

Report of the Second Early Career Academics Forum

Kunming, Yunnan, P. R. China (Virtual Meeting)

(Thursday 13th January, 2022)

1. Introduction

China and ASEAN economies are neighboring with each other and share several similarities particularly in natural resources. This makes an important driving force of Sino-ASEAN communication and cooperation in forest resource management and forestry development. Considering the importance of scientific research in forestry and huge potential improvement in capacity building of forestry researchers, APFNet proposed the Sino-ASEAN Network of Forestry Research Institutes (SANFRI) to advance collaboration among forestry research institutes and contribute to sub-regional sustainable forest management.

SANFRI especially through the Early Career Academics Forum aims to build a communication platform for the young forestry scholars of China and ASEAN economies to share research experience and facilitate mutual learning process. The First Early Career Academics Forum was run in Pu'er city of China in 2019, helping strengthen scientific and technological exchanges under the theme of tropical forest restoration among the scholars of SANFRI member institutes.

In order to continually maintain a networking and timely update knowledge and experience to forestry researchers, APFNet proposed to virtually organize the second Early Career Academics Forum in January 2022. The Forum will focus on sharing research works of APFNet Small Research Grant under SANFRI and get to well-know about partners for a closed collaboration. In this

regards, all members of the SANFRI Young Scholar Team will be invited to attend this event.

2. Objectives

- Consolidate the platform for forestry scholars from ASEAN economies and China through mutual learning process, and
- Maintain a remote communication among the sub-regional young scholars and seek for a future tangible cooperation.

3. Key Speakers and Participants

3.1 Key Speakers

Three key speakers were invited by the Forum. They are Mr. Dede Jajat Sudrajat, Researcher of Forestry and Environment Research Development and Innovation Agency of Indonesia, Mr. Nguyen Van Tho, Principal Researcher of Vietnamese Academy of Forest Sciences, and Mr. Nguyen Van Bich, Researcher of Vietnamese Academy of Forest Sciences.

3.2 Participants

Totally 29 members of the SANFRI Young Scholar Team (23 participants) and the SANFRI Steering Committee representatives (6 participants) were invited to attend the Forum on-line. These participants are from Cambodia (2 participants), China (4 participants), Indonesia (4 participants), Laos (3 participants), Malaysia (4 participants), Myanmar (2 participants), Thailand (4 participants), Vietnam (4 participants), and APFNet (2 participants). Most of the participants are young foresters under 45 years old and vibrant in their forest research or forest management.

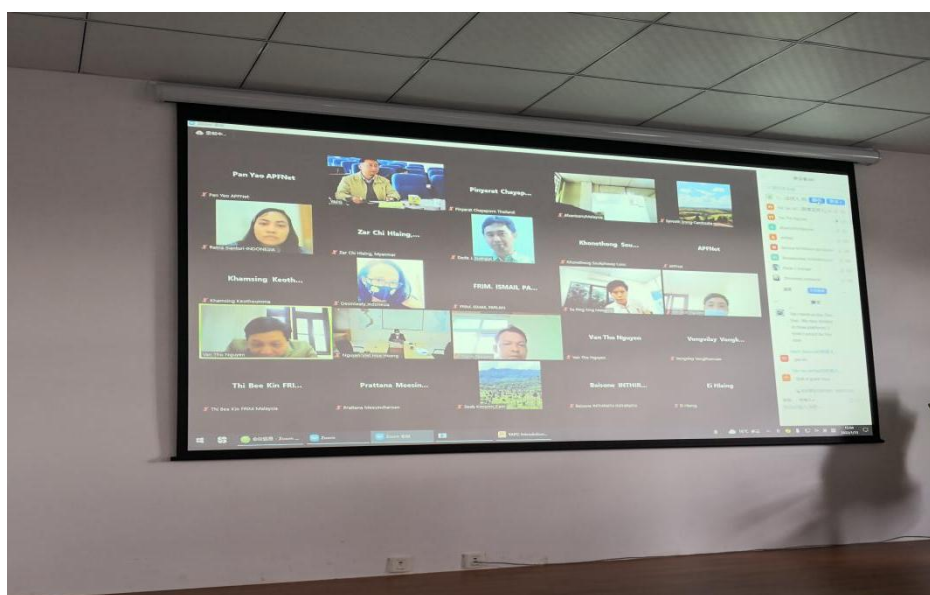
4. Summary of main activities

4.1 Opening speech

In the afternoon of January 13, 2022, Dr. Vo Dai Hai, President of Vietnamese Academy of Forest Sciences, gave his address to the forum as the chairman of the 3rd

Steering Committee Meeting of SANFRI. He briefly introduced the forum and the work plan for 2022 - 2023 has been approved by the Third SANFRI Steering Committee Meeting. According to the work plan, there are 4 major activities will be conducted as following:

- Further improve and conduct Visiting Scholar Program.
- The Third Early Career Academics Forum.
- The Second Batch of APFNet small Research Grant.
- APFNet Conference attendance Support.



