

ABSTRACT

The natural gap in this area is huge, the land is sparsely populated, and the ecological environment is beautiful.

However, there is less planning and design in the mountains, the block landscapes disconnected, and the road system is single.

My design attempts to identify the features and problems of landscapes with different heights, amplify people's perception of features and solve problems through design. The design of multiple transportation systems pierces each block. At the same time, tourists can also embark on a journey of vacation.

Site : Livigno, Italy

Time: Aug-Nov 2022

Type: Academic, Individual Work

In Between Restoration and Enhancement of the valley



I BACKGROUND

Livigno is situated in a valley stretching for 12 kilometres. Nestled between two mountain ranges, it descends gradually from 3000m to 1800m above sea level.

The name Livigno derives from the old word for avalanche, as the valley lies beneath the surface of the snow for several months of the year, surrounded by steep mountains. Over the centuries, the river Spohr has shaped the Livigno valley. The felling of trees and the diversion of the river have created a new image and changed the topography of the Livigno valley.

I DATA

FUNDAMENTAL ANALYSIS

Routine analysis of local residents, number and size of houses.

7000 inhabitants
24.02 inhabitants per sqm

1193 buildings quality

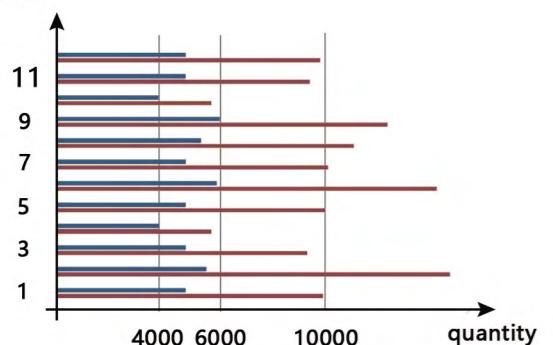
900 residential
240 productive, commercial

61 stone
35 concrete
804 wood/steel/etc

TOURIST AMOUNT DURING A YEAR

Tourism revenue is one of the local economic sources and the main object of the design.

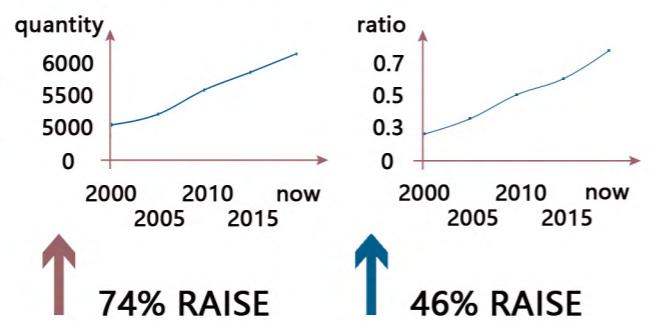
month



The number of tourists is significantly higher than that of residents, especially in summers and winters.

RESIDENT POPULATION CHANGE

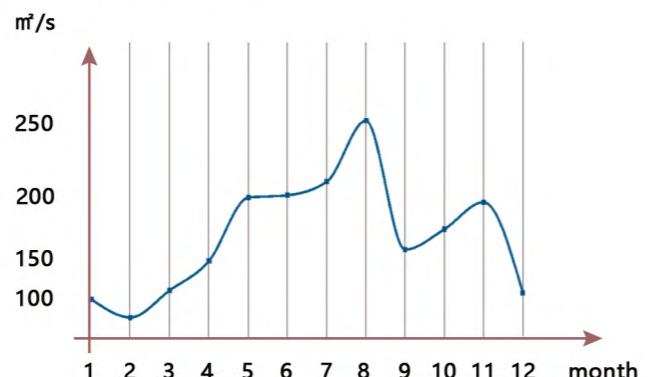
The number of permanent residents is also an important factor in measuring the composition of the population.



The number of local residents has been on the rise in recent years, which reflects the increase in the labor force and the development of the economy.

RIVER FLOW

Analyze river flows to derive the possibility of developing tributaries



The annual flow changes and gaps of rivers are large, and even stop flowing in winter.

