

Term of Reference

FORESTRY SUMMER COURSE 2024

The VIIIth International Forestry
Summer Course: Tropical Forest
Development Toward Carbon
Neutrality and SDGs



UNIVERSITAS GADJAH MADA
FACULTY OF FORESTRY



<https://mikugm.id/scfkt2024/>



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Foreword



Ir. Sigit Sunarta, Ph.D., IPU.
Dean of Faculty of Forestry UGM

The journey of the Faculty of Forestry UGM has been acknowledged nationally and internationally, especially in producing tropical forestry science and technology in order to contribute to solving forestry problems in the past, present, and future. Various science and technology innovations have been born, such as social innovation in national forestry policy, biodiversity conservation, restoration of peatland and mangrove ecosystems, rehabilitation of critical land and reclamation of ex-mining land, productivity of natural forest and plantation forest, and increasing the added values of forest products in the form of wood fiber, non-timber, and environmental services.

To improve its academic reputation at the global level, the Faculty of Forestry annually organizes an International Summer Course involving experts from international universities or foreign institutions as well as lecturers from the UGM Faculty of Forestry. This year's Summer Course theme is **'Tropical Forest Development Toward Carbon Neutrality and SDGs'**. This theme is based on the future of the earth which is closely related to forest ecosystems and forestry. Forestry has a national and international commitment and contribution in handling global climate change and in supporting the achievement of the Sustainable Development Goals (SDGs). Low carbon development in various sectors including the forestry sector is also the backbone towards a green economy to achieve the vision of a developed Indonesia in 2045 and achieve zero emissions by 2060.

SDGs is a long-term global development agenda that optimizes all the potential and resources owned by the country. This program is aimed primarily at developing countries in achieving sustainable development goals in the 2016-2030 period. The SDGs goals have been formulated in line with Indonesia's abundant natural resource potential, one of which is the forestry sector. Through the SDGs program, it is hoped that the available resources can be utilized as optimally as possible while maintaining their sustainability considering that forests are a resource that contributes various raw materials for various sectors. Therefore, forests play an important role in supporting the implementation of the SDGs program.

The contribution of the Faculty of Forestry internationally in this case can be done through Summer Course activities. This activity will involve participants from the ASEAN region, Asia-Pacific, Europe, South Asia, various countries with experts from well-known universities in the world and also national forestry and environmental practitioners. We expect contributions from all parties, especially from private companies and state companies, to contribute to supporting the implementation of this International Summer Course activity. We express our deepest gratitude for the attention and cooperation of all parties.

Dean of Faculty of Forestry,

Ir. Sigit Sunarta, Ph.D, IPU

Background

The main agenda in higher education nowadays is the internationalization of higher education. Currently, UGM has also improved its academic reputation at the global level by becoming a world-class national university, one of which is shown by the improvement in the QS WUR ranking which is increasing from year to year. In the past 5 years, QS WUR has increased, for 2023 UGM is ranked 231st in the world.

The programs in line with and support UGM's efforts to become a "World Class University" continue to be improved, such as a program which brings in foreign lecturers or professionals and foreign students for activities that elevate UGM's academic excellence and reputation. These programs can be developed in the form of short courses or workshops that can increase UGM's leverage at the global level, framed in relation to the internationalization of education. One activity that can support internationalization in the education sector is the summer course program which involves the participation of participants from overseas partner institutions.

The UGM Faculty of Forestry continues to strive to develop quality and networks in implementing educational, research and community service programs in forest and environmental conservation, one of which is through the 8th International Summer Course Program. In 2024, this summer course activity takes the topic of '**Tropical Forest Development Toward Carbon Neutrality and SDGs**'. This theme was selected considering that carbon emissions are one of the main problems in energy consumption. Various countries are trying to reduce it by focusing on carbon neutrality.

Carbon emissions are a significant problem in the manufacturing sector. The Forestry Sector is also committed to carbon neutralization and strives to support the achievement of the Sustainable Development Goals (SDGs) or the 2030 agenda. In line with this, of course it is important in partnerships and internationalization of achieving sustainable development. Various outputs from the tropical forestry sector also play a role in achieving SDGs goals.

