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海の恵みを拒絶する日本の復興

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コンクリートの堤防に1兆4000億円、これが日本の復興。自然との共存、それが世界の復興です。

1.4 trillion yen is being spent on new concrete sea walls. This is Japan's reconstruction after the great tsunami caused by the 2011 Great East Japan Earthquake. Coexistence with nature is the reconstruction policy of many countries of the world.

Nature Can Act as a Shield Against Disaster: It Can Be Our "Bio-Shield" Legacy to Future Generations

The great tsunami that occurred shortly after the Great Earthquake of Eastern Japan on March 11th, 2011, extensively destroyed 'indestructible' sea walls. And yet, the Japanese government has been hurriedly pushing construction of huge concrete sea walls at 667 locations totaling 290 miles of concrete structure. Notably, in three prefectures (Iwate, Miyagi and Fukushima) most of the sea walls are higher than five meters (17 feet). Some are so tall that they exceed 10 meters (33 feet) in height! The height of sea walls is based on the government's standard that requires the height of sea walls match that of tsunamis which may occur between every several decades and a dozen decades. Likewise, throughout other parts of Japan, new plans and projects are underway to enhance existing sea walls or to build totally new walls by making them tall enough to meet the heights of future tsunamis.

However, the effective life span of concrete exposed to sea water is several decades or up to a hundred years. Most of the newly built sea walls may not last until a next major tsunami. Another factor is that Japan is experiencing rapid population decline and demographic change of aging with declining child population. This trend will accelerate worsening of fiscal problems. In fact, as all kinds of concrete structures all over Japan have been aging, governments (national and local) have been struggling to come up with funds for repairing concrete structures such as levees, dams, sea walls and highways, let alone additional funds for new concrete construction. A good example of this is Okushiri Island that was devastated by a huge tsunami during the Hokkaido Earthquake of 1993. The national government and people of the island chose to construct a great sea wall to protect its town. But the sea wall blocked the view of the beaches and ocean making the overall landscape

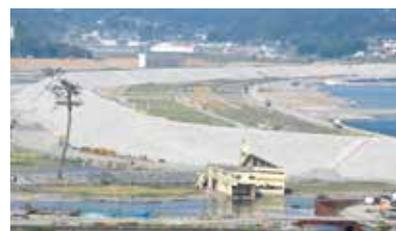
unsightly. The wall also negatively impacted the island's fisheries. As a result, visitors and the island population have been steadily declining.

Many countries of the world have changed their strategy to reduce damage from tsunamis by restricting land use of coastal areas by increasing restoration of natural ecosystems along their beaches. After the terrible tsunami disaster following the Sumatra Earthquake of 2004, the world has adopted the Cairo Guiding Principles for Post-Tsunami Rehabilitation and Reconstruction. Briefly, its major principles are: a) public facilities and housing should be built on higher ground and land use in lowland areas should be restricted; b) enhance the ability of the natural systems to act as a bioshield to protect people and their livelihoods by conserving, managing and restoring wetlands, mangroves, spawning areas, sea grass beds and coral reefs, thereby weakening the power of tsunami and high tides; and, c) promote sustainable tourism

In England and the United States, many projects have been implemented to restore salt marshes, mud flats, and beaches instead of constructing concrete sea walls. Natural areas along the coast can not only mitigate damage from hurricanes and high tides but also can improve water quality and provide habitats for various wildlife. All these promote fisheries, tourism, and recreation opportunities.

When you think about your children's future, you will understand the importance of building sustainable coastal communities where many generations can live happily by restoring nature along beaches making it a resilient bioshield and by promoting ecotourism using beautiful natural coastal areas. We must not forget those costly

lessons we have learned from areas that have suffered from the disaster of tsunami. Our mission must be to build communities that can coexist with our precious sea and to achieve sustainable redevelopment of regional communities.



Construction of sea walls has been expedited over long reaches of coastlines that have suffered disastrous earthquakes and tsunamis



Concrete sea walls will deteriorate as time goes by and expensive maintenance and management costs will increase



Since suffering from the great earthquake and tsunami, the people of Sumatra have been restoring mangrove forests for reconstruction of their communities



Restoring nature and making it a bioshield will positively impact local economies and help build sustainable communities

禁無断転載 海外との情報交流促進のため要約を英文で掲載しています

訂正 前号(No.158)のp6,9の両グラフにおいて、凡例の色が逆になっていました。お詫びして訂正いたします。