



Green Reconstruction

GOING GREEN FROM THE GROUND UP

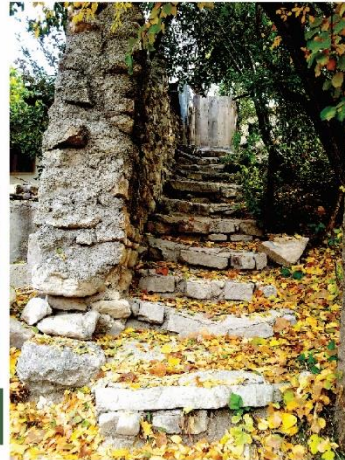
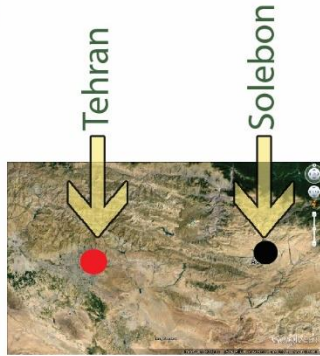
Islamic Republic of Iran

7th i-Rec
Conference 2015

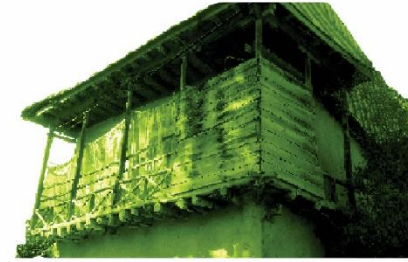


Introduction

Solebon is a county in Dobluk Rural District, Arjomand District, Firuzkuh County, Tehran Province Iran. At the 2006 census, its population was 585, in 186 families.



the Features of Solebon



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Geographical features

Cold weather
Heavy rain

Economical features

Agriculture
Animal husbandry

Social and cultural features

Alliance in community
Community participation in decision-making

Traditional Architectural characteristics

Stone walls with a width of 50 to 100 cm
Low and small opening
Stone foundation
Using of stone material
High levels of entrance
Hipped roof and gable roof

Animal barn
Barn for storage of agricultural products
Enough space for agricultural implements

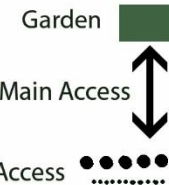
The importance of public space such as mosque in decision-making as well as division reducing



Solebon



Arable lands and Gardens



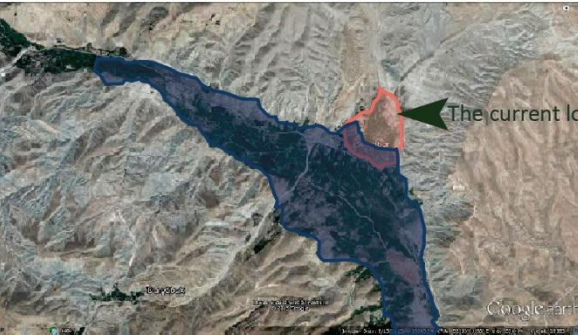
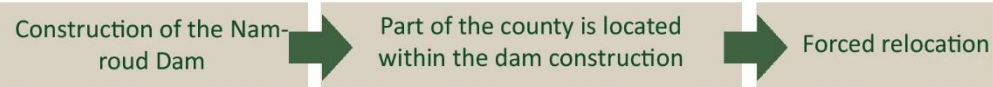
SoleBon County





Problem Statement and Site Analysis

Problem Statement



The dam basin



Aim of Project

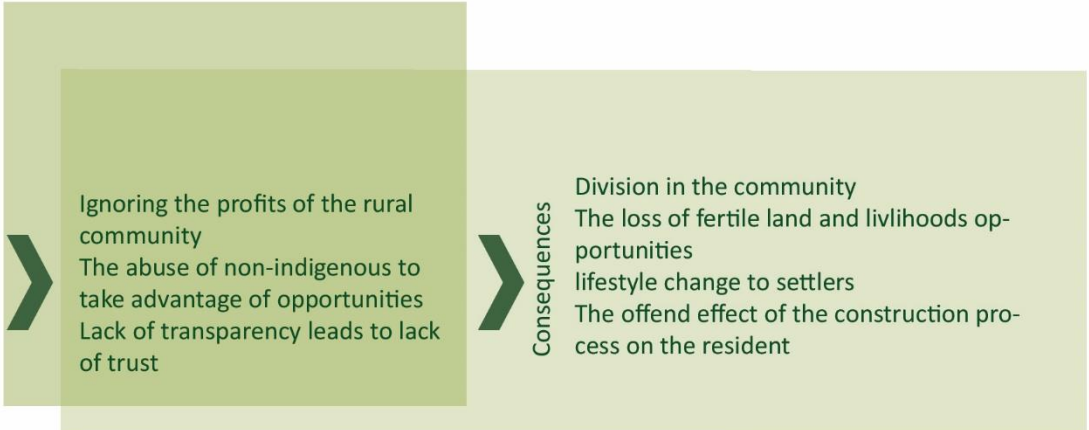
Since the solebon is both disaster prone and touristic with small businesses, it seems that after relocation, life resumption with an emphasis on resettlement concept play central role in the new site . In this regard, discussed issues thoroughly provides specific aim as follow:

