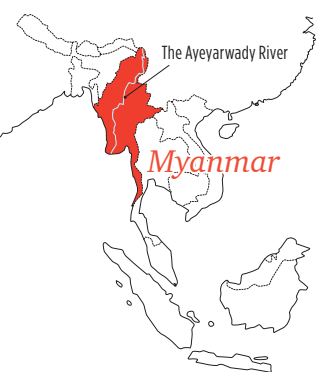




Planted six months ago, these mangrove trees are now three meters high.

Protect People and Nature with Natural Seawalls



Mangroves that stretch along the coastline in tropical regions are important as animal habitats and natural seawalls. Japan and Myanmar have worked together to restore Myanmar's mangroves, which were damaged by illegal deforestation and cyclones.

THE GROVES THAT STRETCH ALONG THE SEASHORE WERE DAMAGED BY CYCLONES

Most people can imagine mangroves along the coast facing the blue ocean in tropical countries. Mangrove is a generic name for dozens of species of plants that grow in areas covered with shallow brackish water which is mixture of fresh and salt water, near the mouths of rivers, not a specific tree. Many creatures live in the mangrove forests, which

also provide food and fuel for people. A mangrove forest like this served as a natural seawall during the 2004 Sumatra Earthquake, where it became obvious that the forest helps protect areas from high waves. This has contributed to growing momentum to conserve mangroves.

However, Myanmar's mangrove forests are at risk. Myanmar has a high deforestation rate compared to other countries in the Association of South-east Asian Nations (ASEAN). Deforestation caused by illegal tree cutting and conversion to cropland is a serious problem in the estuary delta area of the Ayeyarwady River, which flows through the center of Myanmar. In addition, Cyclone Nargis in 2008 greatly damaged Myanmar, a country rarely affected by cyclones. The Ayeyarwady Delta's mangrove forests also suffered enormous damage. For the Myanmar government, rebuilding the forests with their limited resources would be difficult, so they asked Japan for



Above: Young plants to be planted this year. They are supposed to protect the myanmarese coastline.
Below: Hideto Yamazaki conducted research on the field.

assistance. Thus, the Project for Mangrove Rehabilitation Plan for Enhancement of Disaster Prevention in Ayeyarwady Delta started.

Hideto Yamazaki, JICA's forestation project expert in Myanmar, emphasizes, "Myanmar's coastal areas are covered with vast forests. Maintaining the mangrove forests will become a great example of Myanmar's Ecosystem-based Disaster Risk Reduction (ECO-DRR). We are working to help the Ayeyarwady Delta's devastated mangrove forests to recover. Our goal is to reestablish the natural ecosystem to strengthen the coast against wind and tide, and to improve the residential living environment."

This project is funded by Japan's grant aid initiative and is executed with the assistance of groups including the Myanmar government, administrative officers and workers of the targeted reforestation areas. Yamazaki manages the project, considering the interests of each group. Yamazaki says, "We are

trying to show Myanmar a good example of quality control, process management and safety control in reforestation."

The main partner in the project is Ministry of Environment Conservation Forestry staff; Yamazaki recognizes their strong desire to care for and conserve their own forests. The Myanmar government obviously has great interest in this project as the top officials of the Ministry visit the conservation site every month.

REMOTE DELTA AREAS GROWING FORESTS LONG TERM

The project is located in the delta areas of the Ayeyarwady River's estuary. The project office is four hours away by boat from the port town of Bogale.

Mangrove trees were planted on 300 hectares of land in the rainy season last year and are growing steadily. The final goal is to plant about 1200 hectares of land; this year's planting started after the rainy season.

Along with tree planting, a watch tower to observe the forests and be a cyclone shelter has been built and donated to the Myanmar government. A patrol boat has also been donated to the government and is now used by the forestry office in daily patrols around the plantation and surrounding areas.

The director of the Ministry of Environmental Conservation and Forestry and the manager of the plantation project were Japan's partners when Japan assisted in building the Forest Development Training Center as technical assistance in the 1980s. The manager at the plantation site has received a Ph.D. from Yokohama National University; thus there has been a long-term partnership in this project.

Yamazaki emphasizes improvement, "Because seeing the effects of natural environment improvement in human lives over the short term is hard, some people may think this area has a lower priority. However, it will obviously bring great benefits to local residents indirectly and in the long term for disaster prevention, climate change and sustainable forest usage."

If the Ayeyarwady Delta's mangrove forests recover, local resident lives are stabilized and the forest will prevent future disasters. Simultaneously, the forests will increase on a global scale which will lead to reducing greenhouse gas emission. The trusting relationship between Japan and Myanmar through the reforestation will continue into the future.



The daily patrol uses a boat from Japan. Local personnel are determined to protect the forest.



The watch tower is also used as a shelter during cyclones. To protect the forest, illegal deforestation must be stopped.