

# REGIONAL PLANNING WORKSHOP TO SUPPORT THE IMPLEMENTATION OF THE GLOBAL PLAN OF ACTION FOR FOREST GENETIC RESOURCES

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17-19 September 2014, Kuala Lumpur, Malaysia

## Workshop Report



RESEARCH  
PROGRAM ON  
Forests, Trees and  
Agroforestry

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## BACKGROUND

The *Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Genetic Resources*, based on the findings of *The State of World's Forest Genetic Resources* (SoW-FGR, 2014), was adopted by the FAO Conference at its 38th session in June 2013. The Global Plan of Action was informed by the 86 Country Reports and the results of the Regional Synthesis Workshops.

The Global Plan of Action has 27 Strategic Priorities, grouped into four areas: (1) improving the availability of, and access to, information on FGR, (2) conservation of FGR (*in situ* and *ex situ*), (3) sustainable use, development and management of FGR, and (4) policies, institutions and capacity-building. The Strategic Priorities for Action constitute a comprehensive global programme of work, that can assist countries to integrate FGR conservation and management needs into wider policies, programmes and frameworks of action from local to national, regional and global levels, as a basis for developing sound technical and scientific programmes for the successful management of FGR. Implementation of the Global Plan of Action will strengthen the sustainability of FGR while contributing towards the Millennium Development Goals, the post-2015 agenda and the Aichi Biodiversity Targets.

The Regional Planning Workshop to Support The Implementation of The Global Plan of Action for Forest Genetic Resources was held in Kuala Lumpur, Malaysia from 17 - 19 September. The workshop was attended by 11 National Coordinators and Focal Points of The Asia Pacific Forest Genetic Resources Program (APFORGEN) and the State of The World's Forest Genetic Resources process. The workshop was jointly organized by Bioversity International, FAO and APAFRI with funding from the CGIAR Research Program on Forests, Trees and Agroforestry.

## WORKSHOP REPORT

### Day 1 - 17 September 2014

**Welcome remarks** by Dr Sim Heok Choh, Executive Secretary of APAFRI on behalf of Dato Dr. Abd. Latif Mohmod, Chairman of APAFRI and Director General of Forest Research Institute Malaysia (FRIM), followed by the **Opening remarks** by Judy Loo, Bioversity International.

### Session 1: Introduction and workshop objectives

#### ***The State of the World's Forest Genetic Resources and the Global Plan of Action for Forest Genetic Resources – Judy Loo, Bioversity International***

The genetic diversity of forest tree species is valuable to humanity and has to be conserved to ensure food security, adaptation to climate change and benefits derived from timber as well as non-timber forest products. The first State of the World's Forest Genetic Resources (SoW-FGR) Report, based on information gathered from 86 countries, presents key concepts and technologies related to FGR, analyses the current status of FGR conservation and management and provides policy recommendations. The Global Plan of Action for the Conservation, Sustainable Use and Development of Forest Resources (GPA FGR) is based on the main findings of the SoW-FGR Report and identifies 27 main strategic priorities for action which are divided into four priority areas: (1) improving the availability of and access to information; (2) *in situ* and *ex situ* conservation of FGR; (3) sustainable use, development and management of FGR; (4) policies, institutions and capacity building. The GPA FGR provides a framework that considers from the regional to international level the urgent conservation needs and challenges of FGR. Regional networks can have an important role in the implementation of GPA FGR. FAO recommends that the countries develop Country Action Plans for implementing the GPA FGR and establish links to National Biodiversity Strategies and Action Plans (NBSAP).

#### ***Workshop objectives***

Riina Jalonen of Bioversity International introduced the objectives of the workshop:

- To identify regional priorities for the implementation of the Global Plan of Action in Asia.
- To establish Working Groups for at least two strategic priorities or priority areas, and develop related work plans.
- To develop a joint statement for mobilizing support at national, regional and international levels for the implementation of the GPA in the region.

#### ***Expectations***

Participants were asked to note down their expectations for the workshop which was posted on the wall (Figure 1 and Annex 1).

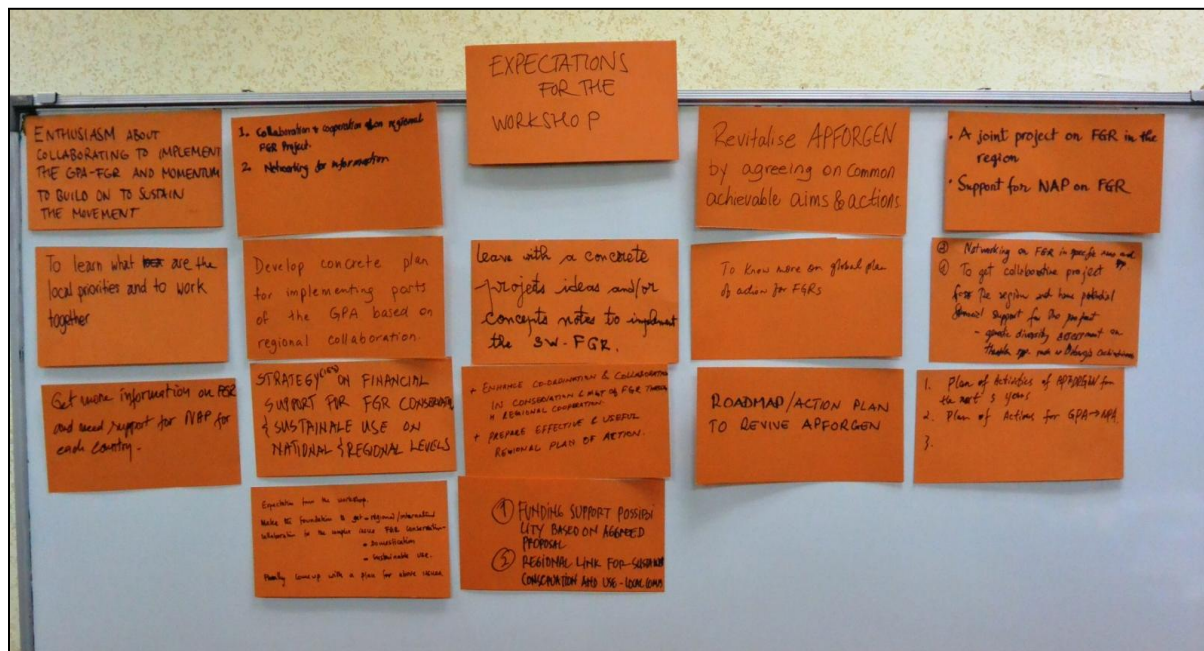


Figure 1. Expectations for the workshop.