In a big picture of the 2024 Summer Course theme, several learning materials will be presented, namely

- 1) Sustainable Forest management and the economic value of carbon**
- 2) Silviculture to optimize carbon uptake**
- 3) Utilization of forest products and environmental services**
- 4) Conservation of biodiversity and ecosystem services and**
- 5) Introduction and exchange of Indonesian culture.**



All of the learning materials are very relevant to support climate change mitigation actions in the form of increasing carbon stocks, reducing CO₂ emissions through concession areas, peatlands, and biodiversity conservation. This theme is in line with Indonesia's commitment to efforts to control climate change, reflected in its participation in the Paris Agreement to the United Nations Framework Convention on Climate Change. Indonesia is committed to reducing CO₂ emissions by 29% with national capabilities and 41% with international collaboration. Current management of tropical forests is also very much in line with achieving the SDGs goals of bringing real benefits and welfare to the people now and in the future.

It is hoped that the implementation of these summer course activities will further develop the academic collaboration network with foreign institutions, especially in encouraging the creation of collaborative research, student exchange, joint degree and double degree programs.



Program Objectives



Encourage the participation of lecturers/professionals and foreign students in understanding and studying current issues in tropical forest sustainability, especially in carbon neutrality and mitigating climate change.



Strengthen collaboration across scientific disciplines and institutions in the field of forestry which is superior and recognized at the international level.



Develop and expand programs and media for information exchange and cross-scientific fields regarding the development of tropical forest management in a carbon neutral manner and the achievement of SDGs at the international level in the context of academic internationalization.



Strengthen the position of UGM and the UGM Faculty of Forestry in their contribution to the development of tropical forestry in Indonesia, especially in relation to adaptation and mitigation strategies for climate change and in order to support the achievement of the SDGs.

Implementation of Activities



August 12th - 26th 2024



**Faculty of Forestry UGM
Jl. Agro No. 1, Bulaksumur
Yogyakarta, Indonesia**

Learning Outcomes and Curriculum Description

It is hoped that this summer course activity will equip participants to be able to know more deeply, be able to explain and communicate effectively the learning material regarding current issues regarding the development of tropical forests and environmental sustainability, carbon neutrality and achieving SDGs through the Forestry sector.

Specifically, participants are expected to:

- 1 Understand more deeply and explain the desired vision of sustainable tropical forest management now and in the future in accordance with the dynamics of interests and contestation of the actors.
- 2 Understand more about climate change mitigation, carbon reserves, reducing emissions, reducing CO2 emissions on various forest lands, and biodiversity.
- 3 Understand more deeply and be able to understand forestry program practices in achieving SDGs.
- 4 Understand more deeply and explain forest management monitoring efforts to mitigate climate change in various countries and forest types and the use of forests based on wood, bioenergy, non-timber and environmental services in Indonesia.
- 5 Interact with various cultures and regarding the history and cultural features of the archipelago (especially Yogyakarta).
- 6 Compile simple scientific work and interpret material related to the themes given during the short course.



Learning Material and the Lecturers/Experts

The VIIIth International Forest Summer Course is planned to be held on August 12th- 16th, 2024 online and August 17th - 26th 2024 onsite at the Faculty of Forestry UGM, Jl. Bulaksumur Agro No. 1 Yogyakarta.

The learning material during this summer course includes 8 days of class lectures (26 learning materials) which includes 5 days online and 3 days onsite, 2 days field practice, 3 days cultural study and 1 day group discussion and presentation. The lecturers and experts came from 16 lecturers affiliated with foreign universities/institutions and 10 UGM lecturers and Forestry and Environmental Practitioners. The details of activities and lecturers/experts are as follows:

August
12th

ONLINE

1. Introduction and orientation of Summer Course 2024 Program

Ir. Dwiko Budi Permadi, S.Hut., M.Sc., Ph.D., IPU. – Vice Dean of Faculty Forestry UGM

2. Monitoring deforestation related to carbon neutrality

Dr. Mui-How Phua – Universiti Malaysia Sabah

3. Students' allocation for group study and announcement

August
13th

ONLINE

1. Livelihood Sustainability and Environmental Protection

Dr. Guangyu Wang – The University of British Columbia

2. Stepping Up to the Challenges for Green Recovery in Tropical Forest

Dr. Linda Yanti Sulistiawati – National University of Singapore

3. Pathogenicity in wood and its influence in sustainable wood production

Dr. Shuhei Takemoto – The University of Tokyo Chiba Forest

4. Forest Insects and Contribution to Society

Dr Arthur Y.C. Chung – Sabah Forestry Department, Forest Research Centre

August
14th

ONLINE

1. Global Change and Pest Spread Related to Good Health and Wellbeing

Dr. Jiri Hulcr – University of Florida

2. Forest Bioeconomy and Sustainable Development Goals

Dr. Mi Sun Park – Seoul National University

3. Ectomycorrhizal fungal communities of tropical forest

Dr. Tharnrat Kaewgrajang – Kasetsart University

4. Protected Areas and Biodiversity Offsets

Prof. dr. J.P.G. (Julia) Jones, Utrecht University

August
15-16th

Independent study and specific task

August
17-18th

ONSITE

Cultural Study #1 - August 17th

Indonesian History and Celebration of Independence Day

Cultural Study #2 - August 18th

Indonesian Traditional Attire (The Making of Batik)



