

REGIONAL TRAINING CENTER ON FOREST GENETIC RESOURCES: PLANNING WORKSHOP

1-3 December, 2015, Binzhou City, Shandong Province, China

Workshop report



Table of Contents

Background _____ 1

Day 1

Opening session _____ 2

Concept of the training center and related national and international frameworks _____ 2

Target groups for training _____ 5

Types of training _____ 6

Day 2

Existing training materials and programmes _____ 7

Operational matters _____ 8

Budget and funding sources _____ 8

Steering committee _____ 10

Day 3 (Field trip) _____ 11

Annex 1: Workplan 2015-2016

Annex 2: Workshop programme

Annex 3: List of participants

Background

Forest genetic resources (FGR) are the heritable materials maintained within and among tree and other woody plant species that have current or potential economic, environmental, scientific or societal value. Genetic diversity enables tree species to resist abiotic and biotic threats and adapt to changing environments, and forms the basis for present and future selection and breeding programmes. It contributes food sources for humans and animals, including at times when annual crops fail.

Forest genetic resources in many Asian countries have been severely depleted, yet there is limited recognition about their ecological and societal importance. Political and institutional support for conserving the resource base have not kept pace with the economic development in the region. Conservation of FGR and enhancing their sustainable use are restricted by inadequate funding and limited institutional and human capacities.

As a follow up to the State of the World's Forest Genetic Resources process, member countries of the Asia Pacific Forest Genetic Resources Programme (APFORGEN) agreed in 2014 to strive towards establishing a Regional Training Centre on Forest Genetic Resources. This goal was included in APFORGEN's regional strategy for 2014-2016, the overarching aim of which is to support the implementation of the Global Plan of Action for Forest Genetic Resources in the Asia-Pacific region. The initiative is spearheaded by the Chinese Academy of Forestry which represents China in APFORGEN.

A workshop was held on 1-3 December 2015 in Binzhou City, China, to plan for the implementation of the Regional Training Center. The workshop had the following objectives:

- Develop the concept of the training centre – what, why, how, for whom
- Plan an assessment of training needs related to FGR
- Identify existing training materials that can be adopted or adapted for use at the training center

The workshop was jointly organized by the National Forest Genetic Resources Platform of China, the Chinese Academy of Forestry, APFORGEN, the Asia Pacific Association of Forestry Research Institutions (APAFRI) and Bioversity International. The workshop was hosted by China Happy Ecology, a private company working on tree breeding and ecological restoration that has expressed interest to fund regular training courses on forest genetic resources under the prospective training centre.

The workshop was attended by representatives of Chinese Academy of Forestry, University of the Philippines Los Baños, National Institute of Forest Sciences of the Republic of Korea (NIFoS), APAFRI, Food and Agriculture Organization of the United Nations (FAO), World Agroforestry Center (ICRAF) and Bioversity International.

Day 1

Opening session

Zheng Yongqi of the Chinese Academy of Forestry opened the workshop and introduced its objectives. This was followed by a presentation by **Zhang Hongxun**, President of the China Happy Ecology, on the company's work in forest and landscape restoration. China Happy Ecology produces improved planting material for restoring degraded lands affected by salinity and wind erosion, currently focusing on the Northwestern provinces of the country. In partnership with the Chinese Academy of Forestry, China Happy Ecology has released five new varieties of species including *Salix* spp., *Tamarix* spp. and *Pseudoacacia* spp., established 300 seed production stands and a tissue culture facility. The company has received numerous national and provincial awards for its achievements.

Concept of the training center and related national and international frameworks

Zheng Yongqi presented initial thinking behind the concept of the training center. The center will importantly support the implementation of the *Global Plan of Action on Forest Genetic Resources* (FAO 2013), allow sharing knowledge on common issues affecting FGR in the region and harmonizing interventions. Need for information on FGR is increasing as recognition of their role in achieving environmental and societal goals is growing. However, institutional and human capacities on conservation and management of FGR are poor, and there is a lack of a systematic approach to training on FGR. There are existing sources of training materials and experts as trainers that can be built on. China can offer facilities for classroom and field trainings on diverse topics, considering the diversity of the country's forest ecosystems and tree species.

