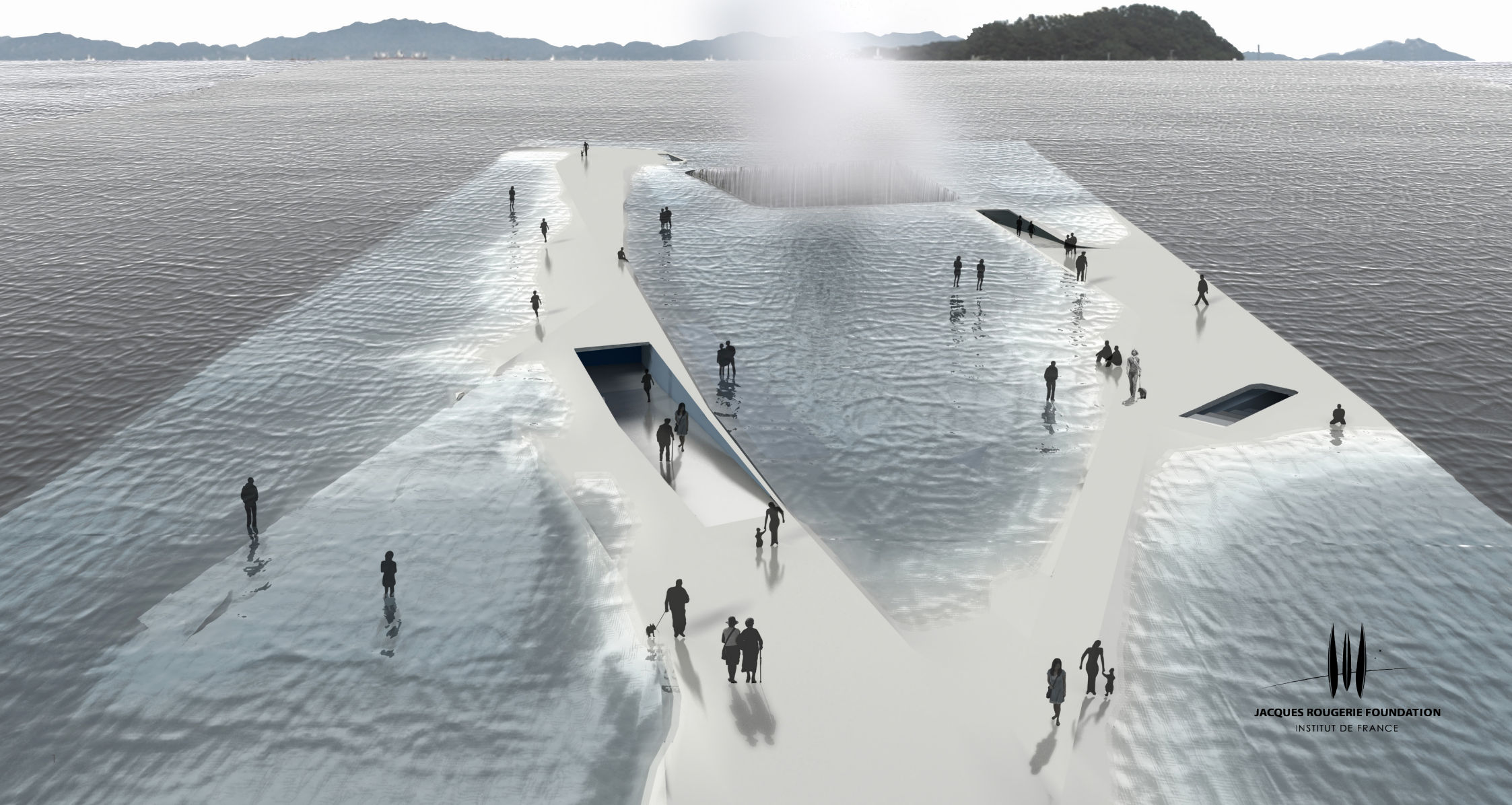
"The fact that our body is an organized river is something we cannot doubt" Novalis Fragmento

Water is the essence of everything that flows in Nature. From the large oceans and seas with their currents to the human body and its cells, life is associated with water and its movement. Those movements are universally understood by any culture around the planet… waves, whirlpools, currents or tides are present in every corner of the globe. This proposal endeavors to be constructed upon water movement and to represent the significance of life. The Pavilion is not an architectural object in relationship with the water but rather a nautical construction shaped by the movement of water.



