MARE MONSTRUM: a land between the seas

The unstable foundation of the new Calabrian Ionian and Tyrrhenian coastline after storm surges

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*** PMopenlab srls

Two-Faced
Splashdown/Impoundment
Instability
Border/Coastline
Climate Change

MARE MONSTRUM: a land between the seas

1 | Textual narrative (edited by Nava C. and Curulli I.)

The textual and visual narrative of the research interprets the land-sea border in its double and inverse relationship:

- **Two-faced**: boundary as a double margin, as land-liquid surface / sea-solid and thick surface;
- **unstable:** related to its foundation, which allows the move from territories landing in the sea to land impoundment;
- **double phenomenon:** of the post event, in which the storm surge is a climatic effect, while the change of the coastline is the effect of the storm surges;
- **bilocation:** which reads the Ionian and Tyrrhenian coastlines of Calabria not as geographically opposed land stretches, but it captures their settlement attributes and interpret these land stretches as water-fronts of differently arranged coastlines.

Climate change and regenerative devices (Nava C.)

The transition scenario to be referred to tells that the Mediterranean is a real hot-spot: «(...)The previsions of temperature increase to 2100 foresee several scenarios, based on the different human capacity to reduce their carbon footprint: if the increase of CO2 in the atmosphere was contained in a range of concentration compre between 400 and 40 parts per million, the temperature would increase up to 2 ° C compared to the pre-industrial era. If mankind does not intervene with active measures, this will be the situation in the atmosphere already by 2025. If the concentration of CO2 in the atmosphere reached 1000 ppm, the average planetary temperature would be about 4°C higher than in the pre-industrial era, but with peaks of up to 6.4°C: without regulatory action this will be the situation in the atmosphere by 2100. (...) This increase in temperature will not be homogeneous throughout the planet: it will be greater at high latitudes, in the northern hemisphere and on the continents, less intense at low latitudes, in the southern hemisphere and on the oceans. To increase moreover will be more the minimum temperatures and less the maximum ones. The Mediterranean region in particular is considered one of the hot-spots of climate change, with a warming that could exceed 20% of the global average increase. (...) Rising temperatures and reduced precipitation in the Mediterranean area will further exacerbate the risk of wildfires, impacting people, bea and ecosystems in the most vulnerable areas» (Pievani, Varotto, 2021). The effects of climate change will find in the reports of the new visionary geography the answer to their impacts, through the ability of regenerative devices to anticipate in an extreme way new transition scenarios. In particular, recording that the greatest changes to the Jonian and Tyrrhenian coasts of Calabria have

occurred in the past 100 years, we can propose transition scenarios for the next 100 years. In detail, according to the visions produced in our study, by 2130 we can say:

- **Two-faced**: the relationship between soil and water changes in its known condition and both become natural resources capable of assuming new models of living and producing. The regenerative devices will allow to transform the impact on coasts and sea levels, in a new platform of material and immaterial networks able to respond with high levels of adaptability. The eco-infrastructures for the defense are able to retain soil, water but also store CO2 and distribute energy from smart grids;
- **unstable***:* the new artificial soils coming into the sea and the flooding of water towards the settled territories, become new productive and service landscapes to the new naturalness and permeability of the coast;
- **a double phenomenon***:* mitigation devices for the impacts of storm surges on the coasts and adaptation to make resilient the inhabited systems that will find in the inner areas their safest location, returning to the sea areas of flooding to park, restoring the naturalness of the rivers; regenerating "the Mediterranean hot spot" with real conditions of controlled microclimate, able to lower the local effects of overheating;
- **bilocation:** the regenerative devices of energy production, will be able to exploit the different geographical location of the coasts, the difference in solar incidence at different times of day and seasons, as well as the flow of winds from the sea and the territories of inland areas, will create real energy catalysts and effective trails of mitigation.

Figure 1a | Mare Monstrum – Video. Source: A.R. Palermiti's video-production, direction and narration by C. Nava, link: https://youtu.be/lOX399x0dns

Figure 1b | One Hundred Years – Video. Source: A.R. Palermiti's video-production, direction and narration by C. Nava, link: https://youtu.be/R_-1zeSOcng

Climate change and resilient adaptation (Curulli I.)

Mare monstrum identifies the border as a device capable of generating transient-resilient landscapes. The coastline is thus a stratified surface, formed by heterogeneous elements (rainfall, air, soil, minerals, animals, plants, and people) that relate to each other in variable and complex ways. Mare Monstrum landscapes reduce vulnerability and increase adaptive capacity (incremental, anticipatory, transformative) to climate change, encourage the structural variety of the landscape, provide its connectivity, and synergistically increase adaptive capacity. These landscapes can absorb, learn, adapt, and transform into new landscapes in which inhabitants-communities are an integral part.

