



A PROJECT OF NON RESISTANCE

Venice 21<sup>st</sup> March 2100

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P5

Transitional Territories Graduation Studio

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Motivation

Problematization

Deconstruction

Reconstruction





Mestre

Cavallino

Giudecca



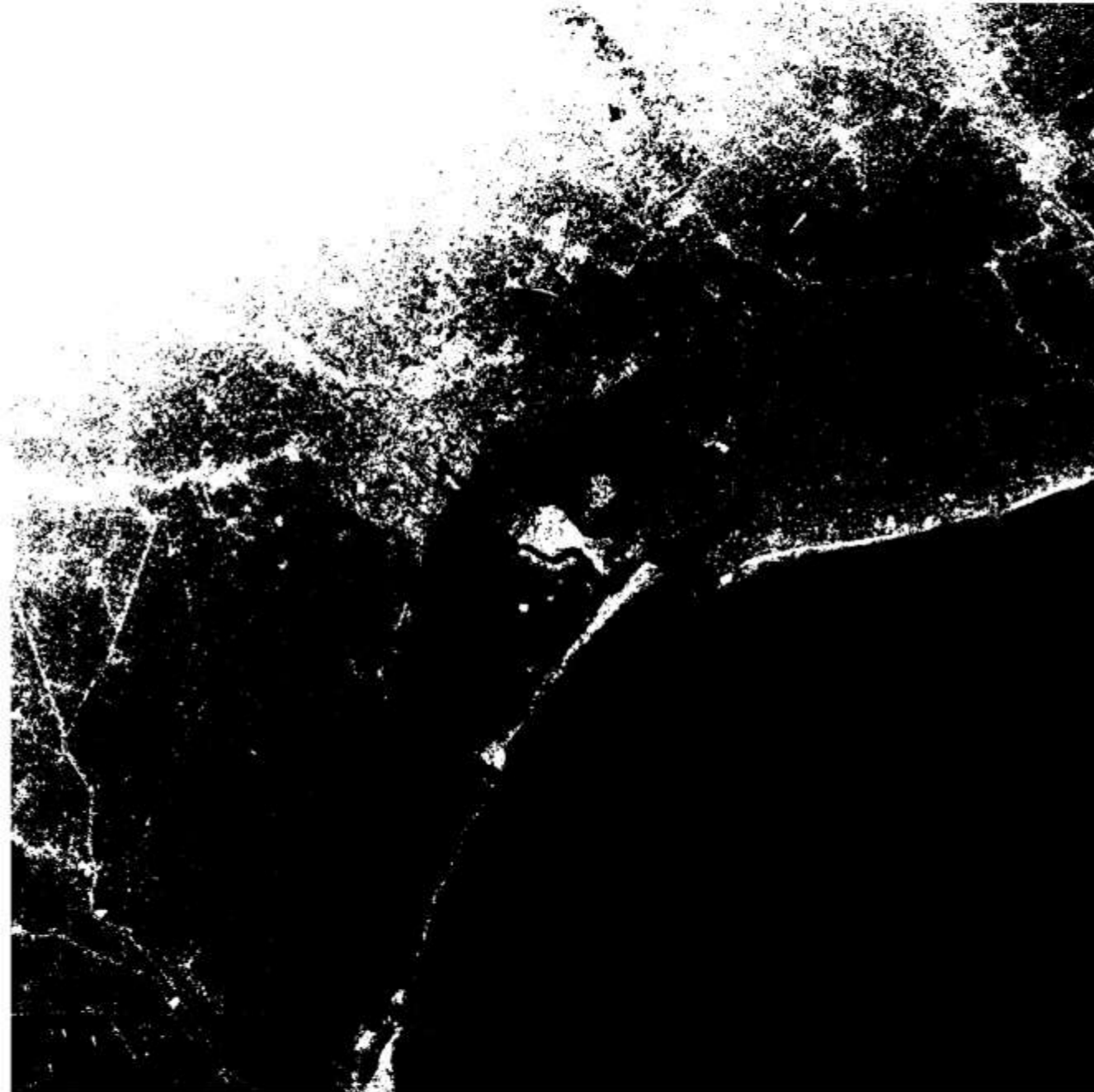
## Sense of displacement

*“When a family sees the neighbourhood around it changing dramatically, when their friends are leaving the neighbourhood, when the stores they patronise are liquidating and new stores for other clientele are taking their places, and when changes in public facilities, in transportation patterns, and in support services all clearly are making the area less and less livable, then **the pressure of displacement** already is severe. Its actuality is only a matter of time. Families living under these circumstances may move as soon as they can, rather than **wait for the inevitable**; nonetheless they are displaced.”*