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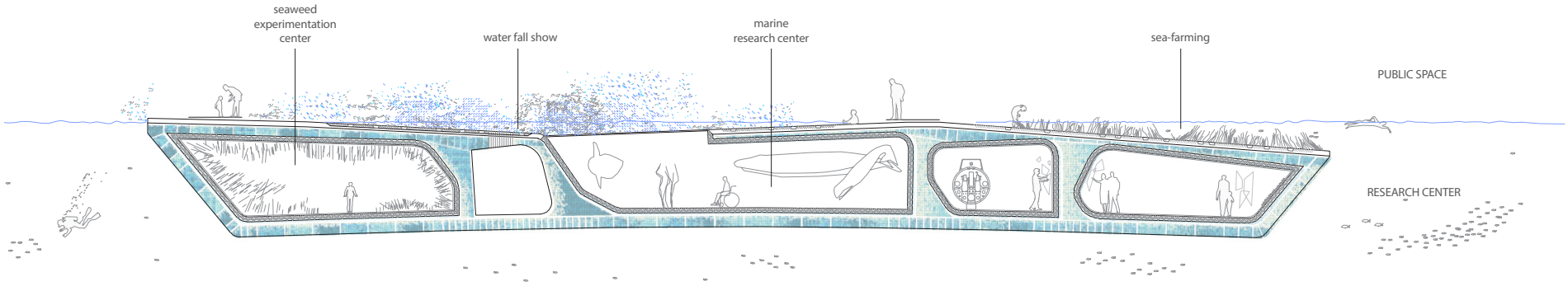

WEAK EQUILIBRIUM

Water movement appears in different formats and with different intentions across the pavilion, from the most didactical (water shows and water screens) to the most technical form (hydraulics or cooling system). A cross section of the Pavilion reveals that, as it happens in the human body, water runs through its "veins" in order to allow the pavilion functioning (display, shows, cooling, hydraulics, etc.).

The design of the Pavilion aims to raise people's attention on the ocean and coastal environmental crisis. The relationship with the water is intentionally solved in an unstable equilibrium. The Pavilion is between a submerged and emerged level –as submarines do- defining a sensible state of equilibrium between dry and wet. This aims to represent the real risk that many coastal areas around the world will face by the rise of the ocean level consequence of global warming.

The visitor will experience certain uneasiness when visiting the Pavilion, a state of mood suitable to enter the interior exhibition space where information is display.

Flood in Venice

Floating Market in Thailand

The Delfta works in the Netherlands

Releave of canal breaking a dike. The Netherlands

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WATER ICON

We live in a time with the highest density of iconic buildings per square meter in the world. While the buildings tend to attract the attention of the visitor by expressive forms and new materials on their facades, sometimes architecture has to adopt a different attitude to become an icon –a reference on the site. Our proposal for the Pavilion is flat, parallel to the water bed. In order to become visible and referential to the visitors it is proposed an icon made of water. At the end of the access plaza there is a hole which provokes the free fall of the water. This artificial cascade creates a cloud of water vapor and the sound of a cascade.

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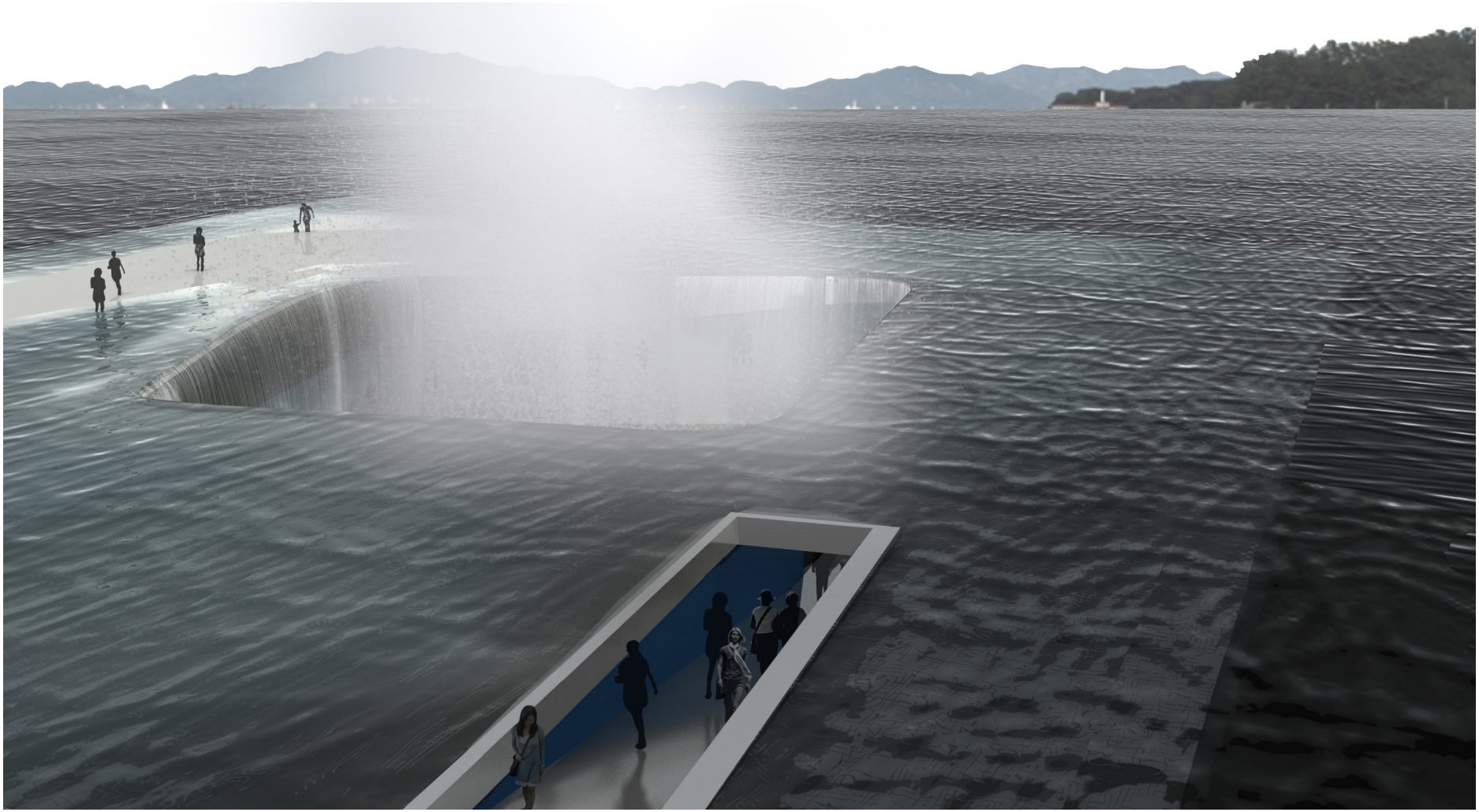
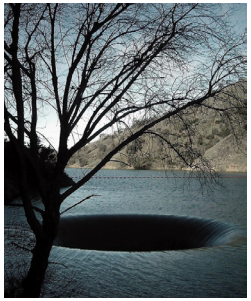
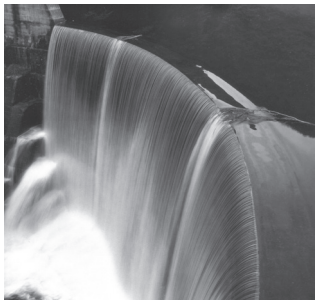


