup> Century

## **PROVISIONAL PROGRAMME**

#### Sunday 22 March 2015 - Arrival and registration of participants

#### **DAY 1: Monday 23 March 2015**

- Opening ceremony and introduction to the course
- Module 1: Societal changes, land use and forests in the ASEAN: The unfolding future
- **Module 8: Drafting policy briefs**

| Time        | Agenda/ Topic   | Presenter/ Facilitator  |
|-------------|---|---|
| 0730 - 0900 | Registration  | APAFRI/ Forest Department   |
| 0900 - 1000 | Icebreaker – Getting to know each other   | Yurdi Yasmi/ CTS Nair   |
|             | Introduction to the course  | CTS Nair  |
| 1000 - 1030 | Forests and forestry in Myanmar:<br>Meeting the challenges in the 21 <sup>st</sup><br>century | Nyi Nyi Kyaw, Director General,<br>Forest Department  |
| 1030 - 1100 | Coffee Break  |   |
| 1100 - 1200 | Green economy in ASEAN and its effects on forest resources                                    | Hadi Pasaribu   |
| 1200 – 1300 | Lunch break   |   |
|             | Opening co  | eremony   |
| 1300 - 1400 | Welcome remarks   | H E Union Minister U Win Tun, Ministry of Environmental Conservation and Forestry (To be confirmed) |
|             | Introductory remarks  | Patrick Durst, FAO  |

|             |                                      | Bui Thi Lan, FAO      |
|-------------|--------------------------------------|-----------------------|
|             | Remarks by partners                  | Hadi Pasaribu, AFoCo  |
|             |                                      |                       |
|             | Vote of thanks                       | Sim Heok Choh, APAFRI |
|             | Group photo                          |                       |
|             | Refreshment                          |                       |
| 1400 – 1500 | Drivers of change and their          |                       |
|             | implications on forests and forestry | Patrick Durst         |
|             | in the ASEAN                         |                       |
| 1500 – 1545 | Societal changes and the future of   | CTS Nair              |
|             | ASEAN forests and forestry           |                       |
| 1545 - 1600 | Tea break                            |                       |
| 1600 – 1730 | Module 8: Drafting policy briefs –   | Yurdi Yasmi/ CTS Nair |
|             | Introduction to the module and       |                       |
|             | identification of topics             |                       |
| 1800 - 2030 | Welcome dinner                       |                       |

## DAY 2: Tuesday 24 March 2015

- Module 2: The environmental dimension: Climate change, biodiversity loss and water crisis Managing forests to improve ecosystem services.
- Module 8: Drafting policy briefs

| 0830 - 0845 | Recap of issues discussed on Day 1  | Selected Participants |
|-------------|-------------------------------------|-----------------------|
| 0845 - 0900 | Introduction                        | CTS Nair              |
| 0900 - 1030 | Climate change and forests: What    | Jennifer Conje        |
|             | has been done and what more needs   |                       |
|             | to be done?                         |                       |
| 1030- 1100  | Coffee break                        |                       |
| 1100 - 1200 | Forests and water: Myths and        | Yurdi Yasmi           |
|             | realities                           |                       |
| 1200 - 1300 | International environmental         | Jennifer Conje        |
|             | agreements and national forest      |                       |
|             | policies.                           |                       |
| 1300 - 1400 | Lunch                               |                       |
| 1400 - 1500 | Market instruments and              | CTS Nair              |
|             | environmental services: Future of   |                       |
|             | PES                                 |                       |
| 1500 - 1530 | Coffee break                        |                       |
| 1530 - 1630 | The future of REDD+ - Opportunities | Ben Vickers           |

|             | and challenges                   |                                 |
|-------------|----------------------------------|---------------------------------|
| 1630 - 1730 | Module 8: Drafting policy briefs | Yurdi Yasmi/ CTS Nair/ Sim Heok |
|             |                                  | Choh                            |

## Day 3: Wednesday 25 March 2015

- ❖ Module 3: The future of wood production, processing and trade in the ASEAN
- Module 8: Drafting policy briefs

|  | * Woodule 6. Drafting policy briefs   |  |  |
|--|---|--|--|
| Recap of issues discussed on Day 2   | Selected Participants   |  |  |
| Introduction to the module   | CTS Nair  |  |  |
| Production and trade of wood and   | Dennis Neilson  |  |  |
| wood products in the ASEAN   |   |  |  |
| Coffee break   |   |  |  |
| Changing pattern of forest products  | Tetra Yanuariadi  |  |  |
|  |   |  |  |
| ·  | Tim Dawson  |  |  |
|  |   |  |  |
| developments in the ASEAN  |   |  |  |
| Lunch  |   |  |  |
|  | Bruno Cammaert  |  |  |
|  |   |  |  |
| heading to?  |   |  |  |
| Coffee   |   |  |  |
| Panel discussion: The future of  | Dennis Neilson/ Tetra Yanuariadi/   |  |  |
| wood industry in the ASEAN: Is it  | Bruno Cammaert/ CTS Nair/   |  |  |
| becoming a sun-set industry in the   | Patrick Durst   |  |  |
| Region?  |   |  |  |
| Technologies for tracking illegal  | Kent Elliot   |  |  |
| timber   |   |  |  |
| Briefing on field trip   | Thaung Naing Oo   |  |  |
| Module 8: Drafting policy briefs   | CTS Nair/ Yurdi Yasmi/Sim Heok  |  |  |
|  | Choh  |  |  |
| larch 2015   |   |  |  |
| cies on the ground   |   |  |  |
|  |   |  |  |
| Management of natural teak   | Forest Department   |  |  |
| forests.   | Forest Department   |  |  |
| forests.  Management of teak plantations   | Forest Department   |  |  |
| forests.  Management of teak plantations  Local community participation in   | Forest Department   |  |  |
| <ul> <li>forests.</li> <li>Management of teak plantations</li> <li>Local community participation in forest rehabilitation</li> </ul> |   |  |  |
| <ul> <li>forests.</li> <li>Management of teak plantations</li> <li>Local community participation in forest rehabilitation</li> </ul> | Forest Department  Forest Department  |  |  |
|  | Coffee break Changing pattern of forest products trade- ASEAN and global trends Forest Law Enforcement, Governance and Trade: Recent developments in the ASEAN  Lunch Forest certification and VPA: Where are we now and where are we heading to?  Coffee Panel discussion: The future of wood industry in the ASEAN: Is it becoming a sun-set industry in the Region? Technologies for tracking illegal timber Briefing on field trip  Module 8: Drafting policy briefs  arch 2015 |  |  |

## Day 5: Friday 27 March 2015

- Module 4: The policy process: Resolving conflicts in the use of land and forests in the ASEAN
- **❖** Module 8: Drafting policy briefs

| 0830 -0845  | Recap of issues discussed on Day 3  | Selected participants                   |
|-------------|---|---|
| 0845 - 0900 | Introduction to the module  | CTS Nair                                |
| 0900 - 1030 | Policy process- Theory and practice   | Jennifer Conje                          |
| 1030 - 1100 | Tea/ Coffee break   |   |
| 1100 - 1300 | Restoration of degraded forests<br>through social movements: The<br>Korean experience of accomplishing<br>forest transition | Don Koo Lee                             |
| 1300 - 1400 | Lunch   |   |
| 1400 - 1500 | Improved coordination and resolution of land use conflicts – The One-Map initiative in Indonesia                            | Kent Elliot                             |
| 1500 - 1530 | Tea/ Coffee break   |   |
| 1530-1630   | Managing conflicts in policy formulation and implementation   | Jennifer Conje/ Yurdi Yasmi             |
| 1630 - 1730 | Module 8: Drafting policy briefs  | CTS Nair/ Yurdi Yasmi/ Sim Heok<br>Choh |

