

New submission abstract from Abstract for Paralell Session



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Faaris Mujaahid



Dear Invited Speakers,

Thank you for submitting your abstract. Please note that the number of pages for full paper is **5-7 pages**.

We look forward to receiving your full paper.

We hope to see you in Cork, Ireland!

Best regards,

IWGM 2019 Committee

Name of Speaker	Faaris Mujaahid
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Photo (Maximum Size: 2MB)	BKD-Faaris-M_b.jpg
Profile (describe your experiences: maximum 120 words)	Faaris Mujaahid hold a bachelor degree in 2010 from Electrical and Electronics Engineering Department, Saxon University of Applied Sciences, the Netherlands. He received a master degree in Sustainable energy Technologies in 2016 from University of Southampton, UK. He is currently a lecturer in the Department of Electrical Engineering, Faculty of Engineering, Universitas Muhammadiyah Yogyakarta, Indonesia. His main research interest is in LabVIEW and renewable energy (mainly in solar cell material and fabrication technologies).
Sub-Themes	Managing Setting and Infrastructure
Abstract Title	The way to green: a sustainable effort to reduce carbon footprint in UMY
Author(s)	Faaris Mujaahid, Hilman Latief, Agus Jamal, Tony K Hariadi, Sri Atmaja P Rosyidi, Slamet Riyadi, Nafi Ananda Utama, Bagus Soebandono
Abstract (maximum 200 words)	Higher education institution plays an important role to help the United Nations framework of sustainable living. There are four sectors that the universities can participate in the Sustainable Development Goals (SDG): education, research, innovation and partnership. This paper reports the effort conducted in Universitas Muhammadiyah Yogyakarta (UMY) to reduce the carbon footprint as part of university green campus strategy called The way to green (WtG). Until 2016, some programs have been conducted to support the WtG, such as paperless program, implementation of energy efficient building, use of energy efficient electronic appliances and water recycling. In order to enhance the green campus program, UMY also participated in UI GreenMetric ranking 2018 to help shaping the strategy firmly. There has been significant number of reductions in the use of electricity and the CO2 emission production by a student per year. In 2011, each student used 256 kWh electricity and produced 268.8 kg CO2 emission. In 2018, the numbers have lowered down to 187 kWh/student and CO2 emission 196.35 kg/student. It means that the electricity consumption and the carbon emission production have decreased to the number of 69 kWh/student and 72.45 kg/student respectively. This energy saving is nearly halved the average energy consumption of Indonesia household per month.
Are you willing your paper to be published in scopus-indexed proceeding?	Yes

The Way to Green: a sustainable effort to reduce carbon footprint in UMY

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Abstract. Higher education institution plays an important role to help the United Nations framework of sustainable living. There are four sectors that the universities can participate in the Sustainable Development Goals (SDG): education, research, innovation and partnership. This paper reports the effort conducted in Universitas Muhammadiyah Yogyakarta (UMY) to reduce the carbon footprint as part of university green campus strategy called *The Way to Green (WtG)*. Until 2018, some programs have been conducted to support WtG, such as paperless program, implementation of energy efficient building, use of energy efficient electrical appliances and water recycling. In order to enhance the green campus program, UMY also participated in UI GreenMetric ranking 2018 to help shaping the strategy firmly. There has been significant number of reductions in the use of electricity and the CO₂ emission production by a student per year. In 2011, each student used 256 kWh electricity and produced 268.8 kg CO₂ emission. In 2018, the numbers have lowered down to 187 kWh/student and CO₂ emission 196.35 kg/student. It means that the electricity consumption and the carbon emission production have decreased to the number of 69 kWh/student and 72.45 kg/student respectively. This energy saving is about halved the average energy consumption of Indonesia household per month.

1 Introduction

Creating a sustainable living has been the global target since 2015 and adopted by world leaders. This is according to the Post-2015 Development Agenda led by United Nations to achieve certain goals and targets related to sustainable future for the next 15 years, or in 2030 precisely [1][2]. Starting from 2016, this development framework is called Sustainable Development Goals (SDG). There are nine out of 17 sectors that can be associated to the climate change and the mitigation of carbon footprint. Those sectors are goal number 6 clean water and sanitation, number 7 affordable and clean energy, number 8 decent work and economic growth, number 9 industry, innovation and infrastructure, number 11 sustainable cities and communities, number 12 responsible production and consumption, number 13 climate action, number 14 life below water, and number 15 life on land [3].

The higher education, such as the universities, plays a vital role to achieve the SDG goals. This is because the universities can take part in the education, research, innovation and global partnership [4]. In the education sector, the university has the right to adapt the curriculum

to correspond on three dimensions of sustainable development, which are the economic, social and environmental [5]. In the research and innovation sector, the universities in China are experiencing the rapid innovation and technology development on their country. This means that the increase of economy growth is linear to the use of energy, especially the fossil energy sources. The green campus concept has risen and attracted both the society and the universities [6]. The concept offers the universities not only about energy efficient technology and environmental quality, but also the science-technology cultivation and innovation in the development of sustainable society. Another example is in Malaysia university, the laboratories construction incorporates sustainability in terms of social and environmental dimensions to the building infrastructure [7]. Global partnership is one of the SDG goal that will certainly have an important role to build a sustainable living in the future. In the university level, global collaboration among the institutions and its stakeholders will bring huge impact, and potentially can be extended to the industrial partnership [4]. The programs like joint research, joint publication, joint conference, visiting professor/ lecturer, and student mobility will provide positive results to the

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