



SDG 15

Life on Land

15 LIFE ON LAND



Research by Number (2020-2024)



Publication

200



Citation Impact

1.06



Citation Count

1,434



SDG 15 Life on Land



Greening the Future: Unpad’s Tree Planting Initiatives for Environmental Sustainability



Universitas Padjadjaran (Unpad) consistently contributes to environmental preservation through tree planting activities involving the academic community, alumni, and student organizations.

On January 14, 2024, Unpad, in collaboration with the Indonesian Association of State University Alumni Organizations (Himpuni), planted 51 fruit tree seedlings in the Leuwi Padjadjaran Reservoir area at the Jatinangor Campus. This activity was part of the Himpuni Annual Meeting agenda and aimed to support environmental conservation while strengthening the reservoir’s function as a water buffer for surrounding communities. Tree planting in this area plays a vital role in maintaining ecosystem balance, preventing floods during the rainy season, and ensuring water availability during the dry season.

Subsequently, on April 21, 2024, the student organization International Association of Agricultural Students and Related Sciences (IAAS) LC Unpad held a tree planting event titled “*Tree Planting Event: Planting Hope, Saving Earth*” on the slopes of Mount Geulis, Jatiroke, Jatinangor. In commemoration of International Earth Day, 83 avocado tree seedlings were planted in collaboration with the Forestry Office, Mount Geulis Communication Forum, and Bening Saguling Foundation. This initiative not only aimed to green the environment but also to encourage students and local communities to become more aware of and engaged in environmental conservation. For this effort, IAAS LC Unpad received an award from the Forestry Office and the Acting Governor of West Java.

These two activities demonstrate Unpad’s strong commitment to supporting SDG 15 (Life on Land), particularly in conserving terrestrial ecosystems, protecting biodiversity, and mitigating climate change through increased vegetation cover. Tree planting contributes to oxygen production, carbon dioxide absorption, the provision of habitats for various species, and improvements in air and soil quality in surrounding areas.

Unpad's Palawa Unit Contributes to the Conservation of Endemic Saninten Trees

On December 12, 2024, the Palawa Student Nature Lovers Unit of Universitas Padjadjaran took part in the “1,000 Saninten Tree Planting” activity held in the Bandung Utara (North Bandung) area. The event was organized by Pertamina Patra Niaga Regional West Java as a concrete effort to conserve endangered plant species and protect the environment.

The Saninten tree (*Castanopsis argentea*) is an endemic species native to West Java and plays a crucial role in maintaining forest biodiversity and ecosystems. However, its population has declined significantly due to exploitation and land conversion. Saninten is a protected species under the Indonesian Ministry of Environment and Forestry Regulation No. 92 of 2018, making its conservation a national priority.

This program aims to restore Saninten trees to their natural habitat while raising public awareness of the importance of protecting rare flora. Saninten trees are ecologically valuable as they support forest food chains, its fruit serves as a food source for various wildlife species. Additionally, Saninten trees have a high capacity to absorb carbon dioxide, which contributes to mitigating global warming and improving air quality, particularly in the increasingly urbanized Bandung Utara area. Beyond ecological benefits, Saninten also has economic potential, as its fruit can be processed into valuable food products.

This tree planting initiative marks the beginning of building a sustainable Saninten conservation forest. Palawa Unpad, together with Pertamina Patra Niaga Regional West Java, hopes that this activity will inspire wider community participation in environmental preservation and the protection of endangered plant species.



Agri Summit 2024: KAFP Unpad Market Connect



In response to the growing global food insecurity crisis affecting 880 million people, Universitas Padjadjaran organized Agri Summit 2024: KAFP Unpad Market Connect, a strategic event aimed at advancing sustainable agriculture, protecting terrestrial resources, and promoting innovation. The summit took place from August 30 to September 1, 2024, at Grha Sanusi Hardjadinanti, Bandung, as part of the 65th Anniversary of the Faculty of Agriculture (Faperta) Unpad.

The event featured a series of activities, including the National Seminar on Food Security, a Job Fair & Business Connect, and an Alumni Gathering. The discussions highlighted the urgent need to prepare food systems to address future challenges such as climate change, land degradation, and resource scarcity. Agriculture—including fisheries, livestock, and plantations—remains a critical sector that supports livelihoods, contributes to global GDP, and plays a significant role in maintaining ecosystems and biodiversity.

Minister of Cooperatives and SMEs, Drs. Teten Masduki, underscored the need for innovation and generational renewal in agriculture to address these challenges. He emphasized the risk of a severe food availability gap by 2050 if land and food resources are not well-managed. He also recognized Unpad's significant contributions to agricultural innovation and research.

Unpad Rector, Prof. Rina Indiasuti, highlighted that the university's research-based and technology-driven innovations are aimed at strengthening food security and ensuring sustainable land use. Many of these innovations integrate local wisdom from West Java, such as the use of cassava, which supports both agricultural biodiversity and local community resilience.

