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## Rising sea swamps island along Bengal coast

by Joydeep Gupta | Jan 15, 2018

*Around 1.5 million people will be displaced in the Sundarbans, and the process has started*



Standing atop an 18-foot embankment, Badruddin Sarkar pointed to his previous home, engulfed by a rising sea (top). That was in 2009. In December 2017, Abdul Hanan showed the saline wasteland left behind (bottom) as that embankment was breached, and all other attempts to build sea walls were overwhelmed by the Bay of Bengal (Photos by Joydeep Gupta)

The living drown and the dead float out from their graves as a rising sea engulfs Baliara village in Mousuni, an island facing the Bay of Bengal. Every third or fourth day, the high tide enters homes and leaves farms a wasteland. The village burial ground has been engulfed by salt water and skeletons keep floating up out of the earth.

At one edge of the Sundarbans – the world’s largest mangrove forest – Mousuni used to have an embankment along Baliara to hold back the rising sea. That collapsed during the 2009 Cyclone Aila. Since then, there have been three attempts to build sea walls, all of which have collapsed against the power of the sea. Scientists say seas around the

world are rising due to climate change, but the Bay of Bengal is rising twice as fast as the global average.

I had first visited Baliara in 2009, two months before the cyclone hit. Badruddin Sarkar, retired headmaster of the village school, had then stood on top of the 18-foot embankment and pointed out the homes he used to have – the first was overtaken by a rising sea in 1991 and the second in 2004. All that could be seen of the second was the trunk of a coconut palm – it used to be part of the foundation. Two months after I met him, a storm surge from Cyclone Aila topped the embankment, ruined Sarkar’s paddy fields and freshwater fish farms with salt water, killed his livestock, and forced him to migrate to Kolkata, the capital of the Indian state of West Bengal, over 100 kilometres away.

Now, Abdul Hanan, 61, retired headmaster of the school’s primary section, pointed out the effects of the rising seas. There is no sign of the original embankment, girders from subsequent attempts to build a sea wall lie overwhelmed and abandoned, dead coconut and date palms dot a landscape of saline pools where nothing can grow.



The futility of trying to hold back a rising sea with concrete walls is seen in the broken slabs lying on what has become a saline wasteland (Photo by Joydeep Gupta)

At the confluence of the Muriganga – a distributary of the Ganga – with the Bay of Bengal, Mousuni is a bustling island of about 5,000 households. But over 2,000 of them are in Baliara, and they are under a sentence of displacement or death.

“How do you expect us to live?” asks a visibly angry Jasimuddin Sarkar, pointing to his farm that is under about a foot of dirty brackish water, a small species of amphibious fish the only sign of life in it. “Do you see that embankment between my two farms, with the coconut tree on it? It is all dead.” He has tried to protect his home from the rising sea with plastic fencing, but the water keeps getting in. Peek inside the large hut, and the first thing you see are piles of soggy old newspapers. That is what the family uses to mop up the water from their furniture, their floor, their walls. They do it every three or four days.



Jasimuddin Sarkar in front of his farm that now grows nothing, and his house that gets flooded with dirty saline water every third or fourth day (Photo by Joydeep Gupta)

### Climate refugees

So how do they survive? Jasimuddin's answer is the same as that of everybody in Baliara. "My son works in Kerala as a mason. He sends money home. That's how we survive." Others talk of their sons, brothers or husbands working as security guards, farm labour, masons, mall cleaners and so on. The diaspora that has moved from Kerala to West Asia to work has led to another, internal, diaspora from the Sundarbans to go and work in Kerala.

It's not a situation that anybody likes. "Nobody wants to get their daughters married to a boy from Baliara," Jasimuddin says. "We could get my son married only after searching for months. Ask her," and he points to a woman in her early twenties standing nearby.

Salma Bibi – married to Jasimuddin's son a few months ago – is from a village about 20 kilometres inland. "I completed school. I know I can get a job elsewhere," she says confidently. "I've been telling my husband and everyone else at home we should just go away from here. This is no life – getting everything at home drowned in dirty salt water every third or fourth day. Two of the three saris my father bought for my marriage have been ruined. I'm going to tell my husband the next time he comes home for a holiday, and we're going to go away."

