



Islamic Development Bank Group

An island in recovery: Reconstructing Simeulue island in Indonesia

On 26 December 2004, a huge earthquake struck off the coast of West Sumatra in Indonesia, about 40 km north of the island of Simeulue. Immediately afterwards, the people noticed the waters around the island receding. They knew what was about to happen: a tsunami. Most moved quickly to higher ground; as a result, only six people died out of more than 80,000.

But while their prompt action saved many lives, it did not save the island's infrastructure. Of the 171 schools on the island, 169 were completely destroyed. Sixty bridges collapsed and 210 km of roads were damaged, as were three fishing ports, 40 medical facilities and the general hospital in Sinabang, the island's capital. The losses were estimated at US\$105 million, and more than 85 per cent of Simeulue's people saw their homes or livelihoods destroyed. The damage was

compounded by another earthquake on 28 March 2005.

As part of the recovery effort, the Islamic Development Bank (IsDB) provided a soft loan of US\$13.1 million. This was used to build 15 schools and 16 medical facilities, and restore 23 km of roads. The loan also provided equipment for the general hospital and funded the construction and equipping of a fisheries port near Sinabang.

Simeulue island, Indonesia.



In the immediate aftermath of the tsunami, the Government of Indonesia established an Agency of Restoration and Reclamation, whose mandate included the rebuilding of Simeulue. The IsDB-supported 'Simeulue Island Reconstruction Project' was implemented under this body. Managed by a Project Management Unit (PMU) established by the local government of the Regency of Simeulue, the project was approved in 2006 and started in 2007. As a multi-sector initiative, it simultaneously re-established the infrastructure needed for Simeulue's education, health, transport and fisheries sectors.

Even before these natural disasters, Simeulue was one of the poorest regions in Indonesia. The project therefore not only replaced the infrastructure destroyed, but sought to bring new prosperity and improved livelihoods for the island's inhabitants. And these benefits have been widespread.

Rebuilding Simeulue's schools

The tsunami destroyed 773 classrooms on Simeulue, and at the start of the project children were attending makeshift classes in tents. To provide a better place to learn, the project constructed 15 schools: seven kindergartens, three elementary schools, four junior highs and one senior high school.

One kindergarten rebuilt by the project is in the village of Sua-Sua, near the island's airport. Forty children aged between 3 and 5 start each day with singing and exercise. Their old kindergarten was a single classroom in a dilapidated house perched on stilts. The steep stairs and low walls meant that the teachers had to keep a close eye on the children at all times to keep them safe.



Kindergarten classes start with singing and dancing.

But thanks to the IsDB project, the children can enjoy a much more appropriate environment. "Now we can focus more on teaching and education," says Anti Eka Putri, one of their teachers. "And we have the playground, so there's more variety of things to do."

Cut Irdawati, whose daughter is in her last year of kindergarten, confirms this: "The teaching is good. The children like it because there's a lot of variety, with Islamic studies and sports." The new kindergarten has attracted many more children than the old one did, she says, mostly because it is safer. Some parents even bring their children from as far away as Sinabang, because the school is so good and less crowded than the ones in town.

**"Now we can focus more on
teaching and education"**

– Anti Eka Putri, Teacher, Sua-Sua kindergarten

Building a brighter future

Another establishment to benefit was the Madrasah Diniyah Takmiliah Awwaliyah Nurual Farji in Sinabang, a primary school that teaches 392 pupils in grades 1 to 6 (ages 6 to 11). In July 2011, when the newly constructed school first opened its doors, a line of parents started to form immediately after morning prayers at the nearby mosque. They were eager to enrol their children, even though the process did not start for another three hours.

While the project was urgently needed to replace the destroyed education infrastructure, it was also an opportunity to update the facilities on the island. Muhamed Hefy Fuady, one of the school's older children, remembers the original cramped building, which was in a narrow alley. He much prefers the new school: "I like it here; I would not want to go back to the old school."

Today, the children at the school are like schoolchildren everywhere: eager, excited and rushing around with masses of energy. But it is also notable that the children are disciplined, paying attention when their teacher asks them to be quiet.

In fact, the school has become the preferred choice for many parents, and these factors – the children's spirit, the teachers' enthusiasm, and the discipline – all encourage them to send their children here. "Part of the attraction is the religious focus," says Mirati, the Head Teacher.



The schools focus on basic education, with extra time for religious studies.

