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LOCAL ACTION WITH INTERNATIONAL COOPERATION TO IMPROVE AND
SUSTAIN WATER, SANITATION AND HYGIENE SERVICES

**Sustainability of ODF status of selected communities in
disaster prone areas in the Eastern Part of Indonesia**

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Community Based Total Sanitation (STBM) has successfully contributed to the acceleration of sustainable rural sanitation progress in Indonesia. The fact that many communities in Indonesia live in disaster prone areas may affect that progress. The study aimed to review the sustainability of Open Defecation Free (ODF) status of selected communities in the eastern part of Indonesia. These communities have experienced disasters during and after STBM implementation. Despite the study finding that the selected communities have not fully achieved ODF, the majority of households have proven that they could maintain their ODF behaviour even after experiencing the disasters (27 out of 30 respondents in each communities). The factors that enable sustainability of ODF behaviour, in regards to disaster resilient community, are disaster risk awareness of communities, having coping mechanism in place and the ability of the communities to build back better and reduce vulnerability.

Introduction

Government of Indonesia has adopted Community-Led Total Sanitation (CLTS) in 2008 through their national sanitation strategy called Sanitasi Total Berbasis Masyarakat (STBM) (EHD, 2016). It is being rolled out by local government, donors, International Non-Government Organization (INGOs) and local NGOs across Indonesia and there has been a significant progress in sanitation. To date, at least 7,000 out of 33,000 triggered villages have been verified as Open Defecation Free (ODF) villages (STBM secretariat, 2016). That significant progress has contributed to increase of access to sanitation from 35 per cent in 2006 to 61.1 per cent in 2014 (STBM secretariat, 2015).

On the other hand, many areas of Indonesia are considered as disaster prone. 322 out of 497 districts are categorized as high-risk area based on Indonesia disaster risk Index (BNPB, 2015). There are volcano eruptions, earthquakes and tsunamis that make Indonesia being exposed to the greatest number of hazards. Moreover, Indonesia has also a high risk of drought, flooding and landslides (BNPB, 2015).

There are issues of the sustainability of Open Defecation Free (ODF) communities even in normal communities that are further exacerbated in disaster prone areas (Evans et al., 2009). This may be inhibiting the acceleration of sustainable sanitation progress in Indonesia, eventually slowing progress towards achieving the Sustainable Development Goals (SDGs) target of 2030 as well as the Government of Indonesia's national development target of Universal access to sanitation by the end of 2019. Factors that affect sustainability, include disaster resilience of communities, should be considered in the future program design or at least in post-ODF strategy.

Research objectives

The study aims to review the sustainability of ODF status of selected communities in the Eastern part of Indonesia after being hit by disaster(s) in particular floods and earthquakes and analyse disaster resilience factors that affected the ODF sustainability. The study tried to achieve three specific objectives as follows:

Objective 1: Assess the current ODF status of the selected ODF communities that have been hit by a disaster, in particular floods or earthquakes.

Objective 2: Examine the performance of the STBM approach used by facilitators that has resulted in ODF communities, including if/how disaster risk reduction issue are being discussed during the STBM process in the selected ODF communities.

Objective 3: Investigate factors that may build disaster resilient community and eventually sustain ODF status of the selected ODF communities.

Research strategy and methodology

The study was conducted in two selected ODF communities in eastern of Indonesia. They are Cendana Putih village in Luwu Utara district of South Sulawesi Province and Maritaing village in Alor district of East Nusa Tenggara Province. These communities have declared ODF status more than four years ago and have experienced disasters (floods and earthquake) affecting the whole community since then.

The study used case study approach as research strategy that applied various methods to collect combination of qualitative and quantitative data. The methods used included secondary data analysis, household survey and observation using random sampling to 30 respondents in each communities, four Focus Group Discussions (FGD) with separate men and women groups, and In-Depth Interview (IDI) with 13 key informants from both communities. It is noted that the total sample population is representing five per cent and ten per cent of total population in Cendana Putih and Maritaing respectively. The use of varied methods also allowed triangulating data between methods.

Results and discussion

ODF status in selected communities was a result of STBM implementation started since 2008. Within 12 to 18 months, Maritaing and Cendana Putih claimed and even declared their ODF status. However, Cendana Putih always experiences floods annually in the last 8 years. The biggest flood event recorded was hit in 2010. It lasted for one week where most of the residence areas and farm fields affected. Another significant flood event just occurred early 2016 (in March). The impact was much smaller compared to the flood in 2010. Only several houses were affected by the flood for three days. Meanwhile, Maritaing community experienced a magnitude 6.2 earthquake on 4 November 2015. This was the biggest earthquake felt and resulting major destruction in this area in the last ten years. The earthquake affected-population covered 5 sub-districts and 18 villages including Maritaing village in Alor district. Figure 1 shows the example of impact of the earthquake to sanitation facilities in Maritaing village.



Despite Cendana Putih and Mairtaing have been verified and declared their ODF status previously, the study found that both communities have not fully achieved ODF criteria yet. That assessment was compared to ODF criteria developed by Kar and Chambers (2008) and STBM secretariat (2015). For example, of 30 household survey respondents, 87 per cent of respondents were using improved latrine and three per cent using shared latrine in Cendana Putih. The remaining ten per cent is considered as practising fixed point OD since they have been using an open pit for years. Whereas in Maritaing, one respondent observed did not have a latrine and have been practising OD since years ago although the majority of 30 respondents were observed using improved latrines (77 per cent). Those results may reflect the ODF situation before and after the disasters hit the communities.