Where will they go? Salma is not clear, while Jasimuddin says he knows nothing except paddy and freshwater fish farming, so what will he do elsewhere for a living? Over 150 families in Baliara have already left permanently. They could not sell their land, because nobody was interested in wasteland. They just left.

Has the government been of any help? Local panchayat member Himangshu Aich said those who could prove their farm ownership got a compensation of Rs 10,000 per family after Cyclone Aila. And since then, the efforts of the government engineers to hold back the waves are there for all to see. The situation is the same in other islands in

the Sundarbans facing the world's largest bay. **See:** [Shrinking Sagar island struggles to stay afloat](#) and [Ganga villages devastated by sea level rise](#)

### **More refugees than from all other islands**

The Sundarbans straddle the Bangladesh-India border. The Indian part has around five million people living in it. Nilanjan Ghosh, an ecological economist who is a consultant for [Observer Research Foundation](#) and [WWF India](#), has led a study that shows 1.5 million of these people will have to be permanently relocated outside the Sundarbans, because sea level rise will make it impossible for them to live there or earn a livelihood.

Like Badruddin Sarkar, many residents of Baliara have lost their home two or three times. Every time they have moved further inland. Now they cannot do it any more, because there is no space left.

That means the number of people affected and to be affected by sea level rise in the Indian Sundarbans alone is higher than that of all small islands around the world put together.

The impending fate of these islands is a major subject of discussion at the annual talks of the [UN Framework Convention on Climate Change](#). A strong push by the governments of these island nations forced an aspirational goal in the 2015 [Paris climate agreement](#) – to keep average global temperature rise within 1.5 degrees Celsius.

In contrast, the plight of people in the Sundarbans is not even mentioned in international climate talks, not even by the government of India. [Use the surging seas tool developed by the think tank Climate Central to see what can happen to the Sundarbans](#)

It is not as if there has been no attempt to build climate resilience in this area. For well over a decade, [WWF India](#) has been distributing special varieties of paddy seeds that are salinity tolerant. It still works further inland, but in this area, the water and soil salinity levels have now gone well beyond the survivability of this variety. Two lines from T.S. Eliot's *The Wasteland* keep coming back, "What are the roots that clutch, what branches grow / Out of this stony rubbish."

The problem is far more fundamental than the solutions attempted so far. Apart from sea level rise due to climate change, the entire Sundarbans is sinking because dams and barrages in the Ganga and its tributaries upstream hold back the silt that forms the soil that forms the delta. No policymaker in New Delhi shows any interest in even starting to address that problem.

### **A possible way out**

Is there a solution at all? Go around 2,000 kilometres from the Sundarbans, down India's east coast to Pichavaram in Tamil Nadu, and you will see one with potential.

Mangroves have been cut down all along the coastlines of South Asia, but there was still a large strand standing at Pichavaram when the 2004 Indian Ocean tsunami hit the entire region from Indonesia to East Africa.

Coastal villages to the north and south of Pichavaram were devastated, killing many. But the 16 villages shielded by the Pichavaram mangroves from the tsunami wave escaped with very little damage. The mangroves tempered the wave.

Now it is a protected forest through which you can take boat rides, an activity much loved by young couples. As the boatman poles through about a foot of water, you can get very close to the mangroves, which you cannot do in the Sundarbans for fear of tigers and crocodiles.



A creek through the Pichavaram mangroves (Photo by Joydeep Gupta)

Today, the Pichavaram mangrove forest serves another vital function as climate change hits farmers nearby. Coastal Tamil Nadu is going through another of its frequent and severe droughts right now. According to the [Intergovernmental Panel on Climate Change](#), an increase in frequency and severity of droughts is one of the effects of global warming. Monique Barbut, head of the UN Convention to Combat Desertification, pointed out recently that drought now kills more people than all other so-called natural calamities put together. **See: 'More people die of drought than all other calamities put together'**

The current drought has forced Rajendran – in his fifties – to once again leave his farm and travel six km to become a boatman at Pichavaram. It helps that he had once taken his school education seriously, so now he can converse with tourists in English as well as Tamil. Every year, he says, he has been supplementing his farm income by working as a boatman around the Gregorian and Tamil new year holidays, 15 days apart. This year, he expects it will form the major part of his annual income.

There have been some sporadic attempts to plant mangroves in the Bay of Bengal facing islands of the Sundarbans, but neither the authorities nor the residents seem to

be aware it may be the only effective wall against a rising sea.

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