"The children are more disciplined. Also, it is a new facility and in the centre of town, close to the main road but also safe for the children."

Across Simeulue, more than 1,000 children now have better access to education thanks to the project. And while the lost infrastructure has been replaced, the new buildings also improved standards on the island. A post-project evaluation carried out by IsDB in 2015 concluded that "the schools have contributed to the increased access to education throughout the island, and the almost 100 per cent literacy rate". The next generation in Simeulue have a bright future ahead of them.

The Simeulue restoration project by numbers . . .

US\$13.1 million – the soft loan provided by IsDB for the project

15 – new schools built by the project, after the tsunami destroyed all but two schools on the island

More than **1,000** – children with improved access to education

16 – community medical centres built, with on-site housing for nurses

23 km – roads restored after 210 km were damaged

Ensuring health for all

With just one main hospital in Sinabang, Simeulue's community medical centres form an essential part of the island's healthcare. When the earthquakes and tsunami damaged 32 of these, they urgently needed to be replaced.

The IsDB project constructed 16 new centres and also sought to improve the standard of healthcare available. Before the project, two or more villages would share a centre; now, each has its own, which reduces the travelling time for patients.

The new centres include a house for a nurse to live on site with her family. This means that they are more available to their patients. Refi Marlita is the nurse in Alus-alus village. "At the old place, we had to travel there and back each day," she says. "Now we live [on site], which is easier, and people can call me at all hours."

Having a nurse on the premises is a major benefit to the villagers. It saves them time, and they are much more likely to use the clinic, thus avoiding more serious medical complications. "Just last night, a neighbour came with stomach pain and vomiting," Refi Marlita says. "I gave her medicine and this morning she is feeling better."

Nurse Refi Marlita in Alus-alus village takes the blood pressure of a patient with bad toothache. If needed, she can call for an ambulance from the general hospital.



Working together to equip a hospital

After the disasters, many international donors and non-governmental organizations worked to restore the general hospital in Sinabang. IsDB's role was more strategic: to provide equipment and services that would allow the hospital to function efficiently once more. One of these was a facility to ensure a reliable supply of oxygen, which is essential for any hospital. As the hospital director Asludin explains: "Oxygen is a definitive thing. You have to have it."

Before 2004, oxygen tanks were shipped by boat from Medan, hundreds of kilometres away on the far side of Sumatra. Bad weather could prevent boats from making the crossing and resulted in disruptions to a range of healthcare procedures. Now, thanks to the equipment installed, the hospital can produce the 35–40 oxygen tanks it needs each week without having to rely on shipping.

In addition to the oxygen-supply facility, IsDB provided equipment for anaesthetics and lighting, and operating tables for the surgical theatres. These are essential for a range of procedures; without them, the help received from other donors to rebuild and re-equip the hospital would have been much less effective.



By cutting journey times, the new road underpins many benefits. People get higher prices for their produce, save on fuel and maintenance, and get speedier access to healthcare.

Connecting the dots

Getting around Simeulue island, which is about 150 km long and 25 km across, is crucial for its inhabitants. They need to take goods to market, access healthcare facilities, go shopping for necessities, and travel to work and school. But the earthquakes and tsunami badly disrupted the transport infrastructure. Roads were damaged or washed away, while 60 bridges across rivers were damaged.

In response, the Simeulue Island Restoration Project set aside almost US\$7 million to help rebuild and replace this lost infrastructure. The 23 km of road restored through IsDB's financing helped people to get their lives back on track. It passes through the small settlement of Kampung Aie.

Bustaman, a local government official, says that the new road has many advantages compared to the old one. For example, it used to take over three hours to reach Sinabang by motorbike; now, it takes only an hour. This saves money on fuel and vehicle maintenance. "The road is better, so the bikes get less beaten up [damaged]," he confirms.

Built to last

Even a few years after the project ended, the new road is in very good condition – certainly compared to the potholed and uneven roads found elsewhere. In part, this is the result of the high standard of engineering adopted. For example, much of the island is marshy and the old road was prone to subside and break up, especially along the coast. The new road has a foundation layer of geotextile fabric that stabilizes the road bed and helps to maintain the surface.

According to Bustaman, there are several other benefits. Most of the people in Kampung Aie combine farming and fishing to earn a living, and the new road means they can get fish to market more quickly – and fresher fish fetch a higher price. Access to medical care is also faster.