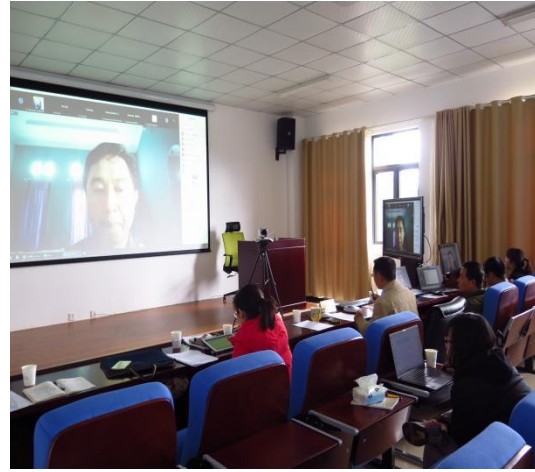
Mr. Lu De, Executive Director of APFNet, also delivered his good wish to the forum's success and placed his high hopes on young scholars after he introduced concisely the APFNet, its function, and main objectives APFNet could support.

4.2 Key speaks

In the afternoon of January 13, 2022, facilitated by Prof. Zhang Jinfeng, Yunnan Academy of Forestry and Grassland, three key speakers delivered their presentations on three funded projects of APFNet Small Research Grant under SANFRI respectively. After 30 minutes for every speaker, there were 5 minutes for questions and answers.

(1) Research on Alternative Methods for Reforestation Using Seed Briquette and Bare-root Seedling Based on Mycorrhizae and Dark Septate Endophyte Biofertilizers

Mr. Dede Jajat Sudrajat, Researcher of Forestry and Environment Research Development and Innovation Agency of Indonesia, reported on “Research on Alternative Methods for Reforestation Using Seed Briquette and Bare-root Seedling Based on Mycorrhizae and Dark Septate Endophyte Biofertilizers”. He introduced an overview of deforestation and reforestation in Indonesia. He commented the general objective and the specific objectives of the research. He showed the research methods, such as: 1) selection of species for application of direct seeding using seed briquette, 2) determination of sowing date and technique of direct seeding using seed briquette, 3) mycorrhizae and DSE applications on direct seeding using seed briquette, 4) technology for bare-root seedling preparation in nursery, 5) mycorrhizae and DSE applications on bare-root seedling, and 6) comparison of seedling performance and cost analysis of direct seeding, bare-root seedling and containerized seedling for selected species. At final, he gave the conclusion, i.e. 1) some species are potential to develop in direct seeding using seed briquette, and the success of direct seeding is positively correlated with seed quality (germination capacity) and seed weight and size, 2) the implementation of direct seeding at SD-2 supported by the use of seed briquettes and the addition of aquasorb was able to increase seedling survival of *C. pentandra*, *E. cyclocarpum* and *C. inophyllum*, 3) AMF and DSE inoculations had a significant effect on seedling survival of *C. pentandra* and *L. leucocephala*, 4) polybag (containerized) seedlings have better seedling survival and growth than bare-root seedling, 5) AMF and DSE gave relatively better growth, biomass and nutrient uptake compared to control, and 6) direct seeding using seed briquette was lower almost half of transplanting costs of polybag seedlings.