Therefore, they are resilient landscapes that express an attitude towards the territory that recognises «the capacity to lead a continuous existence by incorporating change as one of the primary values in a sustainable evolutionary perspective» (Besana et al., 2018: 184).

- **Two-faced**: sees the border as the interweaving of man with nature; border as a malleable hinge between land and sea with a two-faced vocation of place of departure/ place of arrival; border as fertile ground for the exploration of our design imagination and our relationship with fluid-transitional landscapes;
- **unstable**: the boundary is constantly changing, thus generating new scenarios of continuate identity; the dynamics of water and soil shape and relate the elements of the border and create new landscape stratifications, new hybridisations between soil and water;
- **a double phenomenon**: erosions and floods guide transitional landscape design, enrich local ecologies, reinforce the identities and spatial qualities that belong to specific environments: effects of climate change generate the post-event landscape. At the same time, the new border increases its transitional surface and is able to absorb more design interferences;
- **bilocation**: the transitional landscapes of Mare Monstrum are not geographically opposed, but they result from a single adaptation strategy of a single common border that is differently oriented to the effects of climatic variations.

2 | Visual narrative (edited by Mangano G., Leuzzo A., Lucanto D., Palermiti A.R.)

«My mediterranean looks like paper mache while the best thing you can tell someone about the mediterranean is to read the Odyssey» (Simenon, 1934). With these words, the narrative voice of the incipit video of "Mare Monstrum" (Figure 1) concludes the passage from water to soil that represents through the images taken from Bova Marina and Palizzi (Ionian Coast in the province of Reggio Calabria) the instability of the coast in its relationship between the elements, hybridizations between soil and water.

The infographic elaborated on the basis of data from the European Environment Agency Map highlights aspects related

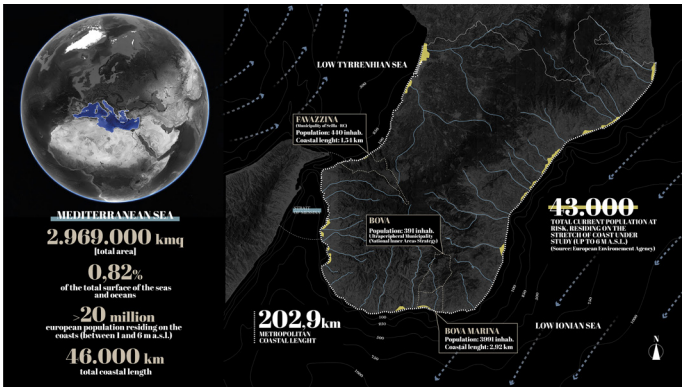


Figure 2 | Data processing on European Environment Agency map "Climate Change impacts in Europe" on the Mediterranean Sea and the RC Metropolitan Coast. Source: ABITAlab elaboration for Medways (2021)

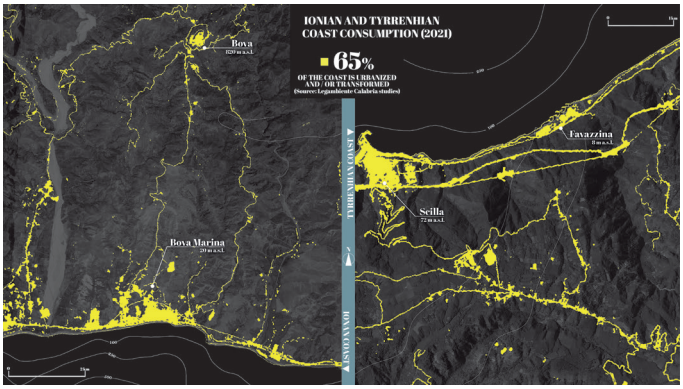


Figure 3 |Land consumption on the Ionian and Tyrrenhian Coast, territory of Bova Marina and Favazzina. Source: ABITAlab elaboration for Medways (2021), Data processing on soil consumption webgis 2021 data - ISPRA SNPA.

to some dimensional characteristics of the Mediterranean Sea and its coasts, also in relation to the population living there (Figure 2). The Mediterranean basin covers a total of approximately 2,969,000 square kilometres, or just 0.82% of the total land area of seas and oceans. However, the population settled on the more than 46,000 kilometres of coastline (in the emerged belt between 1 and 6 metres above sea level alone) exceeds 20 million inhabitants, demonstrating the high population density of these territories. Moreover, taking the metropolitan area of Reggio Calabria alone as a point of reference, through the studies on the 'climate impacts in Europe' of the EEAM itself, it can be shown that in the 202.9 kilometres of coastline, the population at risk of flooding in climate scenarios between 50 and 100 years is about 43,000 inhabitants. In particular, the mapping illustrates the coastal strip at risk of flooding within 6 metres above sea level and the hydrographic structure of the territory of the province of Reggio Calabria, which is affected by the presence of more than thirty major watercourses (plus hundreds of smaller ones not shown on the map). The morphological structure and the state of health of these ecosystems and basins are of fundamental importance for the phenomenon of coastal nourishment. The map also shows the municipalities, the localities and the length of the coasts involved in this research, i.e. the municipalities of Bova Marina (3991 inhabitants) and Bova (391 inhabitants and outermost municipality F SNAI) on the Ionian Sea and the locality of Favazzina (a village of about 110 inhabitants within the Municipality of Scilla) on the Tyrrhenian Sea. Finally, the map shows the main bathymetric curves of the two seas and the prevailing sea currents.

