

RESOLUTION OF DEMAK COASTAL CONFLICT

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ABSTRAK

The conflicts occur between economic interests by RTRW (urban planning by regional government) which allow industrial expansion to run out of control, the interests of investors who exploiting the land without thinking of sustainability, thus violating land use, the characteristic factor of open access ownership, people's ignorance so that they change paddy fields into ponds so that they are not suitable for land use, people also over exploitative the groundwater which worsening the land subsidence. The conflict resolution very on different alternatives according to each party. The government advised the community to leave the submerged village but did not provide adequate facilities. The industry does not provide compensation for losses suffered by residents of villages next to the industrial area. Some environmentalists suggest that residents adapt to nature by building houses on stilts. Including pioneering spots along the coast in accordance with their respective local potentials, for example tourism, entrepreneurship, small and medium industries processing fish and other marine and coastal products, etc.

INTRODUCTION

Currently, there has been tremendous environmental degradation in the coastal area of Demak Regency. The condition is getting worse, tidal wave and abrasion have eroded the land up to thousands of hectares. An area that was originally fertile agricultural land has turned into a pond because the water is brackish. Now the ponds are also forced to disappear because the seawater is no longer slowly coming, but rather crashing waves.

Drastic environmental changes have also caused changes in the socio-economic conditions of the people. The livelihood that was originally a farmer has turned into a fish farmer, and now the pond is gone. Their wealth and economy were destroyed by this disaster. The society's socio-culture in the disaster area has also changed, which is very concerning. In fact, in 2005 two hamlets, namely Senik and Tambaksari in Bedono Sayung Village, were gone. A total of 208 families were forced to lose their homes.

This sad story about the abrasion in Sayung has been widely exposed by media such as Suara Merdeka, Kompas, Okezone, TVOne, and Metro TV since 2009. Many studies have also been carried

out by the Regency, Provincial, Central Government, as well as those carried out by Universities Non-governmental organization. However, the handling is still far from what is needed.

METHOD

To make this policy brief, the method used is to identify problems that arise, conflicts that occur, identify relevant target audience groups, parties involved, take information from various sources and references, conduct interviews, develop two-way dialogue and 'engagement' with the beneficiary of the benefits of research, conduct analysis and make recommendations. There have been more than 64 studies on Demak coastal conditions by the Geological Agency of the Ministry of Energy and Mineral Resources from 1975 to 2012. Several studies have also been conducted by universities such as ITB, UGM, and UNDIP. In addition, the Ministry of Maritime Affairs and Fisheries has been paying great attention to the environmental degradation of Demak Regency in recent years. Furthermore, foreign organizations such as Wetland, JICA, GIZ are also quite concerned with the Demak coast.

Coastal areas are the area's most vulnerable to climate change. Apart from being caused by factors of global climate change which cause sea level rise, tidal waves, and abrasion, degradation of the coastal environment can also be caused by human activity. The current condition is very urgent for environmental protection and rehabilitation. Conflict between groups with their respective interests exacerbates the damage which can cause Demak to sink further.

FINDINGS AND DISCUSSION



Figure 1 Conflict Parties

SEA WATER INTRUSION occurs due to the entry or infiltration of sea water into the pores of the rock. Naturally, groundwater flows from catchment areas to the oceans through aquifers in coastal areas connected to the oceans. Due to the increasing need for groundwater, the flow of land towards the sea decreases or even vice versa, sea water flows into aquifers in land areas.

LANDSUBSIDANCE occurs due to lower groundwater levels. This is due to: soil characteristics and groundwater abstraction.

In terms of **geohydrology**, Demak Regency has a high potential for groundwater basins, namely shallow groundwater of 166.2 million m³/year and deep groundwater of 4.1 million m³/year

(ESDM Office of Central Java Province, 2013).

The groundwater information system is organized in accordance with the provisions mandated by **Government Regulation No. 43 of 2008** concerning Groundwater. There are many definitions or definitions of groundwater. **Law Number 7 of 2004** concerning Water Resources (Law No. 7/2004) defines ground water as water that is contained in a layer of soil or rock below the ground surface.

Groundwater has 3 (three) functions (Toth, 1990): As a natural source that is used for various human needs; the share of hydrology in soil that affects the balance of the global hydrological cycle; as a member/agent of geology.

