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Dr. Ir. Muhdi, S.Hut., M.Si., IPU., ASEAN Eng. is a full-time lecturer at the USU Faculty of Forestry Undergraduate Program in Forestry. He was born in Ujan Mas Lama (Muara Enim) on June 19, 1974, as the fifth child of H. Syeh Ahmad Bin H. Syahri Ramadhan and Hj. Husmah Binti H. Syeh Bourdad. He is married to Prof. Dr. Diana Sofia Hanafiah, SP., MP., with three children: Muhammad Hafizh Abdurrohman, Muhammad Hafazh Abdurrohman, and Shadrina Alyani. He received his Bachelor of Forestry degree from the Faculty of Forestry, Bogor Agricultural University in June 1998. In February 2001, he received his Master of Science degree from the Master of Forestry Science Program, Graduate School of Bogor Agricultural University. Then, in 2007-2012, he attended the Doctoral Program in Forest Management at the Graduate School of Bogor Agricultural University, funded by the Dikti Postgraduate Education Scholarship (BPPS).

Since December 2001, he has served as a CPNS Lecturer at the USU Undergraduate Program in Forestry. In January 2003, he was appointed a PNS (III/b) lecturer at the USU Faculty of Forestry Undergraduate Program in Forestry. On March 1, 2009, he was appointed to the academic/functional position of Associate Professor on the subject of Forest Harvesting. On April 1, 2017, through Presidential Decree No. 00043/KEP/AA/15001/17, effective April 1, 2017, he was promoted to the rank of Senior Pembina (IV/c). During his career at Universitas Sumatera Utara, he was trusted as the Head of the USU Faculty of Agriculture Undergraduate Program in Forestry Forest Products Technology Laboratory/Workshop 2001-2004, Head of the USU Faculty of Agriculture Undergraduate Program in Forest Products Technology 2002-2006, and Secretary of the USU Faculty of Forestry Department of Forest Management, 2017-2021.

In addition to teaching, he is also actively involved in research and community service funded by TALENTA USU and the Ministry of Education, Culture, Research, and Technology's Research and Technology Grant. He has also published his research and community service results at national and international seminars and scientific articles in national and international journals with a good reputation. Based on data released by Sinta as of January 20, 2024, he has an H-Index Scopus of 4 and a Google Scholar of 8. He also holds 2 simple patents.

Training/workshops attended in the last three years: Training and development of assessment and learning strategies, Project Learning and Case Method for lecturers, workshop on Curriculum Development with the OBE Approach Towards ASIIN International Accreditation, Training on Understanding the Implementation of Occupational Health and Safety (K3) in Forest Management and Forest Industries, and National Workshop on the Effectiveness of SVLK Implementation.

The educator certificate in the field of Forest Management was received in September 2014. Professional organizations he is involved in include Member of the Association of Indonesian Forestry Graduates (PERSAKI), Association of Indonesian Forest Product Harvesting Professionals (PERPHINDO), Indonesian Climate Change Researchers Association (APIKI), Indonesian Forest Management Community (KOMHINDO), Indonesian Engineers Association (PII), and ASEAN Federation of Engineering Organisations (AEFO).

The awards he has received include: Best Scientific Paper I in the Science Field at USU in 2004, Second Best Presenter at the USU FP National Seminar in 2016, received the Satya Lancana Karya Satya X Year Award from the President of Indonesia in 2014. In 2015, the Rector of Universitas Sumatera Utara awarded him the USU Outstanding Lecturer I. In 2021, he received the Pioneer Registered Engineer of Forestry Engineering Award from the Ministry of Forestry and Environment of the Republic of Indonesia.

