

# Prof. Dr. Delvian, SP., MP.

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Faculty of Forestry  
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*Prof. Dr. Delvian, S.P., M.P. is a permanent lecturer at the Faculty of Forestry, Universitas Sumatera Utara. He was born in Tes, Rejang Lebong Regency, as the sixth child of the late H. Ibrahim Djaid and the late Hj. Nurjani. He is married to Dr. Idha Aprilyana Sembiring, S.H., M.Hum, and has 2 children named Auzy Adzkie Alkhansa Villiani and Syifa Syakhira Villiani. He received his Bachelor's degree from the Faculty of Agriculture, Bengkulu University in 1993. In 1995-1997, he received the URGE Batch II Scholarship from the World Bank to pursue a Master of Agricultural Science program at the Graduate Program of Andalas University. He followed the Doctoral Program Education at the Forest Science Program, Graduate Program of Bogor Agricultural University from 1998 to 2003, with funding from the URGE Batch V Scholarship from the World Bank.*

*Since December 2002, Prof. Delvian has been serving as a Civil Servant Lecturer at the USU Faculty of Forestry. In 2004, he was appointed as a Permanent Lecturer at the USU Faculty of Forestry, in the position of Assistant Professor in Plant Physiology. On April 1, 2023, through the Decree of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia Number 287032/M/07/2023, Prof. Delvian was appointed as a Professor/Full Professor in the field of Plant Physiology.*

*During his career, he has been trusted as a program manager at the undergraduate and graduate levels. In 2004-2010, he was trusted as the Secretary of the USU Faculty of Forestry Undergraduate Program in Forestry. Next, in 2010-2015, he was appointed as Secretary of the USU Doctoral Program in Natural Resource Management and Environment (PSL) SPs. Then, in 2015-2017, he served as the USU Head of the Master and Doctoral Program of PSL SPs. From 2017 until now, he has been re-appointed as the Secretary of the USU Doctoral Program of PSL SPs.*

*In addition to teaching and managing the program, Prof. Delvian is also actively involved in scientific research activities, especially in basic and applied studies related to arbuscular mycorrhizal fungi as beneficial soil microbes. Prof. Delvian is active in carrying out community service activities, especially related to environmental problems and issues, especially in the field of forestry. In addition, he also often conducts technical field studies with several institutions, both government and non-government, including the Environment Agency of North Sumatra Province, the Ministry of Environment and Forestry of the Republic of Indonesia, and The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).*

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## Publications

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2019

Jurnal nasional

### **Agroforestry Land Management with the Community of Candi Rejo Village, Biru-Biru District, Deli Serdang, North Sumatra**

DENI ELFIATI , DELVIAN , RIDAHATI RAMBEY

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2020

Prosiding seminar internasional

### **The marketing strategy for sugar palm (Arenga pinnata) by people around the protected forest aren HPHTI of Toba Pulp Lestari**

DELVIAN , AGUSSABTI , IWAN RISNASARI , ZULKIFLI

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2019

Prosiding seminar internasional

### **The distribution of non-timber forest products in the protected areas (case study at PT Toba Pulp Lestari concession)**

DELVIAN , ZULKIFLI , AGUSSABTI

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2025  
Makalah ilmiah

## **Developing and assessing the cultural ecosystem services of mangroves in North Sumatra, Indonesia**

MOHAMMAD BASYUNI , APRI HERI ISWANTO , DELVIAN , ETTI SARTINA SIREGAR , ARIDA SUSILOWATI , AHMAD BAIQUNI RANGKUTI , ERWIN RIYANTO ARDLI , DARMA BAKTI , DELIANA

2019  
Prosiding seminar internasional

## **Effect of salinity on spore germination, hyphal length and root colonization of the Arbuscular Mycorrhizal Fungi**

RIDAHATI RAMBEY , DELVIAN

2013  
Jurnal internasional

## **Land use change and simulation of hydrological response using integrated NRCS model and base flow for ecohydrological concept at Krueng Peusangan watershedÂ ...**