Jarkko Koskela of FAO presented international frameworks for FGR conservation and management. These include the *Intergovernmental Technical Working Group on Forest Genetic Resources* (ITWG-FGR) under FAO; the *Extended Programme of Work on Forest Biodiversity* under the UN Convention on Biological Diversity (CBD) which was developed in 2002 and remains very relevant to date, as well as the UN Forest Instrument formally known as *Non-Legally Binding Instrument on All types of Forests*. The GPA-FGR was designed to help implement the CBD and other international commitments. Implementation strategy of the GPA-FGR has now been approved. FAO's own efforts focus mainly on implementing the international-level Strategic Priorities of the GPA-FGR.

Riina Jalonen of Bioversity International presented APFORGEN's efforts in strengthening capacities in the conservation and management of FGR in the region. APFORGEN, established in 2003, is a network of 14 Asian countries. From 2006 to 2010 APFORGEN implemented a regional project on *Strengthening National Capacity and Regional Collaboration for Sustainable Use of Forest Genetic Resources in Tropical Asia*, with funding from the International Tropical Timber Organization (ITTO). As part of the project, national consultative workshops were organized in seven countries to identify capacity strengthening needs. Countries also identified capacity needs by thematic areas in their Country reports and as part of a regional synthesis for the *State of the World's Forest Genetic Resources* report (SoW-FGR; FAO 2014). APFORGEN's strategy for supporting the implementation of the GPA-FGR includes three objectives that can potentially be used to prioritize capacity strengthening needs: (i) mobilizing political and financial support for implementing the GPA-FGR, (ii) developing conservation and sustainable use strategies for regionally important and threatened species, and (iii) strengthening tree seed programmes.

Judy Loo presented the Forest Genetic Resources Training Guide developed by Bioversity International. The training guide is designed for training of trainers. It enables teachers and trainers to cover FGR issues in their courses and improve understanding of how to manage diverse and complex forest and other tree based ecosystems sustainably. The training guide was developed for lecturers and students in tertiary education programmes on forestry, agriculture, environmental studies, and broader land management programmes; trainers and trainees in short courses (on-the-job training) on forest biodiversity and forest genetic resources; and forestry practitioners such as forest managers, certification organizations and NGOs. The guide is organized as modules each of which include case studies, teacher notes and audiovisual materials. The trainer can select topics and case studies that are of particular interest and relevance to students. The training guide is freely available at: <http://forest-genetic-resources-training-guide.bioversityinternational.org/>

Zheng Yongqi presented China's perspectives on FGR conservation and management. Training needs of government and industries are growing on FGR issues. Almost all provinces have their own forestry universities. Chinese Academy of Forestry has developed national guidelines and information management systems for FGR inventories which include survey of tree and shrub species in wild and cultivated populations and collection of samples for future genetic analyses. Inventories have started in each province. These represent a large investment by the central government. Chinese Academy of Forestry was also involved in providing training in each province before the surveys started. China has established a National Platform

on FGR as one of 23 cross-sectoral platforms in the country. Platforms were initiated in 2011, following recognition that research is not well connected to policy. The purpose of the platforms is to integrate scattered efforts across sectors. So far, the Platform on FGR has focused on issues of documentation, information management systems, standardization and developing mechanisms for access and benefit sharing. China has also established a National FGR cooperative (a government body to coordinate efforts and streamline approaches in FGR management) and National FGR bank (conservation stands). Dr Zheng was asked why Chinese government has got so interested on FGR. In his opinion it could be because the country has less natural forest remaining and there has been much focus on tree planting and need for improved varieties.

Shi Ling Ling of ICRAF presented restoration projects led by ICRAF which include restoration of minespoil areas and participation by local farmers. There is a germplasm bank for wild species in Kunming where ICRAF deposits samples from its research projects. Nursery studies have been conducted on 25 species and phenology studies on flowering and fruiting on 90 species.

Lee Seok-Woo of NIFOS presented Korea's efforts in FGR conservation and management. Meetings are organized twice a year between policy makers, industry representatives and other stakeholders to identify capacity needs related to FGR management. Several guidelines have been developed as a result, including on access and benefit sharing, domestic laws and policies on FGR, molecular analysis, FGR database management and collection and storage of forest tree seeds. However, decision-makers change frequently which poses problems for continuity. Therefore, Korea has decided to focus on training-of-trainers for longer-term impacts.