The event also provided a platform to promote sustainable land use, encourage the participation of young generations in agriculture, and strengthen collaboration between academia, government, alumni, and industry to achieve food sovereignty while conserving natural resources.

Through Agri Summit 2024, Unpad demonstrated its commitment to SDG 15 (Life on Land) by promoting sustainable agricultural practices, conserving biodiversity through research and innovation, and supporting the sustainable use of terrestrial ecosystems to build a resilient and equitable food system.

Empowering Communities through Sustainable Plant Cultivation

On October 8, 2024, Universitas Padjadjaran held a knowledge sharing session titled “Cultivation Techniques for Vinca and Kaffir Lime Plants”, organized by the Dharma Wanita Persatuan (DWP) Unpad at Bale Rumawat Unpad, Bandung. The session was delivered by Dr. Rahmat Budiarto, S.P., M.Si., Lecturer at the Faculty of Agriculture, Unpad, and attended by the Chair of DWP Unpad, Dr. Reiva Arief S. Kartasmita, along with members and representatives of DWP Unpad and the Faculty of Agriculture.

The session focused on introducing sustainable and practical cultivation methods for Vinca (*Catharanthus roseus*), a popular ornamental plant, and Kaffir Lime (*Citrus hystrix*), which has both economic and ecological value. These plants are categorized as low maintenance species, making them suitable for wider community adoption.

For Vinca cultivation, Dr. Rahmat explained the simple planting process, which involves mixing soil, rice husk charcoal, and organic fertilizer in pots before sowing the seeds. Proper watering and pruning techniques are essential to encourage continuous flowering and maintain plant health.

For Kaffir Lime cultivation, he emphasized the importance of selecting certified seedlings with blue labels to ensure plant authenticity and health. He also explained the advantage of using grafted plants rather than seedlings grown from seeds to avoid excessive thorn growth. Sustainable harvesting practices, such as moderate daily pruning, were introduced to support continuous growth and branch development.

This activity not only provides practical gardening knowledge to the Unpad community but also contributes to SDG 15 (Life on Land) by promoting the cultivation and preservation of plant biodiversity, encouraging sustainable land use at the community level, and enhancing green spaces through home gardening practices. In addition, the initiative strengthens community engagement in environmental stewardship, supporting Unpad’s mission to integrate sustainability across education and community activities.



Advancing Forest Conservation Research on the Global Stage



Dr. Sc. Dina Oktavia, M.Si., Lecturer at the School of Postgraduate Studies, Universitas Padjadjaran, participated in the 26th World Forestry Congress with the theme “*Forests and Society Towards 2050*”, organized by the International Union of Forest Research Organizations (IUFRO) in Stockholm, Sweden, from June 23 to 29, 2024. Dina was one of the recipients of a full sponsorship through the *IUFRO Scientist Assistance Programme*, which also enabled her to join the Pre-Training Congress Workshop (PCTW) on Research Methods held at the Swedish University of Agricultural Sciences, Uppsala, from June 19 to 22, 2024.

The IUFRO World Congress is a global platform for knowledge exchange, vision sharing, and dialogue among scientists, policymakers, forest managers, youth, civil society, and the private sector. It is the largest international forestry research forum, held every five years.

During the congress, Dina presented two research studies:

01

“Unearthing Past Sundaland’s Legacy: The Savanna Corridor of Belitung Kerangas Forest, Indonesia”

This presentation emphasized the importance of conserving kerangas forest ecosystems as unique natural laboratories that have existed since the Last Glacial Maximum. The Belitung Kerangas Forest, located along the Indo Pacific Warm Pool (IPWP), plays a crucial role in reconstructing past climate changes. Dina highlighted the need to establish long term permanent monitoring plots for studying ecological processes and biodiversity in these forests.

02

“Universitas Padjadjaran Arboretum Offers Biodiversity Resources for Long Term Research and Education”

This second presentation showcased the potential of the Unpad Arboretum in Jatinangor as a hub for biodiversity research and education. For more than 15 years, the arboretum has been utilized as a site for student research and practical field activities. Dina emphasized the university’s dual role as both an academic institution and an ecosystem and biodiversity steward, promoting the conservation of terrestrial ecosystems on campus.

Through her active participation, Dina contributed to global scientific dialogue on tropical forest ecosystems and promoted Indonesia’s kerangas forest conservation efforts. She also positioned Unpad as a leading university that integrates forest conservation, biodiversity management, and long term ecological research into its academic and sustainability strategies.

This initiative directly supports SDG 15 (Life on Land) by advancing research on terrestrial ecosystems, enhancing international collaboration for forest conservation, and strengthening the role of universities as knowledge producers and environmental stewards.