Investigating on the opportunities and future directions of resettlement in new site by rural design solution according to the key concept of GOING GREEN .

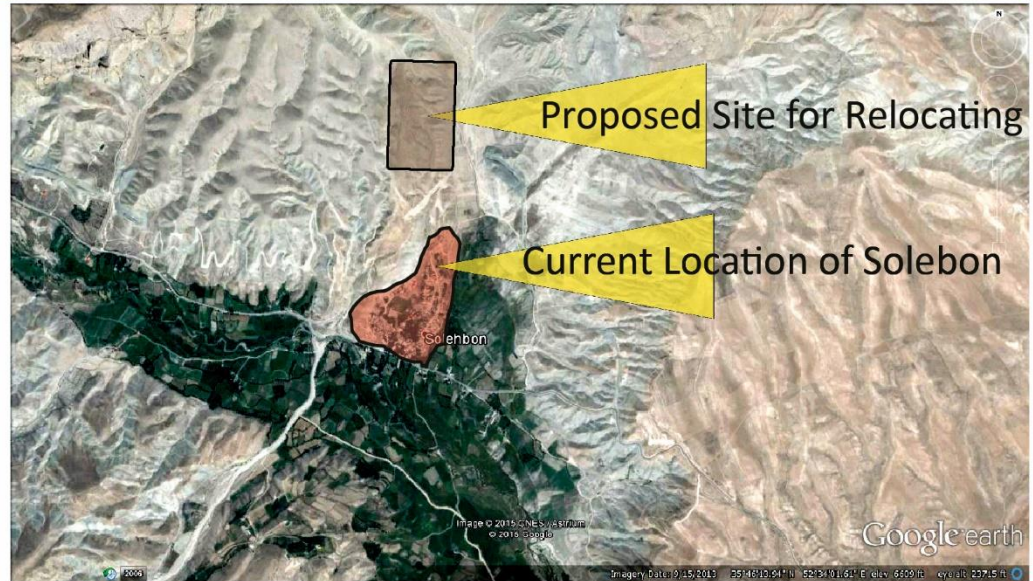


GREEN RECONSTRUCTION

The authorities Decision



SITE SELECTION GOING GREEN FROM THE GROUND UP



In the phase of site selection and layout, the SWOT technique was used to choose the best option between the two proposed alternatives. Geographical, social, economic and environmental criteria was considered in SWOT. In comparison, the selected alternative is less prone to natural hazards, and has more potentials for agriculture and therefore to their business continuity. Plus since it is closer to their current location and has a great view to the landscape, local people prefer to move to this place. So they would be more involved in the process of resettlement