- Marcuse, P. (1985). Gentrification, abandonment, and displacement



Climate crisis - Sea level rise



*IPCC 2021, SSP5-8.5 // +1m RSL // -60cm Subsidence // +5° C*

A place to run to



*Torcello, first settlement in the Venetian lagoon*

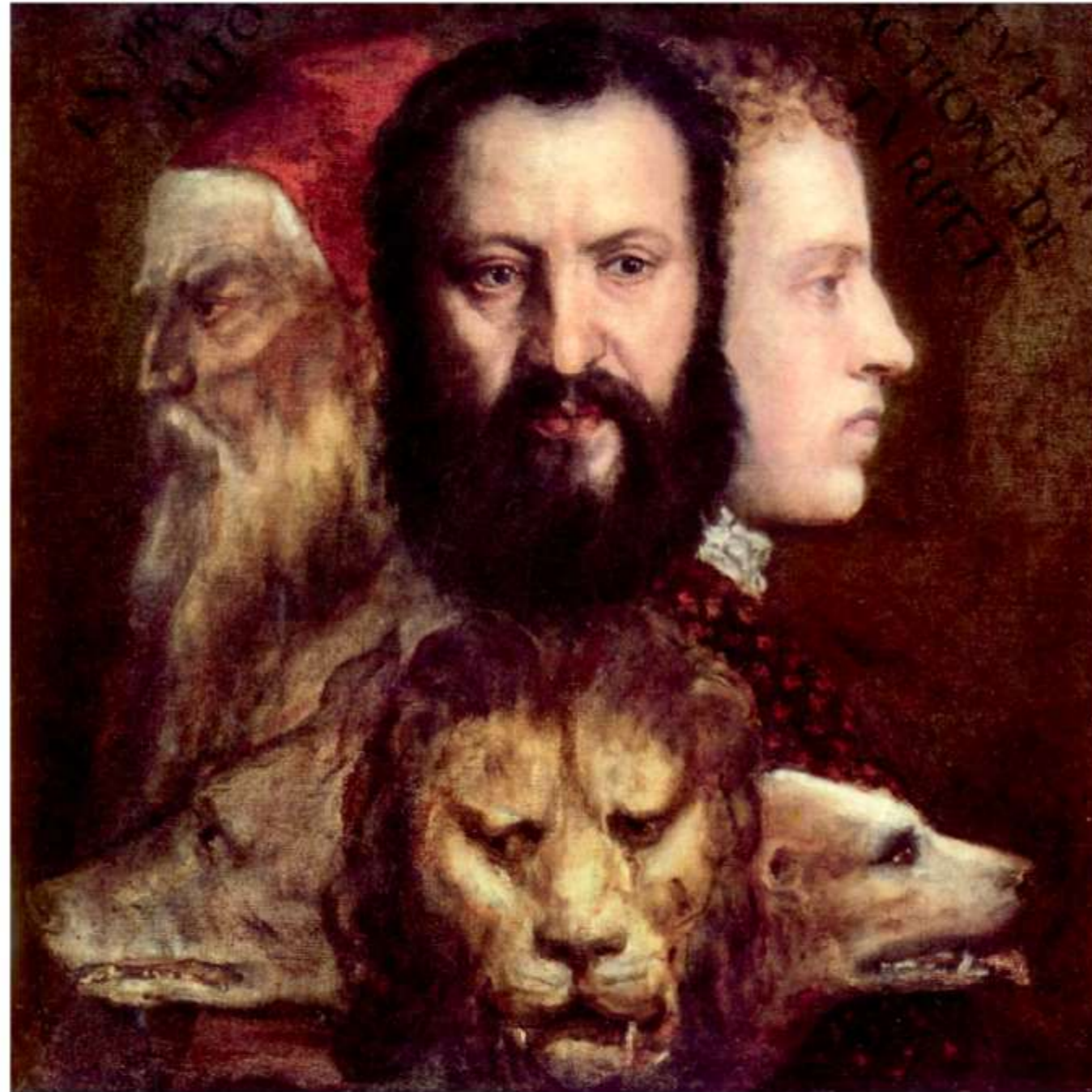
A place to run from







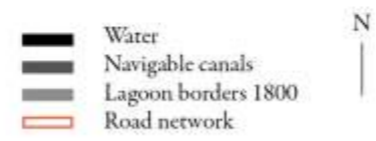
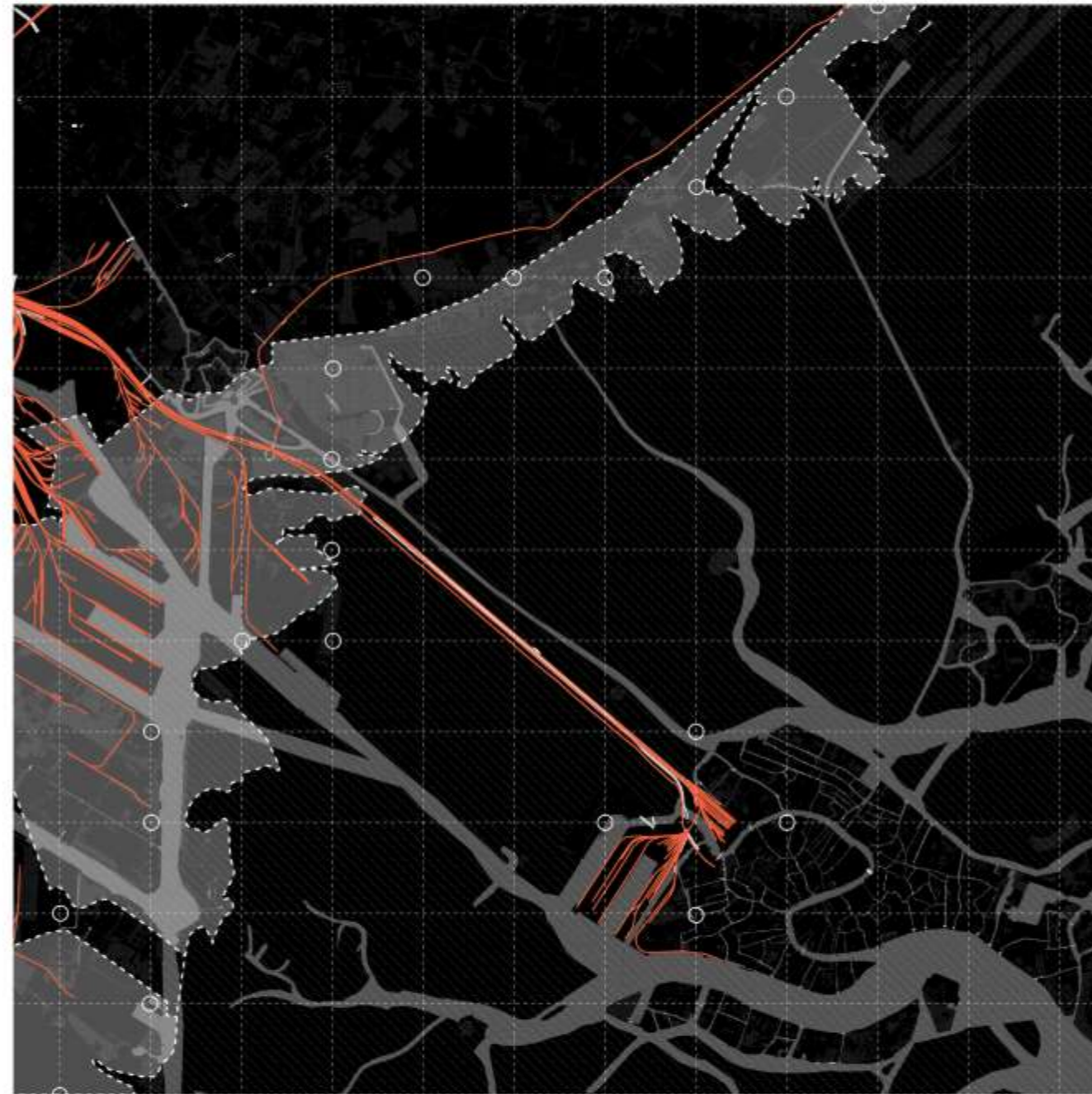
Manfredo Tafuri - Allegory of Prudence