August
19th

ONSITE

1. Forest Policy and Economics, Social Forestry, Political Forest

Assoc. Prof. Takahiro Fujiwara – Kyushu University

2. Remote sensing for mangrove above-ground carbon mapping

Prof. Muhammad Kamal, S.Si., M.GIS., Ph.D. – Faculty of Geography, Universitas Gadjah Mada

3. A Stakeholder Perspectives on Agroforestry Practices in Sabah: The Challenges and Future Prospects

Dr. Affendy Hassan – University Malaysia Sabah

4. Tropical Forest Development Toward Carbon Neutrality and SDGs in Practice of Local Enterprise

Forestry and Environmental Practitioners

5. Cultural Study #3

Cultural exchanges with participants traditional attire

August
20th

ONSITE

1. Biofuel and Non Wood Forest Product Utilization

Ir. Sigit Sunarta, S.Hut., M.P., M.Sc., Ph.D., IPU. – Faculty of Forestry, Universitas Gadjah Mada)

2. Investing in Biodiversity A Review of Indonesia's Integrated Conservation in tropical forest

Dr. (HC). Ir. Wahjudi Wardoyo, M.Sc. – Yayasan Konservasi Alam Nusantara (YKAN)

3. Social Forestry Towards SDGs

Prof. Dr. Ir. San Afri, M.Sc. – Faculty of Forestry, Universitas Gadjah Mada

4. Non-destructive Detection and Prediction of Carbon Content in Forest Plants and Trees

Prof. Satoru Tsuchikawa – Nagoya University

August
21st

ONSITE

1. Carbon Accounting in Tropical Forest

Dr. Ir. Ris Hadi Purwanto, M.Agr.Sc. – Faculty of Forestry, Universitas Gadjah Mada)

2. Macrofungal Diversity Related to Climate Change and Its Impact

Dr. Sabiha Salim – Universiti Putera Malaysia

3. A Future for Social Forestry in the Indonesia and ASEAN Economic Community

Ir. Wiratno, M.Sc – ASEAN Social Forestry Network

4. Wood Processing in Zero-carbon Wood Industry

Ir. Tomy Listyanto, S.Hut., M.Env.Sc., Ph.D., IPU. – Faculty of Forestry, Universitas Gadjah Mada

August
22nd

ONSITE

Field Practice #1: Exploring Wanagama I

1. Contributions of Tropical Forest Rehabilitation to Achieve the Indonesian Nationally Determined Contributions (NDCs) and Sustainable Development Goals (SDGs)

Prof. Ir. Widiyatno, S.Hut., M.Sc., Ph.D., IPM. – Faculty of Forestry, Universitas Gadjah Mada

2. Tropical Forest Ecology: in Wanagama

Ni Putu Diana Mahayani, S.Hut., M.For. – Faculty of Forestry, Universitas Gadjah Mada

3. Tropical Forest Health

Dr. Ir. Sri Rahayu, M.P. – Faculty of Forestry, Universitas Gadjah Mada

August
23rd

ONSITE

Field Practice #2: Exploring Wanagama I

1. Clean and Renewable Energy from Forest Product

Prof. Ir. Widiyatno, S.Hut., M.Sc., Ph.D., IPM. – Faculty of Forestry, Universitas Gadjah Mada

2. Contribution Agroforestry to Improve Forest Recovery and Food Security

Prof. Dr. Ir. Budiadi, S.Hut., M.Agr.Sc., IPU – Faculty of Forestry, Universitas Gadjah Mada

3. Group Presentation

August
24th-26th

ONSITE

Cultural Study #4 - August 24th

Indonesian Heritage Sites of Borobudur and Prambanan Temple

Individual Assignment and Reports - August 25th

Closing Ceremony- August 26th



Existing International Partnership Networks



Japan

- Shizuoka University
- Kyoto University
- Ehime University
- Yamagata University
- Kyushu University
- Nagoya University
- Tokyo University of Agriculture and Technology



Europe

- Georg-August-Universität Göttingen (Germany)
- Utrecht University (Netherlands)



South-east Asia

- Kasetsart University (Thailand)
- Universiti Malaysia Sabah (Malaysia)
- Universiti Putra Malaysia (Malaysia)