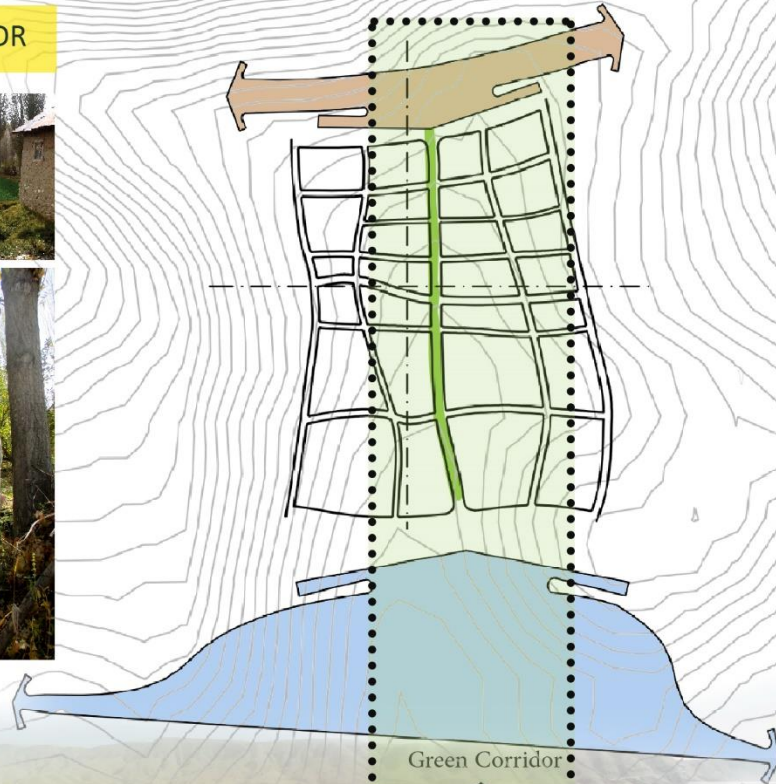


Site Layout and Green Corridor

The neighborhood are planned with the same specifications of their current situation, considering the **potentials** and the **weaknesses** of which one. The topography and the slope of the ground is taken into account for the land use and the basic layout of the streets and the blocks.

The main North-South street which pass the bottom line of the region, divides the county into two parts and is designed as a **Green Corridor**: a walk path which allows local people to offer their fresh products and a different experience for the tourists to feel the rural life closely.

GREEN CORRIDOR



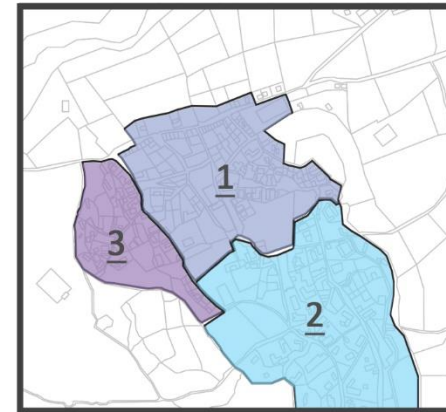
← boundary of the new county

Two profiles of the new county

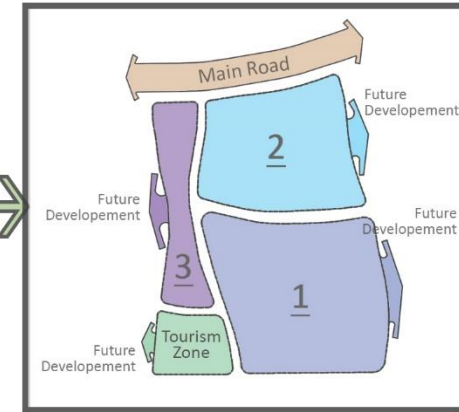
→ boundary of the new county

Site Layout

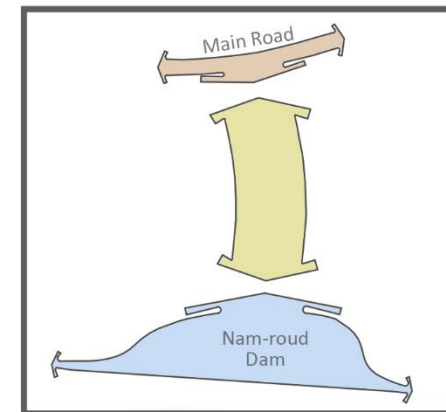
New site layout according to main potential which lead to Green Corridor design solution



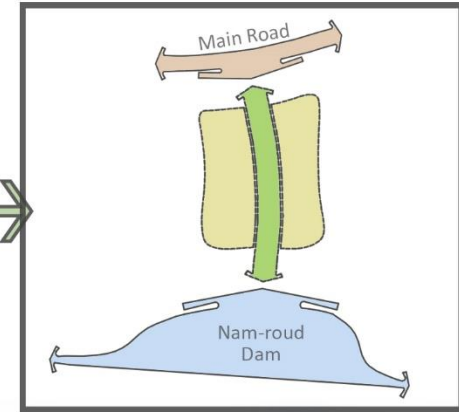
Current situation of the county with 3 main districts