I SITE CONDITION

snow mountain

3439m
remote
bilberry
ibex (summer)



residential area
buildings
green fields
mankind

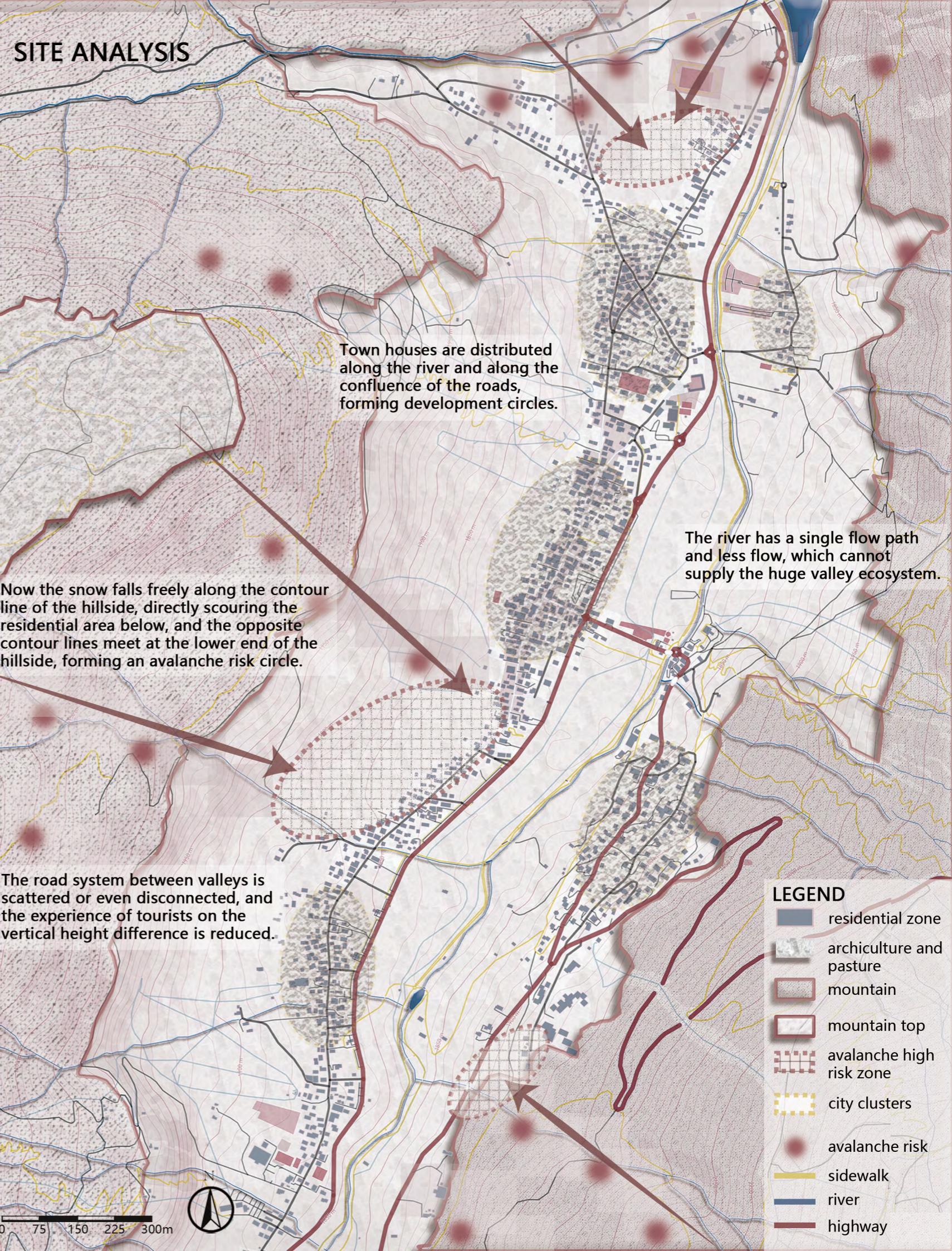
river
wetlands
wet meadow
willow
eurasian otter

farmland

mountain bush
pine forest
ibex (winter)