(2) Research on Propagation of *Lithocarpus ducampii* (Hickel & A. Camus) A. Camus Seedlings by Using Super-light and Self-decomposing Bags to Improve Effective Forest Rehabilitation

Mr. Nguyen Van Tho, Principal Researcher of Vietnamese Academy of Forest Sciences, addressed on the research with background, objectives, contents and methods of project, results, and discussion respectively. Conclusions of the project covered 8 aspects as follows: 1) 15 mother trees, D = 31.2 - 48.4 cm, H 20 - 26 m, the age 22- 23 years old. 150 kg of their fruits carrying out relevant experiments. 2) Seed purity 88.5%, 408 seeds/kg. Germination percentage more than 80%. 3) The root system of *L. ducampii* seedlings develops the best in SLSD with pot substrate of 65% peat + 30% rice husk + 5% dry cow dung (F2), then SLSD with pot substrate of 55 % acacia bark powder + 25% sawdust + 15% charcoal + 5% dried cow dung (F4). 4) Seedlings in F2, F4 and F1 are the best growth in both diameter at root collar and height, and seedlings in F1 is the worst growth in the experiments. 5) Two types of bag in F2 and F4 are suitable to produce the seedling. 6) F4 is the most suitable in terms of good root development, well growth of seedling, and light weight of seedling as well as the low production cost of seedlings. 7) Survival rate of plantation forest

more than 80% after 3 month. 8) Growth of *L.ducampii* in Formula 1 is best in 3 months old.

(3) Research on Estimating Carbon Sequestration Capacity of *Acacia* Hybrid Plantation in Yen Bai Province as a Basis for Implementing Carbon Payments for Forest Environmental Services (C-PFES)

Mr. Nguyen Van Bich, Researcher of Vietnamese Academy of Forest Sciences, delivered his talk on the project include a short introduction for the research, objectives, outputs, activities, results, etc. Conclusions and recommendations of the research as follows:

- 1) Carbon sequestration and storage promises improving livelihood of HHs forest growers by adding value to C-PFES payment and enhancing benefits by extending rotation length to produce sawlog timber.



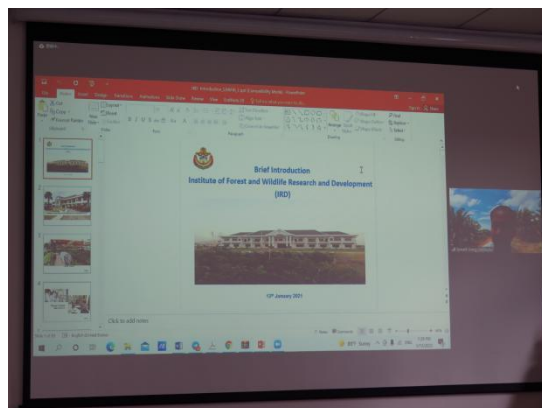
- 2) Outcome of this project provide basis for implementing carbon payment for C-PFES in Yen Bai province as well as in Vietnam.
- 3) The worksheet for calculation of carbon storage in A. hybrid plantation is a toolkit for small HHs growers using to estimate carbon accumulated in their plantation across site indexes.

4.3 Presentations

Facilitated by Prof. Zhang Jinfeng, Yunnan Academy of Forestry and Grassland, the presentations were given by the representatives of young scholar of each economy on an overview of the institutes and contributed their insights to the meeting. After every presenter finished his/her 15 minutes presentation, the facilitator scheduled 5 minutes for questions and answer.

There were 8 presentations of introduction of SANFRI member institutes as follows:

- Mr. Sreng Syneath, Institute of Forest and Wildlife Research and Development, Cambodia,
- Mr. Wang Lei, Yunnan Academy of Forestry and Grassland, China,
- Ms. Ratna, Forestry and Environment Research Development and Innovation Agency, Indonesia,
- Mr. Bounpasakxay, National Agriculture and Forestry Research Institute, Lao PDR,
- Dr. Ismail Parlan, Forest Research Institute, Malaysia,
- Dr. Zar Chi Hlaing, Forest Research Institute, Myanmar,
- Mr. Tedsorn Narin, Forest Research and Development Bureau, Thailand, and
- Ms Hoang Nguyen Viet Hoa, Vietnamese Academy of Forest Sciences, Viet Nam.





4.4 Closing remark

In the afternoon of January 13, 2022, Dr. Vo Dai Hai, President of Vietnamese Academy of Forest Sciences, gave the address to the forum. He highly appreciated the results obtained from APFNet small research grants: Small support, big results.

4.5 Comments

At the Second Early Career Academics Forum, 3 young researchers presented their research progress and results of the projects supported by Small Research Grant. And 8 representatives of young scholars introduced the general condition of each SANFRI member institutes for better mutual understanding and further collaboration in the coming future.

General speaking, the Forum is very successful and it is a new start point for SANFRI young researchers.