Proposed districts in new location



Two main potentials in new site: The road and the dam

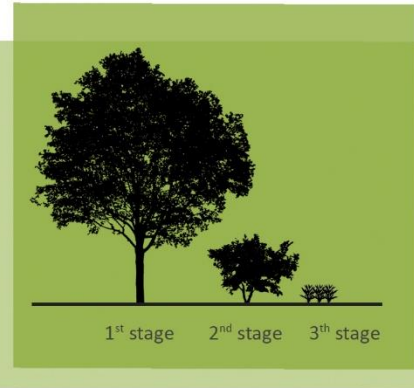


Proposed green corridor



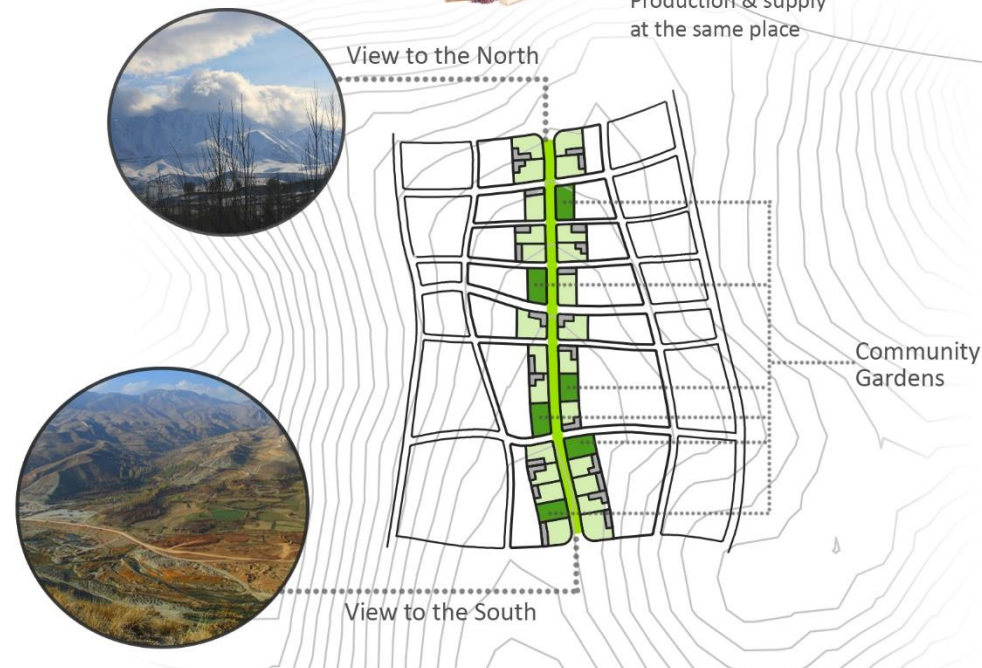
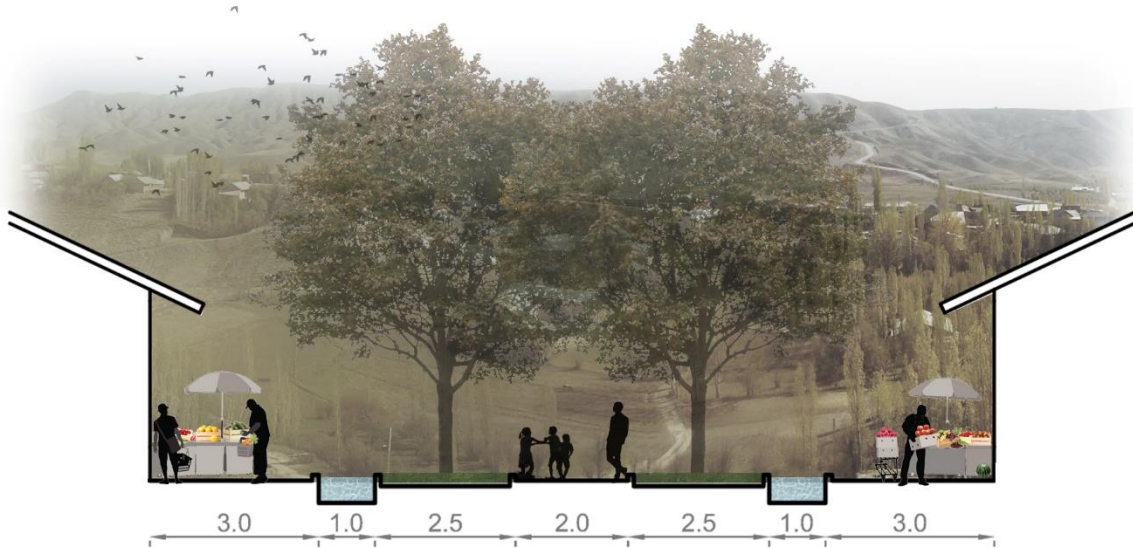
Green Corridor

Green Corridor is designed with 3 **walkways** which are connected through 2 **vegetation** and **water** path. On its two sides, there are the private gardens and the community gardens. Ideally the gardens are designed based on the concepts of **Three-storey Gardens**. This would save more land, as the fertile soil of the region is scarce and valuable.