ZULKIFLI , DELVIAN , ICHWANA

2025  
Jurnal internasional

## **Analysis of Human Resource Behavior in Solid Medical Waste Management: Case Study From Regional Public Hospitals Drs. H. Amri Tambunan Deli Serdang, Indonesia**

DELVIAN , SRI MALEM INDIRAWATI

2024  
Jurnal nasional terakreditasi

## **ANALISIS PENDAPATAN USAHATANI TANAMAN HORTIKULTURA DI FOOD ESTATE HUMBANG HASUNDUTAN**

DELVIAN , ABDUL RAUF

2019  
Jurnal nasional terakreditasi

## **Growth Rate of Rhizophora apiculata Propaguls in Two Sylvofishery Ponds in Tanjung Rejo Village Percut Sei Tuan District**

DELVIAN , RIDAHATI RAMBEY

2022  
Prosiding seminar internasional

## **Exploring endophytic fungi from Rhizophora spp leaves for improving plant growth**

DENI ELFIATI , DELVIAN

2026  
Jurnal internasional bereputasi

## **Risk analysis of human-wildlife conflict in Leuser Ecosystem Area, Indonesia**

ABDUL RAUF , RAHMAWATY , DELVIAN , R. HAMDANI HARAHAHAP

2021  
Jurnal internasional bereputasi

## **Improved Salt Tolerance of Lamtoro (Leucaena leucocephala) through the Application of Indigenous Mycorrhiza**

DELVIAN

2025  
Jurnal internasional bereputasi

## **Agroforestry-Based Plant Diversity and Its Implications for Ecosystem Restoration in Gunung Leuser National Park, Indonesia**

R. HAMDANI HARAHAHAP , RAHMAWATY , DELVIAN , Dr. ENDANG HILMI, SHut, MSi

2019  
Prosiding seminar internasional

## **Isolation and identification of decomposer fungi from Macaranga indica and Hibiscus macrophyllus leaf litter from restoration area of Gunung Leuser**

## National Park

DENI ELFIATI , DELVIAN

2025

Prosiding seminar internasional

### **Carbon stock of forest stand at montane bogs in the Gayo Highlands, Aceh**

DELVIAN , RAHMAWATY , ZULFAN ARICO , R. HAMDANI HARAHAHAP , SITI LATIFAH , BUDI UTOMO , Seca Gandaseca , Iyan Robiansyah

2025

Jurnal nasional terakreditasi

### **Spatial Study of Land Cover Change and Degradation of Environmental Carrying Capacity of Settlements in the Coastal Area of Belawan Bahagia 2004-2025**

DELVIAN

2025

Prosiding seminar internasional

### **Ecological analysis of tree-strata plants in the Pandumaan Sipituhuta Customary Forest Area**

DELVIAN , ROBERT SIBARANI , RAHMAWATY , R. HAMDANI HARAHAHAP , Dr. ENDANG HILMI, SHut, MSi

2021

Jurnal nasional

### **Cultivation of Tilapia (*Oreochromis niloticus*) using the silvofishery method in Tanjungrejo, Percut Sei Tuan, North Sumatra Province**

DELVIAN , RIDAHATI RAMBEY , IPANNA ENGGAR SUSETYA , AMANATUL FADHILAH , DENI ELFIATI

2025

Prosiding seminar nasional

### **The Empowerment and Independence of Assisted Village, Bagan Kuala Through Various Community Services on Ecotourism, Ecoprint Development, Waste Management, and Malaria Eradication: Pemberdayaan dan Kemandirian Desa Binaan Bagan Kuala Melalui Berbagai Inisiatif Masyarakat yang Berfokus Pada Ekowisata, Pengembangan Ecoprint, Pengelolaan Sampah, dan Pemberantasan Malaria**

DELVIAN

2022

Prosiding seminar internasional

### **Utilization of effluent biodigester as a bioactivator for the decomposition of rice husk (*Oryza sativa*) into compost**

