



## **Regional Workshop on Sharing Traditional Forest-related Knowledge for Ecosystem Services in ASEAN Countries**

**24–26 March 2014  
Kuala Lumpur, Malaysia**

### **Introduction**

Currently, about half of the world population lives in urban area. Even though the proportion of world population living in the rural areas dwindles over the year, amidst world population increase many people will continue to live in the rural areas. Urban migration caused by rapid economic developments can affect the cultural and social binding of local community which forms and maintains traditional forest-related knowledge. In this fast changing environment, each community has been confronted with the world-wide common problem of global warming, as well as local level factor of human disturbances.

Most of, if not all, the ecosystem services, can be evaluated at local level. This evaluation process can provide a better understanding of the traditional forest-related knowledge, and facilitate establishing sound and long-term sustainable forest management policies and strategies.

Countries in the Asia Pacific region, especially in the sub-region of Southeast Asia, have very diverse types of forests, which have been providing various different types of ecosystem services. It is a challenge to understand and properly document the ecosystem services at local, regional and global levels.

The Asian Centre for Traditional Forest Knowledge (ACTFOK), currently hosted by Korea Forest Research Institute (KFRI) has suggested a questionnaire incorporating four criteria: subsistence (provisioning) services, environmental (regulating) services, cultural services and conservation (supporting) services, with 25 questions. This questionnaire, while designed for the Korean local communities, could also be used with modifications in other countries, to collect information and data for a better understanding of the traditional forest-related knowledge focusing on ecosystem services in these countries.

### **Workshop Objectives and Participation**

A workshop was convened in Kuala Lumpur, 24-26 March 2014, with the objective of sharing the experiences of KFRI researchers in documenting TFRK using this questionnaire with colleagues from other Asia countries. The programme of the workshop is as in Appendix 1.

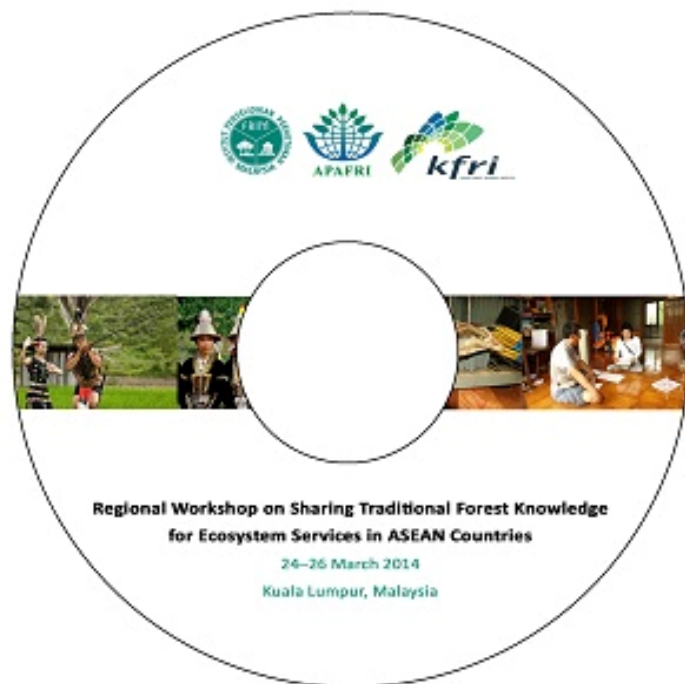


Since this questionnaire was discussed outside Korea for the first time, it was felt that a small group discussion would be effective. Hence, the workshop participation was limited to just researchers from Southeast Asia. A total of 15

participants from Korea, Indonesia, Malaysia, Philippines and Vietnam, participated in the three-day workshop (Appendix 2).

### Presentations and Discussions

There were a total of 10 presentations, two each from Korea, Indonesia, Malaysia, Philippines and Vietnam, on various aspects of TFRK. Colleagues from KFRI presented two case studies using the questionnaire. Dr Antonio Daño from the Philippines presented the only survey outside Korea using this questionnaire. The others presented case studies and research including documentation mainly on utilization of plants and other forest produce. Discussions which followed were mainly around the issues of documentation and utilizing TFRK to supplement modern conservation and management practices. All the presentations and the other documents have been compiled on to compact discs given to the participants, and also uploaded onto APAFRI website: [www.apafri.org](http://www.apafri.org).



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In the morning of the second day, Dr Park ChanRyul assisted by Dr Oh JeongHak, introduced the questionnaire, followed by discussions on modifying the questionnaire to suit the different countries. Dr Lim Hin Fui, FRIM, with his many years of experience working with the Orang Asli (Indigenous People) of Malaysia, led a brainstorming session to gather inputs which will be compiled for a revised questionnaire to be redrafted later. Dr Oh has taken notes during the discussions, and these have been summarized as in Appendix 3.