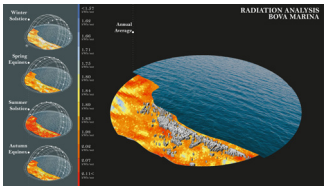
The maps elaborated through the superimposition of aerophotogrammetry of the Bova Marina/Bova and Favazzina territories with the consumed soil surfaces (in yellow) on the basis of the webgis data elaborated by ISPRA SNPA (2021), allow to read the impact of the anthropic transformative intervention and the soil consumption, which, according to the studies of

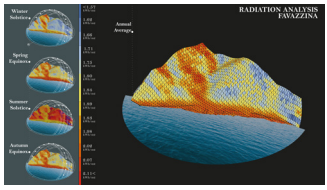
Figure 4 |Bova Marina Radiation Analysis.

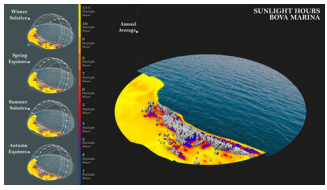
Figure 5 |Bova Marina Sunlight hours analysis

Figure 6 | Favazzina Radiation Analysis

Source 4 | 5 | 6: ABITAlab elaboration for Medways (2021), Parametric Visualization based on climatic data relating to Solar Radiation and Sun Light Hours data provided by the OpenStreet Map database. The data are processed via the LadyBug plugin on Grasshopper.







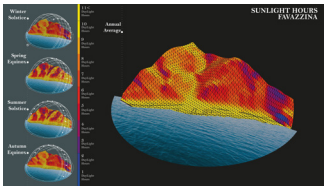
Legambiente Calabria, is over 65% of the Calabrian coastal territories. The coast of the Bova Marina area, 45 kilometres from Reggio Calabria, is characterised by two indentations that enclose beaches of light-coloured gravel mixed with sand and bathed by the waters of the lower Ionian Sea with its gravelly seabed. The majestic Amendolea River separates Bova Marina from the adjacent municipality of Condofuri. The coast of the territory of Favazzina, 22 kilometres from Reggio Calabria and 5 kilometres from Scilla, stretches along the tip of the same name that juts out into the Strait of Messina. It is lapped by the torrent Favazzina and is characterised by pebble and gravel beaches washed by the low Tyrrhenian Sea (Figure 3).
The study of the climatic factors characterizing the coasts of Bova Marina and Favazzina was conducted through the use of Grasshoper software and related plug-ins, in order to demonstrate that, although geographically opposed, the locations of the two coasts can open up to predictive similarities for coastal modification and a unique climate adaptation strategy. The analyses below refer to solar radiation and daylight hours factors in the two different contexts and in the four seasons (Figure 4, 5, 6 and 7).
The measurement of the effects of the winds on the coasts was carried out experimentally, verifying the flows using the CFD eddy3d modeling software performed on Grasshopper. The images are intended to represent the areas to be subjected of actions for the CC impacts mitigation. Figure a) highlights the relationship between the windflow over the inhabited center considering the prevailing winds (shown in fig. b). The figure c), d) and e) give an overall image of the impact situation.
In section d), it is illustrated the analysis of one of the areas most exposed to prevailing winds (Figure 8-9).

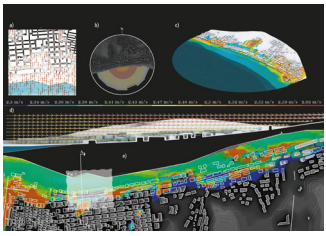
Figure 7 | Favazzina
Sunlight hours analysis. Source: ABITAlab elaboration for Medways (2021), Parametric Visualization based on climatic data relating to Sun Light Hours Data provided by the OpenStreet Map database. The data are processed via the LadyBug plugin on Grasshopper.

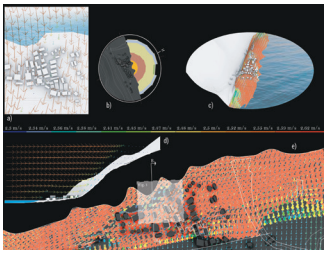
Figure 8 |Bova Marina Windflows analysis.

