How Sugar Could Save the Borneo Rainforest

The right business model could unlock the economic and environmental potential of the Arenga palm tree.

If oil palm monoculture is a villain in the story of climate change, the sugar palm could be its hero. Since the 1990s, vast tracts of **Indonesian forest** have been razed for the intensive cultivation of oil palm trees, adding to greenhouse effects and threatening the survival of species like the orangutan. What if another type of palm tree – the sugar palm – created better economic opportunities for the farmers while helping to restore the environment?

Also known as the Arenga tree, sugar palm is almost the polar opposite of oil palm. It only thrives where there is plant diversity. Its deep roots stabilise the soil and draw nutrients at a level that doesn't compete with other flora. It doesn't require fertilizers or pesticides. One of its many sustainable benefits is its sweet sap, which can be tapped year-round. It yields an exceptionally tasty sugar that's diabetic-friendly to boot.

Arenga palm sugar is a sustainable premium product, which I liken to "rainforest gold" in a recent **case study** co-written by Wina Andreini and Frederik Gerner, both INSEAD GEMBA '17, and Nandini Vijayaraghavan, INSEAD Research Associate, under my supervision and that of INSEAD Professors Sameer Hasija and V. Paddy Padmanabhan. The case study poses the question: How best to leverage the superb economic and environmental opportunity created by sugar palm in the face of institutional constraints.

The challenges

A current limitation of Arenga sugar production is that tapping the trees can be a dangerous job. It also tends to be unfairly compensated. The tree must be tapped near its male flowers, which can be as high as 15 or even 20 metres (65 feet). For ladders, farmers use narrow bamboo poles whose rungs consist of holes carved at intervals – a bit like a musical flute – in which sometimes only a big toe can fit.

A couple of years ago, two INSEAD MBAs came to see me for advice. Aware of the sustainable business opportunity provided by Arenga sugar, these Dutch nationals were keen to start a social enterprise that would improve farmers' lives while catering to health-conscious consumers.

Their concept involved taking over the Arenga palm sugar production and distribution from a local NGO. Devoid of the contacts to develop foreign markets, the NGO could not scale. Despite its best intentions, it also used an archaic business model that wasn't truly advantageous for the farmers.

What the MBAs had in mind was a collaborative

model that would do well on 15 of the 17 United Nation's Sustainable Development Goals (SDGs).

- It would be a social enterprise integrating most operational steps, thereby cutting out intermediaries and leaving more money in the farmers' pockets.
- The farmers would sign contracts with the social enterprise, which would provide them with a stable income and lead to a gradual improvement of their safety conditions.
- With fair negotiation practices, the organisation would attract more farmers as it scaled, helping to halt deforestation and the destruction of the orangutans' habitat.
- Over time, the social enterprise would develop an ecosystem of sustainable villages offering better education for the children (through opening of schools in remote locales) and better health care (through the hiring of nurses to tend to the community).

Creating the right partnership to overcome institutional constraints

With a rich experience in consulting, the two MBAs were set to start their social enterprise. As described in the case study, they had fully fleshed out the supply chain operations, quality assurance steps and distribution networks. They had analysed costs and devised a scaling strategy. Donors and investors stood ready to fund the venture. Farmers were on board.

However, as the social entrepreneurs discovered in the process, their biggest hurdle was institutional constraints. According to Indonesian law, foreigners are not allowed to directly exploit Arenga palm sugar. Only small and medium *domestic* enterprises with revenues ranging from US$30,000 to US$3.7 million may cultivate, process and manufacture this sugar. While local laws do permit foreigners to set up a *trading* company, the lack of ownership of the underlying manufacturing operations put the entire social enterprise concept at risk.

Hopefully, with determination and a little ingenuity, a collaborative solution can be found, so the business can take off. It is in fact our responsibility to find a way to set up the best possible partnership so we can save the rainforest and nurture a viable economic ecosystem able to lift communities out of poverty.

Dominique Lecossois *is a Distinguished Executive Fellow at INSEAD Emerging Markets Institute and former Executive Vice-President and Board Director at Carrefour.*