As a follow up to this workshop, the participants had expressed desires to conduct surveys back in

their countries using the revised questionnaires. APAFRI would propose to KFRI and request allocation for such study. The findings of these national surveys shall be reported in a workshop proposed to be held sometime in 2015.

### Field trip

The participants visited the FRIM Museum and Kepong Botanic Garden in the main campus of Forest Research Institute Malaysia (FRIM) in Kepong on the second day afternoon. Then, after a brief stop at a tourist spot – the Batu Caves, they continued traveling north and put up a night in Kampar.

The next day, the group visited a gaharu (agarwood, *Aquilaria spp.*) plantation near Gopeng town, before traveling to the Ulu Geroh Village, an *Orang Asli* (Indigenous People) settlement at the fringe of a natural forest. Discussions were held at the village multipurpose hall with a few of the village elders. These elders mentioned about various changes happened over the years,



brought along by increasing logging activities and economic developments in nearby areas. With this place becoming popular for nature lovers and more adventurous tourists, a number of the youngsters in the village had been trained and earned steady incomes as tour guides. After the discussions, the group trekked into the forest for more than an hour to find the huge flower – *Rafflesia*.



## PROGRAMME

Day 1	24 March 2014	Remarks
09:00	Introduction KFR I: Opening remarks FRIM/APAFRI: Welcoming remarks	
09:30	Participants Introduction	
10:00	Group Photo & Coffee Break	
10:30	Brief History and Future Direction of ACTFOK for Traditional Forest Knowledge in Asia	KFR I
11:00	Introduction about the Workshop	APAFRI
11:30	Case Studies of Ecosystem Service in Korea: Gotjawal (Lava forests) - <i>Park ChanRyul</i>  Case Studies of Ecosystem Service in Korea: Mt. Gariwangsan - <i>Kim Jiwon</i>	Moderator: Lim HF
12:30	Lunch	
14:00	Case Studies in Indonesia: Agroforest-biodiversity Conservation Kampong - <i>Ervizal Amzu</i>  Case Studies in Indonesia: Local Knowledge of East Sumba People - <i>Zuraida</i>	Moderator: Park CR
15:00	Case Studies in Malaysia: Useful Wild Plants of the Natives in Sabah - <i>Julius Kulip</i>  Case Studies in Malaysia: Documenting Traditional Forest-related Knowledge of Medicinal Plants - <i>Lim HinFui</i>	Moderator: Antonio Daño
16:00	Coffee Break	
16:30	Case Studies in the Philippines: Assessment of Environmental services of a Natural and Man-made Forest - <i>Antonio Daño</i>  Case Studies in the Philippines: Enhancing Adaptive Capacity of Indigenous People - <i>Arsenio Ella</i>	Moderator: Sim HC
17:30	Case Studies in Vietnam: Village Convention in Forest Protection and Management - <i>Bui Trong Thuy</i>  Case Studies in Vietnam: Assessing Climate Change - <i>Nguyen Kim Loi</i>	Moderator: Sim HC
19:30	Dinner	
Day 2	25 March 2014	
09:00	Introduction about the Survey/Questionnaire	KFR I
09:30	Discussion on Provisioning and Regulating Services	Participants
10:30	Coffee Break	
11:00	Discussion on Cultural and Conservation (supporting)	Participants
12:00	Comparison of Ecosystem Service of ASEAN Countries	KFR I
12:30	Concluding Remarks on the Workshop	KFR I
13:00	Lunch	
14:30	Short Tour in FRIM	FRIM
19:30	Dinner	
Day 3	26 March 2014	
08:30	Field Trip	
18:30	Back to Hotel	

## FIELD TRIP

25 March 2014	
14.30	Short tour in FRIM
16.00	Visit Batu Caves
17.00	Depart for Kampar, Perak (approximately 3 hours)
20.30	Arrive at Grand Kampar Hotel, Kampar.
26 March 2014	
08.00	Checkout and depart for Gopeng, Perak
09.00	Arrive at Gaharu Tea Valley
10.00	Depart for Ulu Geroh Village ( <i>Orang Asli</i> settlement)
10.30	Arrive at the village
	Discussion with villagers
11.30	Forest trip
13.30	Back to Kuala Lumpur

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## Proposed Enhancements to Questionnaire – Outputs from Brainstorming

During the morning of the second day, Dr Park ChanRyul, assisted by Dr Oh JeongHak, moderated a session to revisit the questionnaire drafted by KFRI. The exercise is to gather inputs from the participants to further improve the questionnaire to suit the different cultures and practices in different countries.

Dr Lim Hin Fui from FRIM, with his many years of experiences working with the Orang Asli (indigenous people) in Malaysia, kick-started the series of discussions to add more elements to the questionnaires. From the notes taken by Dr Oh JeongHak, ecosystem services could be grouped under a total of 40 items, which can be subdivided into 18 Provisioning items, 10 Regulating items, 6 Cultural items, and 6 Supporting items. An additional item related to threats from establishments of plantation affecting Supporting Services was added later.