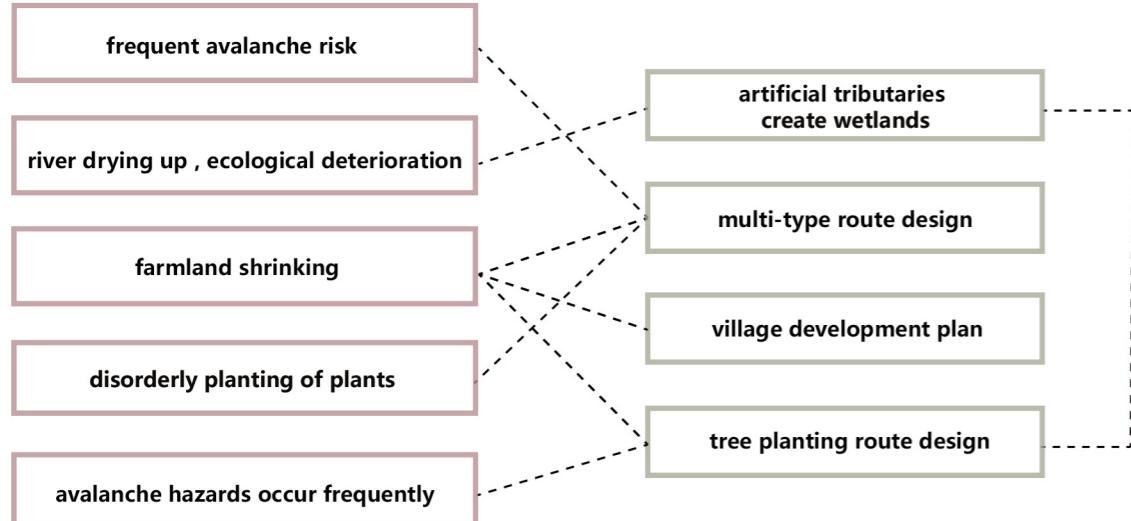


SITE ANALYSIS



FRAMEWORK

PROBLEM



STRATEGY

EXPRECTION



SITE ANALYSIS

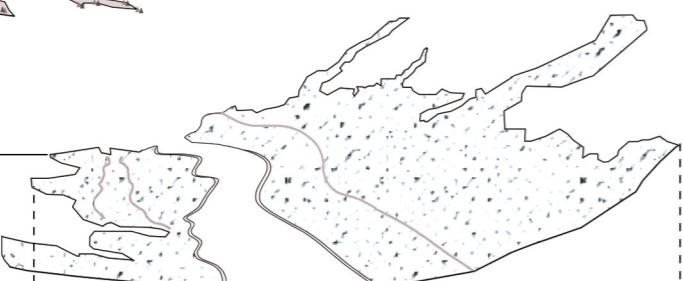
FORESTS

Vegetation is rich in vertical drop, but in a disordered state, it fails to play a protective role.



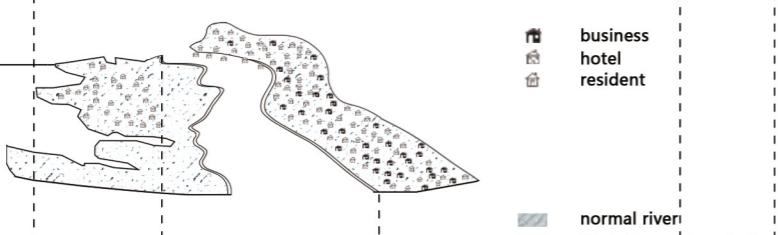
FARMLAND AND ROAD SYSTEM

The existing roads are all parallel to the river, lacking the connection perpendicular to the river and the connection with the mountain, and the landscape resources have not been utilized.