Publications

2026

Prosiding seminar internasional

Productivity of Pinus merkusii Sap Tapping at PT. Inhutani V, Parik Sabungan Village, North Tapanuli Regency

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2025

Prosiding seminar internasional

Estimation of carbon biomass from litter and understory at sugar palm stand (Arenga pinnata) in North Sumatra

MUHDI

2025

Prosiding seminar internasional

Productivity of Pinus merkusii Sap Tapping at PT. Inhutani V, Parik Sabungan Village, North Tapanuli Regency

MUHDI

2025

Artikel ilmiah

Harvesting Productivity of blangke bamboo (Gigantochloa pruriens Widjaja) in Timbang Lawan Village, Bahorok District, Langkat Regency, North Sumatra

MUHDI , ORANG KAYA HASNANDA SYAHPUTRA

2023

Jurnal nasional terakreditasi

Product Diversification in The Furniture Industry in Tanjung Anom Village, Deli Serdang

MUHDI , DIANA SOFIA HANAFIAH

2023

Jurnal nasional terakreditasi

Kebisingan, Tingkat Konsentrasi Dan Persepsi Pekerja Penggergajian Kayu Di Pt. Erika Mila Bersama, Sumatera Utara

MUHDI , HARISYAH MANURUNG

2023

Jurnal internasional bereputasi

THE EFFECT OF MACHINE VIBRATION ON COMPLAINTS OF CARPAL TUNNEL SYNDROME AMONG WORKERS IN WOOD PROCESSING

MUHDI , DIANA SOFIA HANAFIAH

2022

Jurnal internasional bereputasi

Productivity and Cost Analysis of Sawmills by Pandan Bandsaw YT36 and Vertical Bandsaw MJ328

DIANA SOFIA HANAFIAH , MUHDI

2022

Jurnal internasional bereputasi

SPECIES DIVERSITY AND CARBON STORAGE OF UNDERGROWTH AND LITTER IN THE AGROFORESTRY SYSTEM OF NORTH SUMATERA-INDONESIA

SITI LATIFAH , MUHDI

2021

Artikel ilmiah

The effect of occupational health and safety to employee performance in the sawmills industries in Langkat, North Sumatra, Indonesia

MUHDI

2021

Prosiding seminar internasional

Spatial distribution of landslide vulnerability level in Langkat Regency, North Sumatra Province, Indonesia

MUHDI

2021

Prosiding seminar internasional

Timber transportation using two types of trucks in industrial plantation forests, North Sumatra, Indonesia

MUHDI

2021
Prosiding seminar internasional

Estimation of litter carbon stocks in rubber agroforestry in Simalungun District, Indonesia

MUHDI

2020
Jurnal internasional bereputasi

Diversity, biomass, and carbon stock of understorey plants in the rubber agroforestry and rubber monoculture systems in central Tapanuli district, North Sumatra, Indonesia

MUHDI , DIANA SOFIA HANAFIAH

2020
Jurnal internasional bereputasi

Effect of Sulfate Reducing Bacteria and Ameliorants on Soil pH, C-Organic and Height of Corn Plants in Acid Sulfate Soils

MUHDI

2020
Jurnal internasional bereputasi

Effect of Sulfate Reducing Bacteria and Ameliorants on Soil pH, C-Organic and Height of Corn Plants in Acid Sulfate Soils.

MUHDI

2020
Prosiding seminar internasional

Feasibility analysis of sugar palm (Arenga pinnata Merr) by the people around Batang Gadis National Park area

MUHDI

2019
Prosiding seminar internasional

Analysis of biomass and carbon potential on eucalyptus stand in industrial plantation forest, North Sumatra, Indonesia

MUHDI

2019
Jurnal nasional terakreditasi

Utilization of organic waste and soil microorganisms in compost making and its application in hybrid corn cultivation in the middle school environment in Medan City

MUHDI

2019
Prosiding seminar internasional

Chainsaw Operators Perception on Occupational Health and Safety (OHS) in Industrial Plantation Forest, North Sumatra, Indonesia

MUHDI

2019
Jurnal nasional

Struktur dan Komposisi Jenis Tegakan Semai dan Pancang di Hutan Alam Akibat Pemanenan Kayu dengan Teknik Reduced Impact Timber Harvesting

MUHDI

2019
Prosiding seminar internasional

Logging waste of Eukaliptus ind 61 clone in industrial plantation forest, North Sumatra, Indonesia

MUHDI

2019
Prosiding seminar internasional

The Utilization of Sugar Palm (Arenga pinnata) by the People Around Batang

Gadis Nasional Park Area

MUHDI

2019

Jurnal nasional

The Physical Properties and The Extractive Content of Sugar Palm Stem (Arenga pinnata)