Natural water fall



Water scape of dam



Artificial water jump

LANDMARK HOLE

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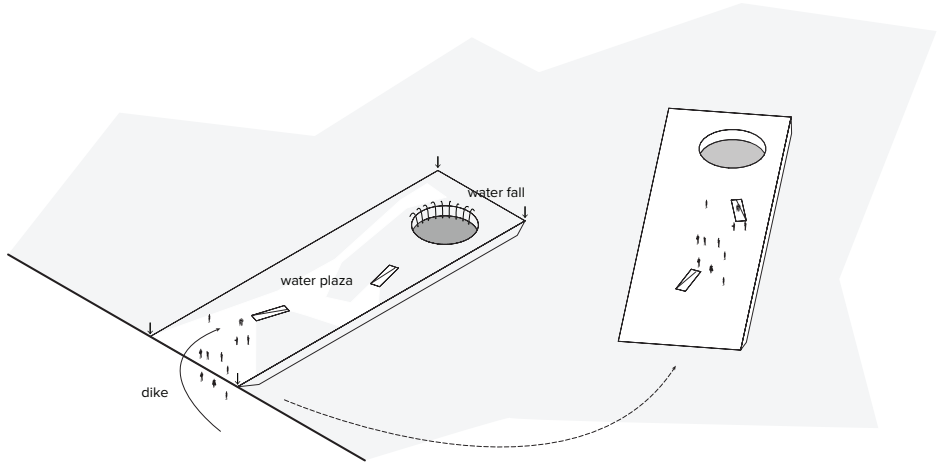
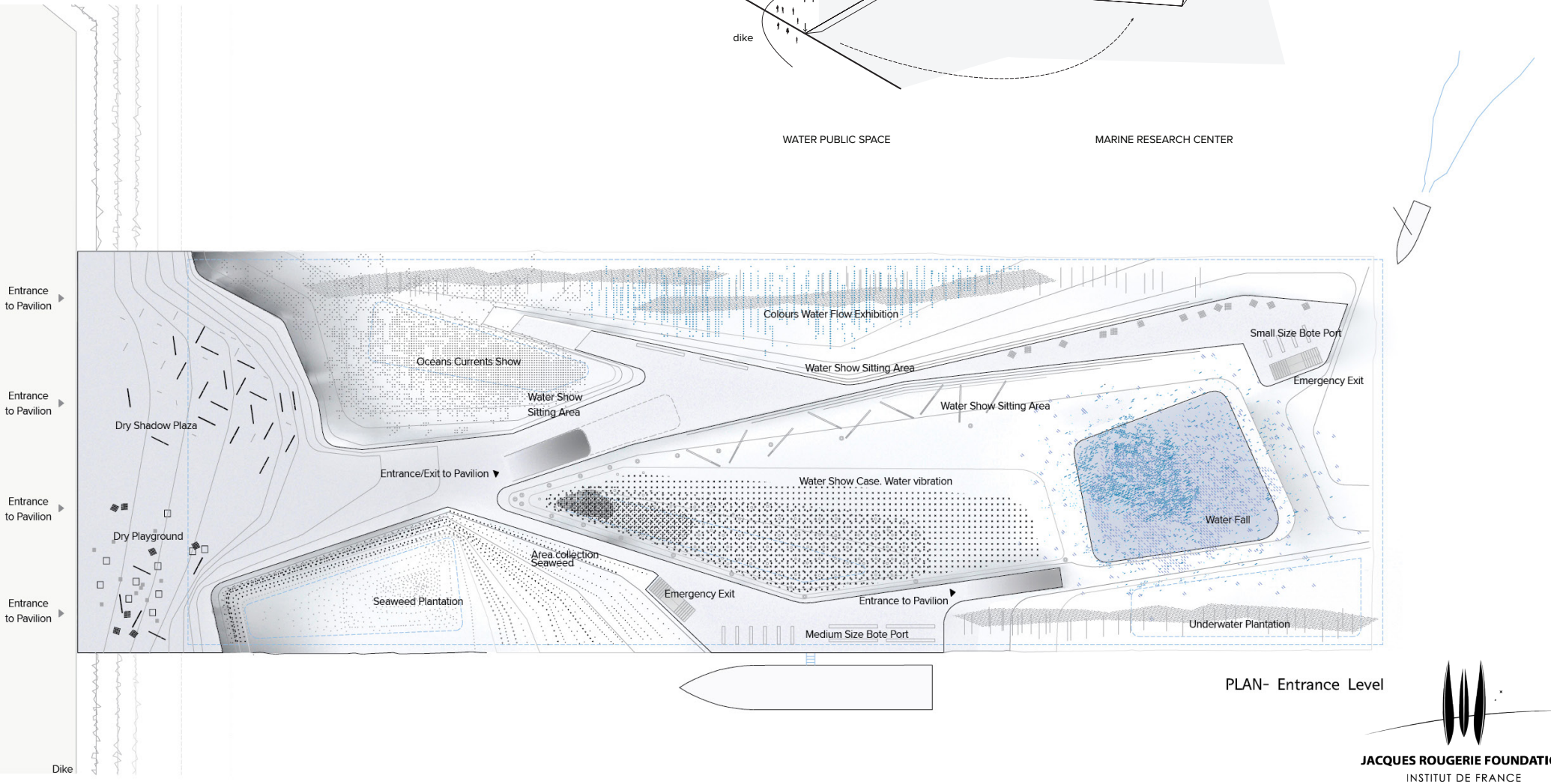
WATER PLAZA-PUBLIC SPACE