## Day 6: Saturday 28 March 2015

- **❖** Module 6: Effective communication for better forestry
- Module 8: Drafting policy briefs

| 0830 - 0845 | Recap of issues discussed on Day 5    | Course participants |
|-------------|---------------------------------------|---------------------|
| 0845 - 0900 | Introduction to the module            | CTS Nair            |
| 0900-1030   | Changing concepts and approaches      | Caroline Liou       |
|             | to communication and their            |                     |
|             | implications on forestry              |                     |
| 1030-1100   | Tea\Coffee break                      |                     |
| 1100 - 1200 | The future of forestry in a networked | Caroline Liou       |
|             | world                                 |                     |
| 1200 - 1300 | Making the messages in policy briefs  | Caroline Liou       |
|             | stick                                 |                     |
| 1300 - 1400 | Lunch break                           |                     |
| 1400 - 1500 | World Cafes: Sharing experience on    | Yurdi Yasmi         |
|             | policy process                        |                     |
|             |                                       |                     |

| 1500 -1530 | Tea\Coffee break                 |                                 |
|------------|----------------------------------|---------------------------------|
| 1530 -1730 | Module 8: Drafting policy briefs | CTS Nair/ Yurdi Yasmi/ Sim Heok |
|            |                                  | Choh                            |

## Day 7: Sunday 29 March 2015

| AM | Field trip covering:  | Forestry Department                     |
|----|---|---|
|    | <ul><li>Farm forestry and agroforestry in Myanmar</li><li>Wood processing</li></ul> |   |
| PM | Module 8: Drafting policy briefs  | CTS Nair/ Yurdi Yasmi/ Sim Heok<br>Choh |

#### Day 8: Monday 30 March 2015

Module: Governance, accountability and transparency in the forest sector: Building responsive institutions

**❖** Module 8: Drafting policy briefs

| 0830 - 0845 | Review of issues discussed on day 6    | Course participants            |
|-------------|--|--------------------------------|
|             | and 7                                  |                                |
| 0845 - 0900 | Introduction                           | CTS Nair                       |
| 0900 - 1030 | Governance challenges in the forest    | CTS Nair                       |
|             | sector                                 |                                |
| 1030-1100   | Tea\Coffee break                       |                                |
| 1100-1200   | Future of public forestry institutions | Antonio La Vina                |
| 1200 -1300  | SAARC Area cross border timber         |                                |
|             | trade study including regional         | Dhananjaya Kumar & Sepul Barua |
|             | institutional mechanisms and trade     |                                |
|             | links with Myanmar                     |                                |
| 1300-1400   | Lunch break                            |                                |
| 1400 -1500  | Leadership in future public            | Antonio La Vina                |
|             | institutions                           |                                |
| 1500 -1530  | Tea\Coffee break                       |                                |
| 1530 -1630  | Group work: Assessment of              | CTS Nair/ Yurdi Yasmi          |
|             | institutional effectiveness            |                                |
| 1630- 1730  | Module 8: Drafting policy briefs       | CTS Nair/ Yurdi Yasmi          |

#### Day 9: Tuesday 31 March 2015

- Module 7: Rebuilding the forest capital in the ASEAN: Restoration and rehabilitation of degraded forest lands.
- **❖** Module 8: Drafting policy briefs

| 0830-0845   | Review of issues discussed on day 8     | Course participants            |
|-------------|---|--------------------------------|
| 0845-0900   | Introduction to the module              | CTS Nair                       |
| 0900 - 1030 | Restoration and rehabilitation of       | David Lamb                     |
|             | degraded forest lands: An overview      |                                |
|             | of the global and ASEAN situation       |                                |
| 1030-1100   | Tea\Coffee break                        |                                |
| 1100 - 1300 | Rehabilitation efforts in Asia-Pacific: | Unna Chokkalingam              |
|             | Lessons from experience hitherto        |                                |
| 1300 -1400  | Lunch break                             |                                |
| 1400 -1500  | The landscape approach to               | David Lamb                     |
|             | rehabilitation of degraded lands        |                                |
| 1500 -1530  | Tea\Coffee break                        |                                |
| 1530 -1630  | Panel discussion: Why rehabilitation    | David Lamb, Unna Chokkalingam, |
|             | efforts succeed and why they fail       | Yurdi Yasmi, CTS Nair          |
| 1630 - 1730 | Module 8: Drafting policy briefs        | CTS Nair/ Yurdi Yasmi          |

## Day 10: Wednesday 1 April 2015

- Module 7: Rebuilding the forest capital in the ASEAN: Restoration and rehabilitation of degraded forest lands – Contd.
- Module 8: Drafting policy briefs

| 2222 2245   | 5 1 (1 11 1 1 6                     |                                 |
|-------------|-------------------------------------|---------------------------------|
| 0830 -0845  | Review of issues addressed on day 9 | Course participants             |
| 0845 - 1030 | Ecosystem approach to forest        | David Lamb                      |
|             | rehabilitation: Theory and practice |                                 |
| 1030 -1100  | Tea\Coffee break                    |                                 |
| 1100 -1200  | Financing forest rehabilitation     | CTS Nair                        |
| 1200 -1300  | Policy and institutional issues in  | Unna Chokkalingam               |
|             | ecosystem rehabilitation            |                                 |
| 1300 -1400  | Lunch break                         |                                 |
| 1400 -1500  | Science and technology of forest    | CTS Nair                        |
|             | rehabilitation                      |                                 |
| 1500 -1530  | Tea\Coffee break                    |                                 |
| 1530-1730   | Module 8: Finalization of policy    | Yurdi Yasmi/ CTS Nair/ Sim Heok |
|             | briefs                              | Choh                            |

## Day 11: Thursday 2 April 2015

- Module 8: Drafting policy briefs
- Course evaluation and closing session

| 0900 -1000 | Presentation of policy briefs | Participants |
|------------|-------------------------------|--------------|
| 1000 -1030 | Course evaluation             | FAO/APAFRI   |

| 1030 -1100 | Tea\Coffee break        |                                  |
|------------|-------------------------|----------------------------------|
| 1100 -1200 | Closing ceremony        |                                  |
|            | Award of certificates   | Nyi Nyi Kyaw,Director General,   |
|            |                         | Forest Department                |
|            | Remarks by participants |                                  |
|            | Remarks by organizers   | Yurdi Yasmi                      |
|            |                         | CTS Nair                         |
|            |                         | Sim Heok Choh                    |
|            | ❖ Vote of thanks        | Thaung Naing Oo, Forest Research |
|            |                         | Institute                        |
| 1300 -1400 | Lunch                   |                                  |
|            |                         |                                  |

Friday 3 April 2015: Departure of participants

#### **POLICY BRIEFS**

# PROMOTION OF FAMILY FORESTRY: REDUCING POVERTY THROUGH LOCALLY MANAGED FORESTS

Under the successful economic growth of ASEAN countries — still there are poor people living in and around forest areas, who depended their lives upon small farm land and forest resources, more people are losing their land through various forms of development. Sustainable management of forests such as family forest practices and locally managed forest, by developing families mix planting plots of edible species of trees/shrubs, fruits, medicinal plants, for their own consumption and for sale. High-value timber species can be planted and managed by families and communities, to enhance self sufficiency and to generate sources of short term and long term income. This will not only help to reduce poverty through boosting livelihoods options and food security but also enhance forests functions and services, protecting global "natural capital" for mankind and earth.

