

INDONESIA

Palu and Borås make waste valuable

In a partnership project between the cities of Borås, Sweden and Palu on the island of Sulawesi in Indonesia, waste is being transformed into important resources. The people who live and work on Palu's waste dump are also being given an opportunity for a better life.

“The waste problem in Palu stems from the way people see garbage as a worthless product. So the waste piled up without being processed and became a major problem for the city,” says Deputy Mayor Tombolotutu in the city of Palu, on the island of Sulawesi in Indonesia. We wanted to solve this issue by utilizing the waste to produce biogas. “We had the resources, but we did not have the knowledge, experience and equipment to proceed.”

The solution was to be found in Borås, Sweden, with which Palu developed a partnership involving many partners. In Sweden: SP Technical Research Institute of Sweden, the City of Borås, the University of Borås and Borås Energy and Environment. In Indonesia: the City of Palu and Tadulaku University. The Swedish

company Biogas Systems is responsible for the biogas solution and supplies and installs the technical equipment.

The waste management process begins down in the city, where waste is sorted before being brought to the dump. The organic waste brought to the dump is made use of in a biogas facility.

“We cover the waste deposits and install a gas recovery system that allows us to collect the methane gas formed spontaneously in the decomposition process,” explains Tony Zetterfeldt at Biogas Systems.

Methane is a highly aggressive greenhouse gas – 21 times more dangerous for the greenhouse effect than carbon dioxide. The biogas facility sucks up the gas, preventing it from dissipating into the atmosphere. The gas can



A social programme within the project will supply new houses for the 86 families that live and work on the dump.

instead be used to generate electricity and hot water.

In parallel, a social programme is in operation for the 86 families that live and work on the dump. Their homes are simple huts that they have built themselves from materials they have found on the site.

“Together with the municipality, we have developed a plan of action so that those who live here and make their livelihoods from the waste, can gain a better life. They are to be given new houses and will sort waste in a better way,” explains Jessica Magnusson, project co-ordinator at SP.

The new houses are being built and those who work at the dump are to be given protection from the sun and will not have to walk in the waste they are sorting. For the first time, they will have electricity to light their homes and for cooking. Showers are also to be installed to improve sanitation and the families’ children will have the opportunity to attend school.

Another objective is for the biogas facility to provide the city with electricity generated from its waste.

“Most important of all is that those who live here will have a better existence,” says Jessica Magnusson. “Actually, that has been my personal goal ever since I first met these people on the dump and saw how they and their children lived. It moved me very deeply.”

In Jessica Magnusson’s view, it is crucial to find a good partner at the local level. She



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PHOTO: ED WRAY

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/DEPUTY MAYOR
TOMBOLOTUTU

explains that the team in Palu is completely fantastic and that politicians in Palu have a vision for what they want for their city, which is also positive.

Deputy Mayor Tombolotutu also speaks of attitudes, of changing people’s views regarding waste and the urgency of this.

“We can start small but we have to think big for the future. We have to think globally. Think big, start small but move fast,” he says.

All of the partners are set on continuing the partnership. Swedish knowledge on environmental management is highly sought after. And the need for environmental solutions in Indonesia is considerable.

THE FACTS

PARTNERS

Palu City, Tadulaku University, Biogas Systems AB, SP Technical Research Institute of Sweden, the City of Borås and Borås Energi och Miljö.

COST

5,400,000 SEK

SIDA CONTRIBUTION

1,800,000 SEK

PARTNER CONTRIBUTION

3,600,000 SEK

TIMEFRAME

2012–2013

RESULTS

■ The project is closely linked to a municipal partnership between Palu and the City of Borås focusing on the use of waste as a resource.

■ An interesting pilot scheme dealing with environmentally sustainable development has been established in the city of Palu – a medium-sized city that is highly involved in environmental issues.

■ Several cities in Indonesia have shown an interest in introducing similar technologies and systems for biogas.

■ The project is one of several under the umbrella of Symbio City. Numerous measures of varying scope and character have been carried out.