DELVIAN

2022

Prosiding seminar internasional

### **Potential analysis of Nipa Palm (*Nypa Fruticans*) in Singkil**

DELVIAN , TAVI SUPRIANA , ELISA JULIANTI

2021

Jurnal internasional bereputasi

### **The undergrowth composition and distribution in different forest area utilization**

BUDI UTOMO , TERNALA ALEXANDER BARUS , DELVIAN

2022

Jurnal internasional bereputasi

### **Occurrence of arbuscular mycorrhizal fungi associated with *Casuarina equisetifolia* in saline sandy environment, North Sumatra, Indonesia**

DELVIAN

2020

Jurnal internasional bereputasi

### **SOIL CHARACTERISTICS OF DRY LAND IN INDRAPURI AND BLANG BINTANG SUBDISTRICTS OF ACEH BESAR REGENCY, ACEH PROVINCE,**

## INDONESI

DELVIAN , T IRMANSYAH , ABDUL RAUF

2018

Prosiding seminar internasional

### **Decomposition rate of *Rhizopora stylosa* litter in Tanjung Rejo Village, Deli Serdang Regency, North Sumatera Province**

DELVIAN , RIDAHATI RAMBEY

2022

Jurnal nasional terakreditasi

### **Mangrove Utilization as Sources of Ruminant Feed in Belawan Secanang Subdistrict, Medan Belawan District**

MARUF TAFSIN , DELVIAN

2020

Prosiding seminar internasional

### **The roles of FMA in increasing growth and effectiveness of soybean roots on dry land supporting sustainable agriculture in Deli Serdang District**

CHAIRANI HANUM L , DELVIAN

2019

Prosiding seminar internasional

### **Land cover change analysis of Besitang watershed**

BEJO SLAMET , DELVIAN

2022

Jurnal internasional bereputasi

### **Short Communication: Occurrence of arbuscular mycorrhizal fungi associated with *Casuarina equisetifolia* in saline sandy environment, North Sumatra, Indonesia**

DELVIAN

2019

Prosiding seminar internasional

### **Changes in some characters of soybean leaves inoculated with mycorrhiza in salinity stress**

DELVIAN , NINI RAHMAWATI , ROSMAYATI , MOHAMMAD BASYUNI

2021

Jurnal internasional bereputasi

### **Potential of phosphate solubilizing fungi isolated from peat soils as inoculant biofertilizer**

DENI ELFIATI , DELVIAN , HAMIDAH HANUM , ARIDA SUSILOWATI , HENTI HENDALASTUTI RACHMAT

2025

Prosiding seminar internasional

### **The implications of land use and land cover changes on the natural environment in North Sumatra**

DELVIAN

2019

Prosiding seminar internasional

### **Utilization of plants colonized by mycorrhizal fungi to reduce Lead in the soil: Greenhouse study**

DELVIAN

2023

Prosiding seminar internasional

### **Potential analysis of Nipa Palm (*Nypa Fruticans*) in Singkil**

TAVI SUPRIANA , ELISA JULIANTI , DELVIAN

2025

Prosiding seminar internasional

### **Ecological analysis of tree-strata plants in the Pandumaan Sipituhuta Customary Forest Area**

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2020

Jurnal internasional

**The Opportunity of Understorey Species to Absorb Secondary Metabolites in the Soil (Case Study in IUPHHK - Industrial Plantation Forests PT. Toba Pulp Lestari, Tbk)**

TERNALA ALEXANDER BARUS , BUDI UTOMO , DELVIAN

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2020

Jurnal internasional bereputasi

**The Growth, Production of Sorghum (*Sorghum bicolor* {L.} Moench) and Changes in Chemical Soil Properties Due To the Treatment of Mulch and Organic Fertilizer**

DELVIAN , ABDUL RAUF , T IRMANSYAH

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2020

Jurnal internasional bereputasi

**THE GROWTH, PRODUCTION OF SORGHUM (*SORGHUM BICOLOR* [L.] MOENCH) AND CHANGES IN CHEMICAL SOIL PROPERTIES DUE TO THE TREATMENT OF MULCH AND ORGANIC FERTILIZER**