Governments of Asian region are committed to halving extreme poverty by 2015 and many have adopted poverty related measures in national policies and programs. A forest policy lays down broad principles and strategies for the country's forestry sector to help guide both public and private actions that benefit forest ecosystems, community and society at large (World Bank study, 2000). Roughly 70% of the Asian country's population is living in the rural area and their contributions to the country's economy were significant especially from the agro-forestry sectors. However, the rural communities become poorer and most of them are living below poverty line. Forests and land degradation has been aggravating poverty. As a consequence, rural people who used to enjoy benefit of neighboring forests lost their sources of livelihood.

## **Underlying causes directly corresponding to are:**

- Declination of natural resources.
- Rapid commercial industrialization, urbanization and deforestation.
- Limited livelihood options for farmers living in the rural villages.
- Over exploitation of resources through forest land concession
- Farmers owning small/no pieces of land
- Social structure and marketing systems.

In most Asian countries forest policy does not allow private investment in public forests. On the other hand government cannot afford to invest for conducting large scale plantation in forests such policy constraints left large area of public forests remain barren for decades. But it's showed evidences from some Asian countries over decades that community participation in forest management, the establishment of community and families' forests generally have good impacts in poverty reduction and empowerment local communities and families to sustainably manage forests.

**Vietnam**, studies showed that the duty to manage a natural forest can be delegated to household and to a community; most of the communities that had established a community forest to which everybody had restricted access were in a position of food security, and either produced enough basic foodstuffs for their own consumption or produced something to sell for cash with which to buy the missing food.

Myanmar, promotion of family forestry is an option to reduce the poverty of rural people as individual families living in and around public forests. are to be invited for forestry practices under some agreements which will provide the family head a usufractuary right on government land for a particular period under specific terms and conditions. **Tenure security** in areas where land appropriation is a threat to livelihood security, local people are motivated to form FUGs in the hope that it will strengthen their claims on the land. According to UNDP<sup>1</sup>, Myanmar's National Strategy on Rural Development and Poverty Alleviation aims to reduce the poverty rate by half from 32% in 2005 to 16% by 2015. The incidence of poverty declined faster in urban areas than in rural areas. Consequently, rural poverty remains higher considerably higher than urban poverty. The rural poor account for 84 per cent of the total poor.

The practices of Family forests are already in place in countries like **Thailand** and **Bangladesh.** An assessment carried out in Uthai Thani and Nakhon Sawan Provinces of Thailand has shown that the family forests provide annual benefits of \$4,500 per hectare per year. (IUCN Thailand 2015) The practices of social forestry in encroached forests of Bangladesh also have been proved to be effective in poverty reduction. Families are receiving an amount of 5000 US \$ equivalent cash on an average as extra income from practicing 1 hectare of forestry every 10 years excluding other annual crops as intermediate product. By investing the money received from forestry most of the families have established their alternative sources of income. (Forest Department Record, Bangladesh)

To overcome the underline causes of poverty mentioned above, there are some options and here are two options for considerations.

1- Promotion of family forestry and locally managed forest for poverty reduction. Family forestry is one of the key factors in securing sustainable forest management. The allocation of forest land to households is reducing conflicts between rural people and State, between farmers themselves, between communities. Allocation of land use rights increases people's control over forest land and facilitates more intensive and long-term land use and forest matching people's food security and interests. In addition, developing families mix planting plots of edible species of trees/shrubs, fruits, medicinal plants, for their own consumption and for sale. High-value timber species can be planted and managed by families and communities, to enhance self-sufficiency and to generate sources of short term and long term income. This will not only help to reduce poverty through boosting livelihoods options and food security but also enhance forests functions and services, protecting global "natural capital" for mankind and earth. Promotion of family forestry can eradicate the poverty of rural people, individual families living in and around public forests are to be invited for forestry practices under some agreement.

Challenges however are that forests investment often requires medium and long-term and thus couldn't provide immediate food, livelihoods and cash. Credit scheme could address the shortage of fund.

2- Private companies can be invited for large scale plantation investment with an agreement to employ local farmers as work force for all the forestry activities. But this option resulted to biodiversity lost due to monoculture and intensive chemical uses leading to fertility degradation, water scarcity, etc. Most of the Asian countries unlike Myanmar do not allow private companies to invest in the government forests. Private companies may use the forest with the objectives of more profit without addressing the objectives of forest management and local employment. Moreover it is evident from Myanmar experience that the farmers living in the vicinity of forests are not happy with leasing out their neighboring forests to companies or private investors. And also the process of leasing out is not necessarily found effective for poverty eradication of rural people.

#### **Conclusion and recommendations**

The reality of the forest land allocation process in Asian countries is that there is currently not enough guidance in terms of the mechanisms, policies, organizational systems, and techniques for implementing family forestry. The most challenging issues are related to post-allocation sustainable forest management and how poor people can benefit from these allocated forests, which vary considerably among allocated units. With the slow growth of forest and extended periods with no profitable returns, it is easy to understand why people do not benefit significantly from forests immediately after allocation. Forests have not yet become a competitive economic component in the uplands and, because of this, require mechanisms, policies, and on-going technical support in order to significantly contribute in terms of incentives for farmers to engage in HF and CF and contribute towards SFM. Ultimately, this system of family forestry combined with SFM principals can lead to meaningful livelihood development and poverty alleviation for the forest-dependent communities that are allocated forest lands for HFM and CFM purposes. Much is dependent on simple management and monitoring rules and regulations that can help to facilitate this process and lead to the success of family forest practice.

A framework that an agreement between family and local government will provide the family head a usufractuary right on government land for a particular period under specific terms and conditions. Farmers can be provided with specific number tree seedlings to be planted per acre along with his agriculture and horticulture of his choice. All the income from agriculture and horticulture production will be enjoyed by farmers along with 50% income of the tree harvested after rotation age, it will encourage farmers to grow maximum number of high value timber trees in the land under agreement.

#### References:

GIZ, 2009. Foreign Direct Investment (FDI) in Land in the Lao PDR.

Lao PDR, 2004. National Growth and Poverty Eradication Strategy (NGPES).

IFFA, 2003. Family Forestry – People and Forests in Harmony.

**SRD**, 2014. Report on the potential VPA impacts on the livelihood of forest-dependent communities in Yen Binh district

IFAD, 2013. Rural poverty in the Republic of the Union of Myanmar.

Forest Department Record, Bangladesh

#### MAKING FOREST REHABILITATION WORK FOR THE PEOPLE

#### **BACKGROUND**

Since 1990, 38.7 million hectares of primary and other naturally regenerated forest have been lost in the Asia-Pacific region. The overall low levels of per capita forest area in the region make these reductions even more significant (FAO, 2012). More so, a great number of communities depend on forest area for livelihood in the region. With this condition, expanding the forest area through rehabilitation activities is essential in the development agenda of any country. Community based forest rehabilitation can be a force to reckon with provided that the land tenure system is improved, local capacity for forest rehabilitation enhanced and livelihood support and other related incentives provided.

