

## 6 Activities of Investigation on Disaster Damage in Asia

### 6-1 Field Survey on the Solomon Islands

#### Earthquake and Tsunami Investigation

The Asian Disaster Reduction Center (ADRC) along with tsunami experts from Hokkaido University, Tokyo University, and the Advanced Industrial Science and Technology visited the Solomon Islands from 11 to 22 April to investigate the aftermath of the earthquake and tsunami that occurred near Gizo Island on the morning of 2 April 2007 (GLIDE: EQ-2007-000042-SLB). The earthquake measured 8.1 on the Richter scale resulted in 52 deaths and nine missing persons, mostly attributed to the tsunami. As many as 20,000 people were affected.

After visited the Secretariat of the National Disaster Council (NDC) and the UNDP Office at Honiara which are located in the capital city of the Solomon Islands to collect and share information, the team visited the affected islands near Gizo by a small boat from 13 to 19 April, where they measured the height, run-up distance, tsunami flow direction, ground uplift and subsidence, and housing and infrastructural damage. Additional interviews were also conducted with villagers about whether they utilized the lessons from past tsunamis such as the Indian Ocean Tsunami, and about their expectations and needs for achieving an early recovery.



The team found that the largest tsunami attacked the western coast of Gizo Isl. (over 5 m at Malakerava) and the northern part of Simbo Isl. (around 8 m at Tapurai) about five minutes after the earthquake. Waves struck three times at intervals of a few minutes. The worst devastation was found in coastal villages, where houses were reduced to their foundations.

However, some villages suffered zero or few fatalities. This was because the villagers had learned about the relationship between large earthquakes and tsunamis from the Indian Ocean Tsunami or from lessons passed down from a large tsunami that struck in 1939. They therefore moved to higher ground after the earthquake struck. Geological conditions, that is, the presence of hills just behind some residential areas, and the time of the tsunami, which occurred just after sunrise at 07:40, helped minimize the number of victims.

The earthquake affected the entire island of Ranongga, with uplift of up to 3.3 m measured in the southern region, while Simbo Isl. subsided from 30 cm to 1 m. The team estimated that the earthquake was caused by a movement of a fault line that is 100 km long and 35 km wide, just under Ranongga Isl., north of Simbo Isl.

The affected villagers moved to nearby locations for fear that the continuous aftershocks might produce another tsunami. Individuals and villages are still deciding whether to return home or to relocate on higher ground, depending on their particular situations and opinions. On 8 May, the NDC summarized the "Initial Recovery Strategy" with the support of international organizations such as UNDP. The government will work in collaboration with international donors to implement recovery efforts in a way that actively involves communities.