WATER PUBLIC SPACE

MARINE RESEARCH CENTER



PLAN- Entrance Level

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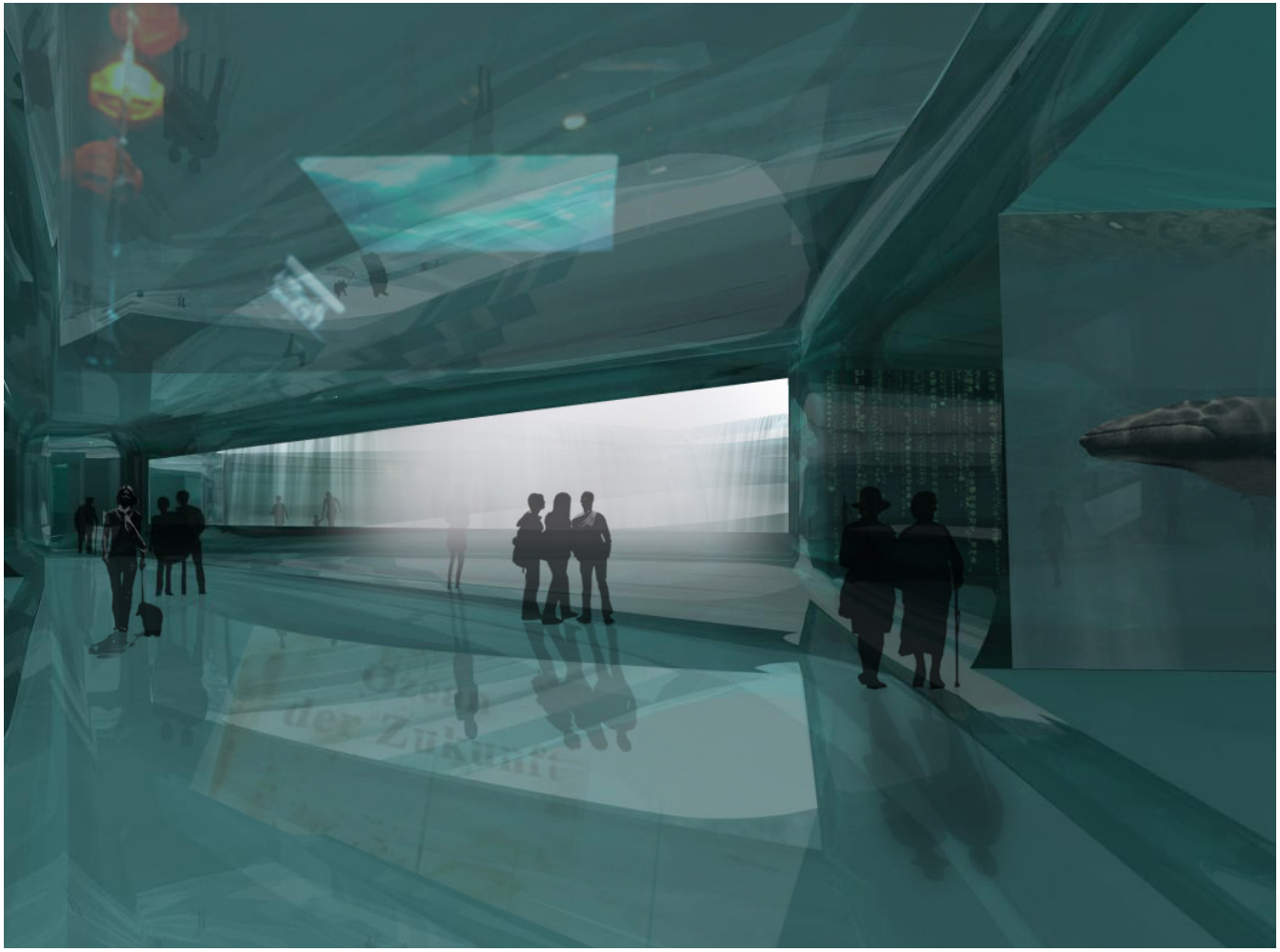
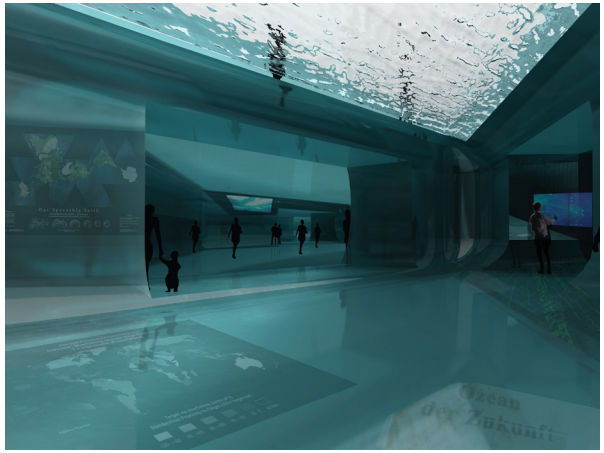