Indeed, the improved transport network has had an important multiplier effect across Simeulue. By improving access around the island, more people can use the other facilities that the project provided, for example the schools and health clinics.

A fishing port for the future

Providing people with a means to earn a living is vital in the aftermath of any large-scale disaster, so that they can start to rebuild their lives and finances. As part of the Simeulue Island Reconstruction Project, IsDB provided almost US\$1.75 million for a new port and fisheries handling centre a few kilometres north of Sinabang. After the tsunami, this was a much-needed investment: the Government of Indonesia estimates that about 3,500 households in Simeulue engage in fishing full time, with another 3,300 involved in subsistence fishing.

Despite some difficulties, which saw the port temporarily close in 2014, the fisheries port should still play a key role in Simeulue's long-term recovery. The Government recently announced a plan to develop five new fisheries centres across the country; one of these will probably be in Simeulue. An evaluation by the Government in 2015 recommended the building of new processing facilities to handle 3 tonnes a day, adding to the 4.5 tonnes that the IsDB facility already provides. This will reduce the cost of shipping fish from Simeulue, making the port more competitive.

Success factors

- **Strong integration and coordination.**

The Simeulue Island Reconstruction Project was part of an integrated development plan for the whole island in the wake of the tsunami. In carrying out the Reconstruction and Rehabilitation Master Plan, the local government of the Regency of Simeulue coordinated the contributions of different donors and development partners to ensure that their various projects supported one another.

- **Synergies between project components.**

The integration of efforts resulted in synergies between the different aspects of the project. For example, each village now has a community medical centre and enjoys improved connections with the general hospital, thanks to the new roads. In turn, the hospital is better equipped to handle the advanced medical needs of the patients arriving. The new schools – from kindergartens through to senior high schools – have enhanced access to education, which will act as a driver of long-term economic development.

- **Building back better.** The project aimed to go beyond merely rehabilitating livelihoods, and ensure that conditions were actually better than before. This was achieved in many activities.

- **Improved resilience.** The project planned for the investments to have greater resilience to future earthquakes and tsunamis. For example, the buildings constructed during the restoration were designed to withstand earthquakes up to 7.0 on the Richter Scale – and they are up to the task. During project implementation, there were two more quakes that measured greater than 7.0 and none of the facilities were damaged.

About 6,800 households depend on fishing to some extent. Better markets for their catch will improve their livelihoods.

Lessons learnt

Thanks to the efforts of the many donors involved, including IsDB, Simeulue can look forward to a prosperous and resilient future. However, in the aftermath of any major disaster, there can be confusion and misunderstandings as donors look to provide both immediate relief and long-term support. The 2004 tsunami was no different, and this project provided many useful lessons for future post-disaster assistance.

Communications between the PMU and IsDB could have been improved. For example, the Japanese Red Cross agreed to build four of the community medical centres planned under the Simeulue Island Reconstruction Project. The project had funds to build an extra four centres as a result, but a miscommunication between the project partners prevented this from happening. It is important to establish clear lines of communication at the start of any large-scale, multi-partner project such as this.

Similarly, an increase in costs for road-building resulted in a reduction of the target from 37 km to 23 km. Contingency funds were available, but local rules dictate that such funds can only be used once work has started. As the increased costs were identified before the work began, the

funds were not used. Discussion between the PMU and IsDB could have released these funds, resulting in a longer stretch of road being built.

Other challenges arose with the contractor for the construction of the schools and community medical centres, which resulted in these buildings being completed without ceilings. As a result, rain on the roof can be too loud for pupils to hear their teachers, while in hot weather the lack of insulation results in stifling conditions as heat radiates down from the roof. The contractor was penalized, and the local government has installed ceilings in the medical centres, but the schools still need them.

Lastly, the current situation with the fisheries port is a reminder of the need to ensure adequate market analysis before embarking on a large project. It was assumed that if the project supplied the infrastructure, enhanced economic activity would follow – but this has not yet happened. There were many contributing factors, but a more thorough analysis beforehand could have revealed these risks, and mitigating action could have been taken, for example to secure buyers in advance. Nevertheless, the availability of the port infrastructure is likely to play a major part in the longer-term development of Simeulue as one of Indonesia's strategic fisheries centres.

Children enjoy using the new roads on Simeulue, as do their parents.



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Children are children, wherever they are.

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