## Session 2: Enhancing regional networking and collaboration

### Results of the pre-workshop survey – Riina Jalonen, Bioversity International

The purpose of the survey was to obtain preliminary information about the importance of the different strategic priorities of the *Global Plan of Action for Forest Genetic Resources* for South, Southeast and East Asian countries. It also offered the workshop participants an opportunity to flag specific interests for collaborations and to share information about successes and good practices regarding FGR conservation and management. Strategic Priorities that were considered very important by most countries were

- 18: Develop national strategies for *in situ* and *ex situ* conservation of FGR and their sustainable use.
- 21: Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes
- 4: Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations
- 12: Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes
- 14: Support climate change adaptation and mitigation through proper management and use of FGR



- 16: Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR

The presentation also outlined reasons mentioned by the countries for prioritizing these Strategic Priorities, Priorities that received (surprisingly) few mentions, and linkages between the Priorities.

Discussion:

- Many of the Priorities are closely linked. Low vote count for some Priorities may not necessarily mean that these Priorities are not considered important by the countries, but rather that they were considered addressed through related, high-ranking Priorities.
- Survey results reflect the opinion of the National Coordinators and Focal points and may thus differ from the results of the SoW-FGR Process. It would be useful to compare the results to identify potential discrepancies. However, regional implementation of the GPA FGR relies heavily on the APFORGEN coordinators and it is important to recognize their interests and expertise for sustaining activities.

***Networking models in Asia – Zheng Yongqi, Chinese Academy of Forestry***

There are several examples of functional crop and tree-focused networks in Asia and the Pacific region which have managed to secure sustained funding from countries in the region after first obtaining a political recognition. Examples of such networks include EAPVPF (East Asia Plant Variety Protection Forum) and APFnet (Asia and Pacific Forest Network). EAPVPF was initiated by ASEAN and has its permanent Secretariat in Japan. Its activities include annual forum meeting, academic conferences, study tours and organizing working groups. The APFNet was initiated at the APEC summit to promote sustainable forest management in the Asian region and is hosted by China. Main activities include organizing trainings, workshops, study tours and sharing information. The financial resources of APFNet come from three sources: (1) The Chinese government, (2) Member countries organizing the events and (3) The participants to meetings and workshops who finance their own costs. Challenges for APFORGEN are to achieve political commitment and the involvement of high level government bodies. Topics for discussion at ASEAN or APEC must be proposed by member countries.

***Networking models: EUFORGEN – Jarkko Koskela, Bioversity International***

European Forest Genetic Resources Programme (EUFORGEN) was established in October 1994 as an implementation mechanism of Strasbourg Resolution S2 (Conservation of forest genetic resources) of the first Ministerial Conference on the Protection of Forests in Europe (MCPFE), held in France in 1990. The Programme also contributes to the implementation of other MCPFE commitments on forest genetic resources and relevant decisions of the Convention on Biological Diversity (CBD). Currently the network involves 25 member countries and 13 associated member countries. Agreements are implemented on voluntary basis. The mission of EUFORGEN is to promote the conservation and the sustainable use of forest genetic resources as an integral part of sustainable forest management in Europe. It also serves as a platform for pan-European collaboration in this area, bringing together scientists, managers, policy-makers and other stakeholders. Its mode of operation include a Ministerial Conference (every 4-5 years), expert meetings (1-2 per year) and workshops and Working Groups on a

needs basis. EUFORGEN is led by the National Coordinators who form a Steering Committee. The network's activities include working groups with specific tasks and deadlines, and the development of a database and portal of the European Information System on Forest Genetic Resources (EUFGRIS) with contribution from 36 countries. The planned budget for a period of 5 years is approximately USD 1.86 million, with contributions by countries depending on UN ranking.

Discussion:

- Efforts should be made to get endorsement for APFORGEN at ASEAN Ministerial Meetings.
- EUFORGEN has no guidelines concerning germplasm exchange but it can facilitate seed collection process.
- EUFORGEN has developed Technical Guidelines for the conservation of 33 tree species.

**Networking models: APAFRI – Dr Sim Heok Choh, APAFRI**

The Asia Pacific Association of Forestry Research Institutions (APAFRI) obtains funding through membership fees which start from 50-250 USD per annum, and through external contributions from agencies such as the Korean Government and FAO. APAFRI organizes and implements programmes and projects, disseminates information among members and mobilizes funding. APAFRI does not carry out any research on the ground. APAFRI as an association intends to cover all relevant forest related topics. This approach is different compared to networks which are usually established around some key objectives. Amongst other things, APAFRI has received funding from FAO for activities on forests' role in poverty alleviation and, more recently, from the Korean Government for forest restoration and documentation of traditional forest-related knowledge.

