



Sifting sand

The Indonesian island of Bangka is the victim of a tin rush, the direct consequence of the success of smartphones and tablet computers. Thousands of miners compete to get their share of the bounty, but they're risking their lives in the process. **Arnaud Guiguitant** reports

PHOTOGRAPHS BY STEVEN WASSENAAR

Whenever it rains, Luli prays that her house won't be swept away. Not long ago, rich tin deposits were discovered just a few metres from the edge of her garden, and her home now teeters on the edge of a crater the size of a football field.

From her terrace, it's possible to catch the occasional glimpse of the miners themselves as they toil at the bottom of the enormous pit. 'When it rains, the soil becomes waterlogged and the dirt walls become unstable,' Luli says. 'Several accidents involving crushed or drowned miners have occurred. Now I'm afraid to live so close to the abyss.'

Two years ago, when she moved to Reboh, a fishing village on the Indonesian island of Bangka, which is located between Sumatra and Borneo, she never would have imagined looking out on this devastated landscape. 'Before, we used to be surrounded by palm and coconut trees,' she says. 'It was a very pleasant place to live. However, since then, miners have dug holes everywhere. They don't care about the environment; these mines are slowly destroying our island.'

CRATERED LANDSCAPE

The world's largest tin producer, Indonesia extracts 110,000 tonnes of the mineral each year - most of it from Bangka and the neighbouring island of Belitung, where mining has been taking place for at least 300 years. Today, almost 300,000 people - a quarter of the islands' population - are involved in mining.

According to Agung Nugroho, a spokesman for PT Timah, the country's largest tin producer, the deposits are effectively inexhaustible. 'Geological studies have confirmed the enormous potential of the subsoil,' he says. 'If we dig a bit deeper, some ore deposits will provide tin for several decades.'

Driving across Bangka, it's as though the island has been struck by a meteorite shower. Mines and craters are everywhere: along the roads, beside the beaches, in the jungle, even in people's front gardens. In all, there are thought to be in excess of 10,000 mines. 'This tin rush was accelerated by the success of smart phones and touchscreen tablets such as iPads, whose components are welded with tin,' explains Uday Ratno, director of local NGO Wahana Lingkungan Hidup Indonesia (Indonesian Forum for the Environment). 'Each device only needs two or three grams of tin, but Apple and Samsung sold nearly 200 million of these products in 2011, so there's an increasing demand for tin from manufacturers. As a result, the number of legal and illegal tin mines, on land or offshore, has grown dramatically - everyone wants to get their share.'

RISKY WORK

In the village of Tanjung Ratu in the island's northeast, sunset marks the end of the working day. The hum of the machines used to dredge the



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bottom of the craters has finally stopped and the miners gather together to compare their booty. Heri Saputra has the most significant haul. He may be only 13 years old, but his ability to sift tin flakes from the sand has already earned him the respect of his elders. 'I have been working in the mine for a year,' he says. 'I prefer to earn money rather than going to school.'

'Of course, it's risky and the working conditions are difficult - mudslides occur frequently - but we're careful,' he continues. Working in the mine, Heri Saputra can expect to earn up to four million rupiah (£253) a month - four times more than the average wage.

Darman, 53, is the oldest miner in the group. Thanks to his job in the mine, he has been able to buy a house and, recently, a fancy motorcycle for his son. The work is hard, however, and today his harvest is small - less than two kilograms. 'I work six days a week, from 8am to noon and from 1pm to 5pm,' he says. 'It's a demanding and dangerous job that requires physical resilience. In my village, six miners have been killed.'

No-one is sure how many workers die in Indonesia's tin mines each year. According to Uday Ratno, the official statistics are underestimates. 'Officially, we speak of 21 deaths in 2010 and 44 in 2011,' he says. 'In 2012, it's fewer than 60. These figures are far below reality. We're much closer to 100-150 deaths, not to mention those who are injured, disabled or suffer from cancer or malaria.'

OPENING SPREAD: miners sift sand in search of tin at an illegal tin mine in Reboh on Bangka Island; **ABOVE:** Abong, 52, a miner for more than 20 years, stands near a house that's being encroached upon by an illegal tin mine; **OPPOSITE, ABOVE:** a miner works on a pump used to wash away tin-bearing sand at an illegal tin mine in Batako; **OPPOSITE, BELOW:** a miner displays a day's haul of tin, worth about €6





DIVING DANGER

On the island, tragic stories abound. In 2006, Aryah Umar, a 30-year-old miner, spent a week in a coma after almost drowning while collecting tin off the coast. 'I was about to dive when the pile of sand we were sifting onboard fell down on me and made me fall into the water,' he says, speaking slowly. 'I could breathe thanks to my oxygen supply, but I was buried for more than an hour.' Traumatized by the experience and still suffering from its after-effects, he stopped working. Now, he watches each day as his former colleagues sail away on their rudimentary rafts.

Off Reboh's coast, dozens of makeshift mining rafts can be seen drifting on the sea. Taking a ride out on one, I'm deafened by the motors and almost overcome by gasoline fumes. A team of three miners spends each day working in this inhospitable environment, including 25-year-old Abdul Rahman, the team's diver.

Risking his life, he will dive to a depth of up to five metres in order to pump sand. 'We are well aware that our job is dangerous,' he says. 'We dive for two or three hours and we breathe thanks to a machine. It's very tiring. We watch each other closely, but it doesn't prevent accidents. I get scared sometimes, but so far nothing serious has happened. But last summer, a man died here.'

CURSED ABYSS

Juni and Abdul weren't miners. Aged three and four, they were playing close to a mining pit in Akok, a dreary plain of cracked soil, in November last year. They were later found unconscious in a water-filled ditch. 'We weren't able to save them,' says their mother, Desi. 'We knew the mine was dangerous; they were told not to play close to the pits. We will never forgive ourselves.'

At the edge of this cursed abyss, Desi prays in silence. But her prayers are interrupted by the yells of miners and the loud roar of their machines. **G**

Map: 68 mm by 68 mm

ABOVE: Irwan, 25, leaps from an improvised tin-mining platform offshore from the fishing village Reboh. He has been diving for tin for five years and typically collects about 15 kilograms of tin each day