Figure 9 | Favazzina Windflows analysis.

Source 8 | 9: ABITAlab elaboration for Medways (2021), Parametric Visualization based on CFD eddy3d modeling software performed on Grasshopper.







2.1 | Transformation scenarios for Bova Marina

The map illustrating the coastal and settlement transformation scenarios for the Bova and Bova Marina territory in the years 2030, 2130 and beyond 2200, is built through the graphical elaboration of the open data available with the Climate Central Map “Sea Levels and Analysis” tools “Risk Zone Map” and the data on land consumption present on the Ispra Geoviewer open webgis data platform In particular, the elaborated mapping illustrates the evolution of the coastline in the three designated periods (short, long and very long term) in the two different stretches of coastline. The aim is to provide indications of a “dimensional” nature of the erosion phenomenon and sea level rise in relation to the built environment of the reference area. The transformation scenario of the Bova Marina territory calls into question the relationship with the Bova settlement. In fact, possible forms of commuting could be generated, which could be activated as an outgoing towards more favourable

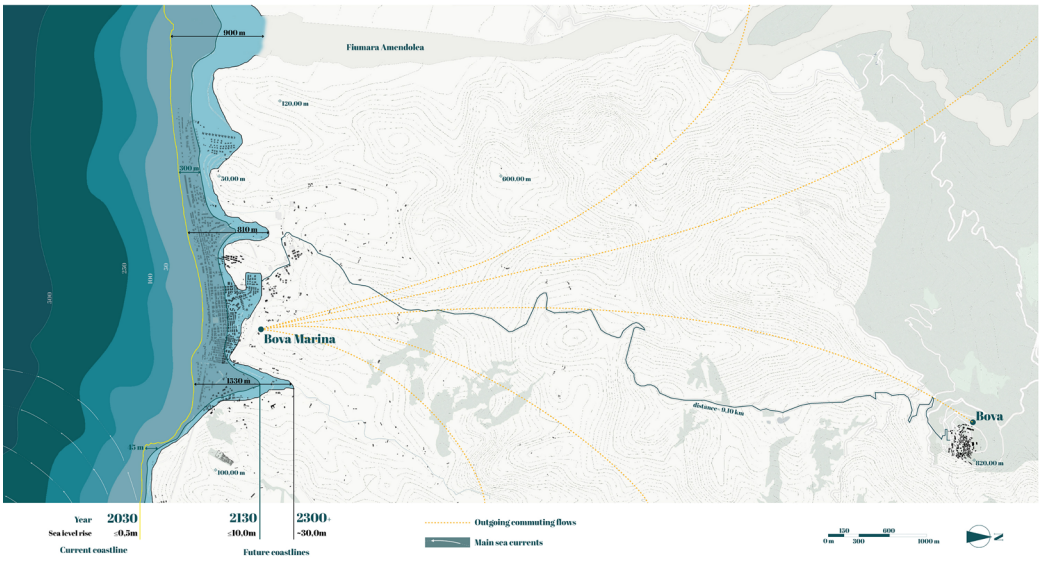


Figure 10 | Bova Marina - Transformation Scenario of Coast and Settlements. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing on Sea level tools and analysis by Climate Central "Risk Zone Map" and soil consumption webgis data by Ispra Geoviewer.

territories compared to the current ones, in fact cancelled out by coastal erosive phenomena, in scenarios of uncontrolled climate-altering gas emissions. The coastal population could then find in inner areas more favourable conditions for the development of new settlements (climate, resources, productive soil) and trigger regenerative actions for local and "emerging" communities (Figure 10).

Instability. Projected sea level rise in Bova Marina by 2130. Analyses have shown that, by 2130, the sea level will rise by up to ten metres (Climate Central, 2021a). In areas of regular settlement, the flood line could extend up to 200 metres from the current coastline (Climate Central, 2021b). At streams, flooding could reach areas further inner, up to twice the distance from the current coastline, due to lower elevation and altered stream beds, as can be seen in the peaks in the top right and centre of the elaboration (Figure 11). In order to initiate a more precise geo-referenced environmental analysis, and to

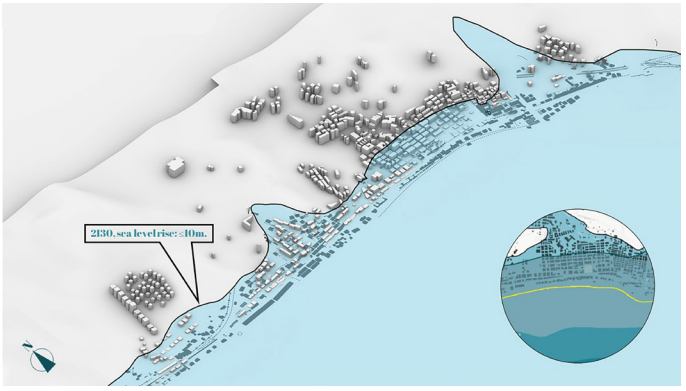
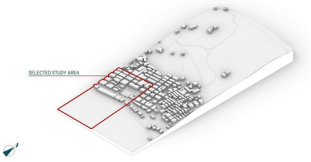


Figure 11 | Bova Marina, Map of flooding 2130+. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central. This map may understate risk.

