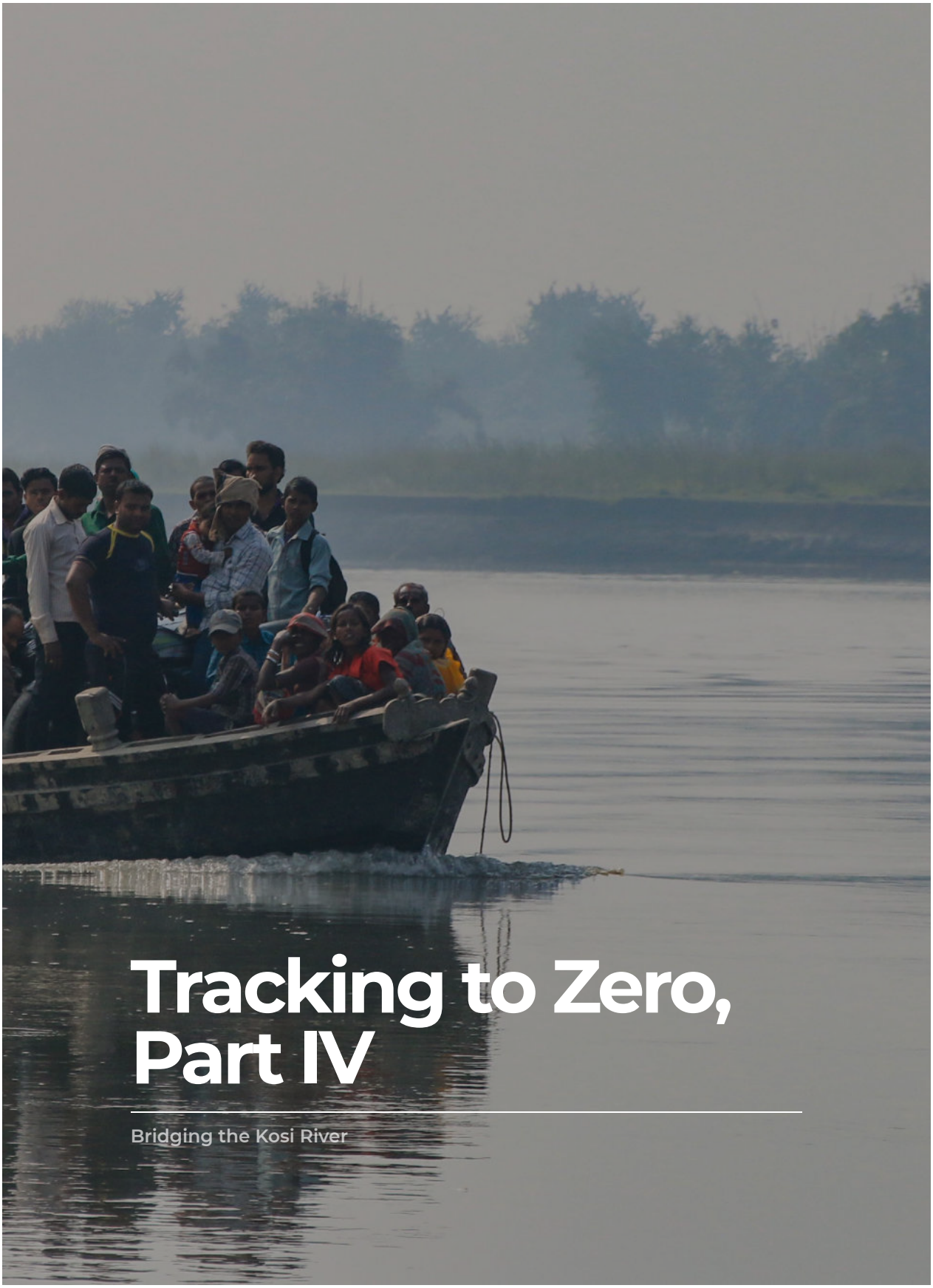


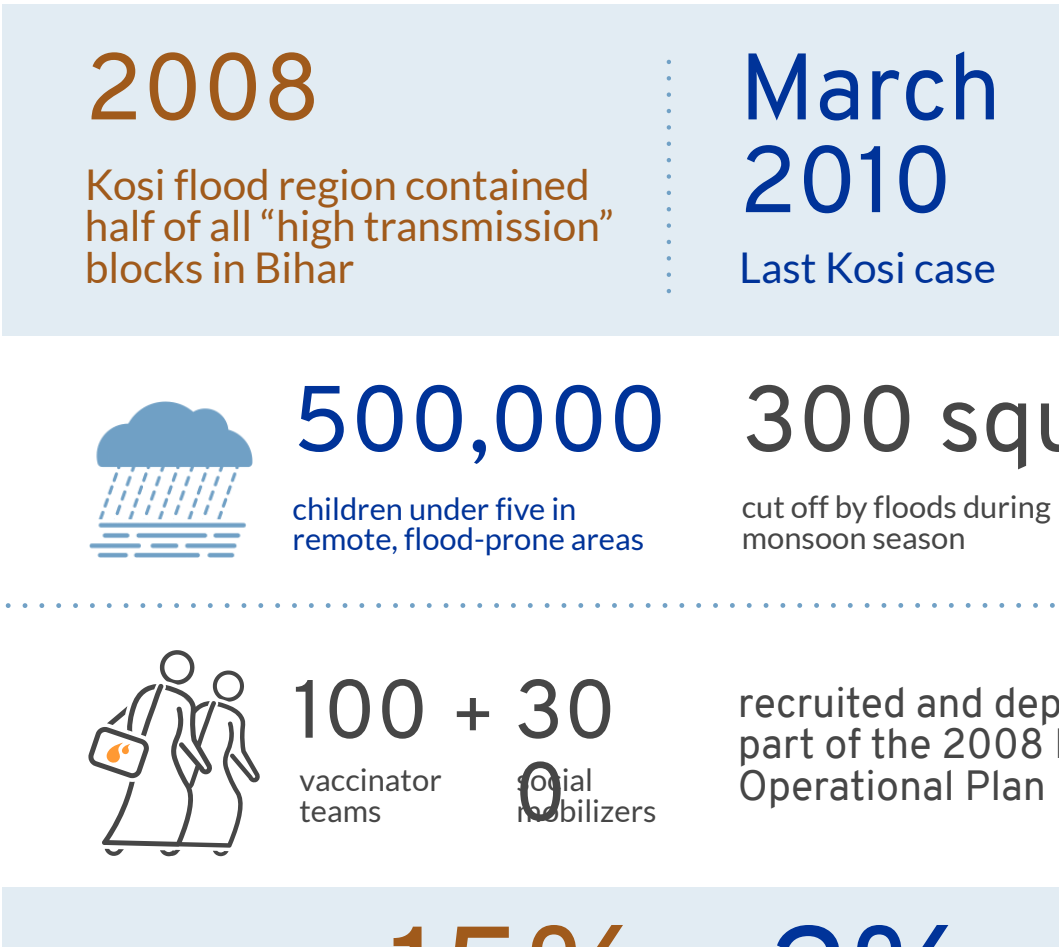
Tracking to Zero, Part IV

Bridging the Kosi River

Bridging the Kosi River

The Kosi River is known as the “Sorrow of Bihar”. It winds down from the eastern Himalayas, crossing India’s border and cutting a wide, slow circuit through the farmlands and villages of India’s poorest state.

Even in the dry season, Kosi seems to dissolve the land as it passes. Waterlogged fields stretch for miles from both its banks, filled with purple lilies and water chestnuts. Children wash themselves in muddy lakes and entire families wade waist-deep through huge silver pools, gathering whatever harvest can grow there.



But during the three monsoon months of June to August, Kosi becomes an avenging flood. Approximately 21,000 square kilometres of land here is floodplain. When Kosi’s waters rise, all but the highest ground vanishes. The river is capricious and unpredictable, changing course at will and sending devastating, silt-filled waters surging over homes and farmland. At the peak of the floods some 300 square kilometres and millions of people are cut off from roads and services.

A new frontline

This part of Bihar in northern India is one of the country's most remote. To reach here from the nearest town takes more than a day of travel at the best of times – by car at first, then motorbike and finally by boat when the land begins to fail.

But in 2007 and 2008, the "Sorrow of Bihar" opened a new frontline in the last battle against polio.

At the time, more than 70 percent of all polio in the state was concentrated in just 16 percent of its area. In these 72 blocks out of 450, imported poliovirus would take root and circulate rather than causing isolated cases. More than half of those blocks were dotted along the Kosi floodplains - home to 500,000 of children living without roads, electricity or government institutions.