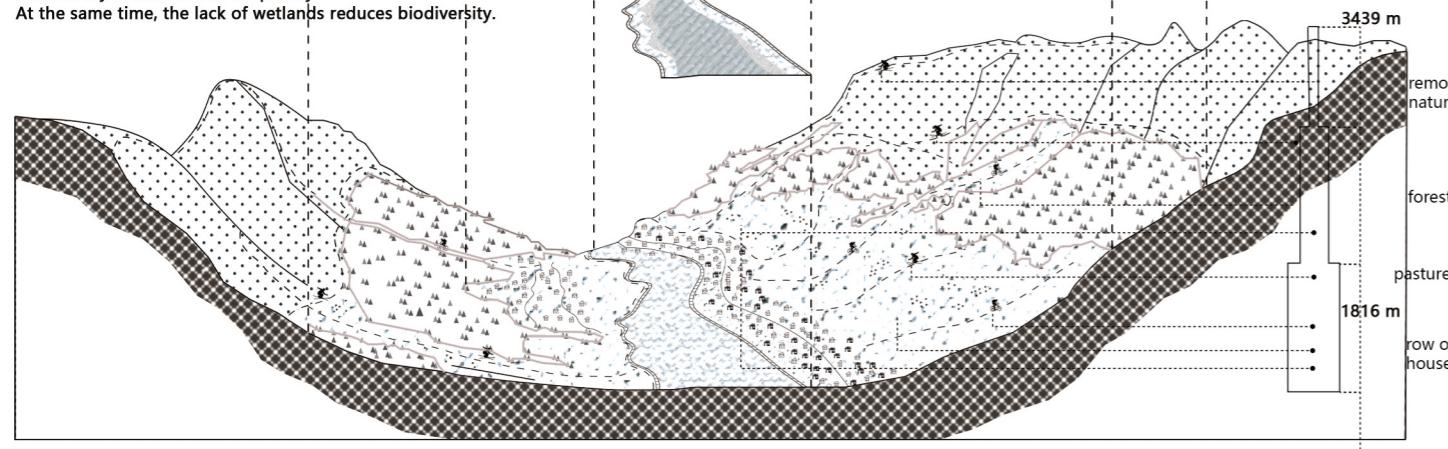
SETTLEMENT

The houses are built around the river, but some areas at risk of avalanches have no protection. And there is no reasonable planning of building attributes, resulting in confusion of functional areas.



RIVER

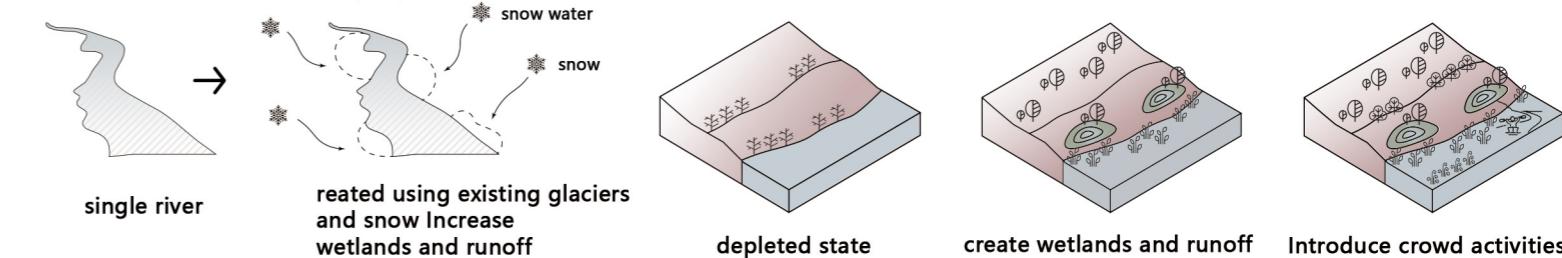
The single river cannot supply such a large site, and the dry season occurs frequently. At the same time, the lack of wetlands reduces biodiversity.