Interior view 1. Entrance

Interior view 2. Exit ramp



Interior view 3

MATERIALITY

Continuity is the spatial sensation users will have when visiting the interior of the the Water Pavilion. Though the space is divided in various areas, continuity is provoked both because of large connecting areas between spaces and, second, because of its material composition. Fluid informational walls are translucent in different degrees so that they can deliver information at the same time that allows vision through them.

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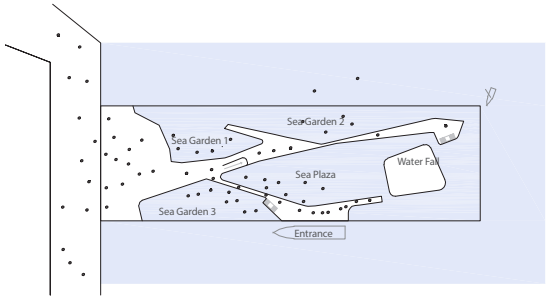
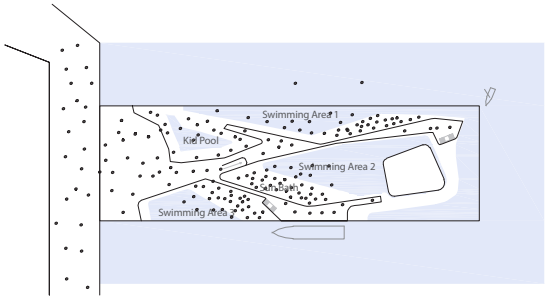
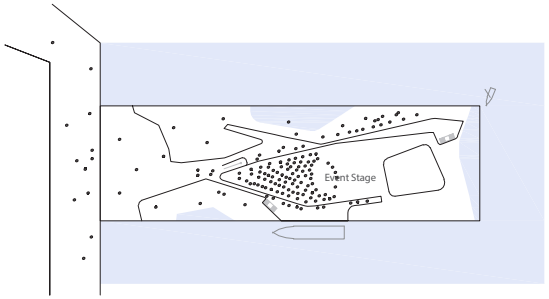


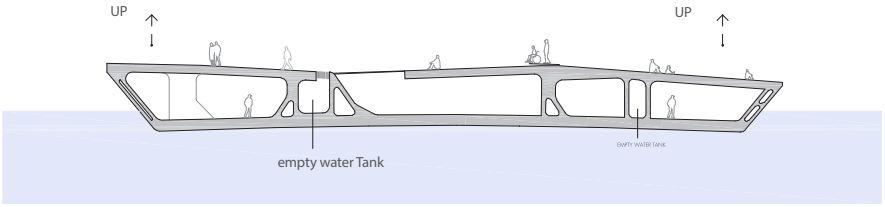
1 Sea Gardens



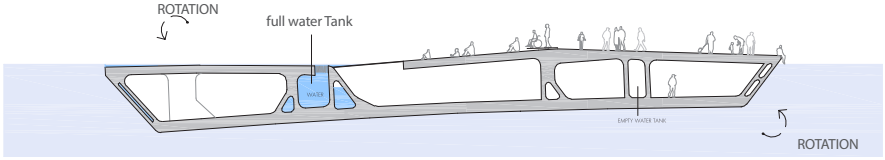
2 Sea Park



3 Event Plaza



EMERGED



SUBMERGED

FLEXIBILITY: HYDRAULICS

The Water Pavilion is a hydraulic machine system which allows manifesting various configurations in relationship with the water. By filling in deposits of water distributed along the structural body the pavilion can gain or lose weight and therefore rise or lower its level with the water surface.