#### ISSUES/ KEY PROBLEMS IDENTIFIED

Decreasing forest cover in AP region → deforestation & forest degradation

In the Asia-Pacific countries, most of the forest have been lost due to various economic, social and political factors; to an amount of 38.7 million hectares between 1990 and 2010 (FAO, 2012). The overall low levels of per capita forest area in the region make these reductions even more significant. The most dominant development has been the conversion of forests to other land uses such as plantation agriculture, mining operations, human settlements as well as industrial and infrastructure development. These large-scale conversions are the logical consequence of an increasing population and the demands of an accelerated economic development. In the AP region, the largest reduction in forest area is reflected in the Southeast Asia where deforestation amounted to 33.2 million hectares or 7.6 percent of the land area within the same timeframe. These forested areas continued to decrease with an average deforestation rate of 1.3 percent for the entire region in the period between 2000 and 2005 (FAO 2007).

Table 1 provides a summary of the extent of degradation of forest land in Southeast Asia (Source: FAO 2005, FAO 2006, FMB 2004). These provide rough approximations of more than 100 million hectares or 59% of forest land in the region are under stocked and unproductive and, thus in need of some form of rehabilitation. These estimations also serve to illustrate the magnitude of the forest rehabilitation task and by no means express accurate rehabilitation targets.

Table 1. Proportion of degraded forest area in relation to total forest area In Southeast Asia (in million ha)

| Country           | Total forest area | Degraded forest area |
|-------------------|-------------------|----------------------|
| Brunei Darussalam |                   | 0.04                 |
| Cambodia          | 18.1              | 10.50                |
| Indonesia         | 105.0             | 59.00                |
| Lao P.D.R.        | <u>16.1</u>       | 6.30                 |
| Malaysia          | 32.9              | 10.30                |
| Myanmar           | 67.7              | 10.60                |
| Philippines       | 14.8              | 7.60                 |
| Singapore         | 0.002             | =                    |

| Thailand | 14.5  | 6.00   |
|----------|-------|--------|
| Vietnam  | 12.6  | 7.00   |
| Total    | 198.4 | 117.34 |

#### Increasing forest cover → plantation forest & rehabilitation

The current emphasis on rehabilitation of degraded forests provides opportunities to build new relationships between governments and local communities based on collaboration rather than confrontation. Progress is likely to be slow, partly because of entrenched attitudes in the bureaucracy embedded in a past view of the world. Nonetheless, there seems to be an inevitability about the general direction of policy, with governments throughout the region (and indeed the world) devolving more rights and responsibilities to various actors in civil society.

Current status of social forestry in the ASEAN region can be spelled out as follows; forest area managed by local people with official community forest agreements (2013) is about 3.5% of the total forest land, and through this enabling mechanism community forestry has contributed to successful rehabilitation of 2.2 million hectares of forest land since 2010. Countries with notable community forest cover expansion include Thailand, Cambodia, Vietnam and the Philippines. Deforestation, however, continues to outpace forest growth by 6:1 ratio.

## Box 1: Extent of communities' involvement in forest rehabilitation integrated in national forestry agenda

- For the first time, The Indonesian Ministry of Forestry's strategic priorities for 2004-2009 include development for communities living in and around forests
- China has adopted a massive forest-based rehabilitation programme to improve environmental
  conditions since 1950s and reduce rural poverty with relative success in increasing forest cover and
  family income.
- The National Greening Program in the Philippines rely largely on People's Organization (PO's) organized under the Community Based Forest Management Program to implement the program. With PO's around, maintenance and protection of established plantations is guaranteed.
- In Thailand, approximately 6,000 Community Forest Management Projects were approved between the years 2000-2006.

#### POLICY RECOMMENDATIONS

#### Community based forest rehabilitation $\rightarrow$ the way forward

Taking cognisance of the past and ongoing rehabilitation initiatives in the AP region and comparing the achievements to date with the magnitude of the area in need of rehabilitation, it can easily be seen that a lot more efforts and investments are required. Much of the success of any rehabilitation programs would depend on complex and sometimes intertwining factors. Aside from infusion of sufficient financial resources, participation of local people in the community in rehabilitation efforts is very important.

Providing communities with tenure security and opportunities to establish forest resources for their own benefits can increase their participation in rehabilitation efforts and enables them to be more effectively involved in sustainable forest management. The forest rehabilitation has to be seen in the context of integrated rural development. Issues need to be addressed in national forest programme processes involving governments, private sector companies, community representatives, and non-governmental organisations.

To improve the contribution of local community towards the country's forest rehabilitation initiatives, approaches must be tailored according to the local conditions and demands. Particularly emphasis should be placed on the followings:

#### 1. Land Tenure Security/ Resources Ownership Rights

Security of tenure matters a lot to making communities take responsibility for forests, best seen as one of necessary conditions for good outcomes for forest rehabilitation activities. To encourage participation and support, particularly from the communities living in and near forest area, policy reforms that sought to broaden local participation in these activities and increase local benefits from forests is necessary. Clear forest land tenure and resource rights are requisites in ensuring equitable participation and allocation of benefits to local communities especially the poor. Secure tenure and clear management rights provide guarantee to families or local communities to benefit from the human and financial resources pour on managing and rehabilitating the forestlands. The policy should be flexible enough to accommodate varying local conditions, facilitative rather than restrictive, and simple enough for communities to understand

## 2. Encourage Multi-Stakeholder Participation In Forest Governance and Management

Social processes which ensure greater participation of local communities and other legitimate stakeholders in the management and sharing of benefits from forests should be adequately developed. What is unique in forest resources is that multiple stakeholders are associated with its multiple uses and represent various interests. Local governments, private institutions, small tree farm holders has individual strengths and advantages that will contribute to the overall success of the rehabilitation program. Thus, efforts towards increasing forest cover and forest rehabilitation need to consider these varying interests, without marginalizing the concerns of the local communities. This calls for the development and institutionalization of social processes that will ensure that the local communities and other legitimate stakeholders are able to participate meaningfully in decision making concerning forest management and benefits haring from forests.

#### 3. Provision of Technical Assistance and Capacity Building Activities

Capacity development is needed for families and communities to develop skills in forest rehabilitation including choice of species, having quality planting materials, tending and other silvicultural activities as well as market support. Local people has varied skills in forest rehabilitation. Many will choose fast growing species while other prefer native species or a combination of fruit trees for more economic benefits. Still others choose to plant those that command immediate but higher price once harvested. Capacity development and technical assistance are needed to meet both the economic, social and environmental benefits that a forest rehabilitation program can offer.

#### 4. Increase Incentives to Community and provision of livelihood

Forestry maintains characteristics of high risk, long production period, easily affected by the natural disasters. Hence commercial insurance companies fear to enter in forestry sector. With these concerns, it is necessary to provide subsidies to the local community for a certain tree growing period. A certain amount of compensation should be available to effectively encourage the communities to put effort in forest rehabilitation.

Couple with those measures forwarded above, awareness campaign is vital in order to promote the entire program and encourage larger participation and support of all stakeholders. This could be done by utilizing the strength of media, academe, nongovernment organizations, etc.

#### **REFERENCES**

FAO 2012: Asia Pacific Forest and Forestry To 2020. Forest Policy Brief 01: Forest for a Greener future.

FAO, 2012: Asia Pacific Forest and Forestry To 2020. Forest Policy Brief 07: Making forestry work for the poor.

Food and Agriculture Organization (FAO), 2005. State of World's Forest, FAO, Rome.

Food and Agriculture Organization (FAO), 2006. Global Forest Resources Assessment 2005. FAO Paper No. 147. Rome.

