Bali *Tirtha Swastika*
From peaks to shores, a holistic water management for a tropical island

Erminia Mossi master project 2016 – ENAC – EPFL

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Today, there is no outside in which the unwanted consequences of our collective actions and personal objects can disappear from the view. There is, in Bruno Latour's words, 'no zone of reality in which we could casually rid ourselves of the consequences of human political, social, and economic life'.

Rania Ghosn et El Hadi Jazairy, *Trash, or, A Genealogy of the Disaster of the World*, Harvard Design Magazine, No. 43 – F/W 2016, 166-167

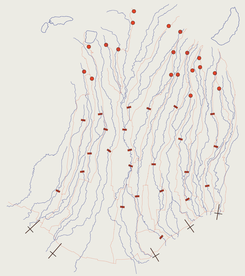
The island of Bali is facing multiple environmental issues related to the overexploitation and pollution of its water resources.
The project proposes a territorial strategy that focuses on a holistic water management system.
From the *sacred* peaks, through the *productive* slopes and to the *hedonistic* shores, multiple interventions generate a new dialogue between **infrastructures** and **users**.

A new network of sanitary canalization, located on the existing road infrastructure, composes the **invisible** element of the project that connects to the **visible** equipments which store, filter and treat water.

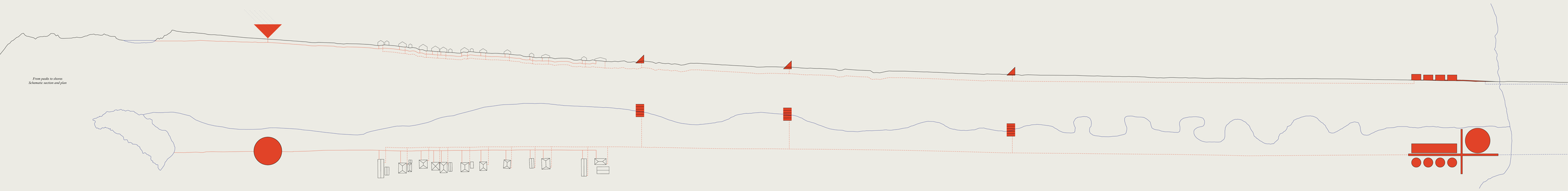
Reservoirs, located near the peaks, harvest rainwater through their monumental roofs and simultaneously store water from the nearby spring sources.
Their design generates a shelter from both the sun and the rain.

Down the deep ravines, which are generated by the specific geomorphology of the island, trash screen bridges filter the water while forming, through their foundations, wash basins to be used by locals.

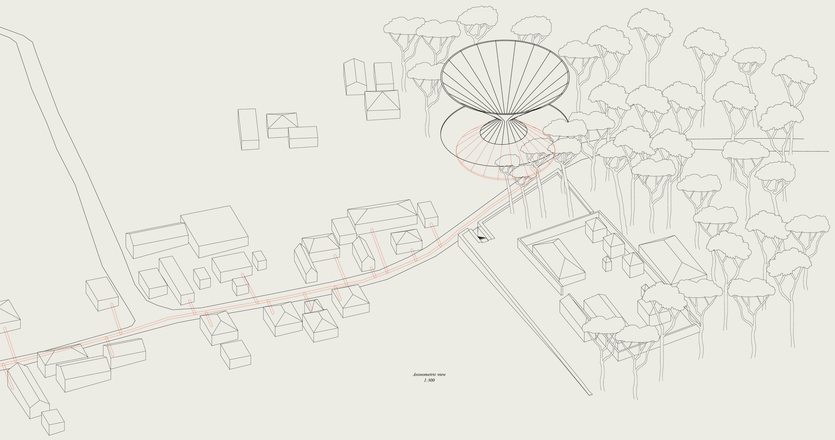
At the end of the system, waste water treatment plants, integrated in the existing urban/agricultural environment take advantage of the terracing landscape of the rice paddies as to generate open air lagoons and marsh to treat water before discharging it into the ocean.
Access to the plant, lagoons and marsh generate a crossroad,
recalling the *catus pathe* of Balinese villages.



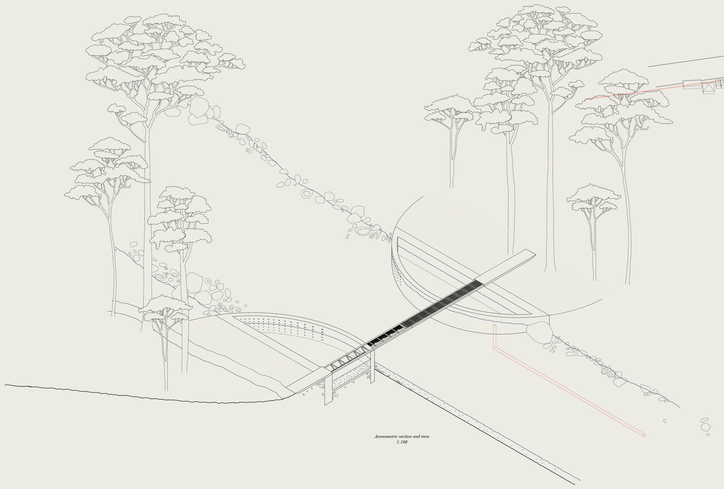
Territorial strategy



From peaks to shores
Schematic section and plan

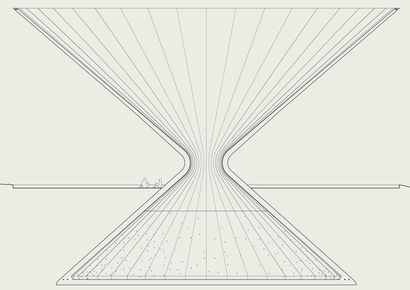


Axonometric view
1:500



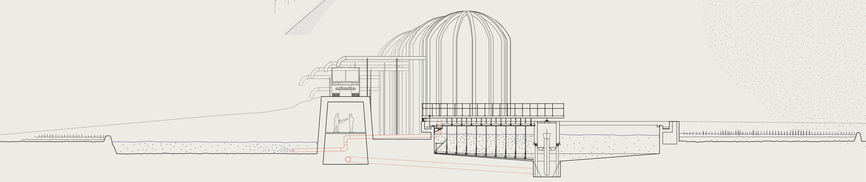
Axonometric section and view
1:100

Axonometric view
1:1 000



Cross section
1:100

Section S-S
1:100



Cross section
1:100