

The limitations of law and EIA: The case of Praeksa Community, Samut Prakan, Thailand

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Abstract: This case study explores the limitations of law and Environmental Impact Assessment (EIA) governing a massive garbage disposal site near the Praeksa Community in Samut Prakan, Thailand. The purpose was to analyze the law and EIA applied to the Sansuk Cooperative community that was affected by the massive garbage site. The methodology involved interview with those affected, focus group, risk mapping, timeline, technical scoping and community scoping. The results showed that light punishment and weak enforcement were significant factors in illegal dumping. The Praeksa landfill did not require an EIA due to the fact that it was an illegal garbage site. The interesting issues were the lack of enthusiasm and sincerity between landlords and government agencies for conducting an EIA in the first place, and not conducting the EIA also reflected that the Impact Assessment (IA) screening system had limitations. In the case of the community disposal site, according to the Public Health Act, the site does not require an EIA. Despite the existence of a waste separation policy, Thailand does not have effective waste separation implementation yet. This resulted in high amounts of toxic and electronic wastes in the community disposal site which affected and continues to affect the quality of groundwater in the area and poses a health risk to the communities nearby. This is evident particularly in the Praeksa landfill located near an industrial zone the proximity of which risks illegal hazardous dumping. Lack of an EIA culminates in no party being held responsible for monitoring risk, enforcing mitigation measures and conducting site recovery rapidly and technically accurately. The suggestion was to revise and update the EIA process, especially the IA screening and scoping to keep pace with the current industrial context.

Introduction

The accelerating of the development of the industrial economy resulted in many factories and industrial estates being situated in the Samut Prakan province. In 1976, the soil around the Praeksa area was excavated in order to build factories. As a result of the excavation, there is a large empty space (approx. 153 rai or 0.2448 square kilometers) and it became an illegal waste dumping site since 1998. One of the environment protection tools is the Environment Impact Assessment (EIA). The EIA aims to protect the environment and communities which may be affected from land use projects. The law assesses the type and size of the project or activity and this determines whether an EIA must be conducted. One of the project types that requires an EIA is waste management factories related to landfill waste. However, the EIA itself has a limitation. More to the point, there is a major problem. A project that adversely affects the environment and community should by law conduct the EIA, for example, a garbage disposal site, particularly, an industrial garbage disposal site. Nevertheless, it is not required to have an EIA conducted if it is an illegal dumping site. The illegality of the site makes it exempt from the EIA requirement. In the case of Praeksa, an enormous dumping site, it is used to aggregate the waste around this area and parts of the waste are regarded as hazardous waste from industry.

Methodology

This research highlighted people who have been affected by the Praeksa garbage disposal site, especially vulnerable groups such as children, pregnant women and the elderly. The methodology is as follows:

1. Literature review of the following topics: 1) community context e.g. community history, ecosystem, culture and economic dimensions; 2) Praeksa's timeline involved in waste dumping; and 3) law mechanisms and institutions related to the Praeksa garbage disposal site.
2. Stakeholder Analysis using community-mapping method.
3. Community Scoping for assembling villagers' concerns using interview and focus group techniques.
4. Technical Scoping, done by academics from various fields related to this issue.

The timeframe of this study was June 2016 – April 2017.

Study area

Praeksa District comprises 13 square kilometers. Historically, this was an agriculture area. The villagers have their own paddy fields; however, due to poor crop productivity, the villagers decided to partially convert the agriculture area to fish ponds. Then the economy in this area changed dramatically from agriculture and aquaculture to industry and aquaculture. The Samut Prakan province is one of the major industrial developments in Thailand; there are an estimated 737 industries around the area, including chemical, rubber and plastic industries.

Praeksa's garbage dumping site

Before 1976, no garbage dump was found in the Praeksa area. However, some people started to dig up land and sell the soil to the business sector in 1997.

In 1999, a roadway was built to connect Praeksa Soi 8 and Bang Poo Industrial Estate which resulted in illegal garbage dumping. There was weak management and enforcement response about the illegal garbage dumping from government officials, and the consequences were as follows:

March 16-22, 2014 – A massive fire broke out at the Praeksa landfill, forcing communities nearby to brace for evacuation.

March 23, 2014 – Fire broke out at Praeksa again, and 1000 villagers decided to negotiate with the land owner but failed to reach any agreement.

April 8, 2014 – Fire broke out at Praeksa, having enormous smoke and stinking odor.

March 12, 2014 – Fire broke out at Praeksa. Because of the smoke and stinking odor, villagers prepared for evacuation but the situation got better. Consequently, the villagers returned to their homes.

Effects of the illegal dumping

1. Vulnerability. (A) The groundwater is vulnerable to waste dumping, taking into account the geographical conditions. (Ahmad Fariz Mohamed et al., 2009). (B) There are many children, pregnant women and elderly in the communities near the Praeksa landfill and it does not have a health monitoring system yet.
2. Risks. A massive fire broke out at Praeksa landfill 4 times in 1 year for a duration of 4-5 days until the situation came back to normal. The situation remains uncertain and the waste is very hazardous because most of the garbage came from factories.
3. Food insecurity. There are many fish ponds around the area and no one can guarantee that contaminated groundwater will not flow to the fish ponds. Despite the potential contamination, villagers sell the fish to outsiders for economic sustainability.
4. Health problem and odor pollution. Particularly in the winter season, prevailing winds made the stench of garbage widespread. Moreover, many people continue to suffer from respiratory diseases, albeit at a reduced rate. Several researches also indicate that adverse health effects are associated with residence in the vicinity of toxic waste dump sites. (Mazza et al., 2015; Fazzo et al., 2011; Benedetti et al., 2013)
5. Disease. There are several disease carriers such as rat, mosquito and housefly in the Praeksa landfill and nearby which could spread the disease to people, and the risk of disease is especially high in the rainy season.
6. Mitigation. Measures to resolve issues are still unclear, as there is no collaboration between related organizations to mitigate and solve the problem.