I STRATEGY

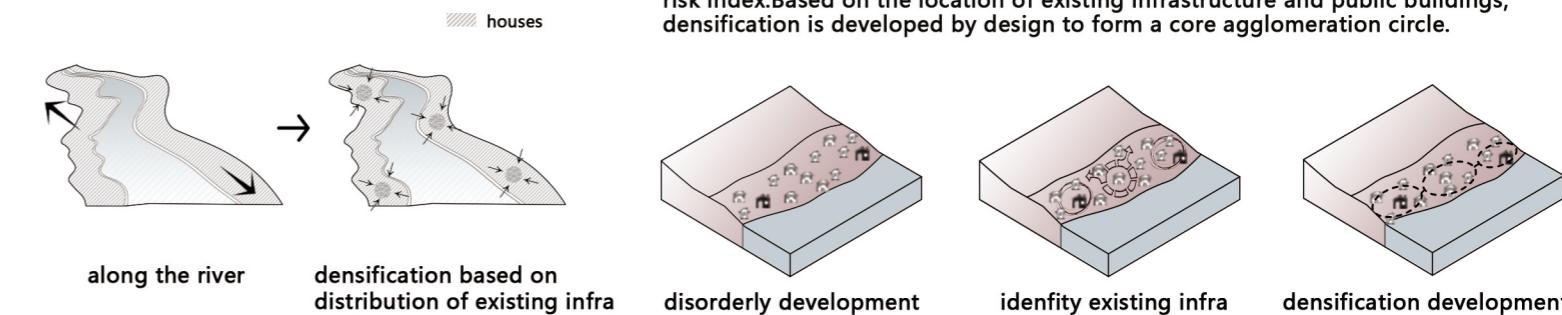
CREATE WETLANDS

The river has a single shape, lacks runoff to conserve surrounding water and soil, and loses wetlands. By artificially adding tributaries, the design forms a wetland circle around the river, nourishing more flora and fauna, and enhancing the biodiversity along the river. In the future, the river flow will increase, and people will enter the event to achieve a coexistence scene.