In Provision Services, the participants expressed diverse viewpoints, so Provisioning Services were primarily divided into four sub categories: Fuel, Food, Materials and Water. Provisioning Services of water can be confused with Regulating Services supplying clean water. However payments for ecosystem services (PES) studies related to water resources have recently been conducted in some countries, thus consistent and sustainable supply of water could also be included as Provisioning Services.

In Regulating Services, participants agreed with the definition of regulating as enhancing, lessening and reducing. Among the 10 items, pollination and seed dispersal might be viewed as the importance of ecosystem component to regulating the relationship between flower and pollinator, and seeds and vectors.

In Cultural Services, six items have a context of sites, so it may be easily mapped on a map. Same positions, however, could be temporally changed with industrialization and urbanization. So, researchers can view the study areas with the viewpoint of *The Period of Place*. For example, peoples can use a place as educational site, although that place had been an historic site with a dolmen from the Bronze Age, which are now disappeared without any trace.

In Supporting Services, among the six items which had been discussed, home for IPs can be confused with the Provisioning Services item: timber for house. Indigenous people regarded forests and nature as one, and they live in harmony with the forests. All ecosystem services components are vital to their wellbeing.

### Ecosystem Services Components

#### 1. *Provisioning Services*

##### 1.1. Fuel

- 1.1.1. Firewood
- 1.1.2. Animal droppings
- 1.1.3. Charcoal

##### 1.2. Food

- 1.2.1. Edible green
- 1.2.2. Mushrooms
- 1.2.3. Livestock
- 1.2.4. Hunting (Bushmeat)
- 1.2.5. Medicinal plants
- 1.2.6. Honey
- 1.2.7. Resin
- 1.2.8. Acorns, fruits
- 1.2.9. Others: bird nest

##### 1.3. Materials

- 1.3.1. Building materials
- 1.3.2. Farming implements

- 1.3.3. Handicraft materials
- 1.3.4. Ship/boat building materials
- 1.3.5. Others: coffin materials
- 1.4. Waters
  - 1.4.1. Water quantity and quality (PES)
- 2. *Regulating Services*
  - 2.1 Supply clean water (quality and quantity): hold and clean raindrops
  - 2.2 Block cold wind
  - 2.3 Lessen damage from typhoon
  - 2.4 Lessen damage from flood
  - 2.5 Lessen damage from soil erosion
  - 2.6 Reduce pest and disease: pest & disease control services
  - 2.7 Pollination and seed dispersal services
  - 2.8 Supply fresh air: Air purification
  - 2.9 Carbon sequestration: waste detoxification
  - 2.10 Regulation climate change: microclimate???
- 3. *Cultural Services (Sites)*
  - 3.1 Burial ground
  - 3.2 Religious sites
  - 3.3 Cultural sites
  - 3.4 Educational sites
  - 3.5 Landscape aesthetics
  - 3.6 Healing and wellness sites: hot springs, nature trails, campsites, etc....
- 4. *Supporting Services*
  - 4.1 Good soil condition
  - 4.2 Good nutrition cycling
  - 4.3 Primary production: grassland, grazing lands,.....
  - 4.4 Safe and conducive habitat for wildlife
  - 4.5 Ease movement of wildlife: land connectivity, wildlife corridor,....
  - 4.6 Homes for IPs
  - 4.7 Threats from introduced species: invasive species, mono-species plantations,.....

### **Timeline of changes**

Changes happened over the years, so it would be more meaningful if the survey could gather information over specific periods of time.

The questionnaire originally developed for the surveys in Korea, requires respondents to answer the questions over three different time periods: before 1945, 1945–1970 or 1988, and after 1970 or 1988. These time periods represented the three very distinct development stages in Korea. Korea has initiated nationwide forest restoration around 1970, and government had prohibited using wood as fuel to protect forests against landslides and flooding. In 1988, Korea was host to the Olympic Games, and this had introduced rapid development and modernization in many rural villages, led to drastic changes in natural resources utilization.

For the other countries, the time periods would be different. After some intense discussions, the followings have been decided:

Philippines	Before 1980	1981~2000	2001~2020
Malaysia	Before 1960	1961~2000	2001~2020
Vietnam	Before 1967	1968~1985	1986~2020
Indonesia	Before 1980	1981~2000	2001~2020

More detailed discussions may be necessary to finalize the timeline of changes that each country should use to document the information appropriately. These would be included in the final version of the questionnaire for conducting the surveys in the participating countries later.

**Other matters**

There were also some discussions about the appropriate sampling procedures including sample size and sampling technique. These will be discussed later when preparing a proposal for carrying out the surveys.