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Wind Turbine and Local Acceptance in Southern Thailand

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Abstract

Wind power has been promoted as a clean energy. However, debate is ongoing with local residents who are not informed about what is occurring in their areas. Local acceptance for wind turbine installations was studied by means of a listening investigation with 729 participants in two districts (Hua Sai and Pak Phanang) in Nakhon Si Thammarat Province, Southern Thailand. The aim of the research was to evaluate the public attitude and its acceptance for wind farms. The studies at Pak Phanang showed that most participants (68.5%) did not know about the project details. However, most participants who lived in Hua Sai (84.1%) knew about the project. According to the informants, 91.5% of the residents in Hua Sai agreed to implementation of the construction, while in Pak Phanang only 45.6% of the residents were in agreement. The construction phase and operation of the wind turbine can have an impact on the environment. Our study revealed that the participants who were concerned about noise pollution were 65.5% and 66.7% in Hua Sai and Pak Phanang, respectively. Future research should be employed to investigate the social impact in both negative and positive ways. The potential harm to the local community particularly on noise and visual impact needs to be identified. The main lesson learnt from this study was that local acceptance is important for project development, particularly in Thailand where capitalism and Thai culture play a key role for project implementation.

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1. Introduction

Wind power has been promoted as a clean energy. However, debate is ongoing with local residents who are not informed about what's going on in their areas. The conflicts between government agencies and local residents on wind power occur in many places in Europe and the United States of America. For example, Urk residents in the Netherlands felt betrayed and considered that their concerns on wind power impact were not taken seriously and that encouraged negative reactions [1]. In the US, the government promoted wind energy and implemented it in rural areas aiming to endorse a new carbon economy. However, lack of participatory technology assessment is still a concern for rural communities [2]. The wind farm project generated strong feelings and mobilized a community action against the project. Community engagement is a way that would promote a better understanding and local acceptance for renewable energy development. Research for wind power implementation can be used to aggravate a community.

Renewable energy in Thailand, particularly wind power, is still limited. The first wind farm was commissioned in 1996 in Phuket by the Electricity Generating Authority of Thailand (EGAT), thirteen years later 1.25 MW for wind turbines were established in Lamtakong Dam in Nakhorn Ratchasima Province. Feasibility studies have been done for more wind power installations particularly in the Gulf of Thailand. Songkhla and Nakhon Si Thammarat Province have potential to implement wind farms because of the above average wind speed. Previous research in 2009 suggested that the Hua Sai area was suitable for the establishment of pioneer wind farm projects along the beaches. Respondents requested more information about the wind turbine generator installation and operation from government agencies [3]. The perceptions of local people on wind power installation and operation is an issue that needs to be clarified prior to launching other installations. This survey study therefore, aims to evaluate more closely the public attitude and its acceptance about wind farms in Southern Thailand.

2. Study sites

The development of wind farming was planned in several provinces in Southern Thailand including Chumporn, Surat Thani, Songkhla and Nakhorn Sri Thammarat [4]. This study selected two districts (Hua Sai and Pak Phanang) in Nakhon Si Thammarat Province, Southern Thailand (Fig 1).

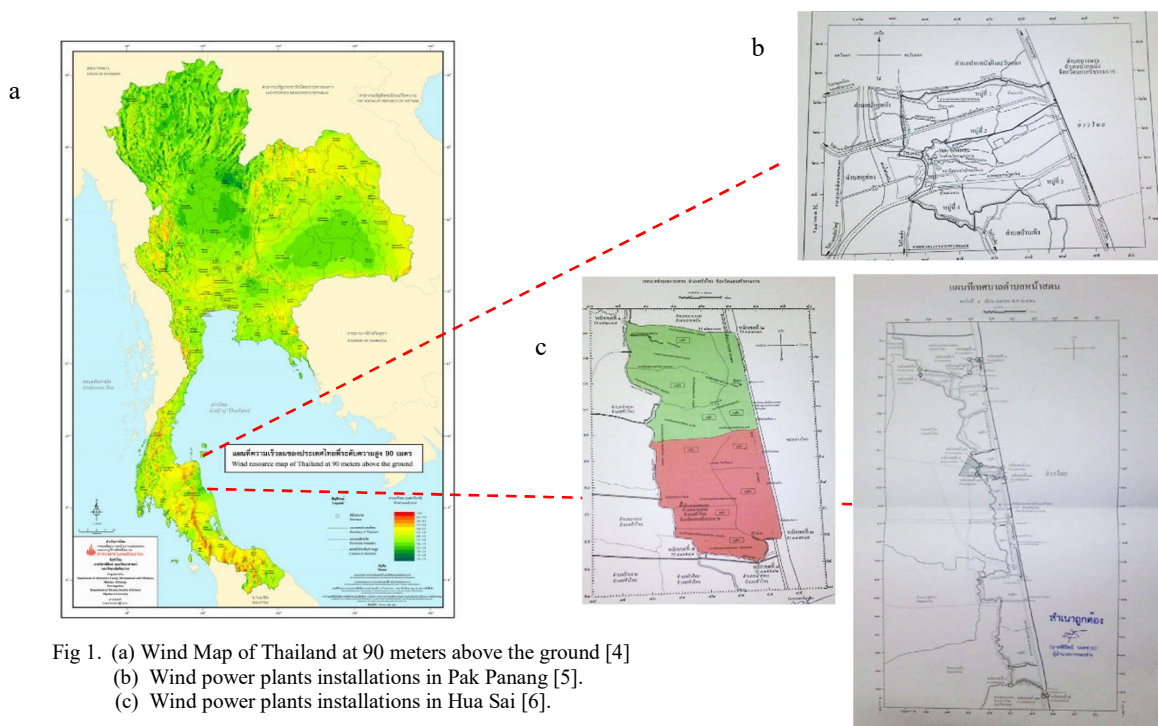


Fig 1. (a) Wind Map of Thailand at 90 meters above the ground [4]
 (b) Wind power plants installations in Pak Panang [5].
 (c) Wind power plants installations in Hua Sai [6].

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