There are two sources of groundwater, namely: Rainwater which seeps into the soil through pores or cracks in rock formations and eventually reaches the groundwater level; Water from surface watercourses such as rivers, lakes and reservoirs that seeps through the ground into saturated strips. (Presiden RI, 2011a)

ROB occurs, namely flooding caused by sea water inundating the land, this flood usually occurs in areas that have a lower surface than sea level.

When there is a tidal wave, the water will immediately submerge the settlements. Even when the waves recede, the floods still inundate people's homes because water cannot flow into the river to the sea. The estuaries of several large rivers are silting, so water cannot flow. When the flood was still inundated, the sea waves rose again, so the tidal flood got worse. The four rivers that contributed to the tidal flooding include Sungai Babon, Dombo Sayung, and Bonjol. Approximately 50-60 centimeters of submerged houses of residents.

Society's indifference to the environment exacerbates the situation. They change agricultural land into fishponds, not in accordance with the designation of the land. Because they were

attracted by the trend of Japanese investment in 1997 which produced tiger prawns and giant prawns. Those who do not have the capital, even rent out the land to be made for ponds. Mangroves are cut down so that more land can be sold to investors.

As a result of the increasing number of ponds, the circulation pathways for fresh and salty water that should have been there have been disrupted, feed has decreased, production has receded, investment has fallen, and investors have left. In December 2000, when the big wind from the Malacca Strait looked like a funnel directly towards Demak, there was a heavy current so that the small embankments of the pond lost. (The bunds between the ponds should be big, they just make it small like for rice fields, about 1 meter.)

In 2004, the Slenik and Timblusloko hamlets sank. 208 residents evacuated along the Gemulak irrigation area. The exodus built houses to occupy the banks of the Gemulak River. (Which actually violates the land use rules as well)

The community's next indifference is that they continue to extract groundwater, which causes the land subsidence to worsen. Even when there is a village whose groundwater is depleted, the villagers next door drill and over-exploit it to get groundwater and sell it to them.

Characteristics of open access ownership. In the north coastal community of Java, the characteristics of open access ownership apply, meaning that ownership is open (as if it is not regulated), everyone seems to be free to use natural resources so that in regional development and resource use often creates conflicts of interest, so that opportunities for environmental degradation and problems the externality is bigger.

RECOMMENDATIONS

There are some NCR (Negotiation and Conflict Resolution) strategies for Natural Resources such as mediation, negotiation,

arbitration, adjudication, litigation, legal pluralism, property rights, forum shopping, constructivist perspective, soft system thinking, cognitive system, communicative rationality, platforms for negotiation and adaptive management. (Upreti, 2001) Some NCR models are also offered, such as Social Choice Rules (Tayebikhorami et al., 2020) expert model and machine learning hybrid approach (Mell et al., 2021) Open innovation model (Barchi & Greco, 2018) Triangular model. (Regina Salvador-Antequis, 2017)

In Demak coastal case, here are the dominant factor: local social relationships, ownership issues, the ambiguous role of external development organizations, and the need for industrial expansion by local governments that do not pay attention to land designation.

This conflict can be resolved by approaching all parties, formulating and establishing supportive policies with the policy direction 'back to friendly with nature'.

Stop exploitation. Stop industry expansion that not suitable with the land use. Regional government must concern a lot with its destroy if continuing the private sector and investor's appetency to build their factories on land that is not according to its designation.

Stop taking ground water. All stakeholders must obey Ministerial Regulation on Saving Groundwater Use. (Menteri ESDM RI, 2012) and Presidential Decree on the National Policy on the Use of Water Resources.(Presiden RI, 2011b)

We can refer to examples of policies that already exist in other cities such as the Regional Regulation on Groundwater Management (Bupati Klaten, 2012) Sragen Regent Regulation (Bupati Sragen, 2012)

Use surface water, such as river water.

House on stilts

From temporary observation, we also need to improve community-level conflict-management practices. The villagers

initially did not want to build houses on stilts, even though it had been directed by the government. They insist on choosing to raise houses and roads when land subsidence occurs. However, when one of the residents who made the house on stilts finally proved that his house was resilient for six years, slowly the other residents began to follow his steps to build a house on stilts too.

Mangrove restoration. Restoration, in an effort to restore environmental conditions to its original state, naturally allows human intervention but is made to be as minimal as possible, especially in imposing the desire to grow certain types of mangroves.

Restoration provides more opportunities for nature to regulate or restore itself. Humans are only limited to providing roads and opportunities and speeding up the recovery process. The mangrove habitat is able to naturally improve its conditions within 15-20 years, if normal hydrological conditions are not disturbed and there is availability of seeds, seedlings and spacing that are not disturbed or obstructed. (Djamaluddin, n.d.)