**Discussion: Revitalizing APFORGEN**

- What are possible ways forward to get more political support for APFORGEN? It often seems useful to have some political endorsement to get basic financial support from member countries, to help then apply for larger funding opportunities.
- APFORGEN could target having a discussion about the importance of FGR during the ASEAN Ministerial meetings that are held every year. Member countries need to propose including the issue in the agenda.
- ASEAN also has more than a hundred working groups. It could be proposed that APFORGEN was adopted as an ASEAN working group to address FGR conservation issues.
- Organize a side event during the next session of the Asia-Pacific Forestry Commission to raise awareness about FGR. It could also be proposed that the APFC requests APFORGEN to coordinate GPA FGR implementation.
- Other useful organizations to link with include the United Nations Forum on Forests (UNFF), the International Tropical Timber Organization (ITTO), the FAO Committee on Forestry (COFO), and the South Asian Association for Regional Cooperation (SAARC).
- APFORGEN can present to FAO several strategic priorities of the GPA FGR as regional priorities, which would help FAO to obtain funding from donor countries.

- EUFORGEN could possibly help to get support from European Union.
- Asian Development Bank and World Bank could be potential funders of FGR work in the region.
- Scientists from APFORGEN should reach out to governments in their home countries.
- Main issue is to conceptualize activities and demonstrate what could be achieved with funding. Need to prepare a leaflet of APFORGEN as well as a targeted focused message, to have a clear statement that is easily understandable by decision makers to get support.

### **Session 3: Examples of good practices and success in FGR conservation and sustainable use**

#### ***National FGR programmes (Strategic priority 18) – Zheng Yongqi, Chinese Academy of Forestry***

China's national FGR Model has three objectives: access and benefit sharing of FGR, breeding/ improvement and short term utilization. The main use of the platform is to connect FGR holders (e.g. resources, knowledge and technology) with FGR users. Another model is the forestry sector FGR programme in China which aims to develop a system for efficient use, conservation and management of FGR combining different approaches. It integrates conventional and biotechnology methods for efficient breeding. GIS is used for monitoring. A central challenge for implementation is improving the cooperation between ministries and local partners as well as the involvement of various sector agencies and stakeholders related to FGR. However, China lacks systematic education in FGR and there is a need for capacity building to increase awareness of FGR importance and address the needs in multiple sectors related to FGR. To follow up on the implementation of strategic priorities, China sends a delegate to attend FAO FGR meetings and is formulating a National Action Plan.

#### ***Information systems (Strategic priority 4) – Jarkko Koskela, Bioversity International***

EUFGIS provides geo-referenced data on genetic conservation units of forest trees in Europe. The EUFGIS as a model for information systems was developed through a project in 2007-2011. The GIS portal (<http://portal.eufgis.org>) is intended as permanent and will continue to be updated. Initially, the minimum requirements for dynamic conservation units were developed based on literature and national FGR programmes. EUFGIS database includes more than 300 species in about 4000 populations. The uses of EUFGIS are documentation and planning of FGR conservation at national level, international reporting, and assessment of FGR conservation. Further developments will include the maintenance of the portal, updating and adding data as well as linking the EUFGIS with other GIS databases (e.g. GD<sup>2</sup> by INRA).

#### ***Seed programmes (Strategic Priority 12) – Rekha Warriier, Indian Institute of Forest Genetics and Tree Breeding (Presentation via skype)***

The main consumption of wood in India is for fuel, timber and pulp for paper production. National demands are met by imports or by plantation or farm forestry. On-farm trials have shown that using genetically improved seeds can increase yield. Project partners, such as the



Institute of Forest Genetics and Tree Breeding (IFGTB) and the Forest Department, deliver improved seed to communities, smallholder farmers and village nurseries. Other activities include awareness raising, on-farm training, processing and storing of seed and community nurseries. To conserve forests and to meet the forest produce demands of the human population and the industry, productivity of trees outside forests should be increased, including in agroforestry and plantation forestry. Alternative techniques should be developed through an integrated application of modern genetics, breeding and biotechnological tools. Establishing model orchards to spread awareness on the need for genetically improved planting stock and capacity building programs for developing and managing seed and seedling production system is equally important.

Discussion:

- The programme has initially focused on exotic species because they are fast-growing. There are attempts to include other, native species as well.

**Restoration for climate change adaptation (Strategic priorities 13 & 14) – Riina Jalonen, Bioversity International**

There is political commitment and enormous potential of restoration to contribute to mitigation of and adaptation to climate change. However, information about the quality of restored forests and information about the actual success rates of restoring diverse and resilient systems is limited. Experience of restoration practitioners suggests that restoration efforts do not typically consider adaptation to climate change. Examples of good practices of FGR conservation taking into account climate change include modelling approaches and genetic studies for identifying appropriate origin of seed sources. Monitoring restoration success in Brazil revealed that planted populations have lower allelic diversity than natural forests, but that gene flow between planted and natural forests is increasing genetic diversity of seedlings in planted forests. Potential opportunities to achieve change and to promote restoration efforts include linking FGR with REDD+ programmes, raise awareness and strengthen capacities among restoration practitioners about seed collection guidelines and to evaluate opportunities for a certification system for restored forest. New global initiatives on forest restoration are being developed amongst other by FAO and the Korea Forest Service.

Discussion:

- Usefulness of genetic markers needs to be carefully considered as they provide information about neutral diversity but are not necessarily linked to adaptive traits. However, markers for adaptive traits do not exist yet. Common garden tests importantly complement molecular studies by providing information on the relationship between neutral genetic diversity and adaptive traits.

## Session 4: Marketplace for collaborations

**Conservation of *Shorea sp. in situ / ex situ* – Bambang Tri Hartono, FORDA, Indonesia**

Tengkawang or illipe Nut (*Shorea spp*) are species of important values to local communities in Indonesia. Seed is collected for oil production which poses problems for natural regeneration. Seven of 13 Tengkawang species have become rare. Kalimantan is the main area in Indonesia where *Shorea* can be found. Breeding programs have been established for some species. *Ex*

*situ* conservation can provide benefits for local people. A conservation approach consisting of establishment of provenance stands, plus tree selection and cloning is proposed, with a target of establishing provenance stands of 10-20 ha between countries in the region.

