

**Proceedings of the 5th International Conference on Rural Socio-Economic Transformation (RUSSET):  
Toward Sustainable Agri-food Systems, Robust Agriculture 4.0,  
and Inclusive Community Development**

29-30 October 2024, Bogor, Indonesia

*RUSSET 2024*

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## Preface

Welcome to the Fifth International Conference on Rural Socio-economic Transformation (RUSSET), an annual event organized by the Department of Communication and Community Development Sciences, IPB University, Bogor. This year's conference focuses on "Toward Sustainable Agri-food Systems, Robust Agriculture 4.0, and Inclusive Community Development". The conference was held online and offline in Bogor, Indonesia, on October 29-30, 2024, to enable participation worldwide, regardless of location.

The theme was chosen in response to the complexity of the 21st century, in which the world is still embroiled in humanitarian crises due to war, such as those in Gaza and Ukraine. These crises have far-reaching consequences, including disruption of global trade, value chains and a food shortage. Concurrently, the international community faces an increasing climate and ecological crisis, with projections indicating a significant rise in global temperatures, which leads to the melting of polar ice caps and exacerbates health issues and crop failures.

Breakthroughs in robotics, nanotechnology, gene technology, artificial intelligence (AI), machine learning and energy generation for agricultural use—often referred to as Agriculture 4.0—have the potential to address the above issues. However, Agriculture 4.0 is also potentially disruptive and transformative in many ways. Given these challenges, the energy transition and food production nexus demand attention by putting nature, people, life and livelihood at the heart of climate action. In doing so, a well-managed transformation of the food system is imperative. Thus, the RUSSET aims to provide a platform for knowledge exchange, foster research collaboration that drives progress on agri-food systems and Agriculture 4.0 and discuss their role in promoting inclusive rural community development.

We are delighted to welcome you, our distinguished speakers, with your insight and expertise to give tone to the conference. We want to express our gratitude to our sponsor, the International Office of IPB, partner universities, steering committee, and organizing committee. Without their support and dedication, this conference would not have been possible.

As we go on this exciting journey, let us seize the opportunity to strengthen our collaborations, develop a long-lasting research network, and inspire each other for a better agrifood sector that facilitates inclusive community development. Your participation is crucial in shaping this conference's discourse and outcome.

Chairperson,

Dr. Iman K. Nawireja

# Contents

## Agrarian & Ecology

- Analysis of Land Conversion and Its Impact on Tenurial Changes in  
Cikarawang Village, Dramaga 1  
*Shafira Rizky Wardiani, Candra Fitrah Sopiana, Nadya Adelaide Vertin,  
Syahrainna Mayzwa Miranjani*
- Detecting the Strategy of Those Who Left Behind (Study on Landscape  
Transformation Triggered by Andesite Mining Activities in Batujajar Village,  
Bogor Regency) 13  
*Heru Purwandari, Arya Hadi Dharmawan, Ekawati Sri Wahyuni, Satyawan  
Sunito, Rai Sita, Hana Indriana*
- The Impact of Agricultural Land Conversion into Residential Land on the  
Sustainability of Community Agriculture in Cihideung Udik Village 23  
*Hasna Sharifa Alisha, Aghna Ajrina, Nailah Rahmah Azizah, Mohamad  
Shohibuddin*
- Impact of Agroecosystem Changes on the Livelihood of Cihideung Udik  
Village Residents, Ciampea District, Bogor Regency 33  
*Devita Damayanti, Khadijah Khadijah, Muhammad Irsyad Al Debaran,  
Nadhira Aisha Putri, Najwaa Fauziyyah Firmansyah*
- The Existence of Culture and Livelihood Strategies in Kasepuhan Sinar Resmi  
in Facing Climate Change 44  
*Dida Saiful Mujab, Nadiya Tsaniya Zahroh, Adriansyah Adriansyah,  
Muhammad Wira Kisesa, Hawwa Zalsabil Addra, Intifadhah Kayla Anwari,  
Titania Aulia, Ninuk Purnaningsih*
- Gender-Based Violence in Higher Education: Awareness and Practices 59  
*Anna Fatchiya, Hesti Asriwandari, Ikhlasih Dalimoenthe, Siti Amanah, Dyah  
Retna Puspita, Adi Firmansyah*
- Oil Palm Farming from a Women's Perspective 73  
*Dyah Retna Puspita, Anna Fatchiya, Hana Indriana, Meyzi Heriyanto, Adi  
Firmansyah, Masrul Ikhsan*

## Development Communication & Agricultural Extension

- Forest Conservation Partnership in Gunung Gede Pangrango National Park 81  
*Febriangga Harmawan Harmawan, Habibullah Habibullah, Siti Amanah*
- Pro-environmental Campaign Exposure via Instagram and Pro-  
environmental Awareness 96  
*Ratri Virianita, Sarah Adiiba Putri*

## Community Development

- The Role of Islamic Boarding Schools in Rural Economic Development  
through Santripreneurs: Lessons from Miftahul Ulum Islamic Boarding  
School, South Kalimantan 112  
*Nurul Amirah, M Iqbal Irfany, Winda Oktaviona*