Figure 12 | Bova Marina – 2021 coastal settlement and selected study area. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images.



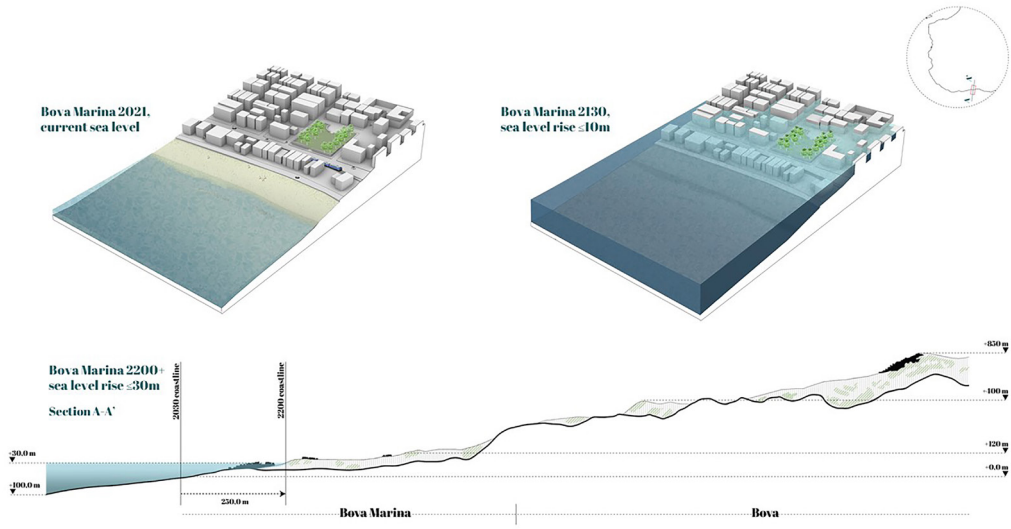
allow for an easier comparison between the existing state and the conditions at 2130, a limited area of the entire Bova Marina territory was examined. The selected area includes: the sea 150 metres south of the shore, the buildings on the waterfront, beyond the railway, and the consolidated built environment up to about 10 metres above sea level , 150 metres north of the coast (Climate Central, 2021b) (Figure 12).

The current state of the examined area in the territory of Bova Marina. In 2021, the consolidated built environment is separated from the shore by a strip of private buildings on the waterfront and the railway, which is still in operation. The relationship with the sea and the shore is locally related to fishing, walking, swimming and boating, with high tourist importance during the summer season.

The state of the examined area in 2130. The sea level is expected to rise by ≤10 metres. As a result, the coastal settlement is totally submerged by sea water, together with the railways and the lower part of the consolidated settlement (Figure 13-14).

Amarage. By 2130, a phenomenon of transferring of inhabitants from the coasts towards the higher morphological areas of the territory favours the repopulation of inner areas. On the contrary, rivers and coasts are being re-naturalised: changes in land use make it possible to create linear parks characterised by autochthonous and typical Mediterranean vegetation. The previously submerged settlement is used for production activities related to organic farming in brackish waters, experimenting with aquaponic tower systems. The cultivation areas and the advanced harbour and accommodation facilities together form a system permeable to the ebb and flow of the sea water: the ditchings of the former coastline. This favours the growth of the ecological habitat and also the increase

Figure 13 | Bova Marina – Current and 2130+ sea level. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images + Data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central. This map may understate risk



of recreational areas for the inhabitants. Indeed, these spaces become new and unusual ways for the community to access the sea. As a result, both the physical and perceptual relationship between inhabitants and the sea changes: the new infrastructure and the hydroponic system create a variety of landings for fishing and for sea travel to other beaches; they connect green productive areas and new settlements within the territory to the sea; the inhabitants regain a new connection with the sea that had been interrupted by previous disastrous flooding (Figure 15).

2.2 | Transition scenario 2130. Ionian coast

Projections to 2130 and beyond for Bova Marina, with a sea level rise of more than 10 metres (Figure 16) and the loss of its coastal settlement within an average range of 70 metres, redesign the coast and impose a radical rethink of land use and settlement. In order to respond in an 'adaptive' way to the impacts of climate change, in particular for our study on the rise in sea level and consequent lagooning of the land, an advanced and regenerative type of project will be required, which can achieve a new sustainable settlement, starting with the reinterpretation of its seafront.

