

PROBLEM: TSUNAMI UPROOTS 400-YEAR-OLD FOREST

On March 11, 2011, the Great East Japan Earthquake led to the Tohoku tsunami which destroyed lives and the land. The 400-year-old 3,600 acre coastal forest, which extended from Aomori Prefecture to Ibaraki Prefecture, was uprooted and left the coast bare of any vegetation. Of the six prefectures, 49% of the forest was located in Miyagi Prefecture. As a result, intense wind-blown sands and salty winds have been affecting the daily lives of the locals. Wind-blown sands occur when the sand and dust from the coast is transported by the wind and loads the atmosphere with suspended dust aerosols thus creating a potent erosional force causing land degradation. Salty winds occur when strong winds, especially during winter, whip the spray off the seas and blow the salt water menace across coastal vegetation leaving thousands of kilograms of salt depositing on the first surfaces they hit. These forces gradually weaken building structures and drastically decrease agricultural productivity. The local farmers of Natori City have specifically asked OISCA International to guide them in restoring the coastal forest to protect the community from these destructive winds as they reconstruct their lives.

SOLUTION: COASTAL FOREST RESTORATION PROJECT

The Coastal Forest Restoration Project aims to revitalize the 100 hectares coastal forest in Natori City, Miyagi Prefecture within a span of 10 years, from 2011 to 2021, with a total budget goal of 1,000,000,000 yen.

Goals

The main goals are to: (1) restore 100 hectares with species of Black Pine trees and indigenous broad leaf trees; (2) improve the quality of life of agricultural victims by providing them jobs in seedling and forestry management; (3) increase collaboration among various stakeholders; (4) mobilize volunteer leaders through frequent on-site project tours; and (5) enhance level of awareness of the public sphere on natural disasters through various means of public communication.

Process

The main vegetation includes 500,000 Black Pine seedlings, which are resistant to pine weevils, and indigenous broad leaf seedlings. The seedlings will be planted on elevated mounds made of local, natural materials which are being created by the national government. This planting combination is more likely not to be uprooted in future natural disasters. Before planting, the seedlings will be nurtured in batches of 100,000 for 6 years in 2 current on-site nurseries. 30 Natori City farming victims are being trained and sub-contracted for seedling maintenance through the guidance of OISCA International and its forestry expertise network. From 2014, Natori farmers will be responsible for the future maintenance of the planted forest and will take lead in future

natural disaster relief projects. Coastal Forest Restoration Project's grassroots approach utilizes local knowledge for a more adoptive management and active local involvement.

Expected Results

The benefits of this model coastal forest restoration ranges from the local farmer to the business owner. 30 Natori farmers have been provided jobs in seedling and forestry management. The local markets will be replenished with healthy produce. As home owners slowly rebuild, their homes will not quickly deteriorate over time. Business owners will have stronger structures which will ensure safe environment for their staff and customers. Once the 10 year project is complete, the land used for the Black Pine seedling nurseries will be used as agricultural land. The project directly impacts the farming victims and their families because their priority is protecting their produce for their daily meals, and the local markets because good quality produce will finally be sold to feed the community.

Partners

In collaboration with the Association for Coastal Restoration of Natori City, Sendai District Forest Office, Miyagi Forestry Cooperative, Miyagi Seeds and Seedling Cooperative, and Japan Foreign Press Center, the Coastal Forest Restoration Project will give the local community the opportunity to learn how to prepare the land, manage the new forest and resiliently respond to future natural disasters through the guidance of OISCA International and forestry experts. OISCA International mobilizes volunteers from various countries to participate in the project activities, hear the stories of the Natori City farming victims and visit the site that once had a 400-year-old forest. Though the sand and salt winds will blow, children will have healthy vegetables, fathers will have their jobs, and families will have strong homes all because the coastal forest will be restored.

OISCA INTERNATIONAL

The Organization for Industrial, Spiritual and Cultural Advancement (OISCA International) is the first major international non-governmental organization to emerge in Japan. Since 1961, OISCA International contributes to humanity's environmental sustainable development, through a holistic approach, by emphasizing the interconnectedness of agriculture, ecological integrity and the human spirit. ([Visit our website for our activities](#)). OISCA International received the Earth Summit Award from the United Nations in 1993, and was granted Consultative Status with the United Nations Economic and Social Council (ECOSOC) in 1995.

(Please refer to the 2 additional attached pages for TIMELINE and BUDGET details)

Coastal Forest Restoration Project Annual Budget
Fiscal Year: 2013 - 2014

Expenditure	JPY	USD
Meeting Expense	¥891,000	\$8,999
Other operational cost	¥6,750,000	\$68,175
Materials & equipment	¥4,050,000	\$40,905
Travel expenses	¥6,750,000	\$68,175
Communication & Transportation of Materials	¥1,350,000	\$13,635
Office Equipments	¥810,000	\$8,181
Consumables	¥540,000	\$5,454
Repairs	¥459,000	\$4,636
Public relations	¥4,050,000	\$40,905
Cost of Purchasing Documents	¥135,000	\$1,364
Printing & bookbinding cost	¥8,100,000	\$81,810
Fuel	¥1,350,000	\$13,635
Utilities		
Rental Expenses	¥1,080,000	\$10,908
Insurance	¥270,000	\$2,727
Supporting staff allowance	¥2,700,000	\$27,270
Tax & due	¥108,000	\$1,091
Membership fee etc.	¥1,350,000	\$13,635
Sub-Contracted Services	¥28,620,000	\$289,062
Miscellaneous	¥270,000	\$2,727
total expenses	¥69,633,000	\$703,293