Three-storey Garden

- 1) Trees: apple, pear, peach, walnut, mulberry,...
- 2) Bushes: barberry, glycyrrhiza glabra,...
- 3) vegetables, saffron, herbs,...





Community Gardens

"A community garden is a single piece of land gardened collectively by a group of people."



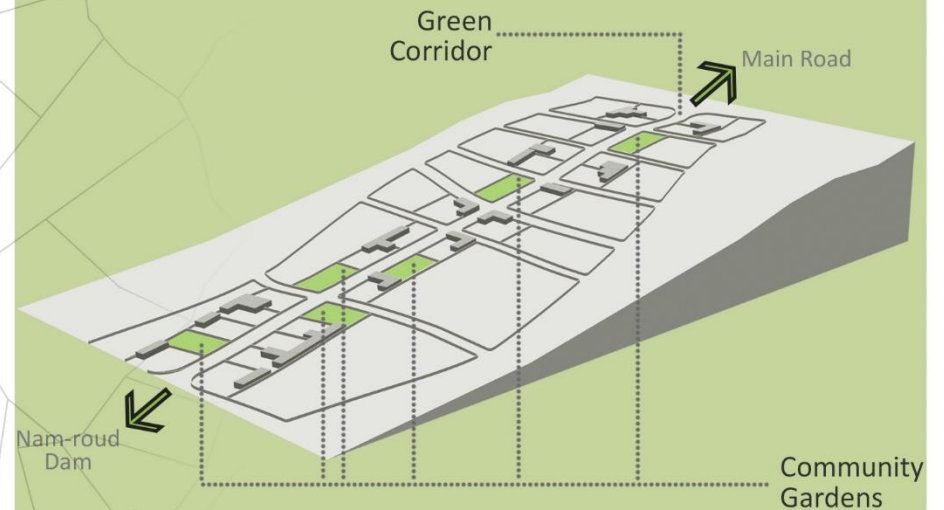
People preparing lunch together for a special occasion



Two cousins who live in a neighborhood

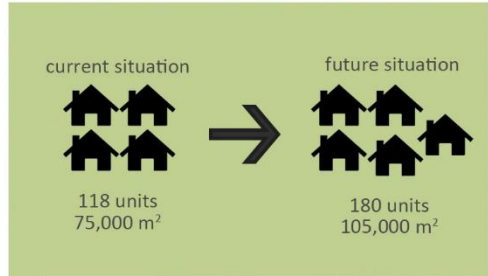


The population of Solebon is consisted of **six main families** which are distributed into 3 neighborhoods. Because of this the sense of **community** and **collaboration** is very high among the people. For using this potential and to activate more the tourist industry, **six Community Gardens** are proposed along the **Green Corridor**.





