

Seedlings of change

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Photos: A. Priyono

KeSEMaT members and volunteers plant 1,500 mangrove seedlings on 8 May 2005, in Teluk Awur Jepara, Central Java, Indonesia.



Students and community members participate in the opening ceremony of Mangrove Replant 2005.

Most people in Teluk Awur Jepara, Indonesia – many of whom work as woodcarvers and fishers – know little about how important mangroves are to their lives and their environment. They do not realize that mangroves stabilize the coasts and riverbanks.

So they fell mangrove forests for firewood and other uses and, assuming the forests have no value, dump rubbish in them. There is no spirit of conservation, and no programme for replanting what is cut down. Since around 1960, both the quality and quantity of the forests in the area have been declining.

The local government has been trying to restore the forests without success, partly because the area that needs restoration is very large. But now a project is replanting the degraded coastal areas with mangroves grown from seeds that have been collected and cultivated locally.

Four years ago, eight marine science students at Diponegoro University Semarang in Teluk Awur Jepara, in Central Java, created programmes and involved local people in the restoration. I was one of these students. We set up the Teluk Awur Mangrove Ecosystem Study Club (KeSEMaT) to develop student research into mangrove ecosystems, to raise awareness of their importance to the environment and to people, and to spread our spirit of conservation in the community.

The club first focused on scientific discussions about mangrove ecosystems so as to learn

more about the issue. Then, in 2002, our Mangrove Replant project won the coastal prize contest period II from Wetlands International–Indonesia Programme (WI-IP). As a result, we built six nurseries to cultivate seeds we gathered.

The next year we began replanting the seedlings, with 120 participants from the cities of Semarang and Daerah Istimewa Yogyakarta. We have since hosted two more such projects, making them yearly events. We set up maintenance programmes, and by the end of August 2005 we had achieved 99 per cent sustainability.

Our success was boosted by involving the community, but we still need both local and international support recognizing the incredible importance of mangroves. So we educate the local people about all their benefits, explain cultivation methods and hope they will continue the project. We try to establish strong ties with local young people so that they adopt a conservation spirit. In the future, we want communities around the world to join us in preserving mangrove forests.

Fortunately, my area was not affected by the horrific tsunami that struck parts of Indonesia on 26 December 2004, killing at least 150,000 people, but I have read how mangroves can absorb some of the impact of large waves and lessen the devastation to coastal communities. That's just one more reason why we need to conserve them!

WHAT ARE MANGROVES?

They are some 70 different species of trees or shrubs, usually found in intertidal areas in the tropics, on mudflats and on the banks of rivers and coasts. Most mangrove forests are in Indonesia, Brazil and the Sundarbans of India and Bangladesh.

WHY DO MANGROVES MATTER?

They act as protective buffers between strong tides and shorelines. Their roots help prevent soil erosion and loss of nutrients, as well as filter out pollution from the water. They provide a rich habitat and breeding ground for animals, fish and shellfish. They also have economic value: for centuries, people have used them for firewood, building material, charcoal, food and medicines. Now, because they are often part of beautiful coastal ecosystems, they are also important for tourism.

WHAT ARE THE THREATS TO MANGROVES?

Humans pose the biggest threat. Eroded topsoil and run-off from agriculture wash downstream and smother mangroves. Forests are being cleared for housing, tourist developments and food production: thousands of square kilometres are being converted into shrimp farms, for example. Such exploitation for short-term gain often causes irreversible damage. High waves, rough waters and hurricanes can also harm mangroves, while climate change and rising sea levels place them under further stress.

WHAT CAN WE DO ABOUT IT?

We can educate ourselves and others about mangroves and their benefits. We can rebuild degraded mangrove forests and protect healthy ones. We can find a balance, making sure that our use of them does not compromise their ecological value. People are reassessing the value of these 'dirty swamps', but to truly preserve mangrove ecosystems, we must also address such broader issues as global warming.

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