OISCA International's Coastal Forest Restoration Project: 2013-2014 Budget

Expenditure	Pieces	Unit Rate	Cost (YEN)	Cost (USD)
Workers Compensation				
Sub-contractual local agricultural workers	30	¥100,000	¥3,000,000	\$30,300
Tree planting group lecturers	5	¥20,000	¥100,000	\$1,010
Agricultural machinery labor	3	¥50,000	¥150,000	\$1,515
SUBTOTAL			¥3,250,000	\$32,825
Facility Establishments				
Large greenhouses	2	¥100,000	¥200,000	\$2,020
Medium greenhouses	4	¥75,000	¥300,000	\$3,030
Nursery Maintenance				
Fertilizer	100	¥3,030	¥300,000	\$3,030
Supplies (nets, hoses, pumps, etc.)			¥300,000	\$3,030
SUBTOTAL			¥1,100,000	\$11,110
Land Preparation				
Agricultural equipment				
Soil cultivation (Harrow, Plow, etc.)			¥5,000,000	\$50,500
Planting (broadcast seeding)			¥3,000,000	\$30,300
Maintenance (fuel, overhead, etc.)			¥6,000,000	\$60,600
Essential supplies				
Supply transportation (fuel)			¥1,000,000	\$10,100
Weeding Tools (hand forks, rakes, etc.)			¥200,000	\$2,020
SUBTOTAL			¥15,200,000	\$153,520
Transportation				
Toyota All Terrain 4x4	1	¥2,700,000	¥2,700,000	\$27,270
Vehicle maintenance (fuel, overhead, tires, etc.)			¥500,000	\$5,050
SUBTOTAL			¥3,200,000	\$32,320
Administration				
Research (land preparation, weather updates, community development, etc.)			¥800,000	\$8,080
Reports (internal and public)			¥400,000	\$4,040
Project site visits (travel, accommodations, etc.)			¥800,000	\$8,080
SUBTOTAL			¥2,000,000	\$20,200
GRANT TOTAL			¥24,750,000	\$249,975

OISCA International's Coastal Forest Restoration Project: 2013-2021 Timeline

	2013				2014				2015				2016				2017-2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
Transplant 1st batch of Black Pine seedlings to pre-coast nursery																				
Sow 2nd batch of Black Pine seeds in 1st stage nursery (100,000 seeds)																				
Collect 2nd batch of indigenous broad-leaf seeds (20,000 seeds)																				
Maintain two nurseries (watering, weeding, etc.)																				
Survival rate analysis																				
Expand land to build new nurseries																				
Transplant 1st batch of Black Pine seedlings to coastal mounds																				
Sow 1st batch of indigenous broad-leaf seeds on coastal mounds																				
Maintain coastal grounds (weeding, grass cutting, etc.)																				
Survival rate analysis																				
Transplant 2nd batch of Black Pine seedlings to pre-coast nursery																				
Sow 3rd batch of Black Pine seeds in 1st stage nursery (100,000 seeds)																				
Collect 3rd batch of indigenous broad-leaf seeds (20,000 seeds)																				
Maintain nurseries (watering, weeding, etc.)																				
Survival rate analysis																				
Transplant 2nd batch of Black Pine seedlings to coastal mounds																				
Sow 2nd batch of indigenous broad-leaf seeds on coastal mounds																				
Maintain coastal grounds (weeding, grass cutting, etc.)																				
Survival rate analysis																				
Transplant 3rd batch of Black Pine seedlings in pre-coast nursery																				
Sow 4th batch of Black Pine seeds in 1st stage nursery (100,000 seeds)																				
Collect 4th batch of indigenous broad-leaf seeds (20,000 seeds)																				
Maintain nurseries (watering, weeding, etc.)																				
Survival rate analysis																				
Transplant 3rd batch of Black Pine seedlings to coastal mounds																				
Sow 3rd batch of indigenous broad-leaf seeds on coastal mounds																				
Maintain coastal grounds (weeding, grass cutting, etc.)																				
Survival rate analysis																				
Transplant 4th batch of Black Pine seedlings in pre-coast nursery																				
Sow 5th batch of Black Pine seeds in 1st stage nursery (100,000 seeds)																				
Collect 5th batch of indigenous broad-leaf seeds (20,000 seeds)																				
Maintain nurseries (watering, weeding, etc.)																				
Survival rate analysis																				

2011 - 2012:	Coastal land, wind-blown sand and salty winds surveying	Nursery building and land maintenance
Stakeholders network collaboration establishment	Farming victims seedling and forestry management training	Sowing of 1st batch of Black Pine seeds
Establishment of Association for Coastal Forest Restoration in Natori City		