Enrique Tolentino jr. of University of the Philippines Los Banos presented on institutional and human capacity needs related to FGR in the Philippines. Conservation and management of FGR suffer from shifting emphasis in related policy making processes that results in discontinuity and hampers efforts in building capacities over longer time. There are no institutions in the country that would focus explicitly on FGR. The National Biodiversity Strategy and Action Plan has been updated but it lacks emphasis on FGR. Executive Ordinance 247 on bioprospecting limits exchange of FGR. There is lack of skilled staff and students at universities, and FGR issues are taught mainly as individual lectures as part of forestry courses on broader topics. Prof. Tolentino is starting a new project on sustainable use of *Falcataria* and *Gmelina* spp. that includes establishment of breeding populations, germplasm characterization and a training workshop on a national seed collection strategy. Exotics were selected as target species because of the priorities of the Department of Science and Technology, but it is hoped

that the Department will replicate the results on other species including natives. The training centre could develop models for public-private partnerships on FGR conservation and management.

Target groups for training

The regional training centre would serve participants from APFORGEN's member countries. However, it was agreed that participation should not be restricted much, and participants from other countries could also attend. Moreover, the country focus could be expanded over time. Only a limited number of people per country can be trained at the training centre, so target groups need to be selected carefully to best achieve impact. However, videotaping sessions and developing distance learning facilities could help expand the audience considerably. In China many universities already make use of distance learning.

The following audiences were identified as potential target groups for the training center:

Trainers (Training of trainers, ToT)

The FGR Training guide for trainers, developed by Bioversity International, is based on evaluation of training needs in Latin America; multiple trainings of practitioners did not result in notable increases in capacity because of frequent career progression or circulation among positions. These observations resulted in switching the training approach to training-of-trainers to achieve more lasting impacts. Target groups include professors and instructors, not necessarily on genetics but also on sustainable forest management more broadly.

Policy makers

Usefulness of training practitioners was questioned if policy makers do not understand the importance of FGR. Several examples of policy outreach within countries were mentioned:

- Chinese Academy approached government with an offer to train their officers which was accepted. In their experience, quicker and broader impacts can be reached if policy makers understand the value of FGR.
- “Forest Academy for Decision Makers” in Finland – importance of forestry is explained to decision makers in various sectors during short intensive courses
- In Philippines, policy-makers accept suggestions from researchers on improving legislation, but these need to be practical

To approach policy-makers, importance of FGR should be explained through large programmes or challenges in natural resource management – for example, the contribution of FGR to rural development, livelihoods, poverty reduction or local institution building. Such

approach also helps to explain the importance of FGR to prospective donors. However, policy makers should be involved also in more technical training to develop their understanding about the issues.

Researchers

Training researchers is easier than other groups because of their prior knowledge on FGR related topics, but there is need to harmonize training activities. Moreover, researchers could be trained in advising policy development and in advocacy on FGR.

Students

Environmental studies are currently a popular topic among youth which can benefit FGR

Industry

Training of business partners, for example those who buy tree seedlings. In China there is large demand for FGR from industry for selection and breeding of resistant varieties. However, some companies may have their own training units already, China Happy Ecology being an example of this.

The difference between providing theme-based training for various interest groups and focusing on training a single target group on diverse topics was recognized. Depending on target groups, training could also focus either on skills development or on awareness creation to motivate action. It was suggested to focus on training-of-trainers and policy makers to reduce the number of target groups.

Types of training

The following approaches were proposed:

- Theme-based training at different levels from local to national or regional, using different approaches for different groups. Trainings on specific topics for different audiences could also be combined, changing audience and approaches between days.
- Provide tailored courses on topical issues to help to quickly develop specific competence and help address the issues
- Targeted training based on specific country needs

It was agreed to conduct a needs assessment as the first step to help identify priority topics and approaches. The needs assessment would be conducted with the help of the APFORGEN National Coordinators. Questions would include

- Who are the most important target groups
- What are priority topics (based on strategic priorities of the Global Plan of Action on FGR)
- What approaches to training are preferred (length, approach, interest for distance learning, language)

It would be important to monitor effectiveness of training to help improve approaches and ensure impact. Monitoring results would also be of interest to policy makers and donors. Participants in trainings should ideally give an echo-lecture or seminar at their home institutions to share the learnings and increase impact. This should be required especially from those participants who receive full or partial funding support to attend trainings.