DELVIAN , T IRMANSYAH , ABDUL RAUF

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2019

Prosiding seminar internasional

**Effect of salinity on spore germination, hyphal length and root colonization of the Arbuscular Mycorrhizal Fungi**

DELVIAN , RIDAHATI RAMBEY

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2022

Jurnal internasional bereputasi

**Occurrence of arbuscular mycorrhizal fungi associated with *Casuarina equisetifolia* in saline sandy environment, North Sumatra, Indonesia**

DELVIAN

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2026

Jurnal nasional terakreditasi

**Spatial Study of Land Cover Change and Degradation of Environmental Carrying Capacity of Settlements in the Coastal Area of Belawan Bahagia 2004-2025**

RAHMAWATY , DELVIAN

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2021

Prosiding seminar internasional

**Effect of land use type on arbuscular mycorrhizal fungi diversity in high altitude of Karo Highland**

DELVIAN

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2022

Prosiding seminar internasional

**Potential analysis of Nipa Palm ( *Nypa Fruticans*) in Singkil**

DELVIAN , ELISA JULIANTI , TAVI SUPRIANA

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2020

Prosiding seminar internasional

**Determination of the most dominant cause factors due to erosion in the farmland of Sibolangit sub-district**

DELVIAN , ZULKIFLI , ABDUL RAUF

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2025

Jurnal internasional bereputasi

**From biomass waste to climate action: characterizing of bioenergy pellet from oil palm fronds and branches wood of mangrove**

ARIF NURYAWAN , RIZKI FADHILLAH LUBIS , DELVIAN , RAHMAWATY , JULIZA HIDAYATI

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2019

Prosiding seminar internasional

## **Characteristics and Morphology of Biodegradable Plastics from Oil Palm Waste for Agricultural and Forestry Applications**

DELVIAN , IWAN RISNASARI , ARIF NURYAWAN , RIDWANSYAH

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2018

Prosiding seminar internasional

## **Decomposition rate of Rhizopora stylosa litter in Tanjung Rejo Village, Deli Serdang Regency, North Sumatera Province**

DELVIAN , RIDAHATI RAMBEY

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2022

Jurnal nasional terakreditasi

## **Agroforestry-Based Land Management in the Food Estate Area of Ria-Ria Village, Pollung District, Humbang Hasundutan Regency, North Sumatra**

DENI ELFIATI , RIDAHATI RAMBEY , DELVIAN

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2021

Prosiding seminar internasional

## **Utilization of sugar palm (Arenga pinnata Merr) by the communities around the PT Toba Pulp Lestari**

DELVIAN , AGUSSABTI , ZULKIFLI

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2021

Lain-lain

## **Cultivation of Tilapia (Oreochromis niloticus) using the silvofishery method in Tanjungrejo, Percut Sei Tuan, North Sumatra Province**

RIDAHATI RAMBEY , IPANNA ENGGAR SUSETYA , DENI ELFIATI , DELVIAN

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2021

Prosiding seminar internasional

## **Glomus etunicatum improved salt tolerance in Dalbergia latifolia Roxb. Through physiological adjustment**

DELVIAN

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2021

Prosiding seminar internasional

## **The effect of forest land allocation on understory plant species associations**

TERNALA ALEXANDER BARUS , BUDI UTOMO , DELVIAN

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2021

Prosiding seminar internasional

## **Use of biopolybag from tapioca starch and sawdust waste**

DELVIAN , IWAN RISNASARI , ARIF NURYAWAN

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## **Researches**

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2018

Penelitian Dana Lokal Perguruan Tinggi

## **Komposit Plastik Dengan Pengisi Serat Berlignoselulosa Untuk Polybag Yang Ramah Lingkungan Serta Pengaruhnya Terhadap Pertumbuhan Tanaman**