Bova Marina, Scenario 2130

The typical seafront road is replaced by a hybrid system formed by a thick area of environmental geostructures for stabilising the sloping ground that runs along the altimetric difference between soil and water. While on the one hand this ecostructure divides and protects the area of the new housing development from the sea, on the other it acts as an anchorage for a receptive port system, integrating a water park system, gardens, biodiversity spaces and aquaponic farms, using

Figure 13 | Bova Marina – Current and 2130+ sea level. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images + Data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central. This map may understate risk

Figure 14 | Bova Marina – Year 2130 - New sea level and complete submerging of settlements and prevailing winds. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images + data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central and windflow analysis.

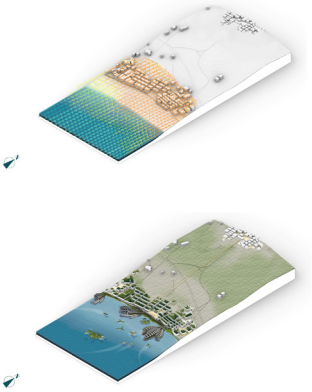


Figure 16a, | Bova Marina, Visual effect of new sea level in 2130. Source: ABITAlab elaboration for Medways (2021), photos edited by A.R.Palermiti.

Figure 16b, 16c, 16d | Bova Marina, Visual effect of new sea level in 2130. Source: ABITAlab elaboration for Medways (2021), photos edited by A.R. Palermiti. were taken with a full-frame reflex camera from an average height of 2.10 m above sea level in order to have an optical effect that would facilitate the development of post-production processing in Photoshop and Camera Raw. The photos were taken with a Dji Mavic Air drone at a height of about 16m above sea level and at a distance of about 40m from the coast. In the post-production rework, the focus was on visually emphasising the effects of climate change, which our coastline could suffer, based on data provided by the online database Climate Central "Risk Map". The first step in the development of the photographs was the differentiation of the colour temperature of portions of the image, in particular in the illuminated areas a warm tone was set to simulate the solar aura linked to the increase in surface temperatures predicted by the data-bases consulted. The next step was to highlight the built-up area on the coasts that would disappear due to the effects of sea level rise. The submerged areas have been rendered visually with cold tones and have been delimited with a "neon effect" line.

sensors and motorised components with artificial intelligence, capable of activating rainwater harvesting systems on the roof, modulating air flows and adopting energy supply systems based solely on renewable sources. The village of Bova Marina, which will lose more than 45% of its built-up area, will be totally rethought as a productive village (see research project *Gardens of The Future*, MJZ studio, 2019), where agricultural activities (bergamot plantations, olive trees, orchards and vineyards), which constitute the most important economic sector of the Grecanica Area, will adopt advanced hydroponics, robotics and AI technologies that are totally carbon free. This will allow the valorisation of organic and typical products and will be able to meet the population's food needs. The new settlement will also make it possible to recover 170% more permeable land, which has so far been consumed by low-quality construction and infrastructure. It will house new productive land, buildings for advanced research activities, and devices capable of producing, storing and distributing locally self-produced energy from renewable sources, according to a developed and regenerative model of Energy Communities. The migratory flows of the coastal population also redesign the settlement areas of the inner territories, with the possibility of developing regenerative settlement and economic models of rural type for a new quality of life also in the inner villages (see Bova, San Lorenzo, Palizzi, etc.). This will reverse the current trend of depopulation and

Figure 17 | Bova Marina 2130 Vision. Source: ABITAlab elaboration for Medways (2021), Graphic elaboration on A.R. Palermiti's photoshoot + projects rendering of Hydramax Port Machines by Future City Lab (2012) and Gardens of the future by MJZ (2019).

promote the reconversion of uses (Figure 17).

2.3 | Transformation scenario for Favazzina

As regards the transformational scenario for Favazzina, short and long term erosion and lagooning phenomena will be able to compromise the safety of the territory and the built settlement falling within the coastal strip of approximately 160 metres for a maximum of 8 metres above sea level. This would also compromise the safety of the important road axis Strada Statale SS18, but not the "high" settlement of Scilla, grafted on a relief of about 120 metres above sea level.

The population of Favazzina would find in Reggio Calabria and in the Tyrrhenian municipalities to the north, the nearest poles to move to (Figure 18).

Amarage. Projected sea level rise in Favazzina by 2130 analysis have shown that, by 2130, the sea level will rise by up to ten metres (Climate Central, 2021a). In areas of regular settlement, the flooding could extend up to 100 metres beyond the current coastline, completely submerging the buildings immediately on the coast (Climate Central, 2021b). However, at natural indentations in the coastline, flooding could reach inner areas three times the distance from the current coastline, as can be seen in the peak shown in the elaboration below (Figure 19).

