PARTICIPATORY DEVELOPMENT COMMUNICATION: BETWEEN ACHIEVING GOVERNMENT'S DEVELOPMENT TARGET AND ENCOURAGING COMMUNITY'S PARTICIPATION (A CASE STUDY IN RENEWABLE ENERGY INITIATIVES IN INDONESIA)[1]

INTRODUCTION

This paper focuses on the communication processes to encourage rural community participation towards renewable energy community in Indonesia. Renewable energy community is "a state-of-the- art community in which integrated, renewable energy technologies play the primary role in meeting the energy supply and demand needs of its residents, with the possibility of providing excess energy back to the grid or other communities" (Carlisle, N., Elling, J., & Penney, T., 2008). In Indonesia, renewable energy community is part of the main goal of Indonesian Government towards energy independence. While moving to renewable resources may be a policy objective, changing the attitudes and behaviour of people towards renewable energy community is a significant task. This paper, accordingly, aims to explore the communication process conducted by local government to encourage community participation in the renewable energy initiatives.

LITERATURE REVIEW

Renewable energy experience in developing countries

Previous studies show that there are social, political, and cultural factors that play important role in implementing the off-grid renewable energy programs in developing countries. Urmee & Anisuzzaman (2016) asserted that in order to have a sustainable renewable energy projects in villages, the government need to consider aspects such as: (a) Identifying appropriate community members in decision-making and target group to obtain critical mass; (b) Building trust on the technology through village leaders or other influential members of the community; (c) Focusing on users energy needs; (d) The level of community participation, as well as on the ownership of the system; and (e) Long-term political commitment from government.

A study in Bangladesh shows that a successful renewable energy promotion requires a well-developed and targeted engagement plan (Sultana, 2011). In other words, it is important

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to identify decision makers in a community and critical mass and target them in the engagement plan. This research found that while women play a vital role to the welfare of the family, decision-making power of Bangladeshi women within the family is limited. Experience of Ghana and Bangladesh show that younger age group and educated people are easier to switch to solar power than other groups (Bawakyillenuo, 2007; Samad, Khandk, Asaduzzaman, Yunus, 2013).

When it comes to transition to a new technology, previous studies in Bangladesh and Ghana show that when village leaders and influential figures in the community use renewable energy, it increases the community's trust towards renewable energy adaptation (Bawakyillenuo, 2007). Another example of Ghana's successful experience in engaging community to adopt renewable energy is because the solar panel project was able to provide the range of benefits the project can render. In the case of Ghana, the benefits were lighting, entertainment, education and business (Bawakyillenuo, 2007). An example of a strong political commitment has helped Senegal to increase its rural off-grid electrification (IRENA 2013). The formation of a new institution, the Senegalese Agency for Rural Electrification (ASER), has increased the effectiveness of how the off-grid electrification is delivered, increasing rural electrification rate from 5% in 1998–24% in 2010.

What this review suggests is the importance of community participants to gain support and trust from communities.

Participatory Development Communication

Participatory communication is relevant issue to use in the micro hydro program because the consideration of community position as the main subject that has to be developed. The concept of participatory communication can also refer on the Participatory Development Communication (PDC) (Besette, 2004). Participatory development communication is a communication process, which relies on dialogue for sharing information, perceptions and opinions among the various stakeholders, in order to empower those who are most vulnerable and marginalized (Tufte & Mefalopulos, 2009). Participatory development communication is not just the exchange of information and experiences, but also the exploration and generation of new knowledge aimed at addressing situations that need to be improved.

There are a variety of understandings of what is meant by the term "participation" and its purpose within the context of promoting development. According to functional or passive perspectives, "participation is seen as a means of accessing information from a variety of stakeholders so as to support more effective implementation of a project, policy or program"

(Duraiappah, Roddy and Parry, 2005:4). Meanwhile, Rights-based or Proactive Perspective view "participation as a means of enabling and empowering less powerful groups in society to engage in decision-making and exercise their democratic rights" (Duraiappah, Roddy and Parry, 2005:4).

Participation is also often linked to power. Arstein (1969) developed three main categories of participation and eight levels of participation, which are arranged in a ladder pattern with each rung corresponding to the extent of citizens' power in deter-mining the end product. The first category is non-participation, which includes manipulation and therapy level. The objective of this category is "not to enable people to participate in planning or conducting programs, but to enable power holders to 'educate' or 'cure' the participants" (Arnstein 1969, 217). The second category is tokenism, which allows the have nots to hear and to have a voice. This includes informing and consultation, and placation level. Finally, the citizen power, which has three levels: partnership, delegated power and citizen control, emphasizes shared responsibility between citizens and power holders "joint policy boards, planning committees and mechanisms for resolving impasses".