*From: Tafuri, M. (1994). La dignità dell'attimo - trascrizione multimediale di Le forme del tempo Venezia e la modernità. publisher not identified. Tiziano Vecellio, Allegoria della Prudenza, 1565, oil on canvas, London, National Gallery*



# Modernity



Inland vs. Seaward



*Alvise Cornaro*

*Tintoretto, Ritratto di Alvise Cornaro, 1560-1565 ca, oil on canvas, 113x85 cm, Firenze, Galleria Paltina.*



*Cristoforo Sabbadino*

*Anonymous, Ritratto a mezza figura di prelado, 1600-1699, oil on canvas, 66 x 59 cm, Chioggia (VE), Biblioteca comunale Cristoforo Sabbadino*



Inlandseaward



*Inland*

*Acqua grande, 1966*



*Seaward*

*Acqua grande, 2019*



## Terraforming

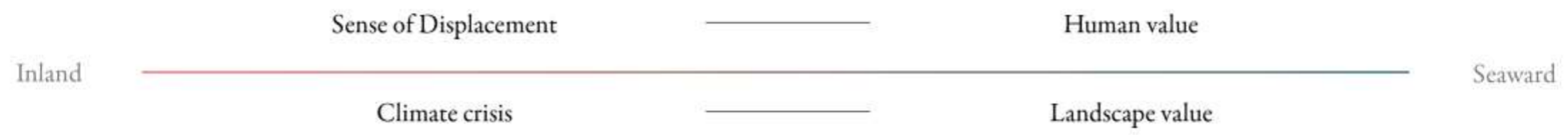


*Lebbeus Woods, San Francisco Project, Inhabiting the Quake, 1995, image via archdaily.com*

