Conservation with added bite

Environment How are dentists saving Borneo's rainforest? By offering free treatment to patients who oppose illegal logging. **Stanley Johnson** visits an award-winning clinic to find out more

Dental and environmental: (clockwise from main) a forest cleared to make way for palm oil crops; orang-utans under threat; Hotlin Ompusunggu at work; receiving her Whitley Award; the Asri clinic AFP/GETTY; REUTERS

The first time I saw Dr Hotlin Ompusunggu was in May, at the headquarters of the Royal Geographical Society (RGS) in Kensington. She was one of seven recipients of the Whitley Fund for Nature's annual awards. Established in 1994, the Whitley Awards recognise outstanding contributions to the protection of the natural environment. The Princess Royal is the patron and it is a task she takes very seriously, not least by actually turning up every year in person to present the prizes.

As Ompusunggu walked on to the stage of the RGS's Ondaatje Theatre to receive her award, I glanced at a paper containing brief biographies of the prize-winners. Ompusunggu, I noted, was a dentist. She had apparently started a whole new movement in Kalimantan, which is the Indonesian part of Borneo, linking the provision of dental care to conservation objectives. Dentists for conservation! The idea sounded intriguing.

"As a dentist," she began, "I never imagined that I would receive a conservation award. As I am standing here, I remember a 12-year-old girl who almost broke her jaw because of chronic bone-related tooth infection. Her father brought her to our clinic a year ago for treatment, because he would not cut down trees from the forest home to Borneo orang-utan to pay for his daughter's medical bills. Grateful for the recovery and in return for the care received, he brought us manure to plant trees in our reforestation projects. This project works."

At the end of the ceremony, the Princess made a speech, congratulating the winners on their achievements. Having listened to Ompusunggu's remarks, I was not surprised that the Princess drew particular attention to the unusual nature of the Indonesian dentist's work.

"As in all the previous years," the Princess said, "demonstrating the support of local communities is critical to achieving those positive conservation results. It isn't always approached in the same way and perhaps the most important thing about today's winners is underlining the fact that you don't have to be scientifically qualified in biology or natural sciences in order to make a difference. Being a dentist is just as important."

During the reception after the ceremony, I buttonholed Ompusunggu. I had been totally intrigued, I told her, by the project she described. Having been an environmentalist most of my professional life, and having a particular interest in the conservation of tropical rainforests, I wanted to understand more clearly what she and her team were doing out there in West Kalimantan. "Could I come to visit you?" I asked.

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She gave me a broad smile. "You are most welcome."

Less than six weeks after the RGS event, I found myself at Kuching International airport in Sarawak waiting to board the Batavia Air plane to Pontianak, with an onward connection to Ketapang. Ompusunggu came on to the tarmac to greet me when my flight touched down. In the car on the way back we had time to talk.

Now 36, she told me she had trained as a dentist in Medan in Sumatra. After she graduated, she had worked first in community outreach programmes in rural Sumatra, then on a mobile boat clinic. When the tsunami hit Aceh, Sumatra's northernmost province, in December 2004, she had co-ordinated a medical and dental relief team.

After her work on tsunami relief was over, Ompusunggu gained a Certificate of Higher Education at Radcliffe College, Gloucester. Soon after she returned to Indonesia, a friend of a friend called her to ask whether she would like to come to work on a new programme in West Kalimantan. The idea was to combine human health with environmental health. That telephone call, from an American woman, Kinari Webb, marked a turning point in Ompusunggu's life.

We reached Sukadana in the early evening. Once, long before the Dutch colonised the Dutch East Indies, Sukadana was one of the main trading ports on the west coast of Kalimantan. At my hotel, Ompusunggu explained that the location of the town at the very edge of Gunung Palung National Park was a factor in her decision to go there, rather than somewhere else, in Kalimantan.

Illegal logging, she explained, driven by global demand for timber and palm oil, was destroying vast areas of Indonesian forest each year. Bornean orang-utan numbers had dwindled from hundreds of thousands to about 45,000 in the wild. Orang-utans could be extinct in the wild within 20 years. Gunung Palung National Park was haven to about 2,000 of them. Gunung Palung is also home to endangered species such as sun bears, proboscis monkeys and gibbons, plus hornbills among an estimated 178 types of birds. With the relentless expansion of palm oil plantations all around, there are more and more pressures on the park, not just from those who wish to chip away at its boundaries to establish palm oil plantations, but from local people who increasingly turn to the park to meet their needs for firewood and timber.