MUHDI , RUDI HARTONO

2018

Jurnal internasional bereputasi

Estimation of aboveground tree biomass Toona sureni and Coffea arabica in agroforestry system of Simalungun, North Sumatra, Indonesia

MUHDI , AGUS PURWOKO , SITI LATIFAH

2018

Jurnal internasional bereputasi

Residual stand damages caused by conventional and reduced impact timber harvesting in the natural forest

MUHDI

2018

Jurnal internasional bereputasi

Estimation of aboveground tree biomass Toona sureni and Coffea Arabica in agroforestry system of Simalungun, North Sumatra, Indonesia

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2016

Jurnal nasional

Pendugaan Cadangan Karbon Tumbuhan Bawah pada Kemiringan Lahan yang Berbeda di Hutan Pendidikan Universitas Sumatera Utara Kabupaten Karo

MUHDI

2016

Jurnal nasional

ANALISIS PENGEMBANGAN OBYEK WISATA PEMANDIAN ALAM KARANG ANYAR, KECAMATAN GUNUNG MALIGAS, KABUPATEN SIMALUNGUN, PROVINSI SUMATERA UTARA

MUHDI

2016

Jurnal nasional

PENDUGAAN CADANGAN KARBON PADA TEGAKAN EUCALYPTUS IND 47 UMUR 5 TAHUN DI IUPHHK PT. TOBA PULP LESTARI, Tbk. SEKTOR TELE

MUHDI

2016

Jurnal nasional

ANALISIS BIOMASSA DAN CADANGAN KARBON BAMBU BELANGKE

MUHDI

2016

Jurnal nasional

Pengaruh Struktur dan Komposisi Tegakan Terhadap Cadangan Karbon Tumbuhan Bawah di Hutan Desa Simorangkir Julu, Kabupaten Tapanuli Utara

MUHDI

2016

Jurnal internasional bereputasi

Estimation of above Ground Biomass in Logged over Areas, North Borneo, Indonesia

MUHDI

2016

Jurnal nasional

PERUBAHAN PENUTUPAN LAHAN HUTAN DI CAGAR ALAM DOLOK

SIBUALBUALI TAHUN 2006 DENGAN 2013

MUHDI

2016

Jurnal nasional

Analisis biaya dan produktivitas produksi kayu pada Hutan Tanaman Industri (Studi Kasus: PT. Sumatera Riang Lestari-Blok I Sei Kebaro, Kabupaten Labuhanbatu Selatan dan

MUHDI

2016

Jurnal nasional

Pendugaan cadangan karbon pada tanaman karet (*Hevea brasiliensis* Muell. Arg.) umur 10 tahun di perkebunan rakyat Desa Tarean, Kecamatan Silindak, Kabupaten Serdang Bedagai

MUHDI

2016

Jurnal nasional

Analisis Perubahan Tutupan Vegetasi Berdasarkan Nilai Ndzi Dan Faktor Biofisik Lahan Di Cagar Alam Dolok Sibual-Buali

MUHDI

2016

Jurnal nasional

Pendugaan Cadangan Karbon Tumbuhan Bawah Pada Tegakan Mindi (*Melia Azedarach*) Dan Mahoni (*Swietenia Macrophylla*)

MUHDI

2016

Jurnal nasional

MODEL ALOMETRIK BIOMASSA DAN MASSA KARBON BAMBU BELANGKE (*Gigantochloa pruriens* Widjaja.) DI HUTAN RAKYAT DESA SIRPANG SIGODANG, KECAMATAN PANELI, KABUPATEN SIMALUNGUN

MUHDI

2016

Jurnal internasional

Wood waste caused by reduced-impact logging in Indonesian Selective Cutting and Planting System, North Borneo, Indonesia

MUHDI

2016

Jurnal nasional

Analisis biaya dan produktivitas produksi kayu pada Hutan Tanaman Industri (Studi Kasus: PT. Sumatera Riang Lestari-Blok I Sei Kebaro, Kabupaten Labuhanbatu Selatan dan

