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## Smart Meter as Technical Brick for Ecological Transition, or the New Knowledge Capital for Industries?

[Wahyuddin, Yasser](#); [Sabri L.M.](#); [Hadi, Firman](#)
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**Abstract**

This article looks at the economy-politico of the Linky Smart meter initiatives in France as part of the Ecological Transition campaign proposed by EDF, the State Utility Company. Introducing Linky, EDF brought forward the idea of R&D consortium composed of dozens of industrial companies in home appliances products. Linky is claimed to be digitally eco-friendly and could be the fundamental movement toward the ecological transition. This research, sketched through a qualitative method, an in-depth interview with dozen key informants, empirically proved and argued that despite the ecological campaign of Linky, the device could play a central role as knowledge capital for the R&D industry members. At this point, research results briefly argue at the first place, EDF, as the leading institution, introduced Linky to be generally more reliable to the current digital home appliances market

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DOI: 10.13189/eer.2022.100309



# Smart Meter as Technical Brick for Ecological Transition, or the New Knowledge Capital for Industries?

Yasser Wahyuddin\*, L. M. Sabri, Firman Hadi

Department of Geodetic Engineering, Faculty of Engineering, Diponegoro University, Indonesia

Received January 23, 2022; Revised April 20, 2022; Accepted May 9, 2022

## Cite This Paper in the following Citation Styles

(a): [1] Yasser Wahyuddin, L. M. Sabri, Firman Hadi, "Smart Meter as Technical Brick for Ecological Transition, or the New Knowledge Capital for Industries?," *Environment and Ecology Research*, Vol. 10, No. 3, pp. 346 - 354, 2022. DOI: 10.13189/eer.2022.100303.

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**Abstract** This article looks at the economy-politico of the *Linky* Smart meter initiatives in France as part of the Ecological Transition campaign proposed by EDF, the State Utility Company. Introducing *Linky*, EDF brought forward the idea of R&D consortium composed of dozens of industrial companies in home appliances products. *Linky* is claimed to be digitally eco-friendly and could be the fundamental movement toward the ecological transition. This research, sketched through a qualitative method, an in-depth interview with dozen key informants, empirically proved and argued that despite the ecological campaign of *Linky*, the device could play a central role as knowledge capital for the R&D industry members. At this point, research results briefly argue at the first place, EDF, as the leading institution, introduced *Linky* to be generally more reliable to the current digital home appliances market development. In bearing so, this article should provide a critical point of view in which the ecological transition campaign is on the cutting edge of the market development rather than a clear view of the ecological transition.

**Keywords** Linky, Smart Meter, Ecological Transition, Knowledge Capital

demanding issues that incorporate the modern view of the energy economy [1]. The idea of the Smart Grid embraces IT infrastructure development, the massive flow of data, and the real-time data to distribute electricity effectively. Smart Grid allows greater control to save energy with real-time quantitative approaches. Reducing the costs and increasing reliability and transparency of energy consumption are at stake.

A common element in most definitions is the application of digital processing and communications to the power grid. Making the data flow and highly interoperable information playing a central issue in the Smart grid in terms of the three layers of electricity activities: production, distribution, and energy storage [2].

The smart grid system consists of varying initiatives ranging from electronic power interface, power control, and grid load. Smart homes, Smart buildings, and electric vehicles also serve as smart grid components [3]. The Smart Grid would allow better understanding of energy consumption based on real-time meter recorded and displayed thanks to the real-time data acquisition [4]. As the study on household energy consumption continues, these new forms would provide a new dimension amidst other architectural and construction engineering innovations to reduce household energy consumption [5].

It is important to note that the birth of the Smart Grid has also brought a new era in the R&D format, trials, experiments, and feasibility tests under living ecosystem circumstances such as urban areas. There is a tendency

## 1. Introduction

The development and implementation of smart grids are



# Community-Based Mangrove Forest Management Sustainability Analysis in Tagpait, Aborlan and Bacungan, Puerto Princesa City, Palawan, Philippines

Mark Joseph J. Buncag<sup>1,2</sup>

<sup>1</sup>Environmental Science Department, College of Forestry and Environmental Studies, Mindanao State University, Philippines

<sup>2</sup>Associate Member, Social Sciences Division, National Research Council of the Philippines, Philippines

Received June 1, 2021; Revised April 7, 2022; Accepted April 21, 2022

## Cite This Paper in the following Citation Styles

(a): [1] Mark Joseph J. Buncag , "Community-Based Mangrove Forest Management Sustainability Analysis in Tagpait, Aborlan and Bacungan, Puerto Princesa City, Palawan, Philippines," *Environment and Ecology Research*, Vol. 10, No. 3, pp. 325 - 333, 2022. DOI: 10.13189/eer.2022.100301.