Dr. Nasir Ahmad Dadgar manages the Polio Programme for UNICEF in Bihar. "I am Afghan," he says. "I know what it's like to walk to remote places. But I never saw anything like this. You cannot walk – you have to struggle for many, many hours on a motorbike or on a boat. You become covered with dust. After a couple of hours you can't even recognize your own face."

"Some of the areas around Kosi are quite literally not on our maps," says Nirbay Mishra, Polio Program Officer for UNICEF Bihar. "At that time we were used to dividing responsibilities by District. And these remote areas were on District borders. It was simpler for one District to assume that another District was managing to reach them."

As the eradication effort intensified on the national spotlight turned to Kosi , something more was needed. "To stop transmission we needed a different plan, says Mishra. "Something more forceful, intensive and methodical."

The Kosi River area ©UNICEF/Claire Hajaj

The Kosi Operational Plan

In March 2008, Mishra and other colleagues from WHO, UNICEF, Rotary and the Government of India held an emergency meeting in Beruseraia – the nearest accessible place to Kosi's floodplains.

There, they developed a document that became known as the Kosi River Operational Plan.

The Kosi Operational Plan was based on three pillars: access, quality and monitoring. It made several fundamental changes to the way polio operations traditionally worked.

First, it overthrew the District-by-District approach. Instead, it laid a grid over the Kosi area, assigning specific teams and responsibilities for each grid square. “It was a way of making “no-man’s” land into “someone’s land”, says Mishra.

Secondly, it called for a massive recruitment of manpower from the Kosi River Basin itself.

Dr. Anisur Siddique, Deputy of UNICEF’s Polio Unit, was with WHO at the time. “Kosi was home to many of India’s so-called “untouchable” caste groups,” he says, “Including the MahaDalitd and a community known as the Musa’aryihahars or Rat-Eaters. Vaccinators were reluctant even to visit them due to social prohibitions. So we decided to recruit people from these communities to implement the Kosi Plan.”

Over the following weeks, WHO recruited new vaccinator teams and 100 monitors, while UNICEF hired more than 300 SMNET community mobilizers from the Kosi area – a challenge in itself within a largely illiterate population. “If a woman had social influence and was eager to work, we would accept her,” says Nirbhay. “And sometimes a community would send a literate adolescent boy to help out during campaigns. But all those who joined us illiterate have since become literate through our training programme.”

Thirdly, the plan committed the partners to a rigorous and physically-demanding monitoring strategy.

“Since it’s impossible to reach Kosi and come back in one day, we decided that monitors, vaccinators and supervisory staff would have to stay in the community for the duration of the campaigns,” recalls Pankaj Bhatnagar, Acting Deputy Project Manager for WHO’s National Polio Surveillance Project. “Even though at the time we had no facilities to support this. Imagine trying to convince people to stay in locations with no electricity, no soap, no comforts of any kind, for a week at a time! Luckily, this is a campaign built on real dedication.”

Satellite houses and way-stations

To help the teams, WHO and UNICEF build satellite houses and “stay points” inside the Kosi River basin, to provide the minimum in safety. The pioneers of those early days remember how their uncomfortable living quarters forged stronger teams.

“It was such an exciting time,” says Abhay Khanant Srivastava, UNICEF’s SMNet Sub-Regional Coordinator for the Kosi River Basin. “At first I used to sleep on the floor of the schoolroom, where we had our evening coordination meetings. But when the satellite houses were built, we slept there together. At 3am we would wake, put on our rubber boots and wade 15 kilometres through the water to reach the vaccination area.”

Srivastava manages a team of three Block Mobilization Coordinators (BMC) and 16 Community Mobilization Coordinators (CMC) covering just one part of his grid area - Dhapbazar Market inside the Kosi Inner Embankment. The CMCs are all locally recruited – but he and the BMCs still have to undergo grueling travel. Teamwork, he says, and the kindness of the Kosi villagers, were the only things keeping them going.

“There honestly were times it would be so hot, and I would be sleeping on the floor soaking wet from wading in the water, with mosquitos all around – I would ask myself– why am I doing this job?” he says. “But then I would watch our vaccine porters pulling these huge vaccines carrier through the mud with us. And I would see villagers bringing us bedrolls and sometimes even food despite their poverty. And I would think: if they can do this for their community, then so can I.”

A cold-chain challenge

Kosi’s remoteness made it particularly difficult to keep the “cold-chain” intact. Oral polio vaccine needs to be kept refrigerated – a challenge without ice factories, electricity or even generators.