The movements can be vertical –up or down- or can be tilted. Each movement will create a differentiated relation with the water defining new movements and usable areas on the pavilion's upper platform.

Hydraulics also allows elevating the pavilion various meters from the water level during Typhoon seasons –heavy sea.

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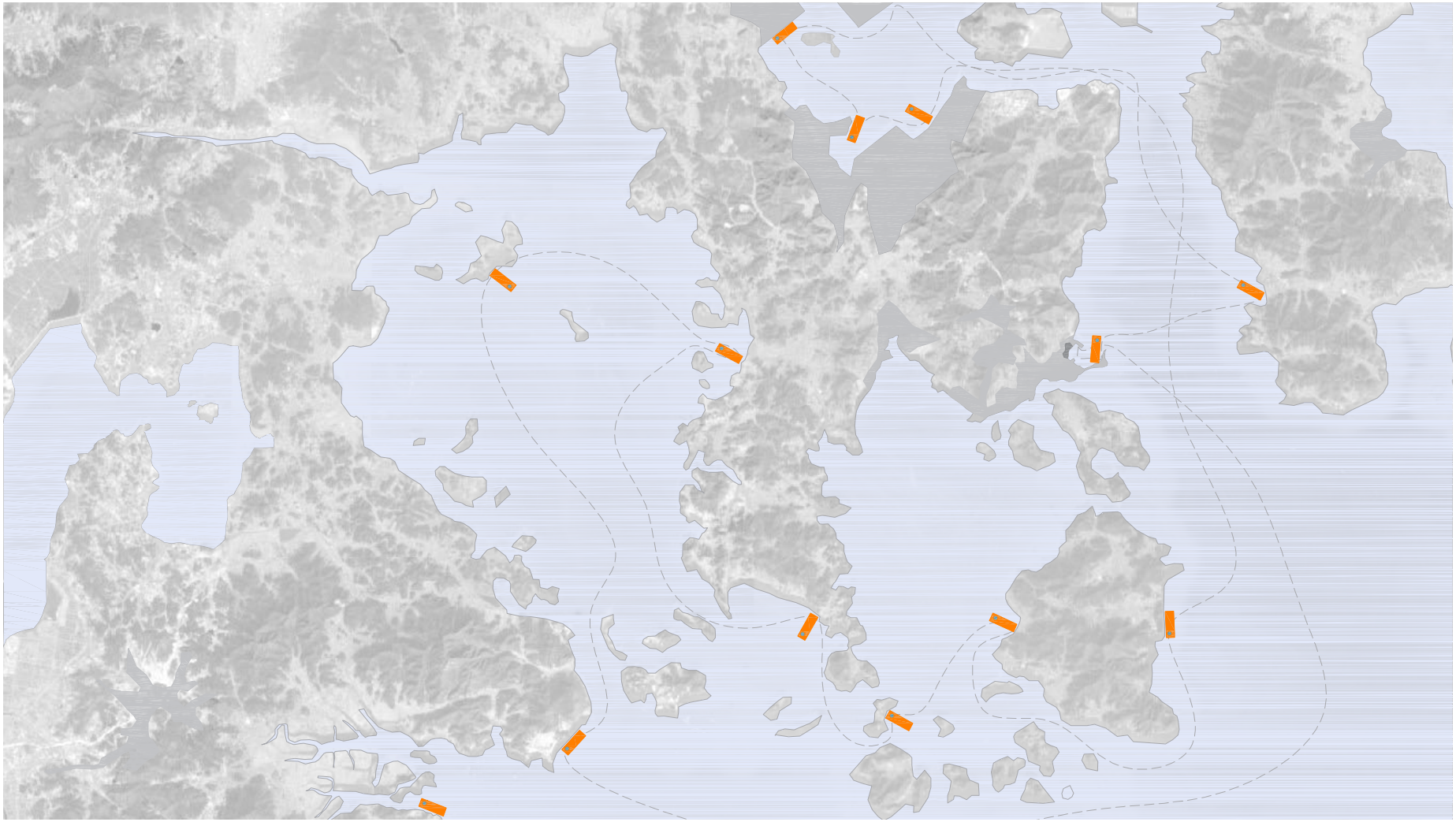

FLEXIBILITY: MOBILITY

The proposal for the Water Pavilion does not have foundations. The pavilion is understood as a boat and therefore it has the flexibility of any other ship, so it could remain on its original location or travel around the region.
This flexibility of movement expands the potential use of the pavilion. This movement would trigger a potential touristic aspect of the facility and be part of a touristic-academic offer for students and visitors.
Moreover, we believe the pavilion could be rented –or sold- to other local governments if necessary.