IWAN RISNASARI , ARIF NURYAWAN , DELVIAN

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2018

Penelitian Dana Lokal Perguruan Tinggi

## **Fungi Mikoriza Arbuskula dan Salinitas Tanah Serta Potensi Isolatnya dari Ekosistem Pantai**

RIDAHATI RAMBEY , DELVIAN

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2017

Penelitian Dana Lokal Perguruan Tinggi

## **Dinamika Sporulasi Fungi Mikoriza Arbuskula pada Tegakan Casuarina equisetifolia Terkait Perubahan Musim dan Variasi Sifat Tanah**

## Community Services

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2016

Ipteks Bagi Masyarakat

### **Penerapan Teknologi Silvofishery dalam Pengelolaan Kawasan Mangrove yang Berkelanjutan**

EDY BATARA MULYA SIREGAR , DELVIAN

2016

Ipteks Bagi Masyarakat

### **Pembangunan Kebun Benih Tanaman Gaharu (*Aquilaria malaccensis*) sebagai Upaya Konservasi dan Penyediaan Bibit Unggul dan Berkualitas**

RIDAHATI RAMBEY , EDY BATARA MULYA SIREGAR , DELVIAN

2016

Ipteks Bagi Masyarakat

### **Penerapan Teknologi Silvofishery dalam Pengelolaan Kawasan Mangrove yang Berkelanjutan**

EDY BATARA MULYA SIREGAR , DELVIAN

2024

Ipteks Bagi Masyarakat

### **Pembentukan Kompos Centre sebagai Wadah Pengabdian dan Pembelajaran pada Masyarakat di Kecamatan Pantai Labu, Kabupaten Deli Serdang.**

SARIFUDDIN , NUR ULINA WARNISYAH SEBAYANG , LUTHFI AZIZ MAHMUD SIREGAR , MARIANI BR SEMBIRING , SATIA NEGARA LUBIS , T SABRINA , DELVIAN , T IRMANSYAH

2021

### **Pengelolaan Lahan Berbasis Agroforestry di Wilayah Food Estate Desa Ria-Ria, Kecamatan Pollung, Kabupaten Humbang Hasundutan, Sumatera Utara**

RIDAHATI RAMBEY , DENI ELFIATI , DELVIAN

2016

Ipteks Bagi Masyarakat

### **Penerapan Teknologi Silvofishery dalam Pengelolaan Kawasan Mangrove yang Berkelanjutan**

RIDAHATI RAMBEY , EDY BATARA MULYA SIREGAR , DELVIAN

2018

Ipteks Bagi Masyarakat

### **Teknologi Penanaman *Avicennia marina* pada Lahan Mangrove Pantai Timur Sumatera Utara**

DENI ELFIATI , DELVIAN

2020

Penelitian Unggulan Perguruan Tinggi

### **Pengelolaan Ekosistem Mangrove dengan Metode Silvofishery di Desa Tanjung Rejo, Kecamatan Percut Sei Tuan, Provinsi Sumatera Utara**

RIDAHATI RAMBEY , DENI ELFIATI , AMANATUL FADHILAH , IPANNA ENGGAR SUSETYA , DELVIAN

2017

Ipteks Bagi Masyarakat

### **Penanaman Jenis *Rhizopora* di Hutan Mangrove Percut Sei Tuan Pantai Timur Sumatera Utara**

RIDAHATI RAMBEY , DENI ELFIATI , DELVIAN

2018

Ipteks Bagi Masyarakat

### **Teknologi Penanaman *Avicennia marina* pada Lahan Mangrove Pantai Timur Sumatera Utara**

DENI ELFIATI , DELVIAN

2018

Ipteks Bagi Masyarakat

## **Teknologi Penanaman Avicennia marina pada Lahan Mangrove Pantai Timur Sumatera Utara**

RIDAHATI RAMBEY , DENI ELFIATI , DELVIAN

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## **Intellectual Property Rights**

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2021

Hasil penelitian/pemikiran yang tidak dipublikasikan

## **Aplikasi Asam Humik dan Aktivator Orgadec terhadap Pertumbuhan Bibit Suren (Toona Sureni) pada Tanah Pasca Tambang Emas (Kelurahan Simpang Gambir, Kecamatan Lingga Bayu &#8230;**

DELVIAN

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