Food and Agriculture Organization (FAO), 2007. State of World's Forest http://www.fao.org/dorep009/a773e/a0773e00.htm

Forest Management Bureau (FMB). 2004. Philippine forestry statistics. Forest Management Bureau, Department of Environment and Natural Resources, Quezon City, Philippines.

Forest Management Bureau (FMB). 2013. National Greening Program. Forest Management Bureau, Department of Environment and Natural Resources, Quezon City, Philippines.

State Forestry Administration, 2014: Forest Resources in China – The 8th National Forest Inventory, P.R. China.

# LIVELIHOOD IMPROVEMENT OF LOCAL COMMUNITIES LIVING IN AND NEARBY FOREST AREA

#### **Background:**

The forest is a valuable resource which must be managed in a sustainable basis. It is vital to ensure that our forest remain as renewable resources in order to provide healthy balance between socio-economic and environmental development and to ensure sufficient resources for our next generations.



Some developing countries are currently facing with the problem of diminishing forest resources due to the encroachment of local people into the protected forest to meet their basic needs. The encroached area in a country can be million hectares of forest land. Having acknowledged such situation, government in

Millennium Development Goals (MDGs):

Goal 1: Eradicate extreme poverty and

hunger,

Goal 7: Ensure environmental sustainability

these nations could now endeavour to prevent this encroachment to degrade forest environment. A well-recognized solution to the situation is the community forest management which is widely accepted as a cheap and effective way to manage forest sustainably.

However, in some countries, despite receiving forest and forest land to protect and carry out some agroforestry cultivation, local communities still encounter great difficulties in managing their allocated forest land. Likewise, the community forest management in such country still need to be improved to ensure that communities are willing to invest their effort to manage community forest in sustainable way.

In both cases, appropriate actions have to be taken to address the problems.

#### **Problems:**

Local people living in villages nearby forest encroach into the protected forest to satisfy their basic needs. Local forest-adjacent communities are "hand to mouth people" with limited amount of resources. Thus, they heavily depend on nearby forest for their daily needs and livelihood. Some countries have just started to allocate forest and forest land to local forest-reliant people for farming and collection of forest products. Therefore, such people are forced to encroach protected forest to exceedingly collect forest products and to occupy forest land for shifting cultivation. Such activities cause severe deforestation and forest degradation.

On the other hand, local communities who have already been allocated protected forest land are facing a number of problems in managing such allocated land sustainably. Local communities are often poor and still heavily reliant on forest for livelihood. However, they are often allocated poor natural forest with limited non-timber forest products and have not rights for timber extraction from allocated forest land. Thus, the income generated from activities of community forest management is extremely low while their responsibility on forest significantly increases. Furthermore, they do not receive sufficient financial and technical support from government and other organizations to effectively manage their allocated natural forest land. As a result local communities now have less incentive to manage the allocated natural forest, leading a high potential of forest degradation.

#### **Analysis of the situation:**

Developing countries are making significant progress to achieve MDGs targets. This growth brings tremendous challenges on forestry sectors. The people who are living in and near the forests remain poor and depend on forests products for their livelihoods. Deforestation and forest degradation are continuing under the activities of local communities. Tackling these issues requires effective participation of local communities.

Total forest area in ASEAN region is 199.7 million hectares, covering 46% of total land area. Only 2.2 million hectares in such region is under the community management. According to RECOFTC report, the target area of community forest management in ASEAN will be 15.9 million hectare.

How to make community forest management (CFM) work for both forests protection and livelihoods improvement of local communities? A very important step is to ensure local communities or households having the rights to manage forests with clear land tenure.

In ASEAN countries, encroached and deforested area is 13.3 million hectares since 2010. Considering the fact of encroached forest land managed by local communities mainly used for livelihoods improvement, it would be a feasible way to allocate these lands to local communities for management. They can receive more incomes with cash crop, at the same time planting tree, NTFP collection and other products from tree and forest.

China started collective-owned forest land reform nationally since 2008 by encouraging and regulating collective forest owners to reassess and reallocate their forest use rights. So far, 180 million ha of collective-owned forest land has been demarcated, taking 98.8% of national collective-owned forest land. Certificate of land use right has been issued for 89.72million households covering 173 million ha of collective-owned forest land. The duration of the land use right under the contract can be up to the 70 years.

Most of allocated forests for community forestry are degraded, local communities have to provide their effort first and then wait for several years for harvesting. For example, trees normally need at least few years to grow before benefits can be realized. So, the policy relevant to community forestry management shall be considering the characteristics of tree and forests, as well as needs of local communities.

In six countries including Lao, Cambodia, Myanmar, Malaysia, Thailand, communities have no significant share of forest land, accounting about 3% (RECOFTC, 2013). These countries often face with

Recognition of community's tenure rights to forest land allow community forest take the old and new roles. Tenure rights grant communities access to an asset that holds potential to facilitate improvement in their livelihood. Transferring forest tenure right to local communities also manifest the government's respect and recognition on human and indigenous rights. This, moreover, help government to comply with global conventions and agreements (RECOFTC, 2013)

forest encroachment of communities around and protected and state forest. Thus, there is

an imperative need to allocate forest land to local communities in these countries. The benefits from community forest management can be seen in the (box )

In some countries, the communities have been remarkably granted with forest land to manage for livelihood and sustainable utilization of forest resources. Such countries as China, Philippines and Papua New Guinea allocated 60% of its forest land to local community while four countries in Asia Pacific region grated one-third their forest land to local communities. The forest tenure rights is continuously transferred to local forest-reliant communities. However, the influence of the communities on forest much depends on the specific governance arrangement in place. Only where communities process forest

The Case study of Nepal demonstrates that stringent restrictions on forest use such as grazing of livestock and collection of forest products such as medicinal plants disproportionately affect poorer segments of society and, in particular, women. (RECOFTC, 2012)

and exercise active control over forest management

embracing commercial use (commercial harvesting timber, NTFP) are they able to derive benefits from forest management and to have sustainable incentives and means to engage in sustainable management. In contract, if there are a number of serious limitations on the forest tenure rights local, communities often encounter with enormous difficulty in managing forest and reaping benefits from their activities. For example, the livelihood sources are highly likely to be adversely affected by the restrictions on forest product use, such as fuel wood, income sources, food and fodder that rural communities depend upon.

In addition, Policy and legal inconsistency often weaken the rule of community forestry management. Most of forests owned by local community are degraded. Local communities are asked to provide their effort first and then waiting for several years for harvesting. Trees, however, need a few years to grow before benefits can be realized while they receive a few supports from government. This leads to low incentives of communities on managing forest.

## **Implementation options:**

The government allocates and regulates the use of forest lands by giving local communities land tenure through issuance of certificate for long term tenure. Socio-economic and site suitability studies need to be carried out. Technical and financial support should be given. Institutional framework, rules and regulations must be in place and strengthened. Awareness-raising and capacity building program need to be conducted.

The government change status of forest lands that have been encroached to other category, namely, agriculture use. These encroached lands which have been changed to agriculture lands would be given to the local communities who are occupying it. However, by doing this the government would lost forest land and have to find other forest lands for replacement to be protected. The local communities will still be staying nearby forest and there is no guarantee that there will be no further encroachment in future. To avoid further encroachment the government has to strengthen law and regulation.

The government enforces law to evict the encroachers from the forest lands. The local communities have been occupying the forest lands for a long time and this process may create social problems and escalate the problems. The local being poor would not be able to pay penalty and may end up in jail

#### **Important conclusions:**

It is clear that local communities are more or less forest dwellers and as a result they should be taken as one part of forest resources management.