AIMS OF THE STUDY

This study aims to examine the communication process to encourage community's participation in the renewable energy initiatives.

METHODOLOGY

This study is a qualitative study based on case study approach. The communication process in the development of micro hydro power (MHP) in Dusun[2] Kedungrong, Kulon Progo Regency, Special Region of Yogyakarta, is chosen as the case study. Micro hydro power is part of Indonesian Government's plan to electrify remote rural area using renewable energy technology. This technology has a competitive price, can be implemented using indigenous technology, and is also suitable for rural Indonesia's geographical condition.

The appreciative inquiry approach is undertaken to explore the community engagement into the micro hydro project. This approach is chosen due to four reasons : (1) this approach emphasizes exploring new ideas, (2) this approach involves members of the community and emphasizes community engagement during the process, (3) each person has an equal opportunity to participate, and (4) this approach is considered a new approach in Indonesia,

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[2] Dusun is Indonesian's term for hamlet.

therefore, there is a potential for a better contribution towards approach in understanding community needs.

The research team observed the area and conducted preliminary interviews with the hamlet's leader and community members who are responsible for maintaining the MHP, as well as with local government representatives. Based on these observation and preliminary interviews, the research team identified actors and groups of community as the participants of the study. The participants of this study can be divided into two main groups: (1) local government actors, and (2) community members. The data was collected through interviews and and focus group discussions (FGD). The research team conducted 3 FGDs with male community groups and 3 FGDs with female community groups. There were 23 interviews conducted. This consisted of 3 interviews with central government representatives and 6 interviews with province and regency government representatives, who are responsible for renewable energy policy, 2 interviews with community leaders, 4 interviews with MHP community organisation representatives, and 8 community members who actively access to the MHP.

FINDINGS

First, this section will provide description about Dusun Kedungrong. This includes description about demography and social structure, local values, and communication channels in the community, which will provide context to understand the communication process. This section is then followed by description on the communication process to support the micro hydro power initiatives.

Contextual background: Dusun Kedugrong

There are 50 households live in Dusun Kedungrong and mostly relies on farming. Most of young people live outside *dusun* for continuing their study or working. The majority of them are Moslem. The communities are grouped into several community organisations and forums. The profile of Dusun Kedungrong is summarised into the following table:

Summary of the profile of Dusun Kedungrong

COMPONENTS	ITEMS	DETAILS
Community groups	Community Groups (*Rukun Warga*/RW) and Neighbourhood Groups (*Rukun Tetangga*/RT)	▪ The groups are developed as mandated by the government. ▪ Community groups to support the function of villages and *dusun,* to provide a better community service ▪ There area two RWs, which are RW-25 and RW-26. RW-25 is divided into RT-51 and RT-52. RW-26 only has one RT, which is RT-53. ▪ Each RW and RT is led by a community leader who was chosen by communities.

COMPONENTS	ITEMS	DETAILS
		▪ Each RT consists of 10 – 20 households.
	Women groups : Kelompok *Pembinaan Kesejahteraan Keluarga/ PKK (*Family Welfare Empowerment group PKK and *Dasawisma*	▪ PKK and *dasawisma were* developed as mandated by the government to empower the role of women in improving community's welfare ▪ *Dasawisma* was developed under PKK, and aiming to support the goals of PKK. ▪ The word *Dasawisma* originated from two words, namely *dasa* which means ten and *wisma* which means house. Ideally a *dasawisma* group consists of women of ten households. In practice, membership of *dasawisma* in *Dusun* Kedungrong was based on the division of RT, which made three *dasawismas*, each of which had 12 to 15 members.
	Interest groups : farming groups, sewing group, *Jathilan* group	These groups were developed to accommodate interests of the communities
	MHP management committee	▪ This committee was established by communities during KKLPMD meeting to support the management of MHP. ▪ The main responsibility is to maintain the MHP and to manage the funding collected from communities. ▪ This committee also becomes the liaison officer between PUPESDM and *dusun.*
Local values	Collectiveness values and strong community bond as well as values of togetherness	This was visible in their collective orientation instead of personal one.
	Gotong royong	*Gotong royong,* which is part of Javanese culture, is a form of cooperation among many people to attain a shared goal.
	Arisan	*Arisan* is an activity that is most held by the community organisations in rural areas. Broadly speaking, *arisan* is a form of social gathering that involves collecting the same amount of money regularly from the members in each meeting. A lucky draw is held in every meeting to know the lucky member who gets the total amount of money collected by all members.
	Javanese values	▪ They use Javanese values as source of their guidance, such as the use of lunar cycle calendar to schedule a meeting. *Selapan* is a lunar cycle in Javanese calendar consisting of 35 days. According to the calendar, one week consists of 5 days, called *Wage, Pahing, Pon, Legi,* and *Kliwon.* The community meeting is conducted every 7 weeks according to the calendar, or 35 days. ▪ Javanese is their main language among communities.
	Religious values of Islam	▪ The majority of communities are Moslems ▪ They often use some Islam's religious events as part of their rituals and tradition
Community Forum	Kelompok Kerja Lembaga Pemberdayaan Masyarakat Dusun/KKLPMD (Working Group of Dusun's Community Empowerment Institute)	▪ The main community's forum ▪ It is attended by household heads, most of whom are men, and the representatives of community organisations like PKK (women's group), farmers' groups, religious leaders, and other community figures) ▪ It is held every *selapan.*
	PKK meeting	▪ It is held every *selapan* and attended by women communities.
	Neighbourhood (*Rukun Tetangga/RT)* meetings	▪ It's attended by household heads, and is held every *selapan.*