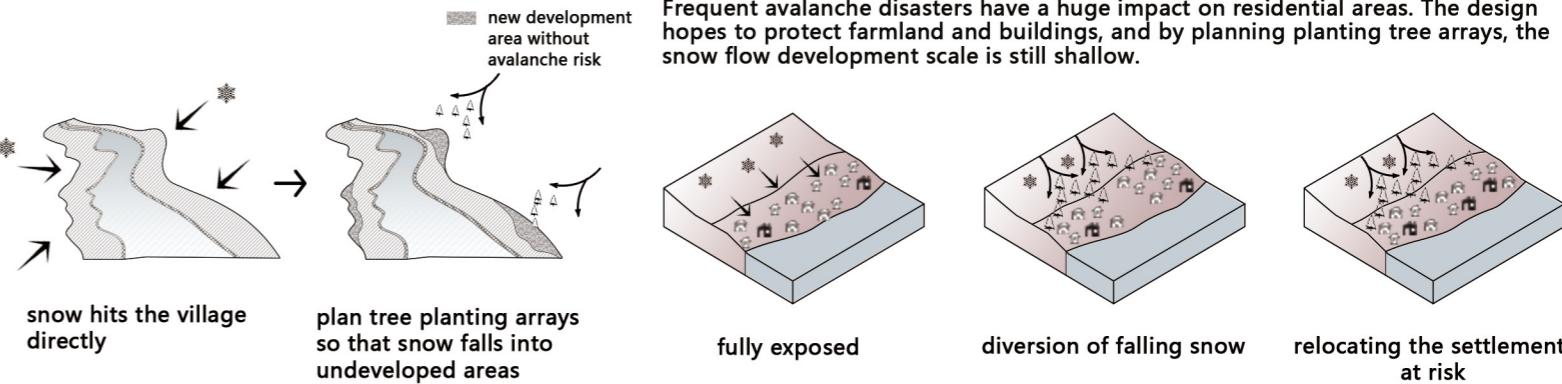


PART 1

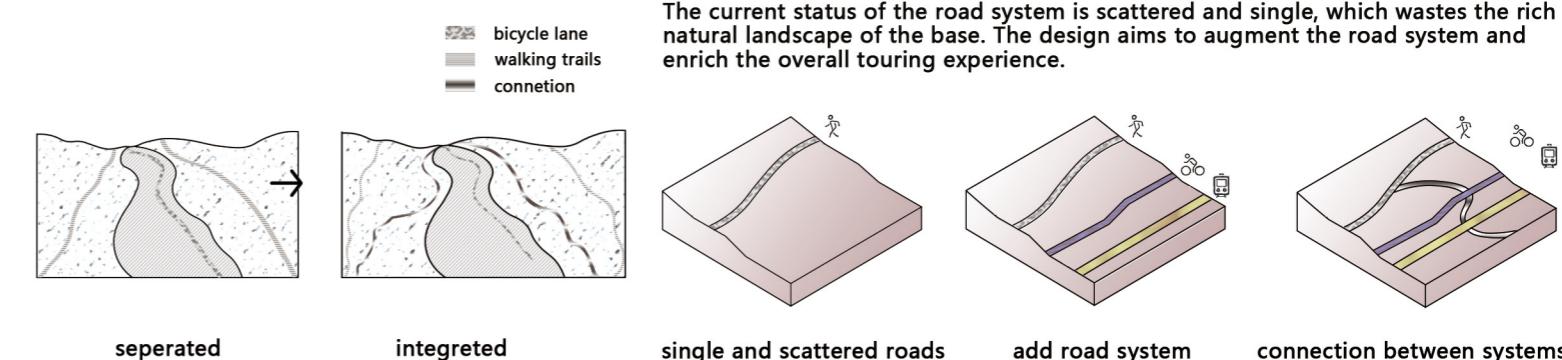
ADJUST THE VILLAGE STRUCTURE



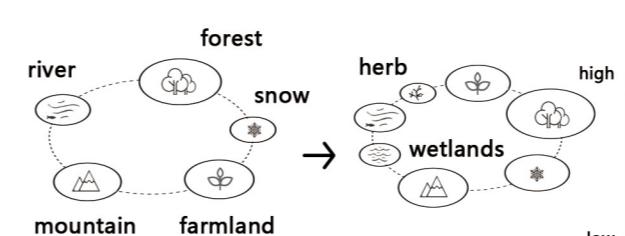
DEAL WITH AVALANCE RISK



INTEGRATE ROAD SYSTEM

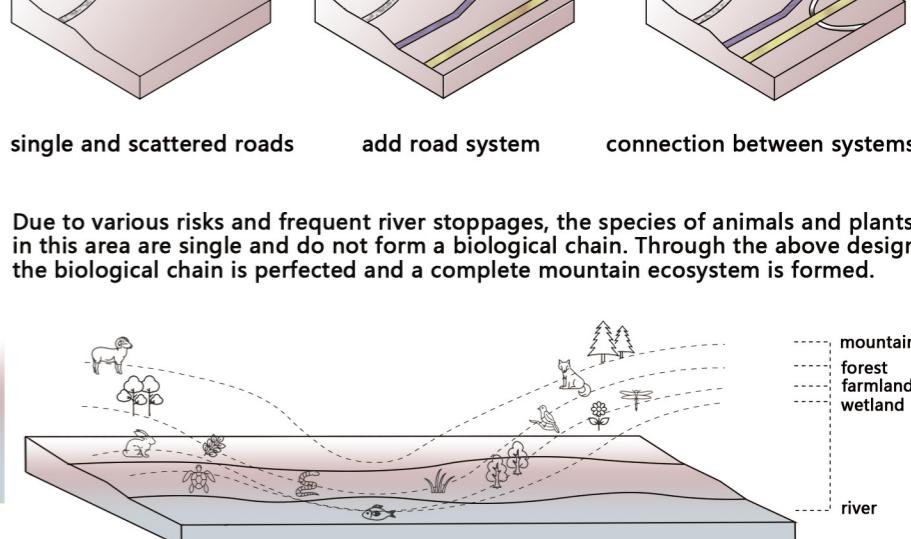


RICH ECOLOGICAL STRUCTURE



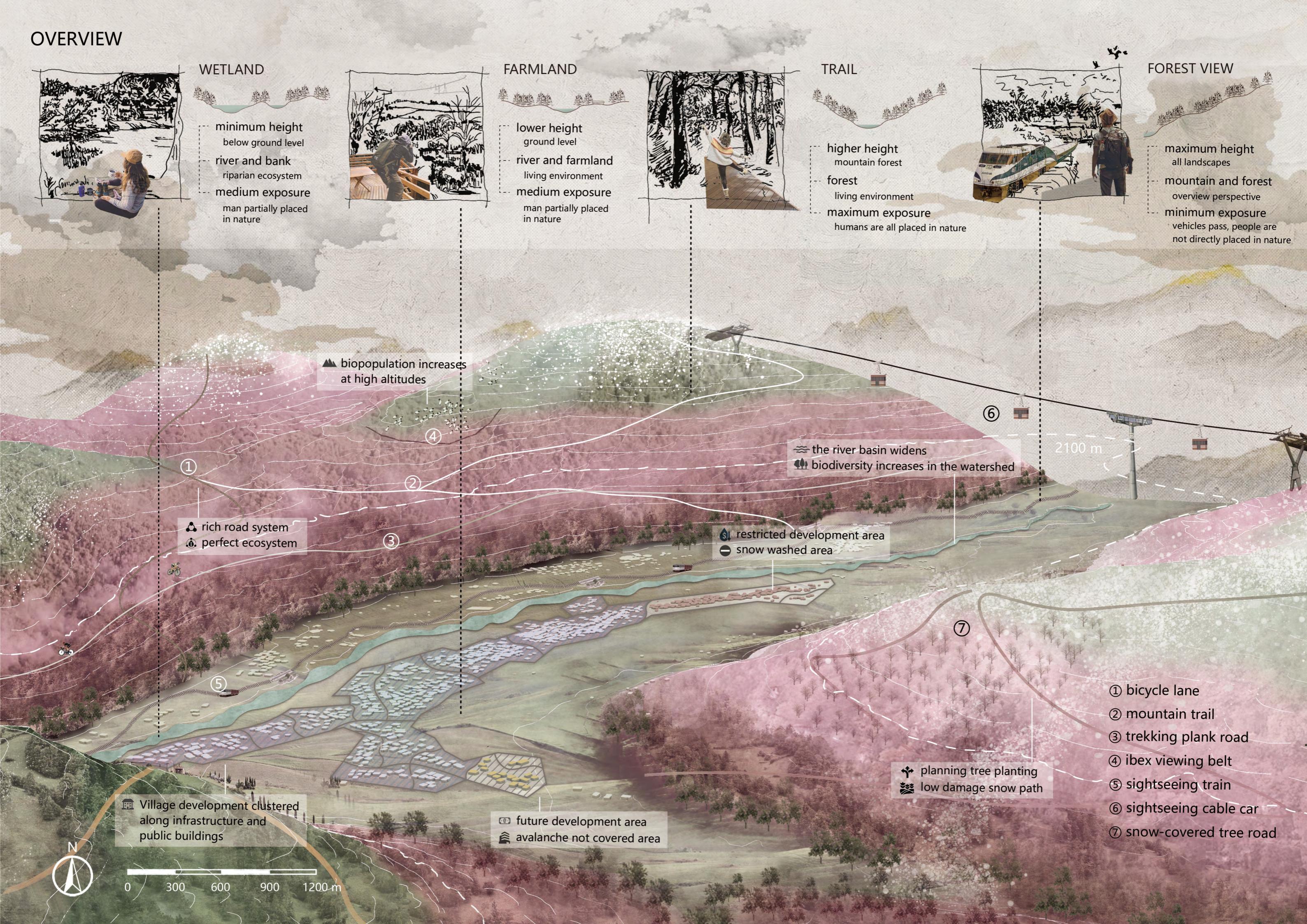
PART 2

PART 3



Due to various risks and frequent river stoppages, the species of animals and plants in this area are single and do not form a biological chain. Through the above design, the biological chain is perfected and a complete mountain ecosystem is formed.

OVERVIEW



I GENERAL OVERVIEW OF THE SYSTEM

After the planning and design, the variability of the base's activities in the different characteristic landscapes has become more apparent.