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**Abstract** Community-based mangrove forest management is the national strategy of the Philippines for mangrove protection. However, aquaculture, resource extraction, and tourism activities of the community may cause degradation and no assurance of sustainability. A number of generalizations may be drawn as to the purposes of this study. This study is useful in developing the contextualized evaluation tool and evaluating the mangrove management system of the communities. This study evaluated the sustainability of mangrove forest management systems by the local community in Tagpait, Aborlan, and Bacungan, Puerto Princesa City, using applicable criteria and indicators (C & I) of sustainable mangrove forest management that were identified through FGDs. This study also identified seven applicable criteria and 35 indicators. The formulation of the verifiers through the rating scale for each applicable indicator was conducted through FGDs and KIIs. The formulated verifiers were used to evaluate the sustainability of mangrove management systems in both communities using HHI, FGDs, KIIs, and secondary data analysis. The results show that Tagpait has a grand mean of 2.31, while Bacungan has a grand mean of 2.47, in which Bacungan has a higher rating of sustainability of mangrove forest management system. Both communities fall under the fair status of sustainability. Also, the Overall Sustainability Index value of Bacungan is 0.35 (moderately sustainable) while Tagpait has 0.33 (moderately sustainable). Hence,

Bacungan has better management, but by looking at the Sustainability Index for Individual Criteria, each community has its strengths and weaknesses in sustainable management. Lastly, this study may be utilized by concerned agencies to evaluate the sustainability of the mangrove management system of each community.

**Keywords** Applicable Criteria and Indicators, Mangrove Forest Management System, Sustainability Index

## 1. Introduction

Mangrove ecosystem comprises valuable tropical forests that provide ecosystem services such as stabilization of coastlines, protection of communities against disasters, provision of habitat for various animals, and storage of carbon [1]. Also, it provides ecosystem services that are useful in the daily subsistence and livelihood of humans, which include the provision of firewood and lumber, food, tourism, and medicine. Additionally, it administers indirect benefits such as the regulation of strong wind and waves, protection against hazards [2], filtration of water from sediments to maintain water quality [3], and provision of habitat to various migratory birds and marine organisms to increase production of marine products beneficial to the

# Assessing Residents' Flood Preparedness through Adaption of Protective Behaviour in Melaka, Malaysia

Atirah Sufian<sup>1,\*</sup>, Chai Jia Chi<sup>1</sup>, Hartini Azman<sup>1</sup>, Nor Azah Abdul Aziz<sup>1</sup>, Fam Soo Fen<sup>1</sup>,  
Ammar Afif Mohd Zamri<sup>2</sup>

<sup>1</sup>Faculty of Technology Management and Technopreneurship, Universiti Teknikal Malaysia Melaka, 76100, Durian Tunggal, Malaysia

<sup>2</sup>School of Mechanical, Aerospace and Civil Engineering, University of Manchester, Manchester M13 9PL, United Kingdom

Received December 21, 2021; Revised February 14, 2022; Accepted April 15, 2022

## Cite This Paper in the following Citation Styles

(a): [1] Atirah Sufian, Chai Jia Chi, Hartini Azman, Nor Azah Abdul Aziz, Fam Soo Fen, Ammar Afif Mohd Zamri, "Assessing Residents' Flood Preparedness through Adaption of Protective Behaviour in Melaka, Malaysia," *Environment and Ecology Research*, Vol. 10, No. 3, pp. 334 - 345, 2022. DOI: 10.13189/eer.2022.100302.

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**Abstract** Flood is a natural disaster experienced by Malaysians including residents in Melaka. Floods cause huge damage and loss, and can affect the health of the flood victims. However, flood prone residents' awareness and preparation towards floods are still lacking. Despite many efforts done by different organizations to reduce the flood risk, flood hazard remains the main problem in Melaka. Several studies had been conducted to investigate the level of flood preparedness in some regions in Malaysia, but the level of flood preparedness amongst residents in Melaka is still unknown. Therefore, this research is conducted to assess the Melaka residents' flood preparedness using the Adoption of Protective Behaviour (APB) scale. The nine measurements APM scale is utilized and another three measurement items are created and added into the scale which makes it twelve measurement items. The mean for the twelve measurement items ranges between 2.85 to 4.03 while the likelihood percentage ranges between 31.67% and 74.17%. The twelve measurement items are significantly correlated with flood preparedness of the residents in Melaka. The result shows that flood preparedness among the residents in Melaka is still low. Most respondents are not well prepared in facing the flood. As the study was conducted on the states of Melaka only, it is recommended that future study should be carried out in all states in Malaysia especially in the east coast of Malaysia where large scale flooding occurs every year. The

findings in this research can assist the authorities and the government to plan on creating public awareness and education for flood disasters. This helps the residents in Melaka to increase their knowledge on flood risk and establish an emergency plan for their families. The study also shows that residents in flood prone area put inadequate efforts in preparing for a flood event.

**Keywords** Flood, Flood Preparedness, Flood Risk, Adoption of Protective Behaviour, Melaka

## 1. Introduction

Malaysia is a country with fewer types of natural disasters compared to many other countries. However, flooding which is one of the natural disasters that occurs frequently in Malaysia causes huge loss and damage to the affected communities. Flooding in Malaysia leads to different kinds of damages that may affect human health physically and mentally. According to Stanke et al. [1], the impacts of flooding to human include financial problems, trauma and domestic violence which can happen due to stress after a flood. This shows that floods can bring a series of problems indirectly towards human mental health. According to the World Health Organization, floods will