**Discussion:**

- National Focal Points from Malaysia and Thailand expressed an interest for cooperation for the conservation of *Shorea* spp .

***Ex situ conservation of Dalbergia cochinchinensis in Cambodia, Laos, Thailand and Vietnam – Ngyuen Hoang Nghia, Vietnam Academy of Forest Science***

*Dalbergia cochinchinensis* is a very important species for timber, seriously threatened and exploited in all countries within its natural distribution for its valuable timber. Not many trees are left surviving in natural forests. There is an urgent need to establish seed collection, from at least 3-5 provenances per country (Cambodia, Lao PDR, Myanmar, Thailand, Vietnam) and develop *ex situ* gene conservation for this species.

**Discussion:**

- National Focal Points strongly supported the proposal. In Indonesia *Dalbergia latifolia* is important species, and Nepal has two *Dalbergia* spp.
- If seed is collected, the material should be characterized for the use by the Global Timber Tracking Network.

***Phylogeographic Assesment in Chloroplast DNA of Dalbergia cochinchinensis Pierre in Thailand – Suchitra Changtragoon, Department of National Parks, Wildlife and Plant Conservation, Thailand***

Twelve populations of *Dalbergia cochinchinensis* were sampled in six phylogeographic areas in Thailand and geographical specific haplotypes were identified. There is a need to conduct a regional phylogeographic and genetic diversity assessment in *Dalbergia cochinchinensis* and other *Dalbergia* spp. for each country in the ASEAN region; enhance the protection and *in situ* and *ex situ* conservation of the species through science-based management; and enhance the enforcement of CITES and national laws for the conservation of the species.

**Discussion:**

- A *Dalbergia* research network existed before and opportunities for collaborating with it or revitalizing it could be explored.
- Northern provenances of *D. cochinchinensis* have been planted in Southern Thailand. They grow well initially because of wetter environment but are often affected by windfall.

***Decentralized seed source management – Hemlal Aryal, Department of Forests, Nepal***

Knowledge of FGR is often limited to few research organizations and it is important to reach out to forest managers at different capacities. The objective of this proposal is to implement and further expand the tree seed zoning system to produce seeds for different planting zones. Seed collection is managed by local seed cooperatives. This approach creates a forum for the production and sale of quality seed, reaching out to forest managers, exploring market opportunities and taking FGR research into account.

Discussion:

- It is important to reach out to forest managers. They are in practice responsible for management of seed sources but lack relevant skills.
- Clonal seed orchards could possibly be used to speed up seed production.

**Training centre on FGR – Zheng Yongqi, Chinese Academy of Forestry, China**

There is a need to strengthen institutional capacities by establishing a National FGR Platform and a National Cooperative on FGR to focus on the development of technical standards, sharing of information and materials and coordinate the conservation and management of FGR. A centre for FGR studies focusing on studies of emerging issues such as Access and Benefit Sharing, Traditional Knowledge, national implementation of international conventions and other policy issues should also be established. Formalizing the Regional Training Centre would allow tapping into government funding.

**Session 5: Identification of Working Groups and synergies with other initiatives**

A sticker and card exercise was conducted to identify which of the Strategic Priorities of the GPA-FGR APFORGEN should start to implement first. The Focal Points were given 3 different coloured stickers to select their top 3 choices of the Strategic Priorities using a coding system according to the colour of the stickers (red=3, orange=2, yellow=1). They were also asked to consider the linkages between the different Strategic Priorities (Table 1).

**Synergies with existing programmes and activities – Judy Loo, Bioversity International**

FAO would like to see the GPA-FGR to be implemented through integration to other relevant programmes and activities where possible, for example the Forest and Landscape Restoration Mechanism, Forest Monitoring and Assessment, the Forest and Farm Facility and the FAO Country Programming Framework

Potential synergies with local programmes and initiatives that might be known to the participants should also be taken into consideration.

Discussion:

- The already ongoing programmes and initiatives at a global level should be tapped onto to make APFORGEN's work more successful.

**Table 1. Strategic Priorities of the Global Plan of Action on Forest Genetic Resources on which APFORGEN should first start working on, according to the workshop participants**

<p><b>4 votes:</b></p> <p><b>SP 18</b> - Develop national strategies for in situ and ex situ conservation of FGR and their sustainable use. (Weighted score 7)</p>	<p><b>3 votes:</b></p> <p><b>SP 4</b> - Promote the establishment and the reinforcement of FGR information systems (databases) to cover available scientific and traditional knowledge on uses, distribution, habitats, biology and genetic variation of species and species populations (Weighted score 7)</p> <p><b>SP13</b> - Promote restoration and rehabilitation of ecosystems using genetically appropriate material. (Weighted score 6)</p> <p><b>SP14</b> - Support climate change adaptation and mitigation through proper management and use of FGR (Weighted score 7)</p> <p><b>SP23</b> - Promote and apply mechanisms for germplasm exchange at regional level to support research and development activities, in agreement with international conventions. (Weighted score 5)</p> <p><b>SP25</b> - Encourage the establishment of network activities and support the development and reinforcement of international networking and information sharing on FGR research, management and conservation. (Weighted score 6)</p>	<p><b>2 votes:</b></p> <p><b>SP6</b> - Promote the establishment and development of efficient and sustainable <i>ex situ</i> conservation systems, including <i>in vivo</i> collections and genebanks. (Weighted score 6)</p> <p><b>SP21</b> - Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programmes. (Weighted score 6)</p> <p><b>SP27</b> - Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of FGR.</p>
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## Day 2 – 18 September 2014

The workshop participants agreed to establish three Working Groups to start the implementation of the GPA FGR on selected topics of regional importance:

1. Mobilizing political and financial support for GPA-FGR implementation and APFORGEN
2. Conservation strategies for regionally important and endangered species
3. Seed programmes to facilitate restoration, climate change adaptation and livelihoods

The Working Groups are described in Annex 3.

