Summary of the RG3 Session

13th March 2022 @UGM (Online)

12:00-17:00	(JST = GST+9:00hrs)	**RG3 Oral Presentation**	
12:00-12:05		**Opening & Introduction**	
12:05-13:20		**Session 1. Growth, planning and silviculture (Chair: Owari)**	
	12:05 Mandy Maid (UMS)	The growth performance of one-year-old *Octomeles sumatrana* and *Terminalia subspathulata* King on degraded forest land in Sandakan, Sabah	p.49
	12:20 Kritsadapan PALAKIT (KU)	Impacts of Tree Coring on Growth of *Pinus kesiya* Royle ex Gordon	p.50
	12:35 Toshiaki OWARI (UTokyo)	Old Sugi (*Cryptomeria japonica*) plantations at the University of Tokyo Chiba Forest: Long-term growth trends and current status	p.51
	12:50 Keisuke TOYAMA (UTokyo)	Historical forest management plans as long-term research materials	p.52
	13:05 Chieh-Yin CHEN (NTU)	Study of mycorrhizal communities of rehabilitation a *Cryptomeria japonica* plantations to a mixed deciduous and coniferous forest	p.53
(Break)			
13:40-14:40		**Session 2. Monitoring and policies (Chair: Phua)**	
	13:40 Siti Husna Nurrohmah (UGM)	Spatial and Temporal Distribution of *Ganoderma* Sp at Urban Forest Gadjah Mada University	p.54
	13:55 Megantara Agustina Pertiwi Massie (UGM)	The Dynamics Of Ujung Pangkah Mangrove Coverage (KEE) Using Combined Mangrove Recognition Index	p.55
	14:10 Meizhi LIN (HU)	Remote Sensing of Tropical Rainforest Biomass Changes in Hainan Island, China from 2003 to 2018	p.56
	14:25 An-Chi LOU (NTU)	Development and implementation of community forestry policies in Taiwan	p.57
(Break)			
15:00-16:00		**Session 3. Certification and ecosystem services (Chair: Perera)**	
	15:00 Chokdee KHANTAWAN (KU)	Forest Management Certification Status of Rubber Plantations in Thailand	p.58
	15:15 Rajitha RUPASINGHE (USJ)	REVISITING FOREST CERTIFICATION IN SRI LANKA: THE FOREST MANAGEMENT AND EXPORT WOOD-BASED MANUFACTURING SECTOR PERSPECTIVES	p.59
	15:30 Xiaolan YAO (HU)	Ecosystem services and conservation priority regions of the Hainan Tropical Rainforest National Park in China	p.60
	15:45 Kamlisa Uni Kamlun (UMS)	Mapping Ecosystem Services in Tropical Wetland Area of Sabah, Malaysia	p.61
(Break)			
16:20-17:00		**General Discussion & Closing**	

Result

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Table 1. Statistic of vegetation density in KEE Ujungpangkah

Density	CMRI Classification	Minimum value	Maximum value	Pixel		Area (Hectare)	
				2020	2000	2020	2000
Low	0.200-0.42036	0.2	0.42036	14072	9823	1266.48	884.07
Medium	0.4203-0.64074	0.42037	0.64074	8089	2060	728.01	185.4
High	0.64075-0.86111	0.64075	0.86111	7439	90	669.51	8.1

Nilai CMRI

1,404446

-0,448298

0 1 2 3 4 5 6 km

(a)　　　　(b)
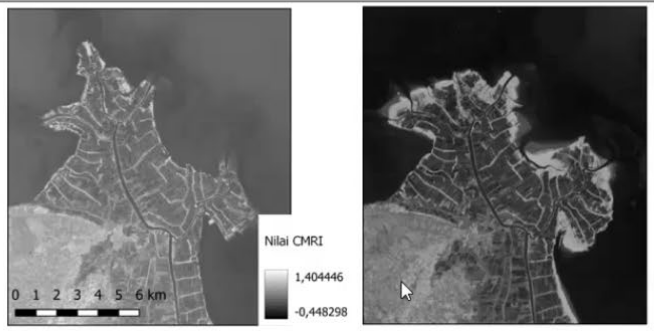
Figure.3 (a) Map of CMRI at KEE Ujung Pangkah year 2000 dan (b) year 2020
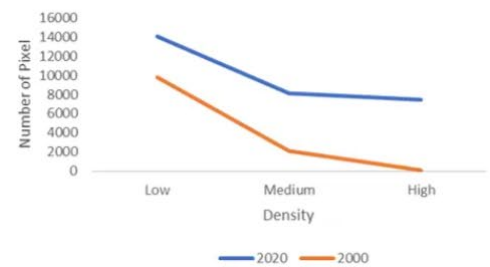
Figure.4 Graph of vegetation density in KEE Ujungpangkah

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LOCALLY ROOTED, GLOBALLY RESPECTED

Dr. Mandy Maid (UMS)

Early growth performance of indigenous *Octomeles sumatrana* and *Terminalia subspathulata* in an enrichment planting experiment on degraded forest land in Sandakan, Sabah

- Comparing forest structure, environment characteristics, and silvicultural treatments of sites where *Octomeles sumatrana* (a native species) and *Terminalia subspathulata* (newly introduced one) were introduced

- Best <u>spacing</u> treatment (4m x 4m) and <u>fertilizing</u> strategies were found for both species

- Shade-tolerant but fast-growing species is desirable
    + Pest tolerance is also important

Dr. Kritsadapan PALAKIT (KU)

Impacts of tree coring on the growth of *Pinus kesiya* Royle ex Gordon

- The effect of <u>tree coring</u> for dieback (damage & healing) and growth was investigated at *Pinus kesiya* individuals for 5 years through bimonth observation

- No significant difference in growing patterns between with/without-coring groups