Day 2

Existing training materials and programmes

The following training materials were identified:

- FGR Training Guide: currently 5 modules, new case studies being added. Experiences from the use of the Training Guide have been positive, although at some instances participants felt the need for more background regarding genetics terms and concepts. The Training Guide is being translated into Chinese.
- In China, university teaching still lacks specific courses on FGR that are currently mainly taught as individual lectures during courses on broader topics.
- In Philippines, there are no locally produced or adapted teaching materials, although it would be important to contextualize lessons with local examples. Forest genetics is not a compulsory course and students are few. The importance of FGR to practice should be demonstrated to attract more students.
- In Korea, only few universities teach FGR related subjects

The following were mentioned as existing guidelines and good practices that could be built on in developing training materials:

- Series of technical standards for FGR conservation and management have been developed in China.
- European Forest Genetic Resources Programme (EUFORGEN) has developed Pan-European minimum requirements for gene conservation units

- Voluntary guidelines to support the integration of genetic diversity into national climate change adaptation planning (FAO). The guidelines include a component on forestry which was discussed by the ITWG-FGR and approved by the CGRFA.
- Guidelines for phytosanitary measures (FAO)
- Thematic studies for the State of the World's Forest Genetic Resources Report (FAO)
- Sustainable Forest Management Toolbox (FAO)
- Open Foris Inventory tools that can support FGR inventories (FAO)

Discussion:

- Research institutes in East Asian countries (Korea, China, Japan) are closely involved in training, but in Southeast Asia roles in research and training are typically separated
- Livestock breeding is more appropriate model for tree breeding than crop breeding, because of longer generation spans and issues of inbreeding depression. Short lifespan of projects is a challenge, even 5 years is short in terms of tree growth and reproduction

Operational matters

A training centre could be a physical unit, a virtual center or combination of both. Location depends on topics of the trainings. Typically, trainees want to visit different locations instead of returning to same place, so it would make sense to keep locations flexible. For example, if specific facilities are needed for certain topics, the training should be organized where facilities already exist rather than creating new facilities. The FGR Training guide can be used for class-room oriented training everywhere. At the same time, China Happy Ecology is interested in establishing a physical training unit in Binzhou area to focus activities and also to help attract government incentives.

Frequency and scope of trainings depends on funding and other practicalities. Each training could have 10-25 participants, 2-3 from each country.

Each training would have at least two trainers. It was decided to develop a roster of people who have interest and expertise to be trainers. Training needs assessment will provide information about what kind of expertise is required.

Training in English would probably not be accessible to all potential target groups, for example forest managers, depending on country.

Budget and funding sources

The following budget items were identified:

- Training needs assessment: translation and printing of surveys

- Facilities for training
 - Centre in Binzhou (provided by China Happy Ecology)
 - Field trainings, FGR conservation trials
 - Facilities for learning or practicing such as laboratories
- Developing training materials or adapting existing materials
- Translation of materials
- Outreach and advertising – including a side event at the Asia Pacific Forestry Week, 22-26 Feb 2016, Philippines
- Cost of trainings, including (i) travel and accommodation cost for trainees and trainers (full or partial), (ii) trainers' time, at least when they are not funded from other sources; may be up to 300 USD per day
- Equipment and communications for developing distance learning facility
- Monitoring and evaluation

It was decided to develop for further discussion an indicative budget for a three-day training with 25 participants (requiring either full, partial or no travel support, and those able to pay course fee).

Efforts are needed to obtain long-term funding from sources such as industries, countries and international organizations. Sustaining activities on project-based funding would be difficult.

The following resources and funding sources were identified:

- China Happy Ecology is committed to fund activities of the centre, but these need to be discussed case by case
- Human and other in-kind resources are readily available at CAF and the provincial academies of forestry, for example for translation services and organizing trainings.
- Some participants may be able to pay training fees, to help sponsor other participants. The centre should invest in marketing and promoting to attract paying participants.
- Government funding, but it is quite restrictive and need to follow complicated funding rules with many restrictions
- International cooperation programs, e.g. part of project funding from National Science Foundation of China can be used for international activities
- Within FAO budget there are some resources for technical collaboration projects, but these are mostly allocated to individual countries and initiated by country or regional offices. FAO has asked each country for inputs for the next biannual country programming frameworks by the end of 2015. Based on this information, FAO country offices would then develop projects, of up to 2-3 years and 200-500,000 USD. Priority topics need to be linked to broader development goals. Agricultural and natural

resource ministries decide which topics will be put forward so they need to be convinced about the needs. Jarkko will forward his travel report and the workshop report to the FAO representative in China to inform him about the Training Centre plans.

- Organizations such as INBAR or APFNet could fund short-term, one-time activities. However, process for acquiring funding may be complicated and use of funds subject to restrictions
- Approach other APFORGEN National Coordinators for additional ideas and in-country funding sources

Core funding available from China Happy Ecology should ideally be used to leverage additional funds. APAFRI has long-term expertise in handling workshop costs and cost sharing principles that can be made use of.