Participants worked most of the day in these groups, developing concept notes for the topics.

At the end of the day, there was a plenary discussion about developing a Call for Action for FGR conservation and sustainable use by APFORGEN. Participants agreed to develop a Regional Strategy to Support the implementation of the GPA FGR that could be used to mobilize political and financial support.

## Day 3 – 19 September 2014

### ***Global Timber Tracking Network – Marius Ekué, Bioversity International***

GTTN is an informal network of scientists that aims to develop technologies and policies to promote a world with sustainable and legal timber logging. A big challenge encountered by the network is that there is no clear definition what “illegal logging” actually is. Technology is needed to verify species and geographic origin of processed wood to tackle illegal logging. Non-DNA based methods include wood anatomy and chemistry, dog detection and stable isotope methods. DNA barcoding allows identification of wood to the species level. GTTN is establishing a database, developing standards for sampling and analyzing of wood samples and promotes networking to reach out to scientists, policy-makers and technology developers. GTTN will help improve the enforcement of forest laws (CITES, FLEGT and EU Timber Regulation, Lacey Act (US) and Australian timber legislation), support timber operators to secure supply-chains and support forest certification and sustainable use.

#### Discussion:

- DNA identification is quite expensive (approx. 200 Eur per sample) compared to anatomical identification (75 Eur per sample). A machine vision is currently being developed to identify species on the field based on wood anatomy.
- Cost of identification should be compared with the cost of revenue loss from illegal logging
- Databases need to be complemented with more samples to improve their usefulness and reliability
- APFORGEN’s Working Group on Species conservation should link up with GTTN

### ***Reporting back to the Plenary by the Working Groups***

#### **Working group 1: Mobilizing political and financial support for GPA-FGR implementation and APFORGEN**

Activities include developing communication strategy and materials, organizing side events at political and scientific meetings, developing a fundraising strategy, developing FGR project proposals and formalizing a regional training centre.

#### Discussion:

- All network members should provide inputs for the fundraising strategy

- Plan to develop booklets with examples of implementation models for the GPA-FGR Strategic priorities, translated to multiple languages
- Training centre could be established in the beginning as virtual. It is important to provide certificates of training. More training materials need to be developed.
- Assess the options for establishing a Steering Committee for APFORGEN. This would be important especially if membership is expanded to more countries

### **Working group 2: Conservation strategies for regionally important and endangered species**

The group will start developing project proposals in January 2015. Fundraising will be done throughout the year.

#### Discussion:

- Project ideas should be conveyed to CITES and ITTO who can help with fundraising because of their high influence on donors
- Need a contingency plan in case fundraising takes more time than planned.

### **Working group 3: Seed programmes to facilitate restoration, climate change adaptation and livelihoods**

Activities that will be carried out include assessing the current status of tree seed programmes, looking into their strengths and weaknesses, and identifying gaps in knowledge and capacity, in order to come up with recommendations and action plans for strengthening current seed programmes. Activities include reviewing the SoW-FGR country reports and National Programmes for background information, designing and conducting surveys on the status of tree seed and tree improvement programmes, and identifying relevant forestry meetings to raise awareness among stakeholders. Similar activities will be carried out for multi-purpose tree breeding. Expected outputs include the results of the surveys, a side event at the Asia Pacific Forestry Commission (Philippines, 2015 or 2016) and case studies and lessons learnt on tree planting and tree improvement.

#### Discussion:

- Important to build on the experiences of the Tree Seed Programmes of former DANIDA and to collaborate with ICRAF
- Sharing both failures and successes is necessary for learning
- Possible donors for forest restoration include car manufacturing, geothermal and mining companies

### **Work Plan**

A 12-month work plan was jointly developed by the participants (Annex 4).



## Annex 1

### Workshop Programme

#### ***Wednesday 17 September***

- 09:00 Workshop Opening
- Welcome remarks – Dato' Dr. Abd Latif Mohmod, APAFRI
  - Opening remarks – Judy Loo, Bioversity International
  - The State of the World's Forest Genetic Resources and the Global Plan of Action for Forest Genetic Resources – Judy Loo, Bioversity International
- 10:00 TEA BREAK
- 10:30 Results of the pre-workshop survey
- Discussion: Enhancing regional networking and collaboration for and through the implementation of the GPA-FGR
- 12:00 LUNCH
- 13:00 Examples of good practices and success in FGR conservation and sustainable use:
- Zheng Yongqi, Chinese Academy of Forestry, China
  - Jarkko Koskela, Bioversity International
  - Rekha Warriar, Institute of Forest Genetics and Tree Breeding, India
  - Riina Jalonen, Bioversity International
- 14:30 Marketplace for collaborations
- Bambang Tri Hartono, Forest Research Development Agency, Indonesia
  - Ngyuen Hoang Nghia, Vietnamese Academy of Forest Sciences
  - Suchitra Changtragoon, Department of National Park, Wildlife and Plant Conservation, Thailand
  - Hemlal Aryal, Department of Forests, Nepal
  - Zheng Yongqi, Chinese Academy of Forestry, China
- 15:30 TEA BREAK
- 16:00 Identification of priority topics for Working Groups for the implementation of the GPA-FGR to Synergies with other processes
- 17:30 Fundraising strategies and opportunities

