

Out of the chute, large rocks tumble. Bang, crash, bang! The oversized shed is dusty, the noise deafening. People in hardhats and blue overalls with reflective strips can barely talk over the din. Working above ground, they're watching granite chunks fall and move off along a conveyor belt. With lives shaped by geology, they're supervising the crushing machine.

Western thought would have us as individuals. In the villages the pull of family bonds happily holds sway. But there are other ingredients in the human. There's history. There's climate. And there's geology.



The Maddhapara hard rock mine aims to extract 9.2 million tonnes of granite over six years.

It's nothing new. Bangladesh is a riverine country, most of it. It's an alluvial landscape that favours rice. Geology rules the farmer's hand and trains Bangladeshi tastebuds. Rocks are rare here – a scarcity that has, for centuries, impacted upon human society.

Ramsagar tank could hardly have been dug in rocky terrain. At Kantaji temple, building and sculpting in clay reached its zenith for a lack of stone. Both of Dinajpur's icons testify to geology's influence; it's hardly surprising, then, if at Maddhapara in Dinajpur's Parbatipur geology similarly rules.

Except that at Maddhapara it's not a lack of stone that's the driving factor but a rock deposit. The two premiere underground mines in Bangladesh are both in Dinajpur. Maddhapara hard rock mine has been operating for over fifteen years.

"Are you scared when you go underground," I ask a passing miner outside the crushing machine shed, where words can be heard. "No," he laughs, a little hesitantly. "What about the first time?" He thinks. He doesn't like to tell. "I had three months training," he says.

The idea to construct the mine arose from there being a lack of surface rock in the country. Crushed granite is used in apartment construction, coastal and river embankments, bridges, roads and as railway ballast. Modern Bangladesh can't get by without it and the Maddhapara mine is projected to contribute 9.2 million tonnes over a six-year period, reducing import needs.

Bangladesh Underground

ANDREW EAGLE

In the entry building to the mine, beyond the safety signs, the rows of head-worn lights and the stores of gum boots and hardhats, miners sign on to start their shift. Outwardly it appears to be a well-organised outfit – but it wasn't always.

The mine was constructed and operated for the first fourteen years by a North Korean company. "They had about 17 deaths," says Md. Zabed Siddique, General Manager of Germania Trest, the consortium consisting of a Belarusian state-owned company and a Bangladeshi company that was contracted to operate the mine since late 2013. "Now there are only minor incidents."

As he speaks there's a distant thud and the ground shakes a little. "There are five or six blasts daily," says Siddique.

Miners descend via a large elevator, complete with an exit sign in both English and Korean, into the tunnels that are up to 300 metres below the surface and stretch for 1.5 kilometres, growing longer every day. There's an underground railway to transport both rock and miners, who complete an eight hour shift. With three shifts per day, activity at the mine never ceases.

"Our miners are mostly from poor families," says Siddique, "But they don't think about owning a fancy



Miners arriving by lift to the surface after an eight-hour shift underground.

car or a big house. They're hard-working and honest. For me, that's one of the best things about working here. We're lucky."

Miners earn 18,000 taka without overtime and if they work underground there's a 100 percent mining allowance. During an eight-hour shift there's a one-hour break, below the surface. The mine directly employs over 700 people.

"There's a prayer room which is a hole in the wall inside the mine," says Siddique, "and a medical room."

Maddhapara also employs 57 foreigners, engineers and managers earning up to \$1000 per month, mostly from Belarus and Ukraine. It explains the four-star accommodation block with Russian cable TV and the cafeteria menu featuring Russian food – on that day scrumptious *pilmeni*, Russian dumplings.

"When the North Koreans were here, they weren't allowed to leave the compound," says Siddique, "but nowadays the foreign workers can visit Bogra or

Rangpur on the weekends."

There's a Russian physician on-site and a team of interpreters, though underground with the Bangladeshi workers communication consists more of basic Russian and Bangla words together with hand signals.

"The interpreters work hard. Sometimes we need them for long hours," says Siddique, "and I have never known one to say 'No I can't, I'm tired.' They're very dedicated."

Perhaps a less obvious sign of the presence of foreigners are the small bottles of nitric acid hanging at intervals along the building walls. "It's to keep snakes away," Siddique explains. You can't help but laugh – to think of the many millions of Bangladeshi villagers who dare to live without such protection, including the miners living nearby. But then, snakes really must be scarier if you come from a country where they are less common and less venomous.

Yet despite the efforts made towards foreign comforts it can't be easy. Braving a very little Russian, I strike up a conversation with a young guy chatting with his friends outside the cafeteria. Thankfully, he adds a very little English into the mix.

He says he's from Dnepropetrovsk, a beautiful city on the Dnepr River in central Ukraine. Somehow I



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manage to ask what he finds difficult... He says he misses his family; and seems to say the heat – but it can't be what he means. Dnepropetrovsk will easily reach forty degrees in the summer, except that it's a dry heat – it's the humidity he's referring to. And he probably misses the dramatic season changes. Ukrainian winters reach minus twenty.

For the Bangladeshis there are also some drawbacks to working at the mine. Siddique is from Chandpur and can only meet his wife and daughter about once a month.

The power of geology is undeniable. It can bring a man from Chandpur to North Bengal. It can entice fifty-seven from Europe. It can create livelihoods for about 700 local families. For the rest of us too, in the food we grow up with, in the way we live, in the culture we share – and even in our thinking – have no doubt, the influence of a little geology is there. ■