MUHDI

2016

Jurnal nasional

ANALISIS EKONOMI PADA KAWASAN KONSERVASI EKS-SITU TAMAN HEWAN PEMATANG SIANTAR

MUHDI

2016

Jurnal nasional

Pendugaan cadangan karbon pada tanaman bambu talang (*Schizostachyum brachycladum* kurz.) di hutan rakyat bambu desa pertumbukan Kecamatan Wampu Kabupaten Langkat

MUHDI

2016

Jurnal nasional

PENDUGAAN CADANGAN KARBON PADA TANAMAN KARET (*Hevea*

**brasiliensis Muell. Arg.) DI PERKEBUNAN RAKYAT DESA TAREAN
KECAMATAN SILINDAK, KABUPATEN SERDANG BEDAGAI**

MUHDI

2015

Monograf

Produk Olahan Rebung dan Daun Muda Bambu

SITI LATIFAH , MUHDI

2015

Monograf

Aneka Kerajinan Bambu

SITI LATIFAH , MUHDI

2015

Jurnal nasional terakreditasi

**The estimation of reserves of biomass aboveground oil palm plantations in
northern Sumatra.**

MUHDI

2015

Jurnal nasional

**Modifikasi Teknik Pemanenan Dengan Perlakuan Fisik Dalam Upaya
Peningkatan Produktivitas Getah Kemenyan Toba (Styrax Sumatrana)**

MUHDI

2015

Jurnal nasional

**Analisis Pengembangan Objek Wisata Pemandian Manigom di Kabupaten
Simalungun**

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2015

Jurnal nasional

Kuantifikasi Biomassa Perkebunan Kelapa Sawit Di Langkat, Sumatera Utara

MUHDI

2015

Jurnal nasional

**Analisis finansial pemanenan kayu teknik reduced impact logging melalui
skema REDD+, Kalimantan Utara**

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2015

Jurnal nasional terakreditasi

**Analisis Biaya dan Produktivitas Penyaradan Kayu Dengan Traktor Caterpillar
D7G di Hutan Alam Tropika Basah PT Inhutani II, Kalimantan Utara**

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2014

Jurnal nasional

**Increasing Oleoresin (Pinus merkusii) Productivity with Physical Treatment
Modification and Time of Tapping in Riil Method**

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2014

Jurnal nasional

**(The Application of H2SO4 As Stimulant To Increase The Productivity of
Oleoresin (Pinus merkusii Jungh et de Vriese) With Riil Method**

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2013

Jurnal nasional terakreditasi

**Studi Pembuatan Papan Partikel dari Limbah Pemanenan Kayu Akasia (Acacia
mangium L.)**

MUHDI

2012

Jurnal nasional terakreditasi

Kerusakan Tegakan Tinggal Akibat Pemanenan Kayu Reduced Impact Logging Dan Konvensional Di Hutan Alam Tropika (Studi Kasus Di Areal Iuphhk PT. Inhutani II, Kalimantan Timur)

MUHDI

2012

Jurnal nasional terakreditasi

Kerusakan Tegakan Tinggal Akibat Pemanenan Kayu Reduced Impact Logging Dan Konvensional Di Hutan Alam Tropika (Studi Kasus Di Areal Iuphhk PT. Inhutani II, Kalimantan Timur)

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2009

Jurnal nasional terakreditasi

Struktur dan Komposisi Jenis Permudaan Hutan Alam Tropika Akibat Pemanenan Kayu dengan Sistem Silvikultur Tebang Pilih Tanam Indonesia (Tpti)

MUHDI

2009

Jurnal nasional terakreditasi

Kerusakan Tegakan Akibat Pemanenan Kayu Konvensional dan Teknik Reduced Impact Logging di Hutan Alam

MUHDI

2007

Jurnal nasional terakreditasi

Desain Primer Spesifik untuk Gen yang Berperan pada Biosintesis Beta Karoten Kelapa Sawit

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2007

Jurnal nasional terakreditasi

Dampak Pemanenan Kayu Berdampak Rendah terhadap Kerusakan Tegakan Tinggal di Hutan Alam (Studi kasus di areal HPH PT. Suka Jaya Makmur, Kalimantan Barat)