**Thursday 18 September**

- 8:30 Identification of Working Groups (contd)  
Introduction to Working groups  
Key funding opportunities
- 10:30 Working groups meet  
(*TEA BREAK in groups at 10.30*)
- Objectives and short rationale
  - Synergies with other processes
  - Capacity strengthening aspects
  - Outputs
- 12.30 LUNCH
- 13.30 Reporting back and discussion
- 14:30 Working groups continued
- Activities and Workplan
  - (Main approaches)
  - Members – tentative roles and responsibilities
  - Partnerships
- 16.00 TEA BREAK
- 16.30 Discussion: Call for Action for the conservation and sustainable use of Asia's FGR  
to Discussion: Regional training centre on FGR
- 17:30

**Friday 19 September**

- 8:30 Global Timber Tracking Network – Marius Ekué, Bioversity International
- 9:00 Working groups:
- Funding
  - Co-funding
  - Fill any gaps
- 10:30 TEA BREAK
- 11:00 Reporting back and discussion  
Discussion: Finalizing the Call for Action  
Follow-up  
Closing
- 13:00 LUNCH

## Annex 2

### Expectations for the workshop

- To know more on the Global Plan of Action for FGR
- Networking for information
- Networking on FGR in specific areas and spp.
- To learn what are the local priorities and to work together
- Make the foundation to get regional/international collaboration for the complex issue of FGR conservation, domestication, sustainable use. Finally come up with a plan for the above issues
- Prepare effective and useful regional plan of action
- Develop concrete plan for implementing parts of the GPA based on regional collaboration
- Enhance co-ordination and collaboration in conservation and management of FGR through regional cooperation
- Enthusiasm about collaborating to implement the GPA-FGR and momentum to build on to sustain the movement
- Collaboration and cooperation on regional FGR project
- A joint project on FGR in the region
- To get collaborative project for the region and have potential financial support for the project (genetic diversity assessment of threatened spp. such as *Dalbergia cochinchinensis*)
- Regional link for sustainable conservation and use – local community
- Leave with a concrete projects ideas and/or concept notes to implement the SoW-FGR
- Funding support possibility based on agreed proposal
- Strategy(ies) on financial support for FGR conservation and sustainable use on national and regional level
- Get more information on FGR and need support for NAP [National Action Plan] for each country
- Support for NAP on FGR
- Plan of action for GPA -> NPA [National Plan of Action]
- Plan of activities for APFORGEN for the next 5 years
- Revitalize APFORGEN by agreeing on common achievable aims and actions
- Roadmap/action plan to revive APFORGEN

## Annex 3

### Working Group Descriptions

#### Working Group 1 – Mobilizing Political and Financial Support for the Implementation of the Global Plan of Action for Forest Genetic Resources in the Asia Pacific Region

##### Background

This Working Group was established by APFORGEN in a meeting of its National Coordinators in September 2014, to support the implementation of the Global Plan of Action on Forest Genetic Resources (GPA FGR) in the Asia Pacific region. The Global Plan of Action on Forest Genetic Resources is a strategic framework for the conservation and sustainable use of genetic resources of trees and other woody plants. It was based on the findings of the first-ever *State of the World's Forest Genetic Resources* report, published by FAO in June 2014.

##### Members

*Chair:* Zheng Yongqi, Chinese Academy of Forestry

*Vice Chairs:* Hemlal Aryal, Department of Forests, Nepal and Sim Heok Choh, Asia Pacific Association of Forestry Reserach Institutions (APAFRI)

##### Rationale

Although FGR in many Asian countries have been severely depleted, there is limited recognition about their ecological and societal importance, including for timber production and adaptation to and mitigation of climate change. Political and institutional support for conserving the resource base have not kept pace with the economic development in the region. Conservation and enhancing the sustainable use of FGR are restricted by inadequate funding and limited institutional and human capacities.

##### Targets

This Working Group has the following targets:

- Strategic priorities of the Global Plan of Action are recognized and supported by high-level policy makers and relevant international organizations and incorporated into relevant national and regional planning and implementation processes
- Funding secured for implementing the strategic priorities of the Global Plan of Action in the region
- Funding secured to sustain APFORGEN
- Regional Training Centre established for strengthening capacities in research, conservation and management of FGR in the Asia Pacific Region

##### Contribution to the implementation of the Global Plan of Action

The activities of this Working Group contribute, in particular, to the following Strategic Priorities of the Global Plan of Action on FGR:

- Establish and strengthen educational and research capacities on FGR to ensure adequate technical support to related development programs (Strategic Priority 21)

- Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of FGR (Strategic Priority 24)
- Promote public and international awareness of the roles and values of FGR (Strategic Priority 26)
- Strengthen efforts to mobilize the necessary resources, including financing, for the conservation, sustainable use and development of FGR (Strategic Priority 27)

## Working Group 2 – Conservation and Sustainable Use Strategies for Regionally Important and Endangered Tree Species

### Background

This Working Group was established by APFORGEN in a meeting of its National Coordinators in September 2014, to support the implementation of the Global Plan of Action on Forest Genetic Resources (GPA FGR) in the Asia Pacific region. The Global Plan of Action on Forest Genetic Resources is a strategic framework for the conservation and sustainable use of genetic resources of trees and other woody plants. It was based on the findings of the first-ever *State of the World's Forest Genetic Resources* report, published by FAO in June 2014.