In this context, conventional forest management system alone is not strong enough to conserve the natural forest and to implement reforestation program so participatory forest management should be jointly applied while managing forest.

Community forest is used as a tool to promote active participation of local people in managing forest and forest resources sustainably.

Policy and legal inconsistency often weaken the effectiveness of community forestry.

#### **Recommendation:**

It is proposed that the government allocates and regulates the use of forest lands by giving local communities land tenure through issuance of certificate for long term tenure. The forest lands shall be managed in compliance with the community forestry management model. The Forest Department is responsible to:

- i.) Conduct awareness program and capacity building for the local communities.
- ii.) Carry out socio-economic study to ensure that the need of the local communities are identified and fulfilled.
- iii.) Carry out the site suitability study to ensure that the crops and trees planted are rightly matched with soil capabilities.
- iv.) Extend technical support and, if necessary, get government financial incentive to be given to the local community participants to ensure the success of the community forestry projects.
- v.) Ensure that institutional framework must be in place and rules and regulations strengthened.
- vi.) Support coordination and cooperation between local communities and private companies.
- vii.) Supporting the development of timber-processing industry and forest products market.

#### **Conclusion:**

The proposal to allocate and regulate the management of the forest lands with the participation of the local communities supported technically and financially by the government would allow them to cultivate land effectively to raise their livelihood and simultaneously protect the forest lands from further encroachment. The realization of this proposal would contribute to the sustainable forest management.

#### SUSTAINABLE PEAT LANDS

Peat lands are wetlands with rich organic top layer, mainly composed of dead and decaying plant materials. They are also known as moors, mire, bogs, swamp forests, etc. Peat lands are natural landscape and sequester of carbon. Peat lands found extensively world over including in south Asian countries. Among the south-east Asia, peat lands of Indonesia, Vietnam, Myanmar, Malaysia, Thailand, are suffering due to various threats and hence degrading rapidly. This is an important landscape in terms of its carbon sequestration, community livelihood and wetland biodiversity conservation, etc.

Degradation of peat land is due to lack of optimum water level, which is eventually drying, drought the landscape. This is due to intentional draining out of water and repeated occurrence of fires put by the wasted interest parties. There are companies, who are involved in plantation business, diverting this important landscape for palm and other exotic species tree plantations. This is resulting in to reduction in the extent of peat lands. This is arising conflict between the local community and private companies. Further, the dependency of the local community is at stake due to the drying of wetland, lowering of groundwater and reduction of wetland vegetation. Further the peat land fire increasing the release of GHGs and nation's commitment to bring down the CO2 level by the year 2015 is at stake. Due to the immense potential of carbon sequestration and livelihood, government took decision to draft a policy for peat land conservation. In this regard, the Government of Indonesia formulated a policy through several processes, which includes, drafting several preparation meetings and discussions were held among related government offices, and experts until harmonization process, and finally notified the policy in the year 2014. Problem with the policy implementation is the effectiveness of its enforcement and its accountability.

The sustainable peat land has a close relationship between the kind of natural vegetation which adds carbon to the landscape and natural water level maintained above the thick carbon level. To that end, composition of natural vegetation, keeping the water in the peat surface as high as possible, such as natural conditions, is very important for sustainable peat lands. In Indonesia, peat lands are degrading due to drought and repeated fire. Most of the peat land areas in Indonesia are covered with mixed forests, secondary forests of logged-over areas, shrubs and swampy grasslands. The recent data from wetland international, (Wahyunto et al, 2006) ravealed that peat lands is estimated at 20.6 mil ha, which is about 11% of the total land area of Indonesia. Of this about 5.8 mil ha or 28% is said to be in Kalimantan, and about 7.2 mil ha or 35% in Sumatra only. Study of Wetland International, Indonesia (2005), reveals that the potential peat lands in Riau Province in the year 2002 was 4.03 million ha. The content of carbon in the peat in 1990 amounted to 16833.45 million tons (75.62% of the total Sumatra), whereas in 2002: transformed into 14592.14 million tons of C. For 12 years (1990-2002) decreased carbon content of 2,241 million tons (13.31%) or 1.11% per year (Wetland International, 2005).

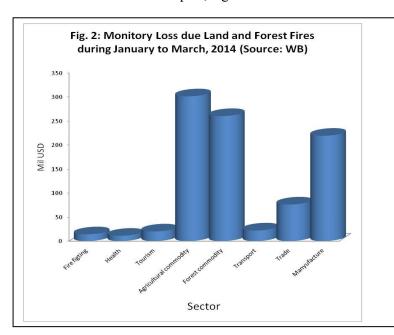
In Indonesia, Peat lands are governed by policies related to forestry, biodiversity, environment, water, fisheries, agriculture and various other regulations for the management of protected areas (National Parks and Sanctuaries), water pollution, swamps, lakes, rivers, land and forest fire control and protection. Due to cross over policies, often conflicts arises between stakeholders. There is huge information gap on the extent and status of the peat lands in the country. It can be seen from the earlier policy, "Presidential decree No 32 (1990) states that peat lands with more than 3 m peat depth in the upper stream have to be classified as protected areas". But while the implementation of the policy, majority of the production

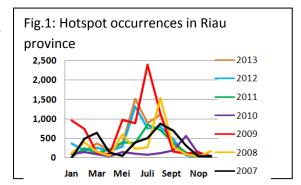
forest areas and forest concessionaires were in peat lands. This shows there is insufficient understanding about the peat land functions and integrated land use management approach.

There is substantial dependency of local community on peat land and they have been using it for fishery, extraction and collection of timber and non-timber forest products, and also cultivating on the reserve areas meant for agricultural extension. Further the community lives in the peat lands are less educated/illiterate, poor and generally practice easy method to earn the livelihood. In the past there was an initiative in the buffer zones of PA by providing alternate cultivations like Cocoa, rubber plantation to meet their livelihood. Presently, due to slash and burning of the peat lands and draining and drying of wetland, community is losing their livelihood from Sago.

Most of the peat lands have been degraded during the decentralized period, which was done by the government notification of regulations on district autonomy (UU No 22/1999), which has devaluated essential power of the Central Government to District Governments. Due to the inefficiency in the system, now all the powers have been taken back (Act 23, 2014) by the central government.

Many experts in the region say that canalization is the main trigger damage to peat land hydrology. They also reported that destruction of peat lands as a result of fires, it can be seen in the data 'hotspot', e.g. land and forest fires in Riau,





2014(fig.1). It is reported that in Bengkalis district, an average of 18 km length canals per ha of peat lands have been made by the plantation companies. Experts assessed that if the water level recedes more than 0.4 m bellow the ground level (i.e. depth to water level), the peat land gets dried up and become fire prone and reduce most of wetland species (e.g. Sagu, Sei Tohor village). Riau province is one of the most prone to forest and land fires. Land and

forest fires occur almost throughout the year, i.e. spread over in the two periods between February and March and the second period in June and November.

There is myth in the people that the palm and exotic species plantation will increase the economic growth of the nation. But the World Bank study, 2014 reveals that there is total sector loss reached \$ 935 million due to the fire and peat lands degradation (Please refer fig.2, for individual sector loss).

Due to the heavy cost and loss, local community is now objecting such diversion of peat land for plantation and encroached by the private companies. Companies are planting oil palm, rubber, *acacia sp, eucalyptus sp,* and diverting huge amount of peat lands in the pretext of national economic development.

