

Fighting the rising tide in Semarang

Even in the colonial era, Semarang was an important port in Java – prompting the Dutch to build a system of polder (dikes) to manage how tides affected the low-lying city. Today, however, the colonial-era dike system is simply not adequate. The tidal influence, known locally as rob, has increased. In 1995, tidal floods reached about 500 meters inland. High tide currently reaches points as far as 5 kilometers from the coast, even flooding the city's historic colonial-era Kota Tua, or old town.

“Since that time, different co-factors have exacerbated the phenomenon of rob, including the illegal reclamation of coastal land, which has certainly played an important role, depriving the coastal areas of the natural protection from mangrove forests,” Benny Setianto, a legal expert on environmental governance at Soegijapranata Catholic University in Semarang, said.

Houses and shacks have effectively replaced the mangroves, serving as an ersatz buffer to the tide. As the land subsides by as much as 7 centimeters a year, entire neighborhoods will likely become constantly inundated over the next 20 years. Local residents are used to it, however. Tidal flooding works fast, with water rising by upwards of 40 cm in less than three hours – a few times a week in some places, every day in others. One woman, 62-year-old Endang, says she has lived on the banks of the Mberok River in central Semarang since 1975.

“I’m used to being affected by the rob since the mid 1980s. The most frequent rob happens in the evening, between 7 and 9 p.m. It usually gets worse during a full moon and can reach up to one meter during the rainy season.” In the last 30 years, those who could move their houses onto stilts. The poor, meanwhile, just fill their flooded floors with rocks or sand – burying their own houses. One local resident, worm seeker Sanusi, 56, lives in his flooded house in a space just under his roof, perched like a bird on beams.

“For more than 30 years, the rob has been flooding my house,” the 56-year-old said. “Before the construction of residential buildings and factories, in some areas of the north coast, there was no rob. Yet, when industry appeared, many people in my neighborhood started complaining of daily flooding.” He continues. “For the last 10 years, I haven’t been able to put my feet on the floor because it was constantly covered with water. I have no pump and I can’t raise the house because I haven’t enough money. I have no electricity and services. I can’t cook so I buy my meals in street stalls.”

Things might begin to improve following a series of initiatives. In 2003, for example, the Public Works Ministry and the Dutch Environment Ministry made a deal to cooperate on flood eradication for those who live near Banger River. Officials have since been working on a pilot project comprising dikes, dam, retention areas and pumps to stem the affect of tides on the community living near the Banger River and to stop the continuous threat of flooding. Further, the Polder Management Agency (BPP SIMA) was formed in 2010, comprised of local residents, academics and representatives of local businesses and government officials. The agency plans to start work on a dam in September. While investment in facilities would be done by the government, local residents would fund in part the river management agency and its work.

Fees would be collected along with primary investment, Sumono Karmidi, the vice-chairman of the BPP SIMA’s steering body and leader of the Banger River community, says. He claims that the protection offered by the program is obvious. “Ninety percent of residents are ready to pay the water fee,” Sumono says. “They understand that raising their own houses would be far more expensive.”