### Members

*Chair:* Bambang Tri Hartono, Forest Research Development Agency, Indonesia

*Members:*

- Chann Sophal, Forestry and Wildlife Research Institute, Cambodia
- Zheng Yongqi, Chinese Academy of Forestry
- Lee Soon Leong, Forest Research Institute Malaysia
- Aung Zaw Moe, Forest Research Institute, Myanmar
- Hemlal Aryal, Department of Forests, Nepal
- KMA Bandara, Sri Lanka Forestry Institute
- Suchitra Changtragoon, Department of National Parks, Wildlife and Plant Conservation, Thailand
- Nguyen Hoang Nghia, Vietnam Academy of Forest Science
- Hong Lay Thong, Bioversity International
- Marius Ekue, Bioversity International

### Rationale

Tree genera of *Dalbergia* and *Shorea*, native to the Asia Pacific region, include many highly valuable tree species that are important for timber production. Some species such as *Shorea stenoptera*, *S. macrophylla* and *S. robusta* also serve as sources of non-timber forest products (resins and oil production from seed) and generate income for local communities. However, because of their high economic value, growing demand for timber and for agricultural land, these species are threatened by overexploitation, illegal logging and habitat conversion. *Dalbergia cochinchinensis* and *Shorea stenoptera*, among many other species in their genera, are classified as vulnerable or endangered on the IUCN Red List of Threatened Species. Their conservation status is further hampered by unsustainable seed collection practices, limited natural regeneration and limited interest to plant the species for plantations industry because of their slow growth. There is an urgent need for concerted efforts to conserve these species and their genetic diversity and to develop strategies for their sustainable use

across their distribution range, to contribute to local, national and regional economies. There are existing models for conserving and sustainably using the tree genetic resources through involving local communities and contributing to their livelihoods, and such models could be adapted to other species and countries in the region.

### **Targets**

This Working Group has the following targets:

- Genetic diversity and phylogeography of *Dalbergia* spp. and *Shorea* spp. assessed
- Germplasm of *Dalbergia cochinchinensis* and related species collected from each country within their distribution range to support their conservation *in situ* and *ex situ*, tree breeding and sustainable use in the region
- Regional species and provenance trials established for *Dalbergia* spp. and *Shorea* spp. for gene conservation and tree breeding purposes
- Regional networking and partnership related to conservation, management and sustainable use of common priority species enhanced (including but not restricted to *Dalbergia* spp. and *Shorea* spp.)

### **Contribution to the implementation of the Global Plan of Action**

The activities of this Working Group contribute, in particular, to the following Strategic Priorities of the Global Plan of Action on FGR:

- Establish and strengthen national FGR assessment, characterization and monitoring systems (Strategic Priority 1)
- Promote the establishment and development of efficient and sustainable *ex situ* conservation systems, including *in vivo* collections and genebanks (Strategic Priority 6)
- Develop and implement regional *in situ* conservation strategies and promote ecoregional networking and collaboration) (Strategic Priority 11)
- Reinforce regional and international cooperation to support education, knowledge dissemination, research, and conservation and sustainable management of FGR (Strategic Priority 24)

## **Working Group 3 – Strengthening Tree Seed Programmes to Facilitate Ecosystem Restoration, Support Local Livelihoods and Climate Change Adaptation and Mitigation**

### **Background**

This Working Group was established by APFORGEN in a meeting of its National Coordinators in September 2014, to support the implementation of the Global Plan of Action on Forest Genetic Resources (GPA FGR) in the Asia Pacific region. The Global Plan of Action on Forest Genetic Resources is a strategic framework for the conservation and sustainable use of genetic resources of trees and other woody plants. It was based on the findings of the first-ever *State of the World's Forest Genetic Resources* report, published by FAO in June 2014.



## Members

*Chair:* Enrique Tolentino Jr., University of Los Baños, Philippines

*Vice Chairs:* KMA Bandara, Sri Lanka Forestry Institute, and Rekha Warriar, Institute of Forest Genetics and Tree Breeding, India

*Members:*

- Chann Sophal, Forestry and Wildlife Research Institute, Cambodia
- Zheng Yongqi, Chinese Academy of Forestry
- Aung Zaw Moe, Forest Research Institute, Myanmar
- Hemlal Aryal, Department of Forests, Nepal
- Nguyen Hoang Nghia, Vietnam Academy of Forest Science
- Jarkko Koskela, Bioversity International
- Riina Jalonen, Bioversity International

## Rationale

Well-functioning supply systems for tree seed are crucial for forestry, agroforestry and forest and landscape restoration. Close to 5 million hectares were planted annually to trees between 2000 and 2010, according to the Global Forest Resources Assessment of FAO. Many countries in the Asia Pacific region have established large-scale national tree planting and restoration programmes with the aim of restoring and reforesting millions of hectares of land, such as the Great Green Wall of China, the Green Mission of India and the National Greening Programme of the Philippines. Such programmes require huge amounts of quality tree seed and seedlings, especially of native tree species which are preferred for ecosystem restoration. Using planting material of appropriate origin is also crucial for adaptation to climate change. However, there is widespread lack of awareness about the importance of quality seed as well as lack of quality seed sources. Lack of, or poorly enforced regulations on forest reproductive material have in many cases resulted in mass production of seedlings of unknown origin and quality, often with narrow genetic base, and in their uncontrolled transfer within and across national borders.

Discontinued government and donor support for national tree seed supply systems and the prevalence of tree farms by small-holders in the region justify the development of market- or demand-driven decentralized seed supply systems. Decentralized seed supply systems can both help meet the demand for seed and provide income for local communities, and there are already promising models in the region that could be tested and adapted in other countries.

Tree breeding for multiple purposes, including increased productivity of timber and other tree products and resistance to abiotic and biotic threats, can importantly contribute to provision of livelihoods, addressing land scarcity and adapting to climate change. Countries in the region can benefit from both collaborative breeding programmes for species of common interest and from sharing of expertise. Documenting and sharing past experiences, both successes and failures, in tree planting and breeding is important for strengthening capacities, improving practices and programme outcomes, and using resources efficiently.