Most difficult situation is that stakeholders have not been participating in the implementation of Government Regulation, 71 of 2014, which is basically for the protection and management of peat lands.

Due to the land and forest fires and diversion of peat lands for the plantation, lowering of critical groundwater level, which is crossed more than 40 cm below disturbed peat hydrology at Sei Tohor village. Further the prolonged dry weather and extended summer season, decreasing the groundwater level in the region and in-turn seriously hampering the cultivation in the command area of the landscape. Another observation made by the study by the Riau University that the lowering of groundwater is gradually changing the hydrological head and increasing the intrusion of sea water into the landmass. This is a serious matter as drinking and irrigation water is met from the groundwater is concerned. Due to this the locally important species, Sago is depleting very fast and fish production has also came down.

The situation and policy analysis provides basis to list various alternatives to manage the peat lands sustainably. Following are some of the alternatives have been identified for the Bengkalis peat land region, Indonesia.

- 1. Awareness rising with the help of specialized persons (communication strategy devised by the experts) about the importance of peat lands conservation and benefit. This will help to conserve and protect the peat lands, which are un-degraded. The sensitized community will come forward and participate in the sustainable management of peat lands.
- 2. Since there are several canals have been already constructed by the company for draining out peat lands, it would be worthwhile to construct simple to moderate canal blocking system in order to restore and revise the peat hydrology. This should be done through very strong imposition of regulations especially on those private companies who for say comply the water level, but take up the advantage of weak policy enforcement and actually draining out the water.
- 3. Establishment of local authority at the district level chaired by Bhupati for the management of peat lands is important. This authority should be provided technical input by a committee, chaired by the central secretary and member secretary of the committee shall be nominated by the Bhupati. Committee would get members from private sectors, local community, forest department, and other line departments. This committee may constitute a task force to monitor the progress made by the policy implementation. This may be done through identification of site specific indicators, gathering temporal data, and compared it with the norms/ standards set in the policy. This body will be responsible for carry out research, if required, for the identification of the suitable species, which is good for the sustainable peat lands and economic development. Further this committee would suggest alternate livelihood opportunities for the local community, so as to reduce pressure on peat lands.
- 4. To control the fire, fire danger rating system of ASEAN country should be used and all the data and information be transformed to the respective/ related community groups, who are already trained to fight the fire. In this regard the government should strictly impose fine on the private company whenever they fail to protect land from fire; this should be done by the third party audit/ surveillance.
- 5. Department should also go for efficient implementation of forest certification for palm oil, timber estate and concessionary forest management units. This will help the department to implement the policy and sustainable management of peat lands.

The policy brief makes general recommendation for the sustainable peat lands and they are; Conserve undrained peat lands; Restore over drained, fire prone degraded peat lands; Adapt management of peat lands by transferring good practices as suggested above.

#### References

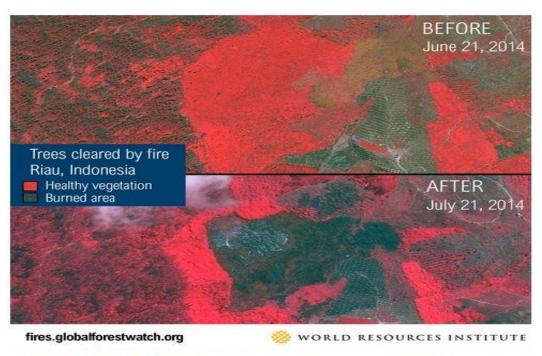
- Anonymous, 2014. Informasi Kebakaran Hutan dan Lahan. Direktorat Pengendalian Kebakaran Hutan, 2014.
- E. Maltby, P. Immirzi, 1993. Carbon dynamics in peat lands and other wetland soils regional and global perspectives. Chemosphere Volume 27, Issue 6, September 1993, Pages 999–1023.
- Iwan Tri Cahyo Wibisono, Tilmann Silber, Irwansyah Reza Lubis, Dipa Satriadi Rais, Nyoman Suryadiputra, Marcel Silvius, Susanna Tol and Hans Joosten, 2011. "Peat lands in Indonesia's National REDD+ Strategy". Responding to the Public Consultation of the draft National REDD+ Strategy of Indonesia issued on August 18, 2011. Wetlands International Indonesia, Wetlands International Headquarters, 2011.
- Susan E., Florian Siegert, John O. Rieley, Hans-Dieter, V Boehm, Adi Jaya & Suwido Limin, 2002. The amount of carbon released from peat and forest fires in Indonesia during 1997. Nature, International weekly journal of science, 2002.
- Sustainable management of peat lands in south-east Asia Portal, visited on 28. 3. 2015. (http://www.peat-portal.net/index.cfm?&menuid=42)
- Wahyunto, Heryanto, B., Bekti H. & Widiastuti, F. 2006. Peta-Peta Sebaran Lahan Gambut, Luas dan Kandungan Karbon di Papua, 2000–2001 [Maps of Peatland Distribution, Area and Carbon Content in Papua, 2000–2001]. Bogor, Indonesia, Wetlands International Indonesia Programme & Wildlife Habitat Canada (WHC).
- Wahyunto, Heryanto, B., Bekti H. & Widiastuti, F. 2006. Peta-Peta Sebaran Lahan Gambut, Luas dan Kandungan Karbon di Papua, 2000–2001 [Maps of Peatland Distribution, Area and Carbon Content in Papua, 2000–2001]. Bogor, Indonesia, Wetlands International Indonesia Programme & Wildlife Habitat Canada (WHC).
- Website visited on 28.3.2015. <a href="http://www.wetlands.org/Portals/0/publications/Presentations/04-Peters\_Peatl\_initiatives\_Ramsar\_COP11.pdf">http://www.wetlands.org/Portals/0/publications/Presentations/04-Peters\_Peatl\_initiatives\_Ramsar\_COP11.pdf</a>
- World Bank, 2014. Hard Choices, Indonesia Economic Quarterly, July 2014.

## **COMMUNITY BASED FOREST FIRE MANAGEMENT (CBFiM)**

Global FRA 2010 indicated that uncontrolled forest fires in South East Asia (SEA) affect 18.6 million hectare of land that has serious consequence especially on the degradation of forest, ecological changes, deterioration of social and economic condition in some land use system. Forest conversion for agriculture by migrants and local people using fires has also been attributed to poverty and hunger. Therefore, any analysis of forest fires needs to take into account the underlying causes of forest destruction. Prevention of uncontrolled fires cannot succeed without adequate attention to these issues. In order effectively to address these issues, emphasis should be given to the participatory/community-based fire management approaches and improve institutional and technological capabilities at all levels.

#### **Status of Forest Fire in SEA**

The SEA region has diverse ecosystem, socio economic and cultural settings, and vegetation type resulting from a wide range of land use system and climatic conditions, consequently having diverse fire regimes and vulnerabilities. Fires are common in most deciduous (or seasonal) forests in SEA and the so-called 'fire climax' pine forests in Myanmar, Thailand, Lao PDR, Cambodia, Vietnam, Philippines (Luzon) and Indonesia (Sumatra) (Goldammer, 1997). There is a lack of existing regional capability in fire research and management, including monitoring, early warning and ecological and socio economic impact assessment and facilitating international cooperation in fire management. There in increasing interest in CBFiM and the need for institutional and technological capacity development at all levels.



Note: The image above is rendered in "false color", which displays healthy vegetation as pink. Image location: Lat: -0.12331 / Long: 101.5838.

