Fewer power failures in Sumatra

People in the Indonesian rural areas rarely have access to electricity despite there being energy in abundance under the earth's crust. As Indonesia begins switching to geothermal energy, local communities will be given the opportunity to participate in the project.

"We're always having power cuts, which is a great problem for us. It's very irritating when the lights go out during social activities or religious ceremonies. It also affects school and economic activities, says Hasyim Usman, the 58-year-old leader of a district comprising of ten villages in Aceh on Sumatra's northernmost point. For a few years now, the community in which he lives has had electricity, but only a few hours a day. All activities therefore grind to a halt when the sun goes down at around six in the evening.

Paradoxically, at the same time as the village is shrouded in darkness, there is an abundance of energy bubbling under the surface. Sumatra and the rest of Indonesia lies in the Ring of Fire, a horseshoe shaped area of high volcanic activity that extends around the Pacific Ocean. The Indonesian government has now decided to utilise the energy under the earth's crust. This will reduce the dependency on the coal-fired power plants that produce most of the electricity today.

In Aceh there is a saying that goes 'the crocodile in the river just looks at the other crocodiles eating its food'. This is used in frustration over Aceh's natural resources being exploited by outsiders. Hasyim Usman hopes that things will change when the government begins extracting geothermal energy at the foot of the Seulawah Agam volcano.

"WWF has invited local leaders to attend a training on geothermal energy. Geothermal energy can certainly be developed at Seulawah Agam, but of course we need enough knowledge and information and it must be useful for the people here."

Before the power plants are built, the people in the district must first give their approval, for which they need more knowledge and information. After the course they can send representatives to take part in the negotiations between the local decision-makers and energy companies. Hasyim Usman's message to the decision-makers is to put a coal on the fire and supply Sumatra with electricity as soon as possible.

"It will create job opportunities for local people, and our community activities can be run without blackouts."

A large part of Indonesia's potential for geothermal energy lies in protected forest areas so it is particularly important to ensure that vulnerable ecosystems are not exploited. WWF has therefore drawn up several sustainability criteria. If followed, the extraction would instead be an incentive to safeguard the forest while providing people in the vicinity with proper livelihoods.

Prior to construction, the residents at the foot of the volcano will have listed the animal species that live there to enable the energy company to avoid their migration routes. In the near future people living around the power plant will possess enough expertise to monitor the company to ensure they are complying with the regulations, something for which government bodies often lack resources.

"We can resolve any conflicts between the energy companies and the community through deliberations. The environment must also be protected to give future generations the best of what the environment has to offer while benefitting from the energy extraction," says Hasyim Usman.

Ring of Fire

Geothermal energy is extracted deep below the earth's crust, usually in the shape of hot water vapour that is either used directly for heating purposes or is led into turbines that produce electricity. The Indonesian government is planning 2.6 gigawatt of geothermic energy on Sumatra. Most of the suitable sites lie in protected forest areas of great natural importance. Each project must therefore cause as little environmental impact as possible. Goals:

• The Indonesian government shall comply with WWF's geothermal energy guidelines when building new power stations on Sumatra.

• That all geothermal projects shall benefit the people who live in the district. The rural population of Indonesia rarely have access to electricity so access to renewable and sustainable energy will greatly improve their living conditions.

• To strengthen the influence and capacity of local organisations. In this way they can ensure that local communities reap the benefits of geothermal energy. They can also contribute to protecting sensitive eco systems.