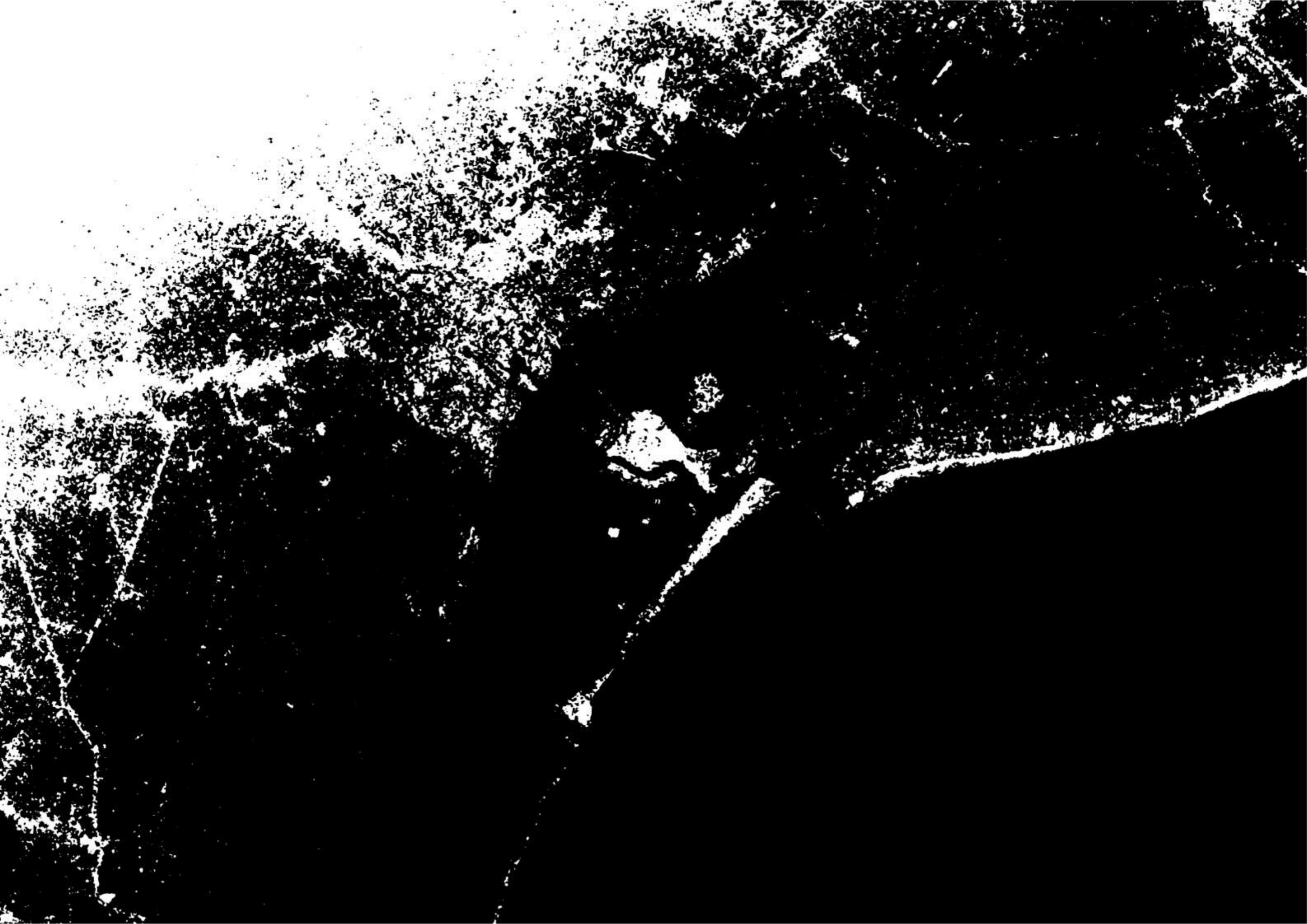
## Utopia

*“Venezia città immortale, immacolata in quanto unica città che non nasce per un omicidio – come è quello compiuto da Romolo -, non nasce, appunto, da un delitto, ma nasce miracolosamente; è il miracolo realizzato, l’utopia realizzata, vergine imprendibile quindi sicura, ma senza mura perché difesa dalle proprie acque. Miracolosa e unica dove l’impossibilità è realtà.”*

