

## Excellent progress with Earthquake Reconstruction in Nias

Dick Beetham at the UNDP/BRR in Nias, December 2006

At 11.05 pm on 28 March 2005 a great earthquake of magnitude 8.7 occurred on the subduction zone fault just 20 - 24km beneath the island of Nias. The entire island, approximately 110 km long and 50 km wide, was shaken violently for 2 to 3 minutes by the quake and the western side was uplifted by about 2 m, in some places by more. It was one of the ten biggest earthquakes in the world over the last 100 years. The destruction caused by the shaking created immediate and continuing chaos for the people of Nias.

Nias had already been hit hard by the strong shaking and tsunami from the bigger, but more distant magnitude 9.3 Aceh earthquake three months earlier on 26 December 2004. However, the death and destruction in Nias from the later earthquake was far worse: 840 people were killed, 6,300 were injured, 70,000 were made homeless with 13,000 houses destroyed and 60,000 damaged, while 90% of the 720,000 people living on the island had their livelihoods disrupted. Some 400 bridges were destroyed, 1,000 km of roads were impassable, most schools, clinics, hospitals, government buildings and 2,000 religious buildings were damaged or destroyed. A saving grace which prevented more deaths, injuries and destruction, was the widespread use of light galvanised iron roofing, rather than heavy earthenware tiles.

Immediate relief and assistance came from the Government and international agencies already working in Aceh on tsunami recovery. Before long Nias joined Aceh to become part of the major recovery and reconstruction project set up to rebuild all the tsunami and earthquake damaged areas. The huge reconstruction effort is funded by many donor organisations and the Indonesian Government together with the Multi-Donor Trust Fund, which has substantial donations from twelve countries. The work is being managed by the BRR (The Bureau of Reconstruction and Rehabilitation), an agency set up by the Indonesian Government and tasked with not only "Building Back Better", but also doing it in a transparent and corruption-free manner, altogether a formidable task. As well, the BRR co-ordinates the activities of the other local and international agencies, such as Red Cross, Oxfam and many others, who are working on recovery and reconstruction.

Before going there in December 2005, I had heard of Nias as an enthusiasts surfing destination. However, rather than as a tourist carrying a surf board, I came to help rebuild as an earthquake and civil engineering technical advisor employed by the UNDP and working for the Nias branch of BRR.

Located almost on the equator and in the Indian Ocean 150 km off the coast of North Sumatra, Nias is a tropical paradise; a fertile, hilly island covered with lush vegetation watered by regular rainfall and fringed with coconut trees and a coral reef. After my arrival in 2005, on the 20 km drive from the airport to the main town Gunung Sitoli, some damage was apparent in the form of crumbled houses, damaged churches and road subsidence. However, in Gunung Sitoli the extent of heavy damage was most clearly apparent. Many of the concrete and brick buildings in the city centre had been damaged or destroyed and much of the area was a rubble wasteland. There was less damage in the urban parts of the town, as houses often incorporated timber and were less vulnerable. Other towns on the island were similarly damaged, while in country areas schools, religious buildings clinics, roads and bridges were heavily damaged or destroyed.

During the three months I was on Nias and less than a year after the quake, the enormous reconstruction task was gathering momentum with intense planning, community consultation and a most ambitious program of capital works, the like of which had not been seen before on Nias. Getting all the required materials and supplies to the isolated island for the reconstruction effort is a logistical challenge, especially when the island ports are small and heavily damaged. I left Nias just before the first anniversary of the great earthquake with the feeling of sadness at leaving when there was so much remaining to be done, but also having learnt so much technically about great earthquakes and a lesson from the people of Nias on how resilient the human spirit is to tragedy and suffering. I was impressed by the dedication and commitment of the staff at BRR.

I have now returned eight months later at the end of November 2006 to work in a similar role as before. On arrival the progress with reconstruction is immediately noticeable and most impressive. Fleets of trucks are working everywhere on roading, extension to the airport runway, carrying supplies and causing minor traffic jams on the trip from the airport. Most of the roads in Gunung Sitoli and leading away from it have been re-built. New water supply pipelines are being constructed and everywhere there is new building in progress. Unlike booming cities such as Shanghai, in China, there are no tower cranes on the skyline because the buildings are low-rise, not more than three levels, but everywhere there is new building construction and gangs of labourers and craftsmen working. Gunung Sitoli is bustling with activity and energy. In my eight month absence there has been a remarkable transformation from a disaster area into a boom-town, with a mood of optimism and prosperity. Well done BRR and all the other reconstruction agencies!



Just one of the original buildings in this part of central Gunung Sitoli survived the great earthquake shaking, but new buildings are starting to grow from the earthquake rubble in February 2006.



By December 2006 the buildings are nearly finished and a reinforced concrete river bank wall is being constructed. As well as the new building construction, all the roads in this area have been rebuilt.



At the northern end of the bridge above, all the original buildings were flattened by the earthquake. The rubble waste-land is now transformed by these new, well constructed buildings.