South Korea

- Kangwon National University
- South National University



Canada

- The University of British Columbia (UBC)

Implementation Mechanism (Participant Networking, Targets and Strategy)

The total number of participants is a minimum of 50 participants consisting of a minimum of 40 participants from abroad and 10 participants from within the country. Participant qualifications include undergraduate graduates (fresh graduates), master's and doctoral students and young professionals. The target foreign participants are from several Asian and Southeast Asian regions such as Kasetsart University (Thailand), Universiti Putra Malaysia (Malaysia), Universiti Malaysia Sabah (Malaysia), Universiti Malaya, Vietnam National University of Forestry (Vietnam), Tokyo University of Agriculture and Technology (Japan), Tsukuba University (Japan); Shizuoka University, Kyushu University (Japan), Nagoya University (Japan), Kwangwoon University (Korea), South National University (Korea), The University of British Columbia (Canada), The University of Western Australia, Southern Cross University (Australia), and other overseas universities.

The selection of participants is by contacting overseas contact persons/lecturers at the above universities who are already known or have a collaborative relationship with lecturers at the UGM Faculty of Forestry to select and send 3 – 5 students to each university. This networking process is considered more effective and efficient because it is handed over to partner institutions. The number of participants is targeted at 50 people with participant requirements are as follows: 1) Not an Indonesian citizen. 2) Active students (B.Sc., M.Sc.) at universities in Indonesia (except UGM) or abroad and/or fresh graduates. 3) First time taking a Summer Course at the UGM Faculty of Forestry.



Summer course activities use blended learning, where online lecture activities are carried out for 3 days at the start of the activity and are in the form of independent assignments, while the remaining 10 days are carried out onsite. The material provided in class is in the form of presentations by selected lecturers according to their fields both online and onsite, followed by discussions and questions and answers, field studies and cultural visits which include field observations on a topic according to the summer course activity curriculum. International lecturers will be selected from representatives of each partner institution and other lecturers related to the material. When delivering presentations, international lecturers are given the option to deliver online from their country or go onsite at the Faculty of Forestry, UGM.

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The VIIIth International Forestry
Summer Course: Tropical Forest
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Committee Members

Person in charge

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- Prof. Ir. Widiyatno, S.Hut., M.Sc., Ph.D., IPM.
- Dr. Kaharuddin, S.Hut., M.Si.

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Secretary

- Ir. Ananto Triyogo, S.Hut., M.Sc., Ph.D., IPM.

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- Arief Mundandar, S.Sos.
- Erni Sri Purnami, S.Pd., M.M.
- Ikhsan Fiqra Naufalianto, S.Hut.
- Rizka Afif Muhammad
- Nurmalita Widyasari Putri
- Faiha Azka Azzahira

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- Ir. Tomy Listyanto, S.Hut., M.Env.Sc., Ph.D., IPU.
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- Prof. Dr. Ir. Sri Rahayu, M.Sc
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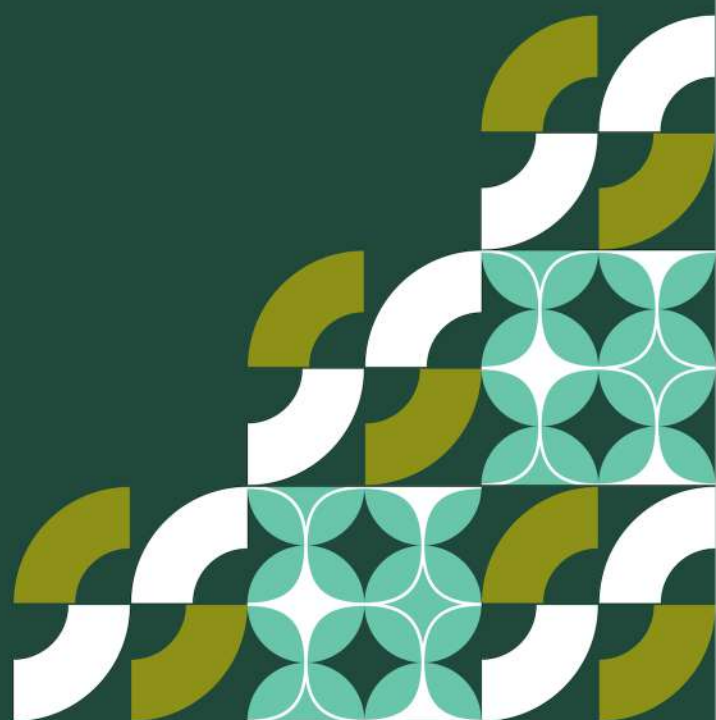
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