- Manfredo Tafuri, 1994, *Le forme del tempo: Venezia e la modernità*







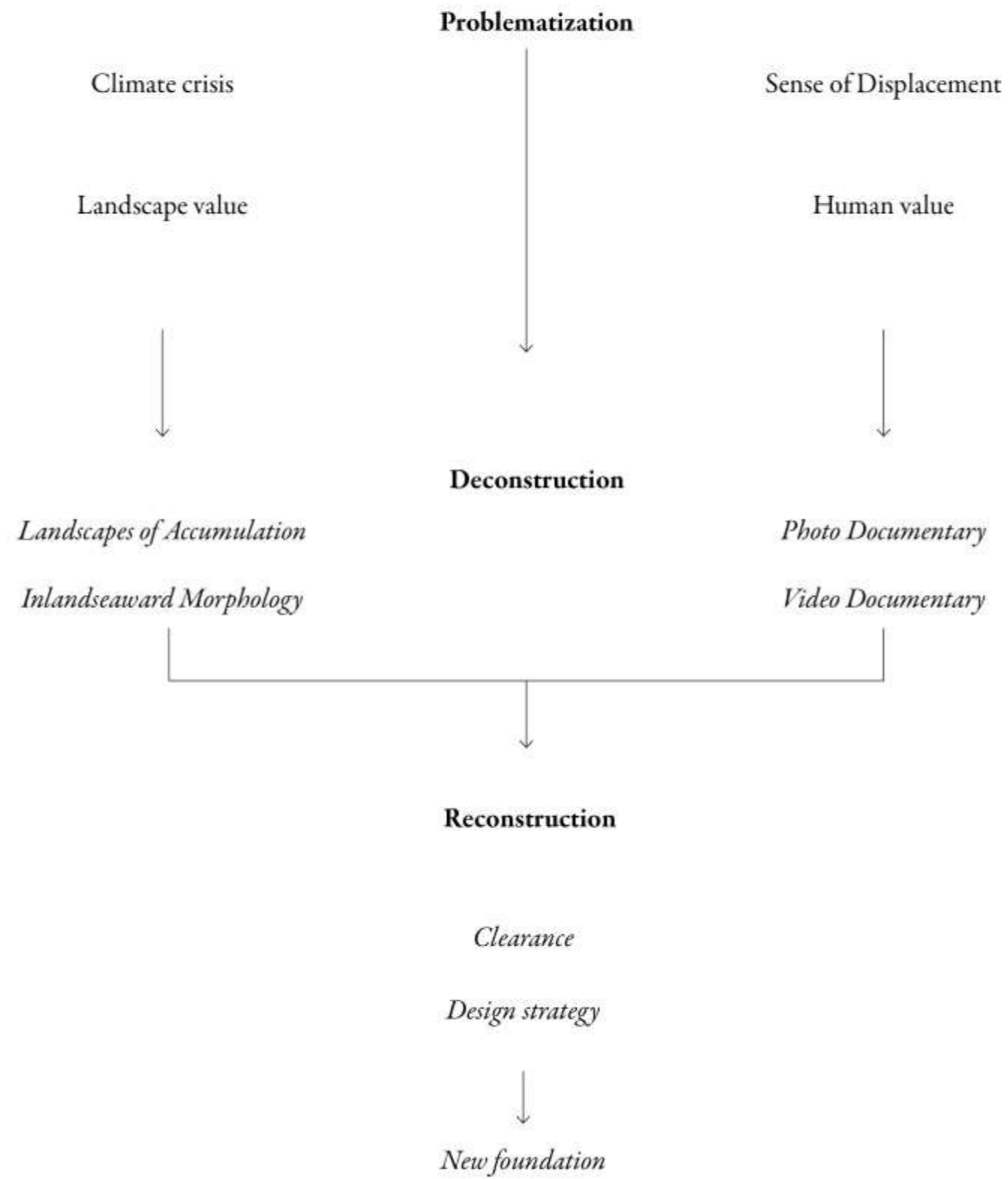
Non-Resistance



In light of the imminent **climate crisis** and its consequent **sea-level rise**,

What is the altered anatomy of **non-resistance** of the Metropolitan city of Venice, supporting its reflection in the spatial, eco, social, economic systems through a **Terraforming** approach?





