Local acceptance process in waste treatment sites: Three case studies from Thailand

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Local acceptance process in waste treatment sites: Three case studies from Thailand
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論 文 内 容 の 要 旨
Thesis Summary

Today, demonstrations and violence against municipal solid waste treatment sites (MSW treatment sites) are common in Thailand as well as many other countries, especially developing countries. Low levels of local acceptance of the sites is a major reason behind these conflicts. Extensive fieldwork in Thailand addressed this research question concerning the key factors and process that create local acceptance of MSW treatment sites through a thorough investigation on three cases in Thailand: Nonthaburi Provincial, Phitsanulok Municipal, and Phuket Municipal waste treatment sites. These three MSW treatment sites encountered local resistance in the past, but they now coexist with local communities. Therefore, it is important and valid to ask why that change occurred. Data were collected mainly by interviewing lay people in the waste treatment sites' surrounding communities, local leaders, and government agencies. With this study, we attempt to understand how the surrounding communities' acceptance of the waste treatment sites arose.

From three case studies, local acceptance can happen after pollution reduction and local benefit creation. Local resistance against the waste treatment sites in these three case is reduced by pollution control of the waste treatment sites. Each site uses different methods to reduce pollution. In Nonthaburi provincial waste treatment sites, basic technology, such as covering dumping area by soil, and spraying EM to minimize the smell are main methods to prevent negative impacts to surrounding communities. Phuket municipal waste treatment site uses more advanced technology— incinerator— to reduce the problems of smell, dioxin, and contaminated water. Phitsanulok municipality reduces the size of the waste treatment system by changing to a decentralized system in order to cut the volume of daily garbage out so that the municipality can handle. In order to reduce pollution for the purpose of local acceptance, the waste treatment sites need sufficient resources, such as budget and technology, and information exchange with local people, such as complaints and public announcement. For Nonthaburi and Phuket cases, their centralized waste treatment system brought them enough budget and technology by the budget of the provincial governments and by cooperation with the private companies. In contrast, Phitsanulok municipal waste treatment site practices decentralized waste treatment which brought the site less volume of budget and less attraction to private sector. The volume of resources for waste treatment effect directly to the ability of the sites in dealing with pollution, and it also affects local benefit creation which will be discussed in the next paragraph. Information exchanges, between

local people and waste treatment sites, also play an essential role in preventing adverse impacts. In case of Nonthaburi, local people can use both formal channels, such as reporting the problem of smell to sub-district governments, and informal channels, such as complaining to their local leader who is also the site manager of the waste treatment facility. Besides, the sites will announce their future projects in the community meetings. In Phuket case, local people, the private company, and Phuket municipality mostly exchange their information via the joint committee of the stakeholders. Moreover, there are a lot of local people work in the waste treatment site. Therefore, they get the announcement about the pollution directly from the site. Phitsanulok municipal waste treatment site does not have much information exchanges with the local people. A reason is that there is no formal connection between two local administrative organizations, and the broker between the site and the local communities keep changing.

Local benefit creation is another factor of local acceptance. The volume of resources for local acceptance creation and structure of the relationship between local communities and the sites determine the success of local benefit creation. This research found that volume of benefit which the site can provide to local people correlates with the number of resources of each waste treatment facility, and it links further to the size of the waste treatment systems. Nonthaburi provincial waste treatment site and Phuket municipal waste treatment site practice centralized waste treatment system. Therefore, they own several resources for local acceptance. In contrast, Phitsanulok municipal waste treatment site has a small waste treatment system; consequently, it has a limited volume of resources for local acceptance creation, such as little gifts for local people.

For the structure of the social networks between the waste treatment sites and local people, this research found that both formal networks, such as the connection between local governments and the waste treatment sites which contain local administrative structures and legal contracts with private companies, and informal networks— groups of relationship between local leaders and villagers, or between villagers who works in the waste treatment site and who does not— are used to increase local acceptance. The formal social networks provide a high cost public benefit, such as local government budget or facility in case of Nonthaburi, or community funded in case of Phuket. Informal social networks bring a smaller volume of benefit to local people, such as emergency helps from the site manager in case of Nonthaburi, and small holiday gifts in case of Phitsanulok. Member of these two kinds of social networks are also different. Informal social network links every population of the administrative units which the facility site. In contrast, the informal social network of the site is determined by the personal social network of the brokers between the site and local communities. However, most of the studies include Thai waste management master plan in 2014 focuses on only formal networks. Therefore, the research need to highlight necessary of informal networks. When small population is determined as locals of the waste treatment sites direct links between the waste treatment sites and local communities are used to distribute local benefit and exchanges information, such as the case pf Phuket. In contrast, local leaders are requested as the brokers between local communities and waste treatment sites when large population is determined as stakeholders of the waste treatment sites. In this situation, relationship between local leaders and villagers become the channel of resources distribution and information exchange for the purpose of local acceptance creation, such as the case of Phitsanulok and Nonthaburi.

The finding of these three case studies shows us the relationship between the size of waste

treatment systems, social networks between MSW sites and surrounding community, and local acceptance to waste treatment site. A size of a waste treatment system determines the volume of resources in the waste treatment, pollution prevention, and local acceptance creation. In the same times, in order to use this resources efficiency for the purpose of local acceptance creation, social networks between the sites and local communities are a requirement. They need the both formal and informal local networks between the waste treatment sites and surrounding community to operate.