5. Annex

a) Forum Agenda

13th January 2022		
Time	Agenda	Speaker
13:30 – 13:40	Opening remarks <ul style="list-style-type: none"> • Representative from APFNet • Representative from the Chair of SANFRI Introduction to meeting agenda	VAFG
13:40 – 15:10	Information-sharing on three funded projects of APFNet Small Research Grant under SANFRI	Facilitator
13:40 – 14:10	1. Research on Alternative Methods for Reforestation Using Seed Briquette and Bare-root Seedling Based on Mycorrhizae and Dark Septate Endophyte Biofertilizers --- by Mr. Dede Jajat Sudrajat (Forestry and Environment Research Development and Innovation Agency of Indonesia) Q&A (5 min)	
14:10 – 14:40	2. Research on Propagation of <i>Lithocarpus ducampii</i> (Hickel & A. Camus) A. Camus Seedlings by Using Super-light and Self-decomposing Bags to Improve Effective Forest Rehabilitation --- by Mr. Nguyen Van Tho (Vietnamese Academy of Forest Sciences) Q&A(5 min)	
14:40 – 15:10	3. Research on Estimating Carbon Sequestration Capacity of Acacia Hybrid Plantation in Yen Bai Province as a Basis for Implementing Carbon Payments for Forest Environmental Services (C-PFES) --- by Mr. Nguyen Van Bich (Vietnamese Academy of Forest Sciences) Q&A(5 min)	
15:10 – 15:20	Break	

15:20 – 17:30	Introduction of SANFRI member institutes by a representative of young scholar of each economy	Facilitator
15:20 – 15:35	1. Mr. Sreng Syneath, Institute of Forest and Wildlife Research and Development (Cambodia)	
15:35 – 15:50	2. Mr. Wang Lei, Yunnan Academy of Forestry and Grassland (China)	
15:50 – 16:05	3. Ms. Ratna, Forestry and Environment Research Development and Innovation Agency (Indonesia)	
16:05 – 16:20	4. Mr. Bounpasakxay, National Agriculture and Forestry Research Institute (Lao PDR)	
16:20 – 16:35	5. Dr. Ismail Parlan, Forest Research Institute (Malaysia)	
16:35 – 16:50	6. Dr. Zar Chi Hlaing, Forest Research Institute (Myanmar)	
16:50 – 17:05	7. Mr. Tedsorn Narin, Forest Research and Development Bureau (Thailand)	
17:05 – 17:20	8. Ms Hoang Nguyen Viet Hoa, Vietnamese Academy of Forest Sciences (Viet Nam)	
17:20 – 17:30	Wrap-up of the meeting and closing	VAFG APFNet

b) List of SANFRI Steering Committee representatives

- Mr. Lu De, Executive Director of APFNet; lude@apfnet.cn
- Dr. Vongvilay Vongkhamsao, Director of Forestry Research Centre, National Agriculture and Forestry Research Institute of Laos; vongvilay7566@gmail.com
- Dr. Ismail Parlan, Director General of Forest Research Institute Malaysia; ismailp@frim.gov.my
- Dr. Vo Dai Hai, President of Vietnamese Academy of Forest Sciences. haivodai@gmail.com

c) The Young Scholar Team under SANFR

No.	Economy	Name	Gender	Organization	Position	Main Research Area	E-mail Address
1	Cambodia	Sreng Syneath	Male	Institute of Forest and Wildlife Research and Development	Deputy Chief of Forest Development and Botanical Research Center	Tree Improvement, Forest Restoration	sineathsreng@gmail.com
2	Cambodia	Seab Kimsrim	Male	Agricultural Cooperative Office, Provincial Department of Agriculture, Forestry and Fisheries of Siem Reap	Deputy Chief of Agricultural Cooperative Office	Tree Breeding, Forest Restoration and Rehabilitation	kimsrim71@gmail.com
3	Cambodia	Sem Rida	Male	Institute of Forest and Wildlife Research and Development	Staff Official	Management Nursery, Forest Restoration in Community Forestry	semrida168@gmail.com
4	China	Wang Lei	Male	Yunnan Academy of Forestry and Grassland	Associate Research Fellow	Forest Ecology	wang-lei-yaf@foxmail.com
5	China	Wei Wei	Male	Yunnan Academy of Forestry and Grassland	Research Associate	Silviculture	646710969@qq.com
6	China	Hu Qing	Female	Yunnan Academy of Forestry and Grassland	Assistant Research Fellow	Soil Nutrient Fertility, Forest Carbon Sink	qing-hu08@163.com
7	Indonesia	Dede Jajat	Male	Forestry and	Researcher	Forest Tree Seed Technology,	djsudrajatbtp@yahoo.com