Steering committee

The following organizations were identified as members of the Steering committee:

- China Happy Ecology Ltd.
- Chinese Academy of Forestry (representative: Zheng Yongqi)
- Government of China
- APAFRI
- Forest Research and Development Authority (FORDA, Indonesia)
- University of the Philippines Los Banos (UPLB)
- APFORGEN (rotational representation; to be confirmed)
- Bioversity International (Judy Loo)
- ICRAF

Next steps will be to develop Terms of Reference, detailing tasks and frequency of meetings; and to identify Chair and Secretary of the Steering Committee.

Day 3 (Field trip)

Accompanied by the president of China Happy Ecology Industrial Ltd., the participants visited with great interest the company's Seed Micropropagation Center in the Yellow River Base (morning) and the Bohai Sea Base (afternoon) that has a salt-tolerant seedling nursery stock area.





Photos: China Happy Ecology Ltd.



Workshop participants. Photo: China Happy Ecology Ltd.

Annex 1: Workplan 2015-2016

What	When / Who	Notes
Needs assessment survey	<ul style="list-style-type: none"> *First draft: Week of <u>4 Jan</u> (Riina) *All workshop participants (and steering committee members) to provide input *identify respondents: APFORGEN, APAFRI, FAO *Launch at the APFW: Week of <u>22 Feb</u> 	<ul style="list-style-type: none"> - Process: first draft; comments; second draft; testing; finalize; identify respondents; circulate; analyse - Ask suggestions for respondents (all workshop participants, APFORGEN etc)
Assemble materials -	<ul style="list-style-type: none"> * Share presentations: <u>7 Dec</u> * Develop template and compile materials: <u>Mid Jan</u> (Judy) 	<ul style="list-style-type: none"> - List of materials, based on workshop presentations - Template for describing materials (language, GPA priorities) - Share through APFORGEN website - Translate materials
Develop a list of trainers	<ul style="list-style-type: none"> * Message to APFORGEN focal points (cv/resume-substance + teaching expertise): week of <u>7 Dec</u> (Riina) * Compile list (Riina) 	<ul style="list-style-type: none"> - Share through APAFRI - Ask at the same time for potential survey respondents
Establish Steering committee	<ul style="list-style-type: none"> * Draft TOR: <u>Mid-Jan</u> (Judy) * Feedback: <u>End Jan</u> (workshop participants) * Seek additional members * Established by 28 Feb 	<ul style="list-style-type: none"> - People who showed interest at APFORGEN workshop

What	When / Who	Notes
Indicative budget for individual training course	* Week of <u>7 Dec</u> (CAF, CHE)	<ul style="list-style-type: none"> - 25 students with different levels of support, 2 per country - Travel cost - Cost per day - > average estimate for 3 day/5 day course?
Budget for training centre	<ul style="list-style-type: none"> * <u>3 Dec</u>: (CAF, CHE) * Riina to share list of expenses listed 	<ul style="list-style-type: none"> - Approx cost for different types of participants (level of support) - Fee schedule for paying participants - Review based on training plan
Fundraising	<ul style="list-style-type: none"> * APFORGEN focal points to identify/contact relevant Ministry officials; ask if priorities have been finalised for FAO projects in country and whether FGR is included. Initial contact: by <u>mid-Dec</u> (APFORGEN focal points) * Donor identification, Concept note development (APFORGEN, Yongqi) 	<ul style="list-style-type: none"> - Based on training plan and budget - Other donors: APFnet
Communications and advertising	Steering Committee and CHE	<ul style="list-style-type: none"> - Getting it on the APFORGEN and APAFRI websites and other media
Training plan for 2016	<u>30 April</u> (Steering committee)	
1 st Steering committee meeting	Chair of steering committee	<ul style="list-style-type: none"> - Possibly IUFRO regional conference, China, Oct

What	When / Who	Notes
First training(s)	<u>September 2016</u> (CHE, Yongqi, Bioversity)	
Official launch	<u>October 2016</u> (Steering Committee)	During the IUFRO Regional Congress for Asia-Pacific and Oceania
Workshop documentation, presentations to website	<u>Mid-Jan</u> (Riina)	
Memorandum of Understanding (MOU) between Bioversity and CHE	<u>End of Feb</u> (Judy/Riina)	

Annex 2: Workshop programme

30 November: Arrivals

Pick-up from Beijing International Airport and drive to Binzhou in Shangdong Province.