- Wound healing analyzed by Gap Light Analyzer showed that only small tree could not fully heal the wound after coring

Dr. Toshiaki OWARI (UTokyo)　　　　　　　　　

Old Sugi (*Cryptomeria japonica*) plantations at the University of Tokyo Chiba Forest: Long-term growth trends and current status

- Long-term growth trends of old Sugi (*Cryptomeria japonica*) plantations from experimental plots in UTCBF (, Chichibu and NTU) and inventory plots

- Growth is generally continuing in old plantations

- Large variation exists in growth of old stands

Dr. Keisuke TOYAMA (UTokyo)

Historical forest management plans as long-term research materials

- Introduced public <u>forest management plans</u>(FMPs) and those of UTF

- Research examples using them

- Information about FMPs' availability

Ms. Siti Husna Nurrohmah (UGM)

Spatial and Temporal Distribution of *Ganoderma* sp. on Old Trees at Urban Forest Universitas Gadjah Mada

- Conducted monitoring the distribution of *Ganoderma*, a fungi causing wood decaying, on old trees at urban forest in UGM. Number of fruitbody of fungi, tree condition, disease incidence were recorded

- Root contact seemed to be the cause of spreading

- Increase of infected trees, especially legume trees, and infection severity data were obtained

Ms. Megantara Agustina Pertiwi Massie (UGM)

The Dynamics Of Ujung Pangkah Mangrove Coverage (KEE) Using Combined Mangrove Recognition Index

- Identifying mangrove coverage and knowing its dynamics through examining Landsat data, especially focusing on CMRI index

- Comparing 2020 and 2020, high and medium-density mangrove area were shrinking by logging and land conversion for ponds

- However, there were large additional area caused by accretion (sedimentation)

Ms. Meizhi LIN (HU)

Remote Sensing of Tropical Rainforest Biomass Changes in Hainan Island, China from 2003 to 2018

- Examining scientific big data of remote sensing for Hainan tropical rainforest. EVI (enhanced vegetation index) was used in several models for biomass prediction

- In Hainan island, especially in some regions with intense urbanization and tourism, rainforests and total biomass have been lost especially between 2013 and 2018

- Afforestation in areas with high rainfall is desirable

Ms. An-Chi LOU (NTU)

Development and implement of community forestry policies in Taiwan

- Examined community forestry programs in Taiwanese Forestry Bureau (since 2002) and NTUEF

- The programs have three(FB) or two(NTUEF)-stage designs, and most communities are still in 1st stage

- Compared to other initiatives, community forestry is continuous and helps to build interaction between forestry authorities and communities

Ms. Chokdee KHANTAWAN (KU)

Management Certification Status of Rubber Plantations in Thailand

- Examined FSC forest certification of rubber plantation in Thailand. FSC covers 0.6% of total plantation

- 4 planting patterns: monoculture, intercropping with trees or other plants, and rubber multiple cropping

- Found and categorized problems (CARs: corrective action requests) were such as implementation of management activities and poor monitoring

Mr. Rajitha RUPASINGHE (USJP)

Forest Certification in Sri Lanka: Does it add value to Forest Management and Export Wood-based Manufacturing Sectors?

- Examined forest certification in Sri Lanka through questionnaire survey and IPA (importance-performance analysis)

- Benefits and deficits of certification were clarified

- Some points are classified as tasks which "should be concentrated" (improvable performance)

Dr. Xiaolan YAO (HU)

Ecosystem services and conservation priority regions of the Hainan Tropical Rainforest National Park in China

- Five ecosystem services in Hainan Tropical Rainforest National Park were quantified spatially and temporally

- Conservation efficiencies in multiple scenarios were compared

- High-altitude area has high priorities of conservation

Dr. Kamlisa Uni Kamlun (UMS)

Mapping Ecosystem Services Supply in Protected Forest Area

- Mapped Malaysian and Indonesian wetland ecosystem services supply through "matrix model assessment" and thematic analysis, using qualitative assessments and land cover type information

- 19 subservices were determined and mapped

- Deterioration of services was found, especially in "regulating services"

Dr. Chieh-Yin CHEN (NTU)

Study of mycorrhizal communities of rehabilitation a *Cryptomeria japonica* plantations to a mixed deciduous and coniferous forest

- For rehabilitating Sugi (*Cryptomeria japonica*) plantation into mixed forest, silvicultural experiment with thinning and planting was conducted. Vegetation and soil microbial communities were examined

- Dominant understory species did not change, but many species were observed and cover ratio recovered after operation

Symposium Presentation & Publication Plan 2022

Presentations

- 3rd International Symposium of Long-term Forest Monitoring Research in Asia (UGM, USJP)

- 9th SAUFC (NTU): mid Aug 2022

- Small hybrid symposium in Thailand about the growth and yield of **teak** plantation (KU): Jul or Aug 2022

Publications

- Special Issue "Tropical Forestry: Conservation, Management and Utilization" for *Trees, Forests and People* (USJP)

- Book publication "Long-Term Monitoring and Research in Asian University Forests" (CRC Press)

- Special Issue "Long-Term Monitoring of Environmental Changes and Ecosystem Responses in Asian University Forests" for *Forests* (UTokyo)

Collaborative Research Activity Plan 2022

- Field work and research meeting on **Sugi** plantation (UTokyo, NTU, SNU)

- **Mangrove** carbon project in Sabah (UMS, USJP): A new project funded by WWF Malaysia will commence this year. Perhaps this can collaborate with Prof. Perera of USJP?

- Long Mio project (UMS, UTokyo): Planned to publish 1 paper in the special issue organized by Prof. Perera (USJP) in *Trees, Forests and People*, and 1 paper in *Remote Sensing*.

- Timber and wood products (USJP)