The mangrove habitat can be repaired without planting, so this is actually a mega project but it doesn't cost a lot of money. For this reason, the restoration plan must look at the potential for obstructed seawater flow or other pressures that might hinder mangrove development. After we can condition the development of mangrove forests, the restoration process will run smoothly. The most important thing is precisely the Brayo plant at the very front. Furthermore, the mangrove seed chooses the place where it will grow. In the back row are avicena, glagah, gebang, etc. They will grow by themselves when the habitat is supportive, so restoration occurs. (Setyawan et al., n.d.)

Develop Economic Hotspots in each area along the coast in accordance with their respective potential. So the villagers have livelihood to make their living. In

areas with good fisheries, fish products and processed products can be sent to tourist areas that can market them. The local government need to build the construction of embankments using the site pile model, infrastructure development to support natural mangrove tourism destinations, construction of houses on stilts and normalization of Regency Road Infrastructure - Inter-village roads and village roads. The shifting paradigm effort in society is to be more concerned about the environment, understand the impact of climate change, and conduct business training, services and mangrove tourism. So that conflicts are resolved and the affected people can get a better life.

The community together increases the capacity of themselves and their territory to become an attractive and environmentally friendly tourist destination. For example Glagah Wangi Beach, a hidden paradise in Tambakbulusan Karangtengah Village, Demak. As well as the increase in the potential for marine tourism in Morosari, Bedono Sayung Village and Morodemak Beach in Purworejo Bonang Village.

The concept of a tourism village also can be carried out by the community and local government by cooperating with environmental activist groups, also village-owned enterprises (BUMDes). In addition to increasing income for the village, of course it can improve the economy of the local people.

CONCLUSION

Conflict resolution in coastal areas needs to be done quickly in order to overcome damage to the coastal and marine environment. Community-based resolutions will be very effective because there is a value of participation and empowerment as well as awareness that is contagious.

We need to resolve with environmentally friendly approach, concern with nature and also heritage. Agriculture is the most suitable business

for mainland Demak. The safest marine fishery business to protect Demak land. Great mosques and tombs as well as more extraordinary history, culture and coastal traditions of Demak must be preserved and highlighted. This is to support tourism as a substitute for the livelihoods of residents who have lost their opponents of rice fields and ponds.

This policy brief is dedicated for Demak regional government who can distribute it to the stakeholders which can work together, collaborate with good coordination so we can prevent the worst condition. So we can resolve the conflict and save Demak from sink.



Figure 2 Resolution Recommendation

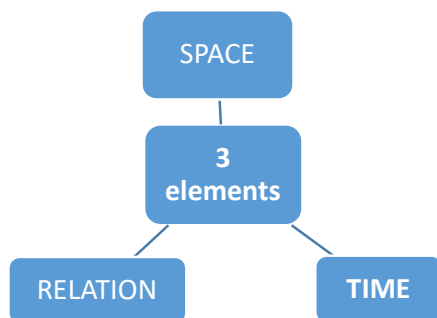


Figure 3 Triangular Model- Elements.

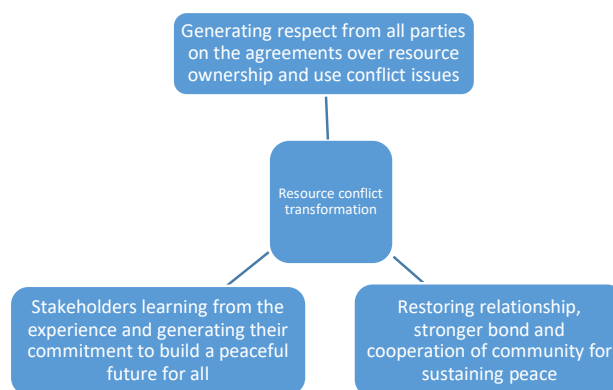


Figure 4 Triangular Model - Transformation



Figure 5 Triangular Model - Process

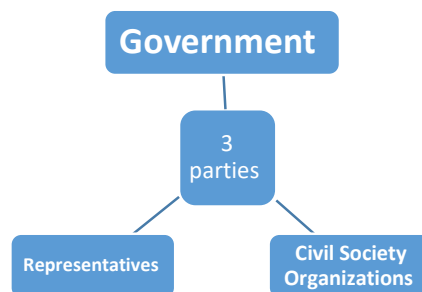


Figure 6 Triangular Model - Parties

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