COMPONENTS	ITEMS	DETAILS
	Dasawisma meeting	• It is held every *selapan* and is attended by women. • One of the main activity is *arisan*
	Pos Pelayanan terpadu (POSYANDUI	• This is a health service center initiated by government to support the improvement of community health, especially the health of mother and child in the village. • POSYANDU actively provides health services to community monthly and is mainly assisted by one female POSYANDU cadre. This cadre is recruited from the community and has been trained by the government to recognize basic health care issues and to support the communities.
Communication channels	*Getok tular*	This is Javanese term for word of mouth. Communities mostly rely on information from their neighbours.
	TOA	TOA is actually a brand name of a loud speaker. This term is commonly used by communities and refers to public announcement through speakers used in the mosque.
	Mobile phones and handy talky	Some of communities members use mobile phone and handy talky. They mostly use these channels to inform or share information related to their *dusun*.

Communication Process to Support the Micro Hydro Power Initiative

The result of the fieldwork found that there were three stages of communication process done by the local government to build the MHP. The first stage is the communication for coordinating with another local government agency and main community based organisation. In the initial stage of planning to build the micro hydro power, there were concerns conveyed by another government agency, i.e. Balai Besar Sungai Serayu dan Opak (Serayu-Opak Board River Basin Management Organization), which was in charge of water management, as well as the Association of Water-User Farmers. Both institutions worried that the project will cause draught and distract the irrigation system. *Dinas Pekerjaan Umum, Perumahan, Energi dan Sumber Daya Mineral/* PUPESDM (Department of Public Works, Housing, Energy, and Mineral Resources), as a representative of government, accordingly, explained about the project to these groups and convinced them that the irrigation canals would not be disrupted although the water flow would be used for the microhydro power. Thus, before the PUPESDM introduced the micro hydro power to the communities, they had ensured that there was no objection from other government agencies about the use of the irrigation canals.

In the second stage, communication was made as a means of introducing the MHP project to the targeted communities. Based on interviews and FGDs with communities, this study found that PUPESDM only conducted socialisation process once, which was only when PUPESDM informed the MHP project to the community in the KKLPMD forum meeting. The

main message delivered by PUPESDM was the plan of the government to build the MHP in Dusun Kedungrong and its benefit for the residents. After this community meeting, PUPESDM representatives had further communication directly with Kepala Dusun and technicions who have chosen by the communities.

Finally, in the third stage, the communication is mainly between the local government and the MHP organisation. They use mobile phone as the main channel for communication between them. The content of the communication was about the technical aspect of operating the MHP and regular maintenance. No further information about the organisational development of the MHP in the future, including the ownership aspect. Although the caretakers had been given training, they were only given knowledge and skills of operating the MHP.