The study found that the impact of repeated disasters in Cendana Putih and one massive disaster in Maritaing did not significantly change the ODF behaviour of majority households in both communities but it has disrupted their ODF behaviour for two weeks to three months. The same 27 respondents in each communities found to be maintaining ODF behaviour before and after disasters. Among them, one respondent in Cendana Putih and four respondents in Maritaing were using shared latrines. While the majority of them is using improved latrines.

In terms of STBM implementation performance, the study identified elements of key STBM activities that have followed the guidelines of proper STBM implementation developed by Kar and Chamber (2008) and STBM Secretariat (2015). For example, in both communities the STBM facilitators applied varied PRA tools in the triggering sessions and conducted strong follow-up activities. Most of Knowledge, Skill and Attitude (KSA) for excellent CLTS facilitation defined by EWB (2010) have been fulfilled by the facilitators from both communities. However, the study also highlighted the elements that require improvements such as low percentage of household representation in triggering sessions (less than 10% of the total households in each communities). The use of partial ODF criteria during the verification that has led to poor ODF verification result was identified as an area for improvement as well.

In regards to Disaster Risk Reduction (DRR), there was no intervention during the STBM activities provided by the facilitator. Nevertheless, the study analysed similarities between STBM and Community Based-Disaster Risk Reduction (CB-DRR) approaches and highlighted as opportunities to synergize these approaches before and after ODF attained. For example, both STBM and CB-DRR are using community-based approach that started with building rapport and then facilitating community to analyse their situation and eventually leading to community plan of action to address issues raised during the analysis.

The study identified three key factors in both communities that may sustain ODF behaviour in regards to disaster resilient communities. The first factor is disaster risk awareness of both communities. Between two communities, Maritaing community (100 per cent respondents) seemed more aware of their disaster risk than Cendana Putih community (70 per cent respondents). The awareness of both communities may not fully reflect their understanding and ability to cope with disasters risks. However, it can be a first step to build their resilience as most of intervention for building disaster resilient community starts with building awareness of community on potential hazards and disaster risks in their areas (UNISDR, 2007).

On the contrary, for the second factor on coping mechanisms, Cendana Putih community was identified is being more prepared than Maritaing. In terms of physical, human and financial, Cendana Putih community has more measures to cope with disaster risks than Maritaing. For examples, allocation of contingency funds in Cendana Putih or construction of disaster resistant latrines in both communities. The abilities of Maritaing and Cendana Putih community to cope with disasters are key factors to maintain their ODF behaviour. This is also one of characteristics of disaster resilient community defined by IFRC (2008). In addition, the capacity of district government to provide responses and to build community preparedness may increase chances of both communities to survive against worse case disasters.

The third factor is that both communities showed their ability to build back and reduce their vulnerability to disaster. 10 out of 14 affected respondents from both communities have rehabilitated their own latrines within less than one month after disasters. Among them, 70 per cent are building back better their latrines without external support. Four respondents in Cendana Putih have even tried to reduce their vulnerability by building a disaster proof latrine that may lead to more sustainable ODF status. These can be also categorized as adaptive abilities (Twigg, 2009). Figure 2 shows the example of a flood proof latrine built by the community in Luwu Utara.



Figure 2. Example of an elevated latrine built in flood prone areas in Luwu Utara

Source: Madani NGO (2016)

These three factors were driven by strong motivation of the selected communities to maintain benefits of practising ODF behaviours such as no diarrhoea cases, lesser bed smell and social conflict. As the communities think that use of latrine is more convenient, seen more prestigious and creating cleaner and healthier environment than practising OD.

The study highlighted lack of investment of communities' knowledge on DRR as a constraining factor for sustaining ODF in both communities. Compared to Maritaing, the study found there is very little effort to provide information on DRR either from the STBM facilitators or from local authority in particular Cendana Putih community (77 per cent and 23 per cent respondents respectively). This may lead to lack of more individual initiatives to reduce their vulnerability.

Conclusion

Cendana Putih and Maritaing communities of East Indonesia have experienced disasters after they declared ODF. The reviews of their ODF sustainability found that they have not fully achieved ODF. However, the majority of surveyed households in Maritaing and Cendana Putih are continuously maintaining their ODF behaviour even after being affected by the disasters (at 90 per cent).

The performance of STBM in both communities shows some good elements of key STBM activities being implemented such as use of variety of PRA tools in triggering session, sufficient follow up activities conducted and good KSA of the facilitators. On contrary, the elements that require improvement such as triggering participation, composition of verification team and the associated methodology, and clear criteria for ODF communities.

The factors that enable sustainability of ODF behaviour, in regards to disaster resilient community, are disaster risk awareness of both communities, coping mechanism and abilities to build back and reduce vulnerability. However, the study found a constraining factor that may affect the resilience building and sustain the ODF communities. The factor is around lack of efforts to invest in communities' knowledge on DRR.

Recommendations

To attain and sustain ODF Communities, the STBM facilitators need to focus to trigger (potential) OD households while building community consensus or developing local regulations on OD prevention. The HHs with an open pit should be asked to cover their defecation hole with lid. Options of affordable improved sanitation facilities should be introduced to them as well.

To improve poor performance of STBM elements, reviews of STBM processes linked to ODF achievement and sustainability should be conducted regularly. The review should be conducted along with

improvement of quality of ODF verification process involving application of solid ODF criteria and methodology.

For future work, it may be worth to test and examine the synergy of STBM and CB-DRR as a strategy to improve HH access to sanitation in disaster prone areas.

To build resilience of community on ensuring ODF sustainability, good practices on resilience building from Cendana Putih and Maritaing should be disseminated. For example on how to cope with disaster hazards, building back better and to reduce vulnerabilities in terms of sanitation such as building flood proof latrines and allocating contingency funds.

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Notes

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