In order to initiate a more precise georeferenced environmental analysis, and to allow an easier comparison between the current state and the conditions in 2130, a limited reference area of the entire territory of Favazzina was considered. The chosen area includes: the sea up to 300 metres north-west of the coast and almost all the built-up area between the coastline and the Tyrrhenian road, up to about 20 metres above sea level (about 200 metres south-east of the coast) (Figure 20).

The current situation of the selected area in the territory of Favazzina. In 2021, the residential settlement extends extremely close to the coastline. The relationship of the inhabitants with the sea and the coast is linked to local fishing and bathing, with high tourist importance during the summer season.

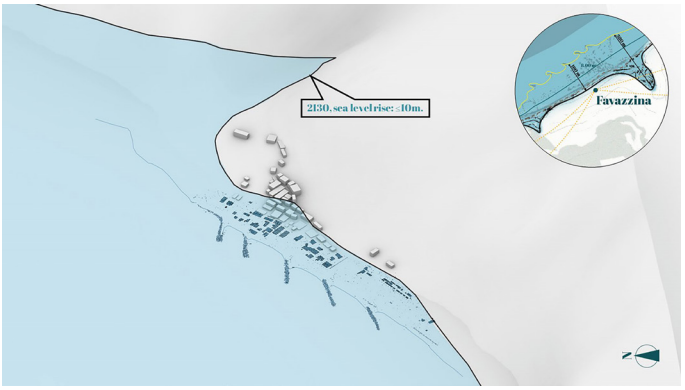


Figure 19 | Favazzina - Transformation Scenario of Coast and Settlements. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing on Sea level tools and analysis by Climate Central "Risk Zone Map" and soil consumption webgis data by Ispra Geoviewer

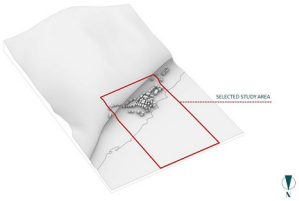


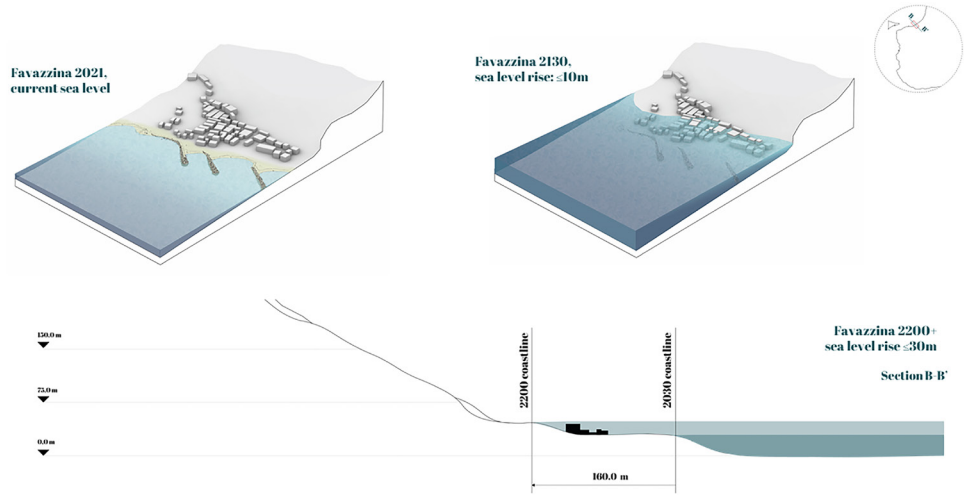
Figure 20 | Favazzina – 2021 coastal settlement and selected study area. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images

The scenario foreseen for the selected area in the territory of Favazzina in 2130. In this area a sea level rise of ≤10 metres is considered (Climate Central, 2021a). As a consequence, the buildings closest to the coastline are totally submerged by extensive flooding that can penetrate the territory up to 100 metres away from the shore (Climate Central, 2021b) (Figure 21). The rise in sea level will cause soil loss due to the complete inundation of the analysed area: all the current settlement is submerged, the shoreline extends to about 200 metres from the old coastline, making these areas uninhabitable (Figure 22). *Splashdown.* Continuous sea storms and extensive flooding completely submerge the existing settlement and make it uninhabitable. At the same time, the dynamics of the water transport and reshape the remains of the old settlement and generate new settlement 'islands' in the sea of limestone type. In this way, the islands attract inhabitants and offer them new ways of living and inhabiting the water and the sea. In addition, they act as large breakwaters that provide a defence against storm surges before the waves reach the coastline and protect it from rising sea levels. This splashdown allows the natural development of a rich green area nourished by brackish water that acts as a green filter over the sea, beyond the railway line and the road (Figure 23).

Figure 21 | Favazzina – Current and 2130+ sea level. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images + Data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central. This map may understate risk.