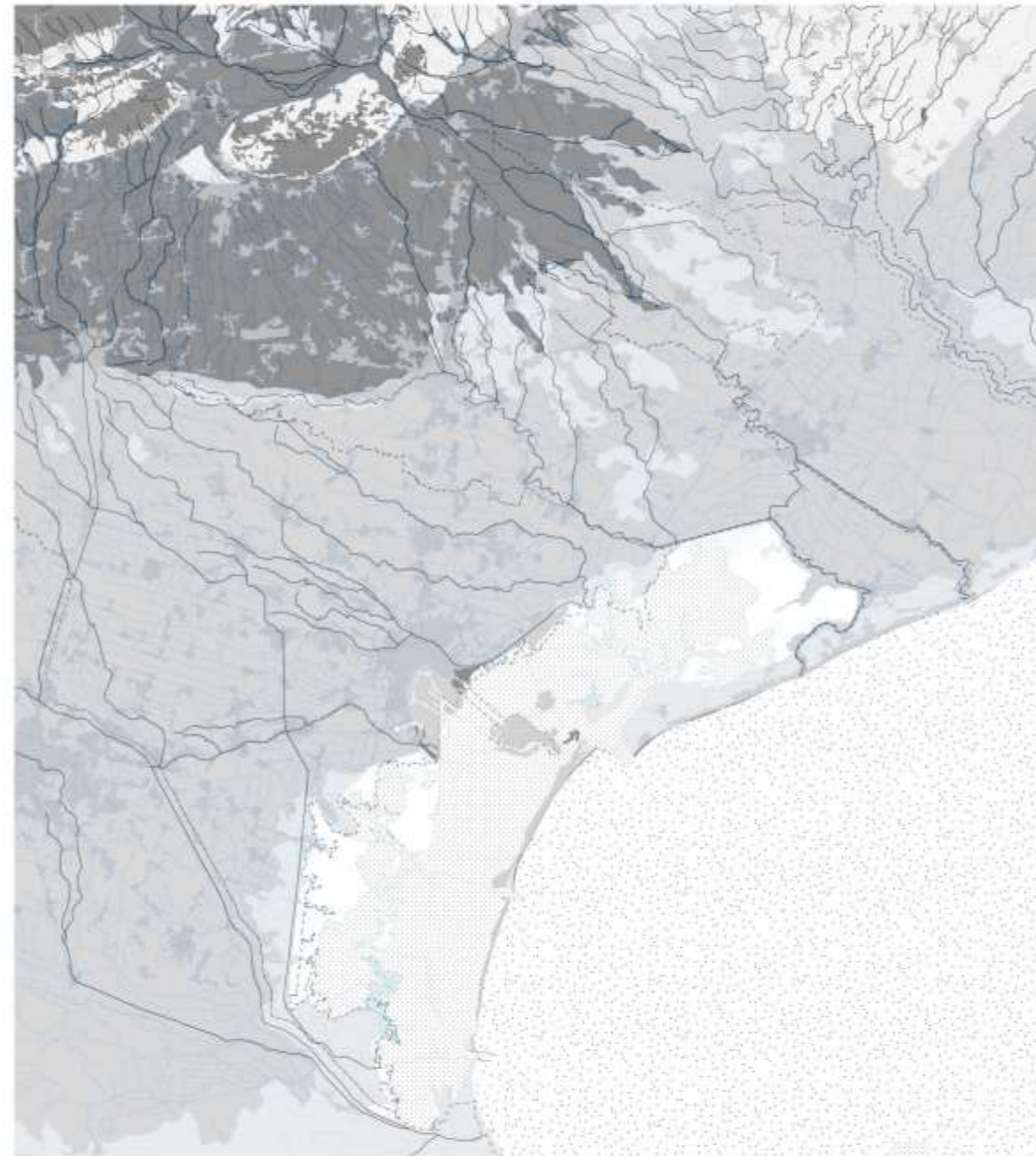
# Deconstruction



Landscapes of Accumulation

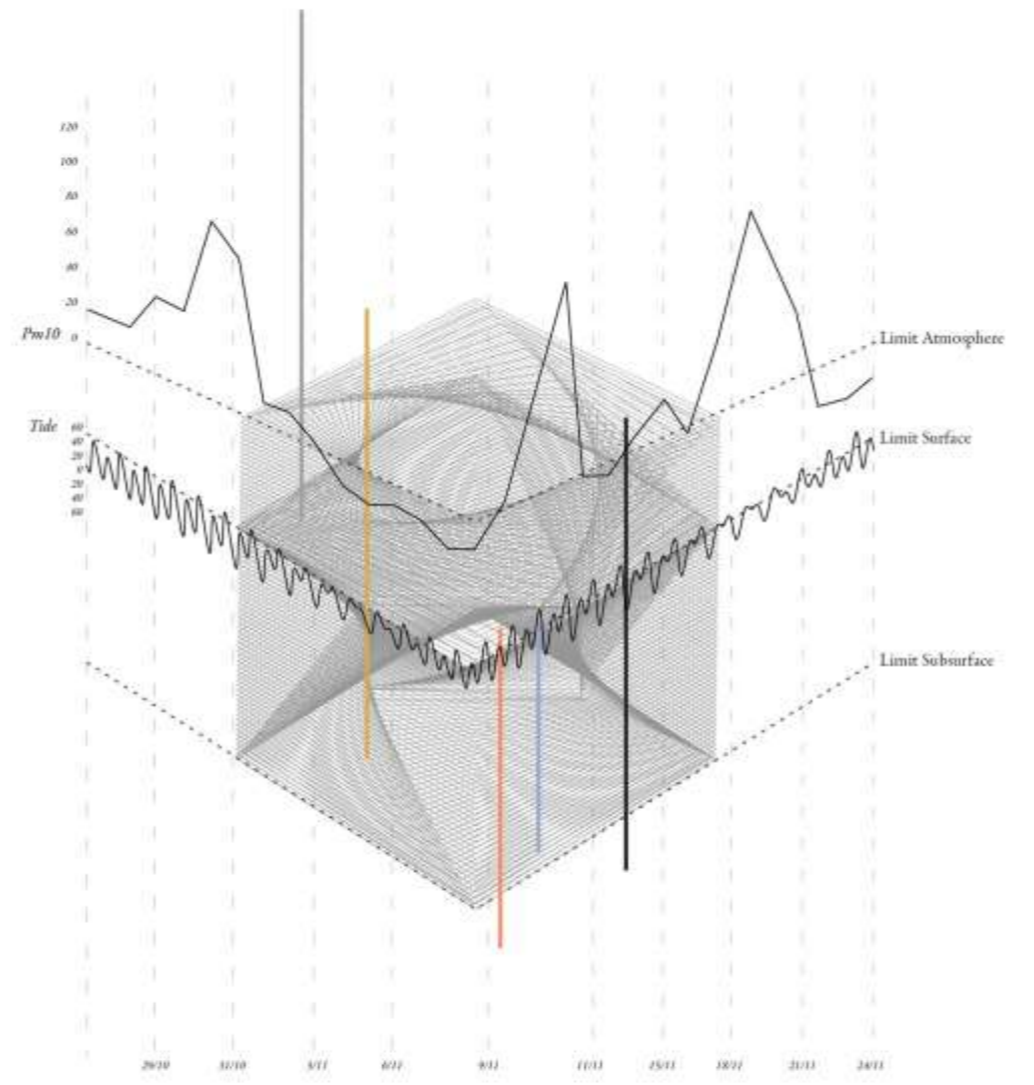


# Matter



- Sea water
- Marsh water
- Artificial territories
- Forest territories and semi-natural
- Agricultural territories
- Wetlands
- Hydrological element
- Primary hydrological element
- Hydrological basin borders
- Aquifers depth
  - Moderately deep - 50 - 100 cm
  - Deep - 100 - 150 cm
  - Very deep - > 150 cm

# Habitat



- Roads
- Water network
- Railway
- Navigable network
- Navigable network
- Flights: from 20/11/21