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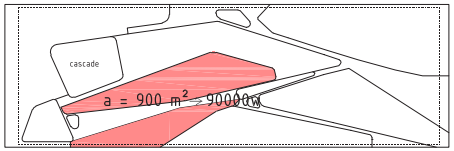
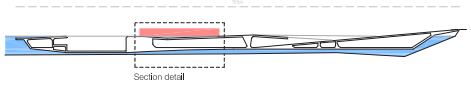
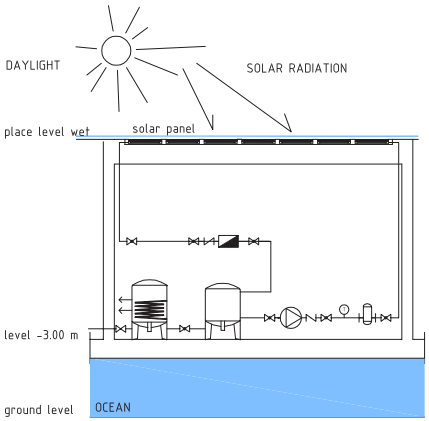
SOLAR ENERGY



Solar Energy - Location of solar panels on the horizontal surface with no more than 10cm water depth





Contracted energy 150 kw

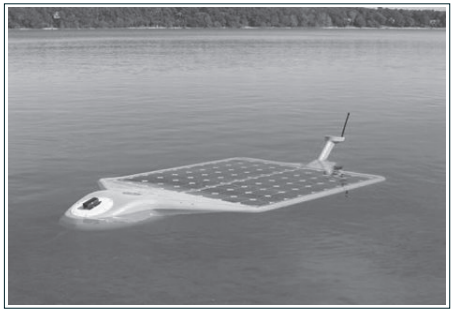
1 solar panels of 2m x 1m → 200w

450 solar panels

90.000 w → 900 m²

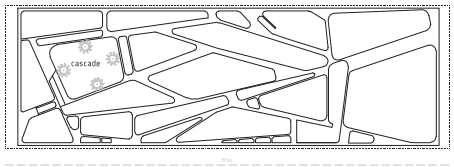
ITEMS

motors movement	42.500 w
lighting	70.000 w
mechanical sources	50 HP (37.500 w)
TOTAL	150.000 w

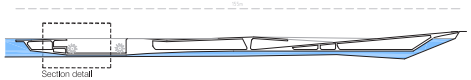


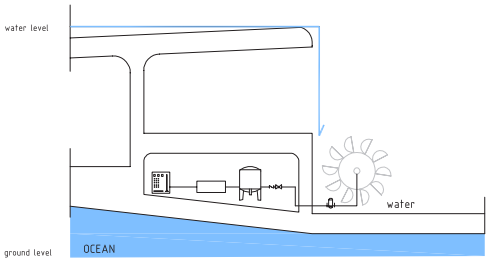
Solar energy generated boat

WATER ENERGY



Water Energy - Cascade function as micro-hydro power. Microturbines placed at the bottom of the same





30 turbine of Ø 30 cm

v= 2cm/s =0.02 m/s

L =2 x ¶ x r =94.25 m

Ø= 0.04 m x 94.25 m =3.76 m²

P= y x q x h (kw)

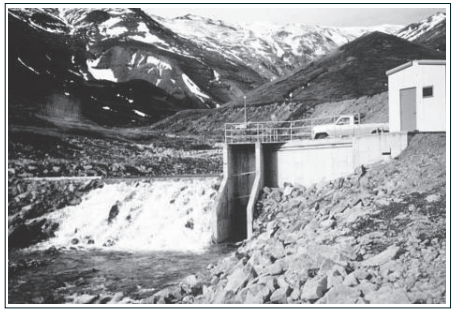
q= v x Ø (m3/s)

h= height (m)

q= 0.02 m/s x 3.76 m² = 0.075 m3

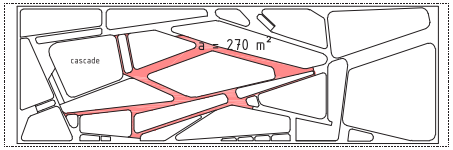
P= 8.4 kN/m3 x 0.075 m² x 30m = 18.95 Kw

TOTAL 18950 w (18.95 kw)

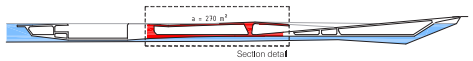


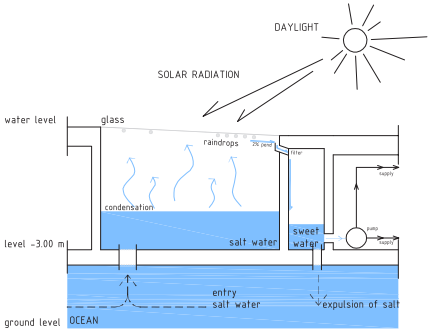
Micro Hydro Facility in King Cove Alaska(800kW)