2.4 | Transition scenario 2130. Tyrrhenian coast

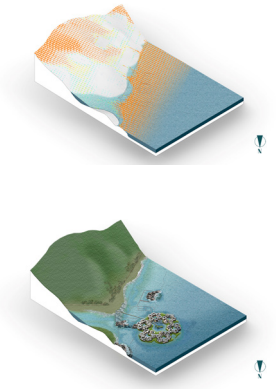
Forecasts to 2130 for the village of Favazzina show a scenario that profoundly alters the coastline and almost totally erases the small coastal settlement, which (in 2020) consists of approximately 120 three-level residential buildings, scattered dwellings and agricultural buildings, all compressed into a strip



of land bounded by the SS18 state road, the railway line and the coastline (Figure 24).
The existing road infrastructure, together with the territorial morphology (hills and mountains near the coast) do not favour the development of a new land settlement pattern. Therefore, Favazzina's 2130 scenario is based on a 'lagoon' system that exploits the natural mechanisms of sedimentation, absorption and degradation between soil, water and inert materials. In fact, a new marine-green park is created along the coastline, characterised by a variable topography (coastal dunes) with a vegetal cover typical of the Mediterranean maquis, with low shrubs (broom, juniper, rosemary), medium shrubs (strawberry tree, lentisk) and tall trees (oleander, laurel, wild olive). This vegetation system constitutes an area of protection from sea storms and is capable of mitigating the action of the strong winds that blow in from the sea. Among the 'vegetated dunes' of the park, flexible structures for the reception and use of the beach can be found, as well as flexible, sustainable, high-performance hybrid buildings. Advanced wind turbines (with +200% energy production efficiency and zero noise impact) dot the park and power a new high-speed railway line for zero-emission transport, with intermodal interchange areas (see Parametric Prefab Hybrid Building by AA School of Architecture, 2011). Floating Pods, small residential units made of 3D-printed, waterproof materials, anchor themselves to the remains of the submerged urban settlement and define new sustainable communities that are flexible to future expansion (Figure 25).

Figure 22 | Favazzina – Year 2130 - New sea level and complete submerging of settlements. Source: ABITAlab elaboration for Medways (2021), Data and graphic processing based on satellite images + Data and graphic processing based on projections from sea level rise analysis "Surging Seas. Risk Zone Map" by Climate Central. This map may understate risk.

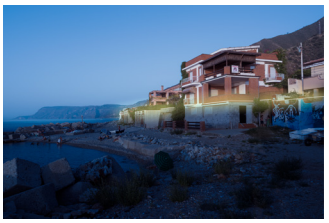
Figure 23 | Favazzina Year 2130 – New relationship with the sea and restored biodiversity. Source: ABITAlab elaboration for Medways (2021).



Favazzina, Scenario 2130

The narration of Mare Monstrum, accompanied by open data on coastal erosion and the narrative voice of a fisherman from the Ionian area of Bova Marina, is entrusted to a three-minute video-storytelling. The instability of the coast, its two-faced character between water and soil, are reread through the prediction of the sea level on the land at 2130 and 2200, showing the effects of climate change already underway on our coasts.
The video narration "100 years", presents the research experience for Medways translating into original images, its deepest trajectory.

Figure 24a, 24b, 24c| Favazzina, Visual effect of new sea level in 2130. Source: ABITAlab elaboration for Medways (2021), photos edited by A.R. Palermiti (see caption for figure 15).



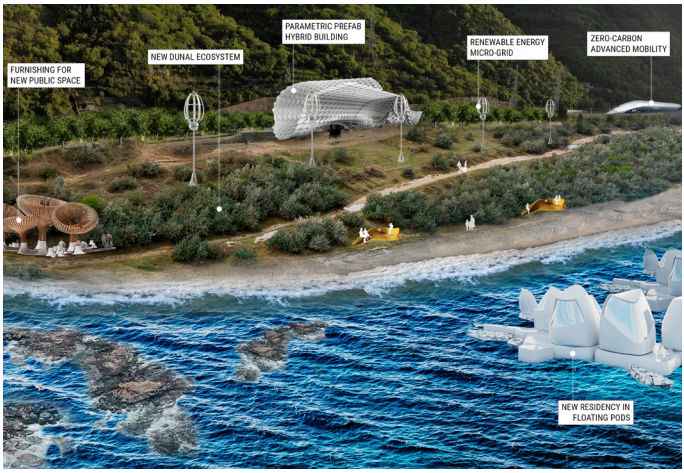


Figure 25 | Favazzina 2130 Vision. Source: ABITAlab elaboration for Medways (2021), Graphic elaboration on A.R. Palermiti's photoshoot + projects rendering of 3D printed floating pods by Monolight Studio (2021), Parametric Prefab Building by AA School of Architecture (2011) and Eco-structures by Mamou-Mani Studio (2019).

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