Leveraging Our Know-how from the Yokohama Forever Forest Project for a Coastal Levee Project in Otsuchi Town

As an advocate of the “Forest That Protect Lives” project being implemented by Otsuchi Town, located in the Kamihei District of Iwate Prefecture, we will support a project that will serve as a model for future activities.

Supporting strong and beautiful urban development for the future

Yokohama Rubber is an advocate of the “Forest That Protect Lives” being implemented by Otsuchi Town as part of the vision in its earthquake recovery plan to “our beautiful town, looking out on the sea, inspiring people to take a walk.” As the first step, we will support a tree planting project that will serve as a model for future activities.

A “Forest That Protect Lives” is a concept first created by botanist Dr. Akira Miyawaki, who is currently serving as an advisor to the Yokohama Forever Forest Project. Essentially, trees are planted atop a coastal levee using the Miyawaki method, which involves planting native tree species to create a forest that is as natural as possible. This same method has been used for the Yokohama Forever Forest Project since its inception in 2007. A forest consisting of native tree species that support one another will form a solid forest floor that cannot be uprooted. This will help mitigate damage from tsunami and tidal surges. The lush green forest will also provide a beautiful landscape as well as give a sense of peace and serenity to the people living in the local community.

We hope to utilize the know-how gained from the Yokohama Forever Forest Project for the recovery and revitalization of Otsuchi Town. With this commitment in mind, we will actively implement and support tree planting activities together with members of the local community. On April 30, 2012, we held a tree planting event that included volunteers from the community and Yokohama Rubber.

A tree planting event was held on April 30, 2012 on a mound created onsite at the Otsuchi Water Treatment Center to serve as a model for the actual coastal levee.

Tree planting event attended by many in the local community

Regional and Local Map of Otsuchi Town
Creating a safer, more secure coastal levee by effectively utilizing rubble and debris from the disaster

A unique feature of the "Forest That Protect Lives" concept is that rubble and debris still remaining from the disaster will be effectively used in the foundation. First, rubble and debris will be sorted and buried in the ground. On top of this a mound will be formed on which trees will be planted. This will create a layer of air between the rubble and soil, which will enable the roots of the newly planted trees to dig deeper into the ground. The tree roots will envelope the rubble, making the forest above stronger and more stable.

Building up the mound will ensure it serves as a safety net against future tsunami, while the act of tree planting will help heighten everyone’s awareness toward disaster preparedness.

Conventionally, pine trees, which grow quickly and are tolerant of salt water environments, have been the tree of choice for tide-water control forests. However, research will help heighten everyone’s preparedness.

Spruce trees are not function effectively in a tide-water control forest in these areas. This demonstrated that pine trees would not function effectively in a tide-water control forest in these areas.

Native tree species planted using the Miyawaki method are ideal for creating a strong root system that provides stability. This will help mitigate tsunami damage and provide additional time to evacuate. At the same time, the forest will also help prevent people from being swept out to sea when a tsunami recedes.

Yokohama Rubber is committed to supporting this "Forest That Protect Lives" because it will help safeguard the lives of everyone in the local community.

Conventional tide-water control forest (Japanese red and/or black pine)

- Pine tree roots reach deep into the ground depending on conditions, but in overly damp sandy areas along the coast pine tree roots extend outward, instead of downward, which weakens their stability. Swept away trees pose a threat to people and buildings.

Future tide-water control forest (greenery that safeguards lives and property)

- The layered forest will act as a wall that will break up a tsunami and mitigate its energy. This will reduce water levels and flow speed, providing people with more time to evacuate.

Source: Website of the Tohoku Council for "Forest That Protect Lives"

Message to Yokohama Rubber

Yokohama Rubber has helped to create valuable forest by planting some 500,000 trees of natural vegetation both in Japan and overseas under the aim of coexistence with leading technologies. Using this knowledge, Yokohama Rubber has taken the first-ever approach of creating a forest for mitigating disaster damage and conserving the environment from earthquake rubble and debris in Otsuchi Town, which suffered serious humanitarian and infrastructure damage due to the Great East Japan Earthquake. I am deeply appreciative of Yokohama Rubber Chairman Nagumo and President Noji as well as everyone involved in this project for taking the initiative to create a genuine furusato (hometown) forest that coexists with the local economy, helps safeguard members of the local community and protects the entire community from inevitable disasters, such as earthquakes, tsunami or fires. I look forward to the future development and activities of Yokohama Rubber.

Message from the Mayor of Otsuchi

Mr. Yutaka Ikarigawa
Mayor
Otsuchi Town, Kamihei District, Iwate Prefecture

Feedback from a Participant

Taku Sasaki
General manager
Iwate Branch Head
Yokohama Tire Japan Labor Union

The Sanriku area suffered extensive damage from the tsunami and took countless lives. Among these were our daily business partners, suppliers and the family members of employees. Dealing with such shock has been painful for us all. Since then, I have continually thought of how I, as a local from Iwate, can help restore the once scenic beauty of the Sanriku area. I feel proud of the fact that I was able to take the first step toward this goal by planting trees together with the people of Otsuchi Town. Going forward, I will be closely following the progress of this coastal levee.