Stitches

Aditya Athreya Rao

Blending landscape fabric through the golden threads of spatial identity in San Riku coastline, Otsuchi, Iwate, Japan.
Devastation

San Francisco Chronicle

Zware aardbeving noorden Japan, doden door tsunami en branden

NRC Handelsblad

Na vrijlating militairen in Libië vragen voor Hilten en Rosenthal

Study praises aggressive treatment

Breast Cancer Research
Hurry home to me.
Japan, Iwate, March 2011

15,896 deaths,
6,157 injured,
2,537 people missing

The coast of Iwate Prefecture

- 12 municipalities
- 16 cities, 4 towns, 3 villages
- Area: 4,040 km²
- Population: 240,000

Local Industries

Along with a booming fishing industry abundant sea, our coast is home to businesses focusing on shipbuilding machinery, case manufacturing, and concrete

Diagrammatic Problem Statement

Before Tsunami

Prezi
The coast of Iwate Prefecture

12 municipalities
(2 cities, 4 towns, 3 villages)

Area: 4,698 km²
Population: 2,400,000

Local Industries:

Along with a booming fishing industry thanks to an abundant sea, the coast is home to businesses focusing on seafood processing, fishing, marine transportation, and ceramic-related industries.

The town faced problems before the tsunami which is important to recognize.

Diagrammatic Problem Statement

Identity can be found in its landscape, streets, people and life and not in built works.

Cost Benefit of Engineering solutions

Mono flow economy

Identity

Budget vs time - $55,700,000 to $550,000,000

50% population working category
Average income
< $5000

20% lack of population in tsunami
1980 - 21,292
2011 - 15,276
2045 - 6220

7 Years (unfinished)
- 6 months Reconstruction Plan
- 2 years Recovery Plan
- 3 years Restoration Plan
- 1 year Restoration plus production

Time for Reconstruction

Lack of an ecological overview

Aging population

Human Casualties

Deceased: 284
Severely Injured: 37
Missing: 388
Population
- 1980: 21,292
- 2011: 15,276
- 2045: 6,220

Cost of building post tsunami -
1.5x-2.5x times higher than pre-Tsunami.

Cost Benefit of Engineering solutions

Mono flow economy

Identity
- Depopulation
- Lack of identity to Urban structure
- All amenities in place, but lack of citizens recognizing it as their structure
- No public, recreational and creativist spaces

Budget vs time -
$55,700,000 to $550,000,000

25% loss of population in Tsunamii

1980 - 21,292 people
2011 - 15,276 people
2045 - 6,220 people

50% population - working category
Average income -
< $5000 than in rate average

7 Years (unfinished)
- 2 month Reconstruction Plan
- 2 year Recovery phase
- 3 year Revitalization phase
- 1 year Expansion phase (delayed)

Aging population

Time for Reconstruction

Lack of an ecological overview

Prezi
The Situation
Theoretical Framework
Contextual History
Site Introduction
Perfectural Level

[Map of regional level]

[Legend or captions if available]
Infrastructure that creates the landscape study?
Tectonic Analysis
Process of Land consolidation:

- Decomposed Granite and crushed rock with fine sand

Location of resource: Otsuchi hills?

Land purchase plan area: approximately 8.0 ha

Heisei 24 - Heisei era 34
2012-2018

Decomposed Granite and Gravel

Source and Usage

Surface Area - Divided into 9 parcels of 3 hectares

Volume of Crushed Gravel - 1.32 Million m³

Height of Raised level - 4 m

Expense - Approximately 13.1 billion yen

Cost as per euro - 2.2 million Euro

Liquefaction period - 5 years

Embankment removal - 1 month
Embankment removal - 1 month
Construction of roads and structures - 3 months
1.1 km of Sea wall limiting erosion
0.8 million cubic meter of granite dust used
20.6 hectares of area of land used

2018

Re evaluating the materials
Testing the theory
Concept
Adapting a new intervention

The Answer to Identity
Design

Agricultural Landscape

Adaptive Intermediate

Economical Landscape

Protection Landscape
Protection Landscape
Dynamic Intermediate

Economical Landscape

The landscape has many such islands, an element of this landscape.
Residential area as backbone

Community garden: rice production, owning ones own land

Market: using local produce exported from economical area creates the urban spine

Spring wells: local ecology and an element of obscuri

Market goes into housing area, allowing residents to set up their own shops

Processes debris from the tsunami that can be reused to create barrier islands as a memory covered with black piles

Granite from quarries that would be used for land consolidation/sea