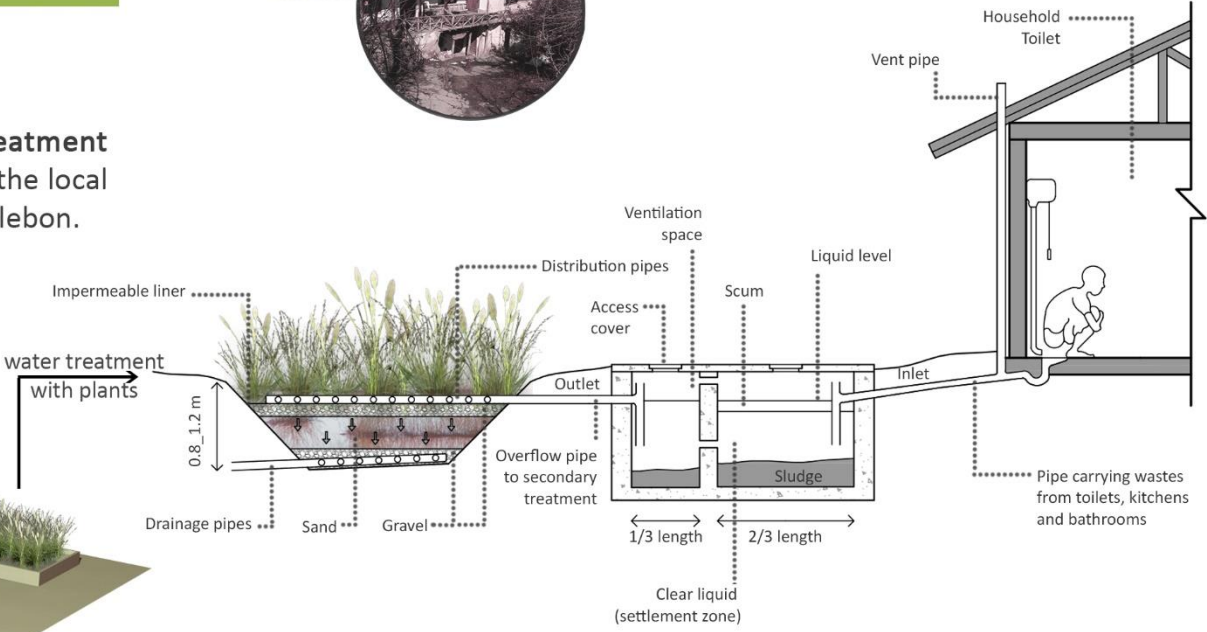
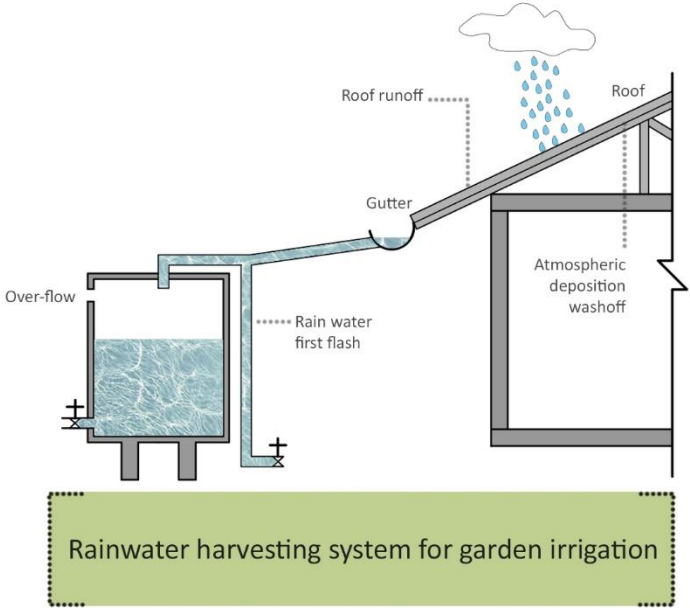
Green Housing



Minimum intervention in house design was applied since the residents are satisfied with their current houses. The materials (brick, log and stone) are locally available. The priority is to supply them by **reusing** and **recycling** the materials from the current buildings.



Critical **water issue** in Iran, leads to think of new water cycles. Utilizing **treatment plants** for waste water is an **environmentally friendly** approach. With the local plants and the climate, this **green** method can be well conducted in Solebon.



Using a vertical-flow planted filtration for secondary treatment of wastewater

Using a septic tank to collect and treat toilet waste water and other greywater



Project Process and Involved Actors

Diagram of the actors involves and the relationships between them

Key roles

Solebon local Community

Bussiness Owner

Resident

Farmer

Ranchero



Academic Research

Academic Society (specially SBU and TU)

Public and governmental Sector

Tehran Governor (Department of Development)

Housing Foundation of Islamic Revolution of Iran

Cultural Heritage, Handcrafts and Tourism Organization

Forests, Range and Watershed Organization



Private Sector

Society of Consulting Engineers and other technical institutions

Experts in Tehran Rural Aria

Local & National NGO's (specially active in green activities)



Using treated water for irrigation

Using reed bed to recycle the surface water runoff

Project process

Approch: GREEN RECONSTRUCTION

Set Problem statement and Aim

Issues

Study of county

Geographical
Economic

Cultural
Architecture

Relocating site to resettlement

Site analysis

Site layout

Proposing design solution

Water and sanitation
Three-story garden

Green corridor
Community garden