#### Country information on forest fire status (FAO, 2006)

| Country | Status of forest fire | Fire management effort | Constraints |
|---------|-----------------------|------------------------|-------------|
|         |                       |                        |             |

| Cambodia    | By shifting<br>cultivation, land-<br>mine clearing,<br>grazing and NTFPs   | Forest Fire Control Unit-<br>established in 2000   | <ul> <li>Little to no support at institutional level</li> <li>Lack of technical expertise, training, and equipment</li> </ul>  |
|-------------|--|--|--|
| Indonesia   | <ul> <li>Largest country in fire mainly in Kalimantan and Sumatra</li> <li>In 2002, 35497 ha burned</li> </ul>     | <ul> <li>Central Government<br/>developed fire-fighting teams<br/>"Manggala Agni"(at provincial<br/>and district levels)</li> <li>Capacity building program by<br/>EU and JICA</li> </ul>                    | Cohesive, balanced, and capable fire management system not effective   |
| Lao PDR     | <ul> <li>About 100 000 ha are burned annually</li> <li>90% of fires originate from shifting cultivation</li> </ul> | <ul> <li>Agriculture and Forestry         officers assigned for fire         management activities at         provincial and district levels.</li> <li>Few donor projects-CESV,         NGO focus</li> </ul> | Forest fires are not regarded as a major threat  |
| Myanmar     | Global FRA 2005     estimate in 1985     indicated 6.5m.ha     were burned   | Public awareness campaigns in<br>dry season through various<br>media   | • Shifting-cultivation ( <i>Taungya</i> ) responsible for causing fires  |
| Philippines | Shifting agriculture, fires removes 3mha/year  | Collaborative fire suppression   | <ul> <li>Community         involvement is difficult</li> <li>Burning to induce         forage in pastures, and         debris burning in         agricultural plots</li> </ul> |
| Viet Nam    | • 50000 ha/year and up to 100000 ha/year (Pham, 1999).   | <ul> <li>Central Fire Protection         Committee at both provincial and district levels.     </li> <li>Forest Working Group at village level</li> </ul>  | Weak technical capacity  |

#### Box-1: ASEAN Agreement on Transboundary Haze Pollution (FAO, 2006)

A significant policy development over the period 2000-2004 is the ASEAN Agreement on Transboundary Haze Pollution, which was signed by all ASEAN Member countries in June 2002 and entered into force on 25 November 2003. This signifies the culmination of concerted and intensive regional efforts over the years to address trans boundary haze pollution since the 1994 and 1997-98 severe haze episodes. This agreement is the first legally-binding ASEAN regional environmental accord to have entered into force, although it is noted that not all ASEAN Member countries have yet ratified the agreement and until this occurs, questions about its potential effectiveness will arise.

#### **Underlying Causes of Forest Fire in SEA**

Fire management practices depend on the historical or natural fire regime of the ecosystem, current condition of the forest, and the management objectives of the landowner. Any proactive fire management needs to adopt integrated, inter-sectoral, multi-stakeholder, and holistic approaches. However, the situation varies markedly in different regions of the world. Following are some underlying causes of forest fire prevalent in the SEA.

- 1. Uncontrolled fire due to lack of awareness and capacity: It is estimated that 350 million hectares burn each year and up to 90 percent of wildland fires are caused by human activities. These are primarily through uncontrolled use of fire for clearing forest and woodland for agriculture, maintaining grasslands for livestock management, extraction of non-wood forest products, industrial development, resettlement, hunting, and arson (FAO, 2006). Use of fires to clear land for 'permanent' agriculture and settlements by local communities is widespread in SEA (Fehr, 1993; Malayang III, 2000; WWF, undated; Standing Office, NCFFPS, 2000). CBFiM related and focused training program to address the needs and circumstances of participants at national to local scales are not sufficiently available. Many indigenous communities, poor migrants, land speculators and forest estate companies, fire is one of the least expensive methods to clear forests and prepare land for permanent agriculture and other land uses.
- 2. Lack of policy and law: In many instances, most SEA countries do not have adequate and appropriate fire-related policies. In recent years, large-scale forest fires in SEA, particularly in Indonesia, have grabbed worldwide attention (Rowell and Moore, 2000). It is a complex issue for governments to endorse regulatory framework for forest fire for the effective planning and operational capacity in various ways.
- 3. Lack of information system and poor promotion of CBFiM: There is poor database information about the CBFiM, which is viable approach and solution to effective fire management.
- 4. Lack of sufficient funding to implement CBFiM: A lack of adequate funding for the equipment, capacity building is always a constraint in SEA for the effective and sustainable implementation of CBFiM.

#### The way forward

Rural communities of SEA are one way or another depend their livelihood on forests and most affected by uncontrolled fires. The governments only have to bear load of expenses more for the fire control. Therefore, CBFiM has been found a significant step forward in the past years and it has increasingly had positive impacts on the improved management of fire in the region. CBFiM is the simplest and least expensive tool indeed therefore; following are the specific policy options for the fire management in SEA region.

- Research and Development: There is a very strong need for fundamental analyses of fire situations
  on an ongoing basis, not only when disaster strikes. It is necessary to conduct national fire and fire
  management assessments in order to formulate legal frameworks and strategies. Proper infrastructure
  like good network of forest road should be developed in forest areas where forest fire is supposed to
  occur in SEA.
- **2. Equipment and Capacity Building**: The development of fire control field crews who are fitted with standardized levels of manual and mechanized equipment is required. In each community, crew size vary between 5 to 20 people and have designated leaders and specialist people capable of operating and repairing fire-fighting equipment is needed. Equipment and resources available in the region comprise a range of locally developed and imported technologies should be managed.
- 3. **Management Information System**: The routine collection of baseline fire information from community that is relevant to a local, provincial or national level are essential to make sound fire management decisions. Effort needs to be directed towards such a program within each country to collect baseline fire-related data. This level of understanding will assist in identifying fire

- management needs and suitable program of management appropriately targeted and scaled to circumstance.
- 4. **Institutional Setup and Regional Efforts**: Establish a regional South Asian Fire Monitoring Center, which in future many also serve as a regional cooperation centre for wildfire disaster response. As the CBFiM has emerged as a new and increasingly adaptive mechanism for working with and managing fire in the region, the future of CBFiM and the benefits it can derive for communities will only be ensured if further multi-stakeholder participation and coordinated efforts at international, regional, national and local level efforts continue its development. Therefore, CBFiM as a practical and suitable form of fire management in the region will increasingly enhances the overall fire management outcomes.

#### REFERENCES

- FAO (2006). Global Forest Resources Assessment 2005 Report on fires in the South East Asian Region. Fire Management Working Paper 10. www.fao.org/forestry/site/fire-alerts/en.
- Goldammer, J.G. (1997). Overview of fire and some management issues and options in tropical vegetation. In Transboundary pollution and sustainability of tropical forests: Towards wise forest fire management. Proceedings of the AIFM International Conference. Edited by Haron Abdul Hassan, Dahlan Taha. Mohammad Puat Dahalan, and Amran Mahmud. AESAN Institute of Forest Management, Ampang Press, Kuala Lumpur
- Rao, S. 2001. Forest fire management in Cambodia and its Prevention Remedies. In: Community-Based Fire Management Regional Workshop (D. Ganz, P. Moore, and B. Shields, eds.), 6-8 December 2000. Regional Community Forestry Training Center, Bangkok, Thailand.
- Rowell, A. and Moore, P.F. (2000). Global review of forest fires. WWF and IUCN, Gland, Switzerland.