WATER PURIFICATION



Water Purification - Collecting sea water into water tanks along the section. Later purification of the sea water through a natural desalination system (by condensation)

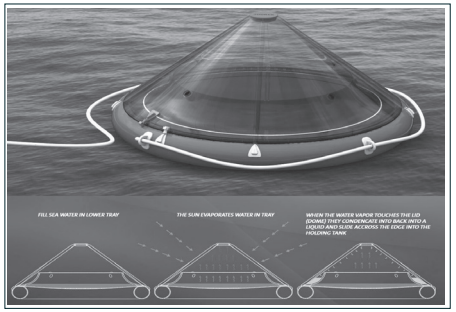




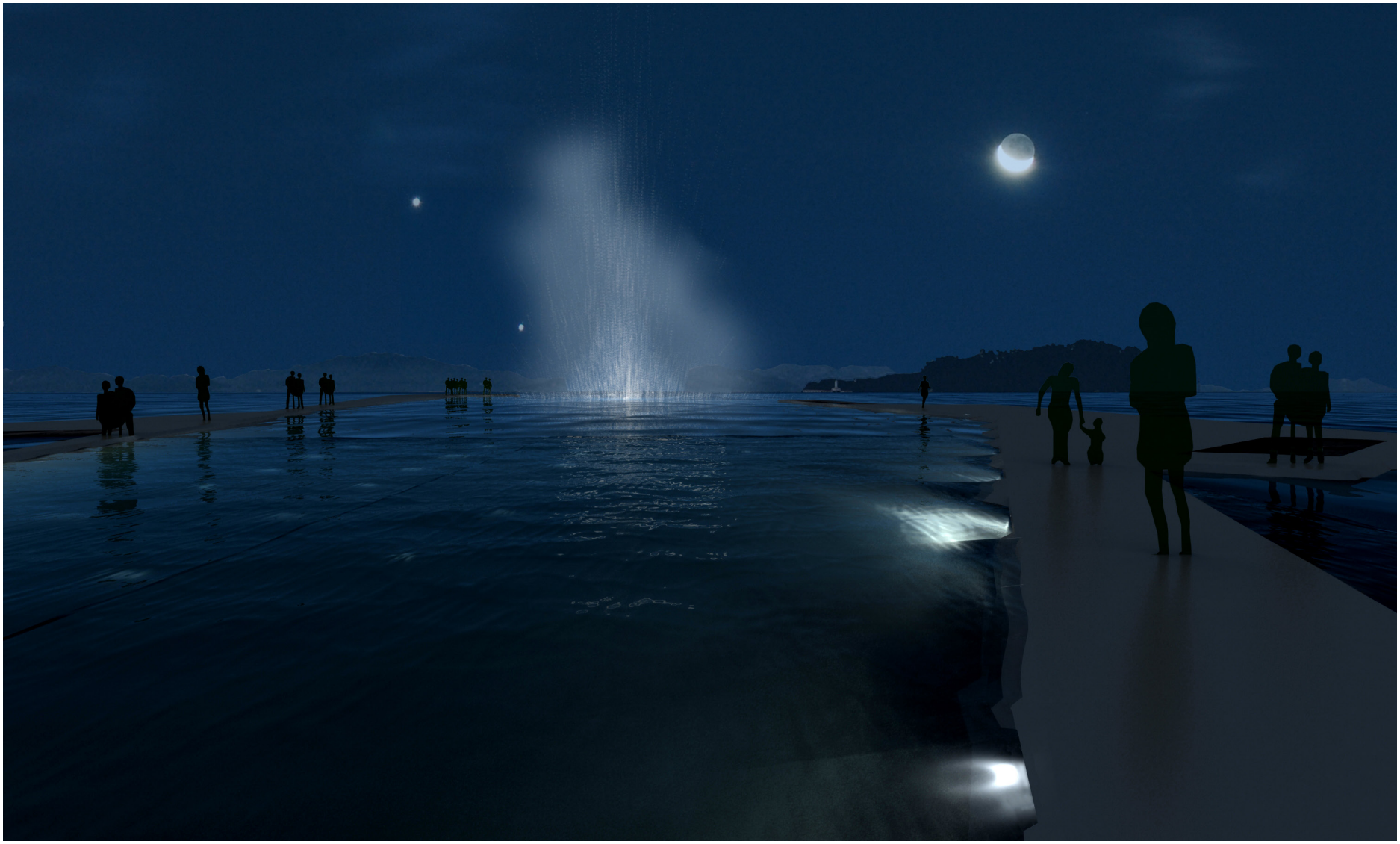
100 l H_2O salt ..... 75 l H_2O salt

30 l of water
1.800 person ..... 54.000 l of water=54m3

Program of sweet water	cafetería	9.000 l
Program of salt water	toilets	10.000 l
	shows	35.000 l
TOTAL		54.000 l



Example of Water Purification by distillation



NIGHT VIEW

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