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2006

Tulisan ilmiah

Dampak Pemanenan Kayu Berdampak Rendah dan Konvensional terhadap Kerusakan Tegakan Tinggal di Hutan Alam (Studi Kasus di Areal HPH PT. Suka Jaya Makmur, Kalimantan Barat)

MUHDI

2006

Jurnal nasional terakreditasi

Dampak pemanenan kayu berdampak rendah dan konvensional terhadap kerusakan tegakan tinggal di hutan alam (Studi Kasus di Areal HPH PT. Suka Jaya Makmur, West Kalimantan)

MUHDI

2026

Jurnal nasional

Pengaruh Penyaradan Kayu Dengan Traktor Caterpillar D7g Terhadap Porositas Tanah di Hutan Alam (the Effect of Skidding by Tractor Caterpillar D7g to Soil Porosity in Natural)

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2026

Jurnal internasional

Wood Waste Caused by Reduced Impact Logging in Indonesian Selective

Cutting and Planting System, North Borneo, Indonesia.

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2026

Tulisan ilmiah

Effectivness of reduced impact logging to carbon stock in tropical natural forest, East Kalimantan

MUHDI

2026

Jurnal nasional

T., & Widyanti, M.(2006) Studi produktivitas penyaradan kayu dengan menggunakan traktor Komatsu D70 LE di hutan alam

MUHDI

2026

Tulisan ilmiah

Pengaruh Penyaradan Kayu Dengan Traktor Caterpillar D7g Terhadap Porositas Tanah di Hutan Alam (the Effect of Skidding by Tractor Caterpillar D7g to Soil Porosity in Natural

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2026

Tulisan ilmiah

EKSPOSE HASIL-HASIL PENELITIAN 2016

MUHDI

2026

Tulisan ilmiah

Medan, 9 Agustus 2016

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2026

Tulisan ilmiah

PENDUGAAN CADANGAN BIOMASSA DI ATAS PERMUKAAN TANAH PERKEBUNAN KELAPA SAWIT DI SUMATERA UTARA

MUHDI

2026

Jurnal nasional terakreditasi

THE EFFECT OF REDUCED IMPACT LOGGING TO RESIDUAL STAND DAMAGE IN THE TROPICAL NATURAL FOREST (A Case Study in Forest Concession Areas of PT. Suka Jaya Makmur, West Kalimantan)

MUHDI

2026

Tulisan ilmiah

Kerusakan tegakan tinggal akibat pemanenan kayu reduced inpact logging dan konvensional di hutan al; am tropika (Studi kasus di areal IUPHHK PT. INHUTANI II, Kalimantan Timur)

MUHDI

2026

Jurnal nasional

Muhdi. 2014. Penggunaan Asam Sulfat (H2SO4) sebagai Stimulansia dalam Meningkatkan Produktivitas Getah Pinus dengan Metode Rill

MUHDI

2026

Jurnal internasional

Productivity and Cost Analysis of Felling in Indonesian Selective Cutting and Planting, North Borneo, Indonesia

MUHDI

Community Services

2015

Ipteks Bagi Masyarakat

Pemberdayaan Petani Bambu Di Desa Durin Serugun Kec. Sibolangit, Kabupaten Deli Serdang

MUHDI , SITI LATIFAH

Intellectual Property Rights

2026

Hak cipta nasional

Pembuatan Gula Semut Sebagai Produk Turunan Aren (Arenga pinnata)

SITI LATIFAH , MUHDI , HARISYAH MANURUNG , ZHRUL ULUM

2026

Hak cipta nasional

Penyusunan Model Alometrik Pendugaan Biomassa Aren (Arenga pinnata)

SITI LATIFAH , MUHDI , HARISYAH MANURUNG , ZHRUL ULUM

2021

Paten nasional

Metoda penggunaan kadar air tanah 110% kapasitas lapang untuk mendukung pertumbuhan tanaman hortikultura

MUHDI

2021

Paten nasional

Inokulan bakteri pereduksi sulfat (BPS) untuk meningkatkan pertumbuhan tanaman jagung pada tanah sulfat masam

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