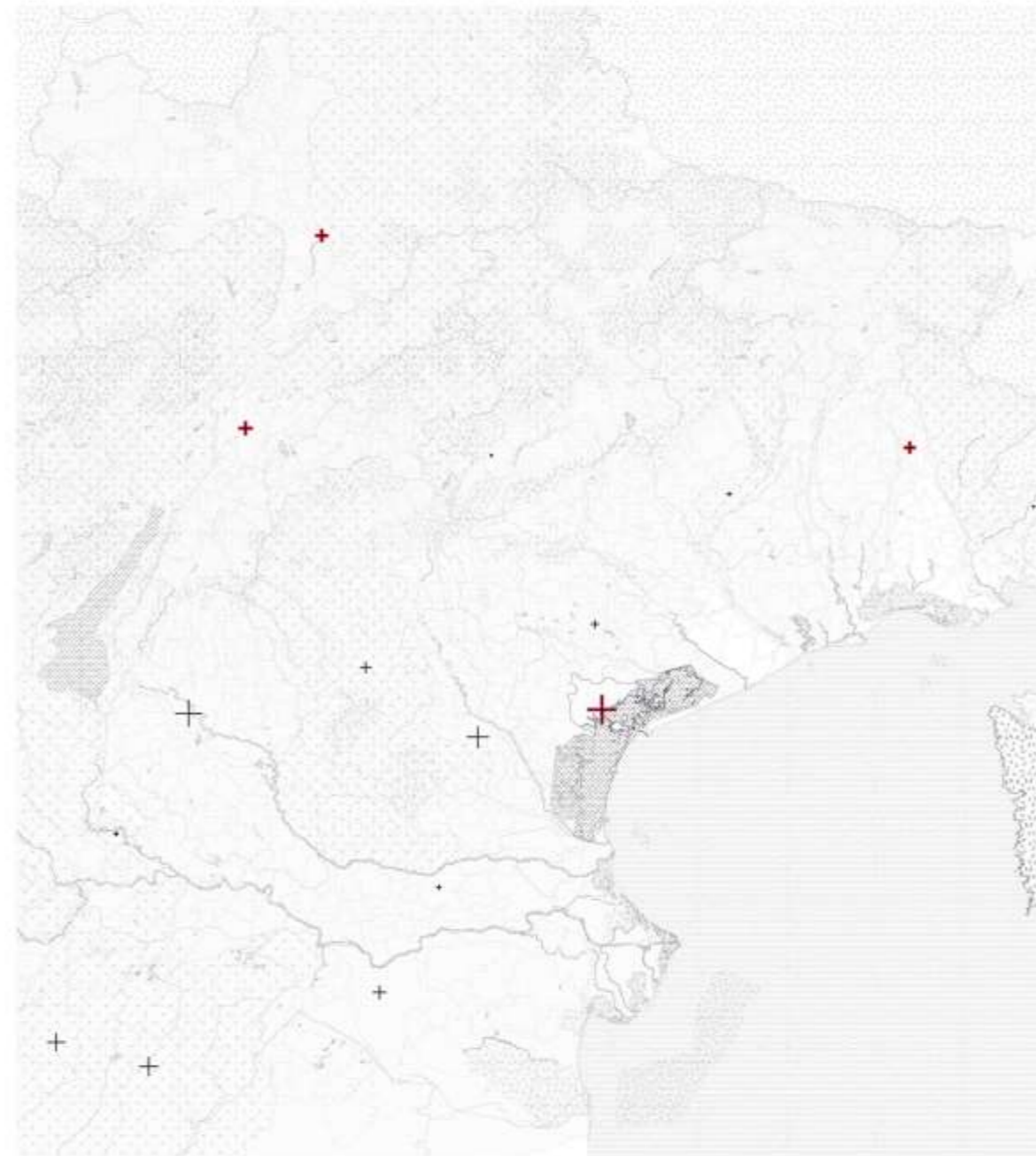
# Topos



□ Punta della Salute  
□ General average

Data from Centro Previsione maree

# Geopolitics



Administration of ecological elements

- European level
- National level
- Regional level
- Municipality
- Hydrologicals basins
- Region capital
- Province

Dimensions based on population:  
Max 261'905 (Venezia) Min 34'742 (Gortizia)