		Sudrajat		Environment Research Development and Innovation Agency		Tree Improvement	
8	Indonesia	Ratna Uli Damayanti Sianturi	Female	Forestry and Environment Research Development and Innovation Agency	Young Researcher	Silviculture	nauliratna@gmail.com
9	Indonesia	Desmiwaty	Female	Forestry and Environment Research Development and Innovation Agency	Junior Researcher	Social, Gender, Economic and Policy of Forestry Issues	desmiwati.wong@gmail.com
10	Lao PDR	Khamphoumi Bounpasakxay	Male	National Agriculture and Forestry Research Institute	Deputy Head of Silviculture Unit	Silviculture and Afforestation	bounpasakxay@yahoo.com
11	Lao PDR	Keothoumma Khamsing	Male	National University of Laos	Lecturer,	Forest Economics and Wood Technology	khamsing54@yahoo.com
12	Lao PDR	Soukphaxay Khonethong	Male	National University of Laos	Lecturer	Forestry Engineering	khone_soukphaxay@yahoo.com
13	Malaysia	Thi Bee Kin	Female	Forest Research Institute Malaysia	Research Officer	Research and Development, Forest Biodiversity, Forest Health and Conservation,	thibeekin@gmail.com

						Mycology and Pathology	
14	Malaysia	Mohd Afzanizam Bin Muda	Male	Forestry Department of Peninsular Malaysia (FDPM)	project officer	Sustainable Peatland Management	afzanizam@forestry.gov.my;nizamuda83@gmail.com
15	Malaysia	Ong Su Ping	Female	Forest Research Institute Malaysia	Forest Entomologist	Forest Health Protection	ongsuping@frim.gov.my
16	Myanmar	Hlaing Ei Ei Swe	Female	Forest Research Institute of Myanmar	Assistant Director	Community Forestry, Agroforestry, Shifting Cultivation, Gender	eieiswehlaing@gmail.com
17	Myanmar	Hlaing Zar Chi	Female	Forest Research Institute of Myanmar	Staff Officer	Natural Forest Management and Silviculture including Plantation Management and Rural Communities' Traditional Knowledge on Forest Resources	zarchihlaing08@gmail.com
18	Myanmar	Maung Aye Chan	Male	Forest Research Institute of Myanmar	Staff Officer	Forest Management, Valuation of Forest Ecosystem Services, Forest Governance and Policy	ayechanmg.fri@gmail.com
19	Thailand	Tedsorn Narin	Male	Forest Research and Development Bureau of Thailand	Forestry Technical Officer	Tree improvement, Carbon storage in biomass of some tree species	narin67@gmail.com
20	Thailand	Chayaporn Pinyarat	Female	Forest Research and Development Bureau of	Forestry Technical Officer	Forest Management, Low-Carbon Development by	pinyarat118864@gmail.com

				Thailand		Forestry Carbon Project to Cope with Climate Change	
21	Thailand	Trakuldit Thanaporn	Female	Forest Research and Development Bureau of Thailand	Forestry Technical Officer	Silviculture, Forest Management, Public Participation	trakuldit.m@gmail.com
22	Vietnam	Nguyen Van Tho	Male	Vietnamese Academy of Forest Sciences	Principal Researcher, Deputy Director of FSCC	Conservation of Plant Genetic Resources, Bamboo Taxonomy, Silviculture	nvthofsiv@gmail.com
23	Vietnam	Hoang Nguyen Viet Hoa	Female	Vietnamese Academy of Forest Sciences	Researcher	Forest Restoration, Sustainable Forest Management	hoa.hnv@vafs.gov.vn
24	Vietnam	Nguyen Van Bich	Male	Vietnamese Academy of Forest Sciences	Researcher	Forest Sciences, Nutrient Cycling, Sustainable Site Management, Soil Nutrient, Sustainable Forest Management, Sustainable Productivity of Plantation, Forest Certification, Carbon Sequestration, Agriculture Forestry	bichnv.fsiv@gmail.com