EIA and Environmental law

Environmental law analysis

1999-2000, A complaint was started by villagers about garbage odor pollution leading to the Sub District Administration Organization's (SAO) use of the law under Determining Plans and Process of Decentralization to Local Government Organization Act B.E. 2542 (1999), Section 16 to arrest and fine garbage smugglers.

2007-2009, garbage smuggling was continuously found. Nevertheless, the SAO only punished by levying fines under the Determining Plans and Process of Decentralization to Local Government Organization Act B.E. 2542 (1999), Section 16, which means punishment is only a token response because of the small amount of fines.

2010-2011, the situation widely affected the villagers because of a severe odor problem; thus, they complained to the SAO. In addition, the villagers discovered that there were many trucks from factories carrying wastes and dumping them into the Praeksa illegal dumping site from 2 AM - 8 AM. The Department of Special Investigation (DSI) started to investigate and fine garbage smugglers 2,000 baht (about 64 USD in March 2018). The SAO ordered the land owner to close the Praeksa illegal dumping site and announced it as a prohibited area, but only for a

week. The smuggling of waste continues unabated. This could reflect that the law is weak and punishment very light; consequently, no one is afraid of the punishment.

2011, the SAO notified the land owner to stop the garbage dumping business, but at the same time, the SAO licensed someone to run a community dumping site business (which doesn't require an EIA) that could be harmful to public health (under Public Health Act B.E. 2535) despite the fact that the SAO should protect the community. This could reflect that the SAO still fails to understand the waste-dumping issue which could affect villagers' health, way of life and food security. It appears that the SAO is not concerned about the garbage dumping as a sensitive issue.

2012, the community complained to Praeksa's Provincial Public Health Office about odor pollution. The SAO investigated and found that the garbage dumping site was full of industrial waste. The SAO ordered the land owner to permanently close the site and fined those who dumped the garbage 5,000 baht (about 160 USD in March 2018). The Office of National Environment Board investigated the quality of waste water and found that Chemical Oxygen Demand (COD) and Biochemical Oxygen Demand (BOD) were above average which showed that the pollutants were clearly having an effect on the community.

2013, the SAO found evidence that land owners still allowed the waste smuggling; as a result, they were punished by fines of 2,000 baht (about 64 USD in March 2018). As the fines were just a small amount and there was no change in the behavior, this could reflect that the law enforcement is lacking the required efficiency.

2014, fire broke out at Praeksa, and the governor declared a national emergency disaster because the fire area was about 1 kilometer and smoke covered an area of about 20 kilometers. There were at least 1,200 people affected.

From an analysis of the law and its application in this case, it appears that the punishment for illegal dumping of hazardous waste was light and may have contributed to the commission of repeated illegal acts. Therefore, this illegal waste smuggling should be treated like an environmental crime which warrants severe punishment.

EIA analysis

1. The impact assessment scoping is the process of determining the scope of the study in both social and environmental dimensions. The scoping process should be clear and cover all the concerns. Therefore, collaboration between the community and technical experts is needed to comprehensively scope the study. However, in practice, the scoping process is determined solely by the experts so there are many times that the social aspect is ignored.

2. There are many illegal landfills like the Praeksa landfill. In this case, the EIA could not protect the community and environment. The absence of an EIA culminates in no party being responsible for monitoring risk, implementing mitigation measures and conducting site recovery quickly and with technical accuracy. The relevant environmental laws should be applied to resolve the problem.

3. Community disposal sites, according to the Public Health Act, do not require an EIA. Although Thailand has a waste separation policy, there is no effective waste separation yet, resulting in there being a noticeable quantity of toxic and electronic wastes in community disposal sites. This could affect the quality of groundwater in and pose a health risk to nearby communities. Particularly, the Praeksa landfill which is located near an industrial zone has a high risk due to the illegal hazardous dumping. Therefore, the EIA's assessment screening criteria should be revised.

Suggestions

1. Illegal garbage disposal sites are regarded as an environmental crime which is being treated with a high level of severity nowadays. To solve the dumping problem, the government should increase the resources (adequate equipment and capacity) and the motivation to deal with the problem makers. In addition, policy and law should prescribe and strictly enforce the appropriate level of punishment for this crime.

2. Praeksa's illegal landfill is a concern for the residents because of the existing impact and potential impact in the near future. Although the government has designated waste management as a national agenda, its mission and cooperation still have problems. In order to solve the problems, cooperation among related organizations is needed; for example, the Pollution Control Department, Sub District Administration Organization, police and community should set the agenda and plan accordingly to settle this issue of illegal waste dumping.

3. The EIA screening criteria should reconsider community disposal sites as projects that require an EIA and the impact assessment scoping should be a collaboration between the community and the technical experts.

4. Pushing forward of Community Health Impact Assessment (CHIA) is one of the crucial mechanism to develop EIA process in Thailand. This model could trigger community to be part of EIA decision making in conjunction with determines their own way of development.

5. Human factors such as attitude, awareness and public participation are very important, and have influence on landfill management and illegal garbage dumping (Agamuthu & Fauziah, 2010).

6. Social media could play a significant role in promoting a positive environmentally-responsible and community-friendly corporate image. On the one hand, social media could be used as social pressure (naming and shaming the companies which are abusing the dumping facilities) to persuade the companies to stop illegal activities. Conversely, social media endorsement could motivate companies to conduct EIAs enthusiastically and sincerely and acquire a possible benefit of environmental accreditation.

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