These communication processes can be summarised into this following table:

STAGE	ACTORS/ PARTICIPANTS	MESSAGES	CHANNEL
STAGE 1 *Coordination*	1. Balai Besar Sungai Serayu dan Opak (Serayu-Opak Board River Basin Management Organization), which was in charge of water management, 2. The Association of Water-User Farmers.	1. The operational aspects of MHP 2. The impact of MHP towards irrigation system	Inter-unit government briefings or meetings

STAGE 2 *Socialisation to the Community*	A. **Local government**
	  1. Mining Agency representatives
	  2. The officials of the Kulon Progo Administration
	B. **Community Members**
	  1 Head of *Dusun*
	  2 Household heads, most of whom are men
	  3 Representatives of community organisations like PKK (women's group) and farmers' groups
	  4 Religious leaders and other community figures
		1. the government plan to build MHP in Dusun Kedungrong
		2. Benefit of MHP for communities.
			1. KKLPMD (*dusun* forum)
			2. Information booklet

STAGE – 3 *Communication with Micro Hydro Power Organisation*	PUPESDM with the MHP management committee	1. knowledge and skills to operate the MHP 2. technical aspects of operating the MHP and regular maintenance.	1. Training session (in the beginning of the project and only once) 2. Mobile phone

Feedback from Communities towards Communication Process

In regard to the communication process that had been going on, the community members said that they had trust in the representatives from the PUPESDM who conveyed the information about the MHP. They considered the representatives were the main source of information they could trust. In addition, the community members also had trust in the *dusun* head and the MHP management committee as their other information sources.

However, the community felt that there was insufficient information regarding MHP. Most of information given was mainly about how to operate the MHP. There was lack of information on how to maintain the MHP equipment and technical knowledge to fix the machine when there were some broken parts. Other information expected was about the ownership status of the MHP. For the community, the ownership status was important to ensure the development of the MHP for the benefit of the community. The community members expected that they would also get information on the development of the benefit of the MHP in the future.

In regard to the use of communication channels, communities stated that the meeting with most *dusun* residents was held only once, which was in KKLPMD meeting. It was attended by household heads, most of whom were men. Further communication was more done by PUPESDM with the *dusun* head and the MHP management committee, particularly the technicians. In the FGDs done with the women's group they said that they also wanted to get information directly from the information sources they could trust, including from the local government.

In the communication process, even though local government representatives try to use direct communication channels, such as text message, phone call, or site visit, communities claimed that these channels are only used when they need to discuss MHP technical problems. There is also a delay and even uncertainty in responding to any communities' inquiries. Often, when there is a problem regarding the MHP, communities must wait to get responses from PUPESDM. Further, since there is no regular visit to *dusun,* communities cannot ask directly to get more information about MHP neither to get encouragement to maximise the use of MHP.

Other than the communication channels mentioned previously, the residents also interacted with the PUPESDM through letters and proposals. It enabled them to propose assistance and ask for attention from the local government to develop the MHP. There were

complaints conveyed by the residents pertaining to the communication. They were aware that the government needed time to respond their proposals.

Sumamry of the Findings

Based in the findings, this paper draws an analysis by comparing what the communities have and expect with what happened in the communication process to support the MHP initiatives. This analysis is as illustrated into following table:

CATEGORY	OWNED BY COMMUNITIES	RESEARCH FINDINGS
Community groups	Community Groups (*Rukun Warga*/RW) and Neighbourhood Groups (*Rukun Tetangga*/RT)	▪ Only head of *dusun* and MHP management committee, especially technicians, were actors and group that were involved by local government. ▪ There was no contact from local government to each community groups. ▪ There was no certain effort from local government to include other community groups.
	Women groups : Kelompok *Pembinaan Kesejahteraan Keluarga/ PKK (*Family Welfare Empowerment group PKK and *Dasawisma*	
	Interest groups : farming groups, sewing group, *Jathilan* group	
	MHP management committee	
Local values	Collectiveness values and strong community bond as well as values of togetherness	▪ The government aware the importance of collective culture including *gotong royong.* Therefore, the government started the contact to the head of *dusun* and other community figures. *Gotong royong* value is mainly seen during the maintenance stage, where community members voluntarily clean up the canal to make sure the flow of the stream to the turbin of MHP
	Gotong royong	
	Arisan	
	Javanese values	
	Religious values of Islam	
Community Forum	KKLPMD	▪ Local government only once communicated with the whole communities through KKLPMD forum. The Forum was used to inform government plan to build MHP and its benefits for communities, rather than to explore the communities needs, capabilities, and hopes in relations to MHP. ▪ The women's forum were never used by local government to inform about the project neither to involve women to support MHP initiatives. ▪ At the communities level, KKLPMD has also become the main forum to discuss any issues related to MHP. Meanwhile, even though women also want to know more about MHP, MHP issues were never discussed in women forum. They often ask their husband when they want to know about MHP.
	PKK meeting	
	Neighbourhood (*Rukun Tetangga/RT)* meetings	
	Dasawisma meeting	
	Pos Pelayanan terpadu (POSYANDUI	
Communication channels	*Getok tular*	Mobile phone is mainly used to communicate with *dusun* head and MHP technician.
	TOA	
	Mobile phones and handy talky	

DISCUSSION AND CONCLUSION

Using a case study on the micro hydro power project at Dusun Kedungrong, this study aims to examine the communication process to encourage community participation towards renewable energy initiatives. To discuss the phenomenon studied, there are three aspects will be examined: (1) the actors and community groups involved, (2) the level of community participation during the process, and (3) the implication of the communication approach taken by the government.