## Targets

This Working Group has the following targets:

- Strengthened, demand-driven tree seed programmes for ecosystem restoration, plantation and agroforestry
- Strengthened multi-purpose tree breeding programmes in support of provision of ecosystem services, climate change adaptation and livelihoods
- Policy-level support in institutionalizing tree seed supply systems

### **Contribution to the implementation of the Global Plan of Action**

The activities of this Working Group contribute, in particular, to the following Strategic Priorities of the Global Plan of Action on FGR:

- Develop and reinforce national seed programmes to ensure the availability of genetically appropriate tree seeds in the quantities and of the (certified) quality needed for national plantation programmes (Strategic Priority 12)
- Promote restoration and rehabilitation of ecosystems using genetically appropriate material (Strategic Priority 13)
- Develop and reinforce research programmes on tree breeding, domestication and bioprospection in order to unlock the full potential of FGR (Strategic Priority 16)
- Promote the participation of indigenous and local communities in FGR management in the context of decentralization (Strategic Priority 22)

## Annex 4

## Work Plan (September 2014 – September 2015)

What	Who	When	Notes
Working Groups to finalize concept notes	<u>Chairs</u> to coordinate; group members	by 26 Sept 2014	- Sign up for other Working groups if interested
Share concept notes and invite additional members	group members, APAFRI	by 3 Oct 2014	
Make SoW-FGR Country reports available on APFORGEN's website	Country Focal Points for the SoW-FGR; APAFRI	send pdf to Ms Syuqiyah by 22 Sept 2014	
Plan for an APFC side event (Philippines, tentatively 2015)	<u>Enrique Tolentino</u> , Sim Heok-Choh, Judy Loo, WG representatives, Riina Jalonen	draft concept note by 10 Oct, comments by 15 Oct 2014	- For presentation at the Steering Committee meeting, 21 Oct - Plan content, search funding - National Coordinators to establish contacts with their country representatives -
Plan for a side event at the ITTO Council Meeting (Japan, 3-8 Nov 2014)	<u>Marius Ekué</u> , Suchitra Changtragoon, Bambang Tri Hartono, Judy Loo	draft by 3 Oct 2014	- Provide materials - The following Council meeting will take place in Malaysia in Nov 2015
Task Force on strengthening APFORGEN's modus operandi	<u>WG1</u> , Suchitra Changtragoon, Bandara Ariyatna, Enrique Tolentino, APAFRI, Bioversity (+ FAO-RAP)?	Convene by 10 Oct Share a draft by 15 Nov 2014	- Develop TOR, work plan for consultation - Consider expanding APFORGEN's membership (other countries, organizations) - Decision making structure - Funding model - Communications strategy

What	Who	When	Notes
Regional strategy to support GPA implementation	WGs; Bioversity to compile for comments, APAFRI, FAO	Start by 22 Sept 2014	<ul style="list-style-type: none"> <li>- Present to APFC</li> <li>- Find out about deadlines for background documents</li> <li>- Identify contacts with country representatives</li> </ul>
Develop key messages to convey the importance of FGR	<u>Judy Loo</u> , Suchitra Changtragoon, Hemlal Aryal, Zheng Yongqi	first ideas by lunch	
Explore establishing a Regional Training Centre on FGR	<u>Zheng Yongqi</u> , Judy Loo, Sim Heok Choh, Enrique Tolentino, Hemlal Aryal, Bambang TriHartono, Per Rudebjer (Bioversity), David Boshier (Bioversity), ICRAF	Convene in Jan 2015	<ul style="list-style-type: none"> <li>- Identify existing materials (including those by Forest and Landscape Denmark)</li> <li>- Conduct a needs assessment</li> <li>- Develop a concept</li> </ul>
Develop Concept note/research proposal	WG2	draft Jan-Feb 2015	<ul style="list-style-type: none"> <li>- Develop idea</li> <li>- Seek donors</li> <li>- Write proposal</li> </ul>
Surveys on seed programmess, tree breeding	WG3	survey ready by Dec-Jan, first results by Mar-Apr 2015	
Plan the next meeting of APFORGEN	APAFRI and Bioversity		<ul style="list-style-type: none"> <li>- Aim to meet again within a year</li> <li>- In conjunction with another meeting if feasible (APAFRO workshop or other)</li> <li>- APAFRI's next General Assembly will be held in Oct 2015</li> <li>- Develop a Calendar of events</li> </ul>
Monitor progress	Riina Jalonen	ongoing basis	

**Annex 5**

**Workshop evaluation –Summary of results**

Respondents: 10 (all country representatives)

**1. How did the workshop meet your expectations?**

1	2	3	4
not at all	met partially	met well	Exceeded

Mean of responses = 3.2 ± 0.4216

**2. What did you like the most?**

Responses:

- Presentations
- Market Place to sell ideas
- Group Work/Discussion
- Knowledge and information
- Exchange of ideas among participants
- Sharing of best practices and strategic issues
- Revival of APFORGEN to develop FGR activities

**3. What did you like the least?**

Responses:

- None (6)
- Too detailed discussions about specific issues
- Thinking about fund raising
- Limited time and place to work after workshop hours

**4. What is your opinion about the time allocation for the different activities?**

Responses:

*We could have spent more time on:*

- Discussion on strategic priorities/workshop objectives
- State of the World FGR and GPA for a better understanding
- Information sharing from other sources
- Complete the working group concept as a group
- Group work
- Workshop discussions

*We could have spent less time on:*

- Presentations on Day 1

**5. How did the logistics work?**

1	2	3	4
poorly	moderately well	well	excellently

Mean of responses =  $3.3 \pm 0.674$

**6. How would you rate your overall experience about the workshop?**

1	2	3	4
poor	moderate	good	excellent

Mean of responses =  $3.3 \pm 0.674$

**7. Comments, ideas, suggestions for improvement:**

Responses

- Have to be able to socialize our program to board stakeholders including policy makers
- More sources of information needed
- Some adjustments needs to made to housekeeping for future workshops in areas like ensuring the air conditioner are set in a comfortable temperature and having facilities for participants to work after the daily workshop hours.
- Excellent



## Annex 6

## List of Participants

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