The full name of Ompusunggu's clinic is Alam Sehat Lestari (which means "Healthy, Nature Everlasting"), usually dubbed the Asri clinic. I arrived there in the morning in time to hear Etty Rahmawati, a young woman responsible for community outreach, explaining the basic principles on which the clinic works to a roomful of 20 outpatients. Each village and sub-village in the district, Rahmawati said, had been classified according to the actions being taken there to prevent illegal logging.

She pointed to a chart on the wall. "If you come from a village which has protected the [Gunung Palung] park, that's one of the green areas on the chart, [so] you get the largest discount on the cost of the treatment. If you come from a blue area, where progress is being made, you get a 50 per cent discount. And if you come from a red area, where illegal logging still continues, you only get a 30 per cent discount," she said. "You can pay with seedlings, or with woven mats or baskets, or even with bags of manure."

It was there that I encountered Kinari Webb, who, five years earlier, had made the telephone call that brought Ompusunggu to Sukadana, sight unseen. Webb is a fully qualified doctor and she explained that, as a foreigner, she is allowed to "assist and advise" in all aspects of the clinic's medical work.

Webb, who is the president and founder of an American NGO called Health in Harmony, the main purpose of which is to support Ompusunggu's clinic, is married to Campbell Webb, PhD, an Englishman who works for the Arnold Arboretum of Harvard University. She invited me to meet him that evening.

Cam and Kinari met in Borneo, 15 years ago, when they were working in the Gunung Palung Research Centre, deep in the forest. They have been here, on and off, ever since. "When we first came to West Kalimantan," Cam told me, "the forest was everywhere. Pontianak itself was a timber town. Now, the timber companies have largely gone because 70 per cent of the lowland forests have gone. The palm oil companies go in for clear-cutting, selling the timber, then planting. Of course, there are still forests in the central and northern parts of Kalimantan – the montane forests. But they don't have the rich biodiversity of the lowland forests. The tallest trees here were 85 metres!"

"I had this vision," Kinari told me, "of combining human and environmental health. I spoke to my friend about it and she said, 'You have to have Ompusunggu.' When she got here, she began to understand the conservation work as well as the medical side. This programme would never have made it without her. She has passion, intensity and willingness. She is one of the most moral people I have met."

I raised an issue which had been bothering me. "I understand that you modulate the medical and dental charges in accordance with the status of the forest. But how do you find out about the illegal logging, who is doing it and where?"

"We have our forest guardian programme," Ompusunggu explained. "We have 30 forest guardians spread around the different villages and sub-villages. They know what is going on."

Over the next few days, I met several of these forest guardians. The £30,000 which Ompusunggu received from the Whitley Fund for Nature, thanks to a special donation by Goldman Sachs, has helped to put the programme on a sound financial basis, at least for the next year. These young men and women are truly at the sharp end of conservation.

What Ompusunggu and Kinari have realised is that it is not enough to try to persuade the villagers to stop going into the forest with a chainsaw; you have to give them an alternative source of income. So Asri has had to expand its horizons. Yes, it is still a clinic with a mission to bring better health to the villagers of the area. But it has also had to become involved with farming and agriculture. Asri now runs a nursery for plants and saplings.

One afternoon, Ompusunggu took me to a village to see the project's cows. There are 12 of them, tethered in an open-sided shed, munching on bundles of grass which the villagers gather from the surrounding open areas. The grass goes in one end; the manure comes out the other.

Looking at the chewing cows, I couldn't help wondering whether Asri, in seeking to turn itself into an agricultural as well as a medical enterprise, may not have bitten off more than it can chew. But when I talked to Ompusunggu and those who work with her, absorbing their confidence and vitality, these doubts melted away. Alam, one of the forest guardians whose village we are visiting, told me proudly: "I have convinced two illegal loggers to stop logging. There is still one man in the village illegally logging, but I hope to persuade him too."

For more information about Asri, see alamsehatlestari.org. For the Whitley Fund for Nature, see whitleyaward.org