“We had to build additional vaccine distribution points close to each grid area, and equip them,” remembers WHO’s Bhatnagar. “We purchased large vaccine carriers to carry extra ice, and hired porters who could carry them through the water – by boat or even on their heads. And we would set out with the vaccine before 3 or 4 am in order to reach the remote areas by early morning. It was such hard work for everyone.”

(Left-right) Susma Devi Poddar kneels as her husband, Chandra Dev Poddar, holds a hand to his head beside the ruins of their home in Bhaddi Village, Bihar State. They have just returned from New Delhi, where the shoe factory that employed Mr. Poddar has shut down. Their home was destroyed by the August 2008 flooding of Kosi River, which affected tens of millions of people. © UNICEF/UNI62185/Sokol

The first bridge to a community

The Kosi Plan was steered and partially resourced by the Bihar State Government - which increased funding for vaccinators, supervisors and other critical staff – and also mandated District Control Rooms to oversee implementation.

Dr. Arbind Kumar is still a member of the District Control Room for Saharsa – covering a large part of the Kosi River Basin. “You have to understand that Kosi did not even get a bridge to allow vehicles to cross the river until 2012,” he says. “So the Kosi Operational Plan was in some ways the first bridge.”

Dr. Kumar remembers a time when the health system did not even have motorbikes able to reach some of the areas. It was frustrating, he says, to see cases occurring without any systematic way of preventing them. “When the State Government took over the Plan, we suddenly saw resources coming to match our will and our ideas,” he says. “And the results are plain for everyone to see. Within one year, we had no more cases around Kosi.”

The data is hard to argue with. “We went from being in the dark, to being able to list every single hut in the area,” says WHO’s Batnagarh. “We used to miss 15 percent of the population. And now we miss less than 2 percent.”

“Now they come running after me.”

But the Kosi Operational Plan also had a profound qualitative impact - on local communities and their relationship with the outside world.

The polio infrastructure has allowed the Bihar Government to launch routine immunization drives after every monsoon, as well as hygiene and hand-washing campaigns and child diarrhea management initiatives. Districts along the Kosi River Basin were given resources to extend the reach of their Public Health Centres and even establish new ones closer to where these families live.

Priyanka Kumari is both a resident of Chiraiya village in Kosi’s remote “inner embankment” and a CMC for her neighbourhood. Families here live in compounds spilling over with old and young. The only electricity is one small solar panel, used to charge mobile phone batteries for some of the men working travelling in and out of the area.

Priyanka explains that her community has an instinctive suspicion of outsiders. “We are so far away from everyone else,” she says. “And our area is quite notorious for being unsafe for strangers. People come to us from all parts of India because we are remote, and no-one will bother them here.”

When she joined up as a CMC, she was not sure what to expect. “No-one in my village had seen anything like this before,” she says. “We were self sufficient and we were used to getting very little

medicines or treatment. So when I used to go and call people for mothers meetings, and the children would say – sorry, my mother has gone to the field. But if I looked inside the house, I would see the mother there, hiding behind the bedroll! And now, they come running after me."

For the Musa'aryihahar community, the impact on life has been even more dramatic. Ram Sarinder Ari is the elder of Aina village, home to a large group of Musa'aryihahar families. "Ten years ago, none of our children were vaccinated," he says. "Women had to go to the river bank to give birth by the waters. There was no other choice for us."

With a mix of anger and resignation, Ari describes sending sick members of the community out on the long, exhausting journey to the nearest health centre in the days before the Kosi Operational Plan. "If they were still alive when we arrived, they would ask us for money for treatment," he says. "And if we gave them money, sometimes even then they would not treat us."

Today, conditions are very different. "Now we have four women who come to us," he says. "We have the CMC who visits regularly, and she calls the ASHA, the Angawari and the Auxiliary Nurse Midwife (ANM). And now our pregnant women give birth in the hospital and our children are all healthy."

From "Sorrow" to success

In March 2010, the Kosi River Basin recorded its last polio case. The whole of Bihar would soon stop transmission, and a year later the whole of India followed.

Polio's "bridge" across the Kosi River had worked. But to this day it remains in place – bigger than ever – to prevent the virus' return and connect communities with the services they now depend on.

Banner image provided by UNICEF India

> "When we realized that the March case really was the last, it was an incredible feeling," says UNICEF's Nirbhay Mishra. "Kosi is the perfect place for polio to thrive, so we knew we had done our work well. But we have not stopped at zero cases. There is more to be done for these communities, more bridges to build – and so our work continues."