18:00-20:00 Welcome dinner, CHE International Finance Center

Time	Activity	Presenter
30 November: Arrivals		
Pick-up from Beijing International Airport and drive to Binzhou in Shangdong Province		
18:00-20:00	Welcome dinner, CHE International Finance Center	
1 December, 2015 (Day 1): Workshop meetings		
7:30-9:00:	Breakfast	
9:00-9:15	Introduction to participants	Zheng Yongqi
9:15-10:00	Presentation: Exploring genetic resource for ecological improvement	Zhang Hongxun
10:00-10:15	Group photo and Coffee break	
10:15-11:10	Presentation: Concept of a regional FGR training center and its alignment with APFORGEN's strategy	Zheng Yongqi
	● Global perspective on FGR	Jarkko Koskela
	● Regional networks on FGR	Judy Loo
	● APFORGEN strategy for networking	Riina Jalonen
	● APAFRI rules in FGR	Sim Heok Choh
11:10-12:00	Discussion on the concept	Riina Jalonen
12:00-14:00	Lunch	
14:00-15:40	Assessment of regional training needs	Judy Loo
15:40-16:00	Coffee break	
16:00-17:00	Presentations: Existing training materials and programmes on forest genetic resources	Riina Jalonen
	● China: Chinese Academy of Forestry (CAF)	Zheng Yongqi
	● Philippines: University of the Philippines Los Banos	Ike Tolentino
	● APAFRI: Asia Pacific Association of Forestry Research Institutions	Sim Heok Choh

	● FAO	Jarkko Koskela
	● Bioversity International	Judy Loo
	● World Agroforestry Center	Shi Lingling
	Discussions on: Training needs, and development of complementary training materials	Riina Jalonen
17:00-18:00	Dinner	
2 December, 2015 (Day 2): Workshop meetings		
9:00-10:10:	Presentations: Operational matters of the training center	Judy Loo
10:10-10:30	● Trainers, trainees	Riina Jalonen
	● Supporting resources from China	Zheng Yongqi
	● Others supporting resources	Riina Jalonen
	Coffee break	
10:30-12:00	Discussion on operational matters	Judy Loo
12:00-14:00	Lunch	
14:00-15:30	General discussion: regularity, frequency, scale, time and venue of training activities; cooperation with other domestic and international initiatives	Riina Jalonen
15:30-15:50	Coffee break	
15:50-16:30	Work plan and summary	Riina Jalonen
16:50-17:00	Press conference & media interviews	Zhang Hongxun
18:00-20:00	Dinner	
3 December, 2015 (Day 3): Field visits		
9:00-11:00	Visit to forest restoration in Yellow River beach	Huang Ping
12:00-14:00	Lunch	
14:00-16:00	Visit to laboratory of tissue culture, collection of FGR, nurseries	Huang Ping
18:00-20:00	Dinner	
4 December, 2015 (Day 4): Departures		
7:30-9:00	Departures	Huang Ping

Annex 3: List of participants

Name	Sex	Organization	Position
1. Judy Loo	F	Bioersivity International, Rome	Theme leader, FGR
2. Jarkko Koskela	M	FAO, Rome	Forestry Officer
3. Riina Jalonen	F	Bioersivity International, Malaysia	Associate Scientist
4. Sim Heok Choh	M	APAFRI Secretariat	Director
5. LEE Seok-Woo	M	National Institute of Forest Science (NIFos), Korea	Director
6. Enrique Tolentino Jr	M	University of Philippines, Los Banos	Professor
7. Shi Lingling	F	World Agroforestry Center, Kunming	Research Professor
8. Zhang Hongxun	M	China Happy Ecology Co. Ltd.	President
9. Li Kang	M	China Happy Ecology Co. Ltd.	Secretary of the Board of Directors
10. Yan Xiudong	M	China Happy Ecology Co. Ltd.	Vice General Manager
11. Xu Jianqiang	M	China Happy Ecology Co. Ltd.	Vice General Manager
12. Sun Chengyi	M	China Happy Ecology Co. Ltd.	Chief Technical Officer
13. Zheng Yongqi	M	Chinese Academy of Forestry	Research Professor
14. Guo Wenying	F	Chinese Academy of Forestry	Senior Engineer
15. Huang Ping	M	Chinese Academy of Forestry	Research Assistant
16. Cheng Beibei	F	Chinese Academy of Forestry	PhD Student
17. Sun Rongxi	F	Chinese Academy of Forestry	PhD Student