This study found that head of Dusun Kedungrong has become the main actor and channel for PUPESDM to initiate communication about MHP project. KKLMPD forum, which was attended by key figures within communities and head of each households, have also become the main forum for PUPESDM to introduce MHP to the community. Head of Dusun Kedungrong was also appointed by local government as a pioneer to use the electricity from MHP. This is in line with previous studies in Bangladesh and Ghana (Bawakyillenuo, 2007), which show that in the transition to a new technology, when village leaders and influential figures in the community use renewable energy, it increases the community's trust towards renewable energy adaptation.

Further, Urmee & Anisuzzaman (2016) asserted that it is important to identify key actors within communities to gain support and participation from communities in a renewable energy project. Urmee & Anisuzzaman (2016) added that local government also need to identify appropriate community members in decision-making and target group to obtain critical mass, as well as to focus on users energy needs as their main communication agenda. This study, however, found that contact with key figures within communities were only conducted once during socialisation process. Communication with Head of Dusun Kedungrong mainly aimed to inform local government's agenda to the communities, rather than to get support from communities. In addition, to support the operation of MHP, PUPESDM also communicated with technicians who were part of MHP management committee. This implied that this communication mainly aimed to ensure the MHP worked well and gave benefits for communities as projected by government.

The study also found that not all community groups and forums were used by local government to engage with communities. There was no strategic communication process enacted by government to engage with community to ensure community's participation. Local government representatives have become the main actors and source of information. The

community members were mostly treated as receivers of messages rather than part of active actors in developing communication process neither in the management of MHP. Communication from local government mainly focused on technical issues of MHP rather than how to encourage communities to maximise the use of MHP. Meanwhile, effective participation should respect principles of inclusion, equal partnership, and transparency. (Duraiappah, Roddy and Parry, 2005).

This communication process tends to lead to communication dissatisfaction. Communities do not feel satisfied with information they received. There was insufficient information regarding MHP. Most of information given were mainly about technical issues. Even though local government representatives try to use various channels, such as text message, phone call, meeting, or site visit, participants claimed that these channels are only used when they need to discuss MHP technical problems.

This negative communication climate, however, does not lead to direct rejection from communities to the MHP project or to the local goverment representatives. This might be due to community values and local wisdom. Village communities in Indonesia have strong community bond as well as values of togetherness, which leads to a sense of shared destiny, a locality, and a strong fraternity. Communities' social relations mainly aim to create a harmonious life, bringing inner peace and balance. This is manifested by the act of mutual help and living in harmony. Accordingly, even though communities feel do not fully satisfied with communication design developed by local government, communities will still maintain good relationships with local government representatives. In addition, communities acknowledged positives benefits they earned from the use of MHP.

From sociological approach, participation is defined as taking part in particular social processes, which includes exposure, attendance or access to the process (Carpentier 2016). Based on this approach, this can be viewed that there is a participation within communication process in Dusun Kedungrong. Meanwhile, in contrast, the political approach emphasizes the importance of equalisation of power relations between actors involved in the decision making process (Carpentier 2016). According to this approach, participation cannot be separated from power issues. Citizen participation is a categorical term for citizen power (Arstein 1969). Referring to ladder of participation developed by Arstein (1969), communication process in Dusun Kedungrong is categorized under manipulation and therapy level. Within these levels, the objective of communication process is not to enable people to participate in planning or conducting programs, but to enable power holders to "educate" or "cure" the participants (Arstein 1969). Local government is considered as a power holder whose aims are introducing

MHP to cure electricity and energy problem in Dusun Kedungrong. These two levels, however, represent levels of "non- participation" rather than genuine participation.

Finally, what the findings suggest is the communication process mainly aims to support the local government to achieve the renewable energy target rather than encouraging community's participation through participatory development communication. As asserted by Hinthorne and Scheneider (2016), PDC should enable stakeholder interaction that is both active and horizontal. Participatory development communication is a communication process, which relies on dialogue for sharing information, perceptions and opinions among the various stakeholders, in order to empower those who are most vulnerable and marginalized (Tufte & Mefalopulos, 2009). Participatory development communication is not just the exchange of information and experiences, but also the exploration and generation of new knowledge aimed at addressing situations that need to be improved.

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