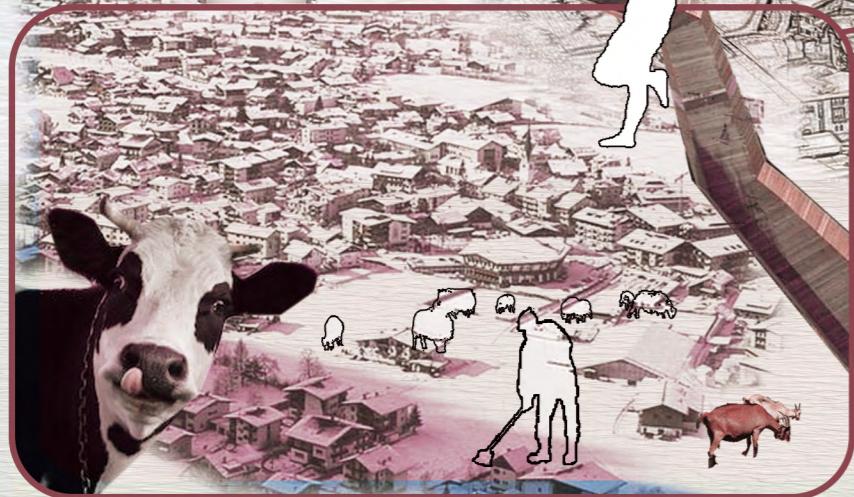
System three Plain



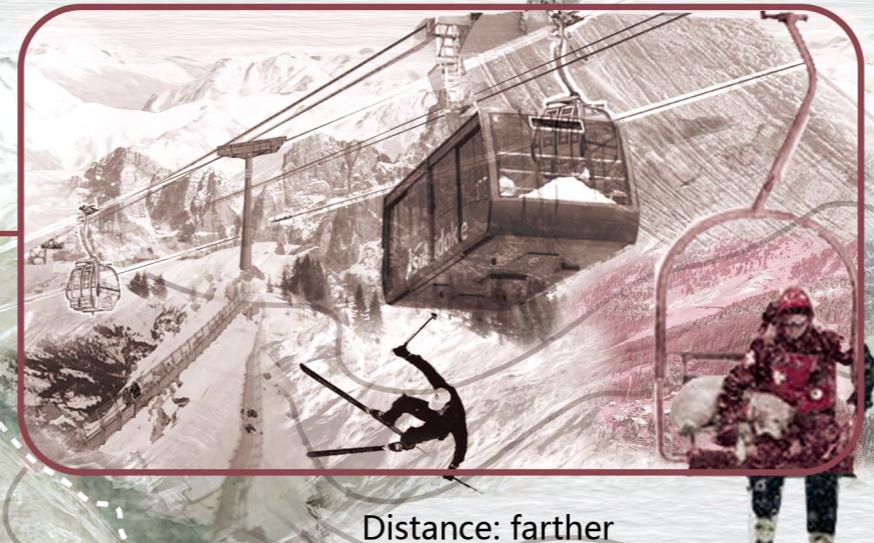
Distance: moderate
Exposure: moderate
Activities: tourist train, cycling
Future scenes: design of a scenic mini-train path through the base to allow visitors an overview of the scene.

Distance: nearest
Exposure: minimal
Activities: walks, farming experiences
Future scenario: urban densification development with reduced exposure.

System four Residential zone

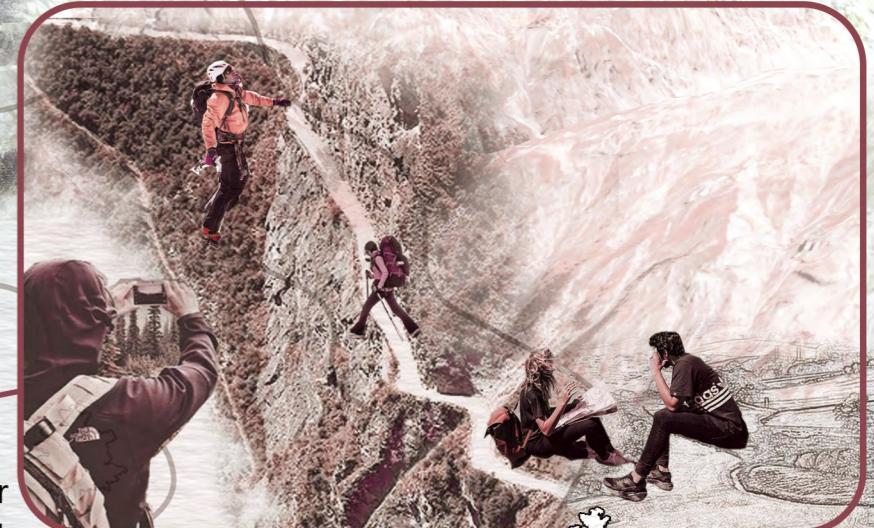


System One Snowy mountain



Distance: furthest
Exposure: high
Activities: skiing, sumitting, cable car tours
Future scenario: The site's original skiing activities are retained, and lift activities are planned in the mountains to facilitate connections to the mountains.

System two Mountain



Distance: closer
Exposure: moderate
Activities: swimming, shallow water frolicking, rafting
Future scenario: wider and more varied river, increased number of wetlands, improved biodiversity.

System five River

