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“Climate change is a crisis that will affect every part of society, and every country. Universities need to be at the forefront of action to reduce the impact of climate change, especially amongst the poorest who will be the most affected.”

-THE Impact Rankings

13 CLIMATE ACTION



Total energy used (GJ)

20,148

Total energy used from low-carbon sources (GJ)

9,308

RESEARCH IN NUMBERS (2024)



109 publications

14.1 Impact Factor



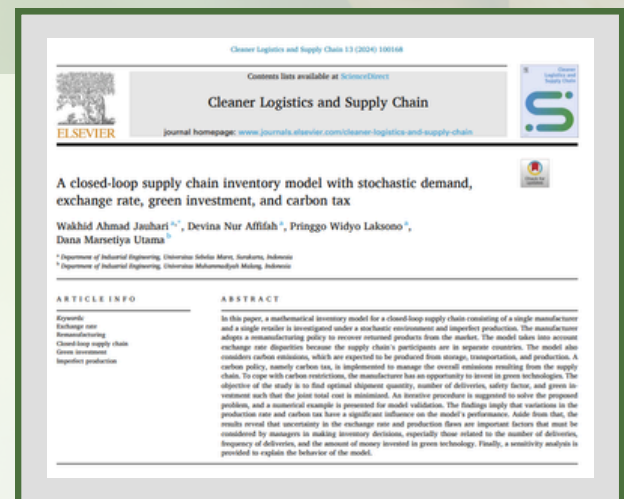
Universitas Sebelas Maret (UNS) is committed to disseminating and implementing the values of SDGs 1-17 through a wide range of education, research, and community engagement programs. One example of this commitment is the dissemination of this research on

SDG 13



RESEARCH ARTICLE

The study presents a **mathematical model for a closed-loop supply chain** that accounts for stochastic demand, exchange-rate fluctuations, green investment, and carbon taxation, demonstrating how manufacturers and retailers can **optimize inventory and investment decisions to maximize profitability while minimizing carbon emissions** and operating under global uncertainty.



13 CLIMATE ACTION



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACT

1 | Solar-Powered EV Charging Station for Energy Efficiency and Carbon Emission Reduction



The Faculty of Mathematics and Natural Sciences (FMIPA) at Universitas Sebelas Maret (UNS) continues to develop sustainable innovations through the construction of a solar-powered **Public Electric Vehicle Charging Station (SPKLU)**. This initiative represents a strategic effort by the faculty **to support energy conservation and carbon emission reduction within the campus environment**.

The SPKLU facility at FMIPA utilizes solar energy as its primary power source, with an effective production capacity of 11,000 watts within five hours. The system is supported by four solar panels that convert sunlight into electricity and a battery storage unit with a maximum capacity of 4,800 watts, ensuring stable power supply for vehicle charging. This technology represents **a significant step toward reducing greenhouse gas emissions**.

2 | The 2nd ICoAGPG 2024: International Conference by the Geography Education Program

The undergraduate and postgraduate programs of Geography Education at UNS organized the **2nd International Conference on Anthropocene, Global Environmental Change, and Powerful Geography (ICoAGPG) 2024**, carrying the theme "From Crisis to Opportunity: Adapting and Mitigating to Climate Change for Sustainable Development." This event was attended by more than **200 participants** from both domestic and international institutions via online platforms. The conference was held on Saturday, 10 August 2024, through Zoom Cloud Meeting and was divided into two sessions featuring leading speakers in the field.



13 CLIMATE ACTION



TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACT

3 BEM FH UNS Highlights Net Zero Emission at Semar Law Festival 2024



Net Zero Emissions (NZE) is a strategic agenda aimed at **reducing environmental pollution that contributes to global warming**. In Indonesia, the energy crisis has become a growing concern, prompting serious national efforts to address it. **To raise awareness among students**, the Student Executive Board of the Faculty of Law at UNS (BEM FH UNS) brought this issue into focus at the Semar Law Festival 2024.

By inviting law students from across Indonesia to participate in the Forum Mahasiswa Hukum Indonesia, BEM FH UNS provided **a platform to exchange innovative ideas and formulate legal policies supporting Indonesia's transition toward net zero emissions**. The event included an essay competition and a Forum Group Discussion (FGD) designed to generate strategic solutions and legal frameworks aligned with national sustainability goals.

4 Rural Sociology Research Group Launches Eco Masjid An Nur to Strengthen ProKlim

The Rural Sociology Research Group of the Faculty of Agriculture at UNS officially launched the Eco Masjid An Nur. Held in Kepuh Hamlet, Karangturi, Gondangrejo, Karanganyar.

The launch of the Eco Masjid An Nur logo marked an important step in supporting the Program Kampung Iklim (ProKlim). The program aims to strengthen the role of mosques **as centers of environmental education in rural communities**. Despite their strong community ties, religious institutions such as mosques have so far played a limited role in climate adaptation and mitigation efforts.

The program includes **the introduction of community-based climate adaptation and mitigation practices centered around places of worship**. Concrete implementations include the **installation of Rainwater Harvesting (PAH) systems**, operational since Eid al-Adha, and the reuse of ablution water for sustainable food gardens.