Inlandseaward Morphology

Inland vs. Seaward

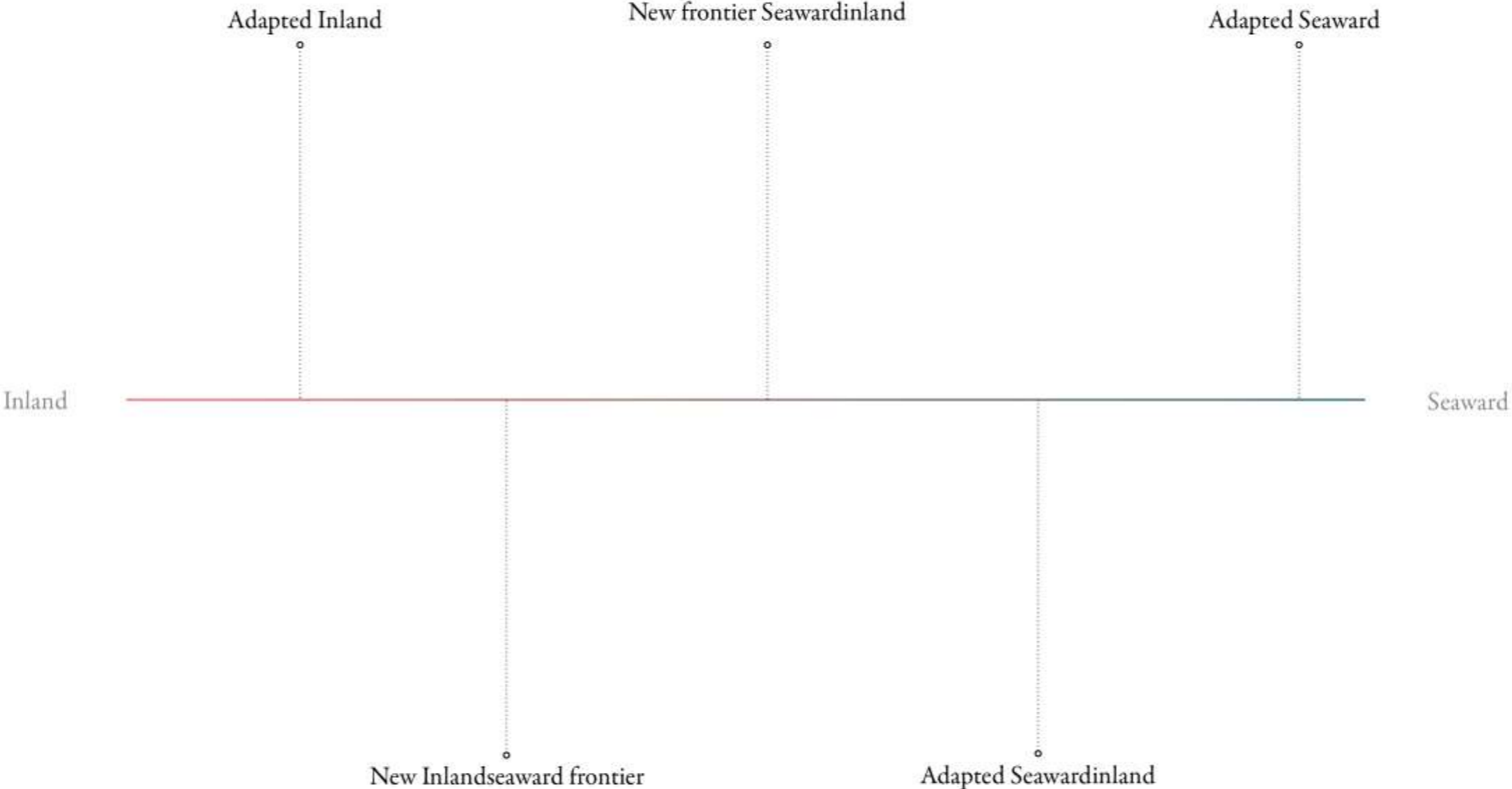




Inland vs. Seaward



Frontiers





Climate crisis



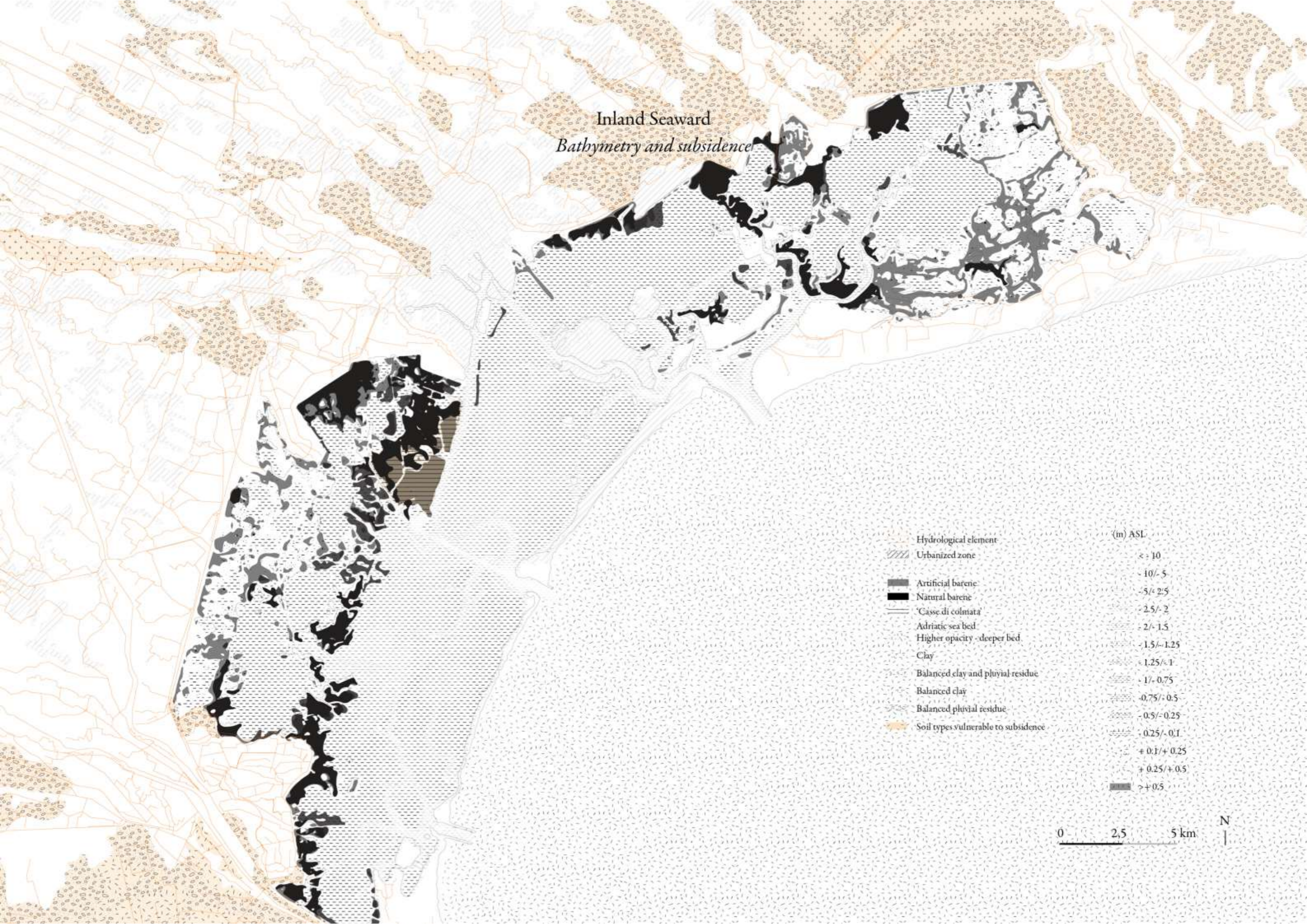
Landscape



New land potential



Inland Seaward  
*Bathymetry and subsidence*

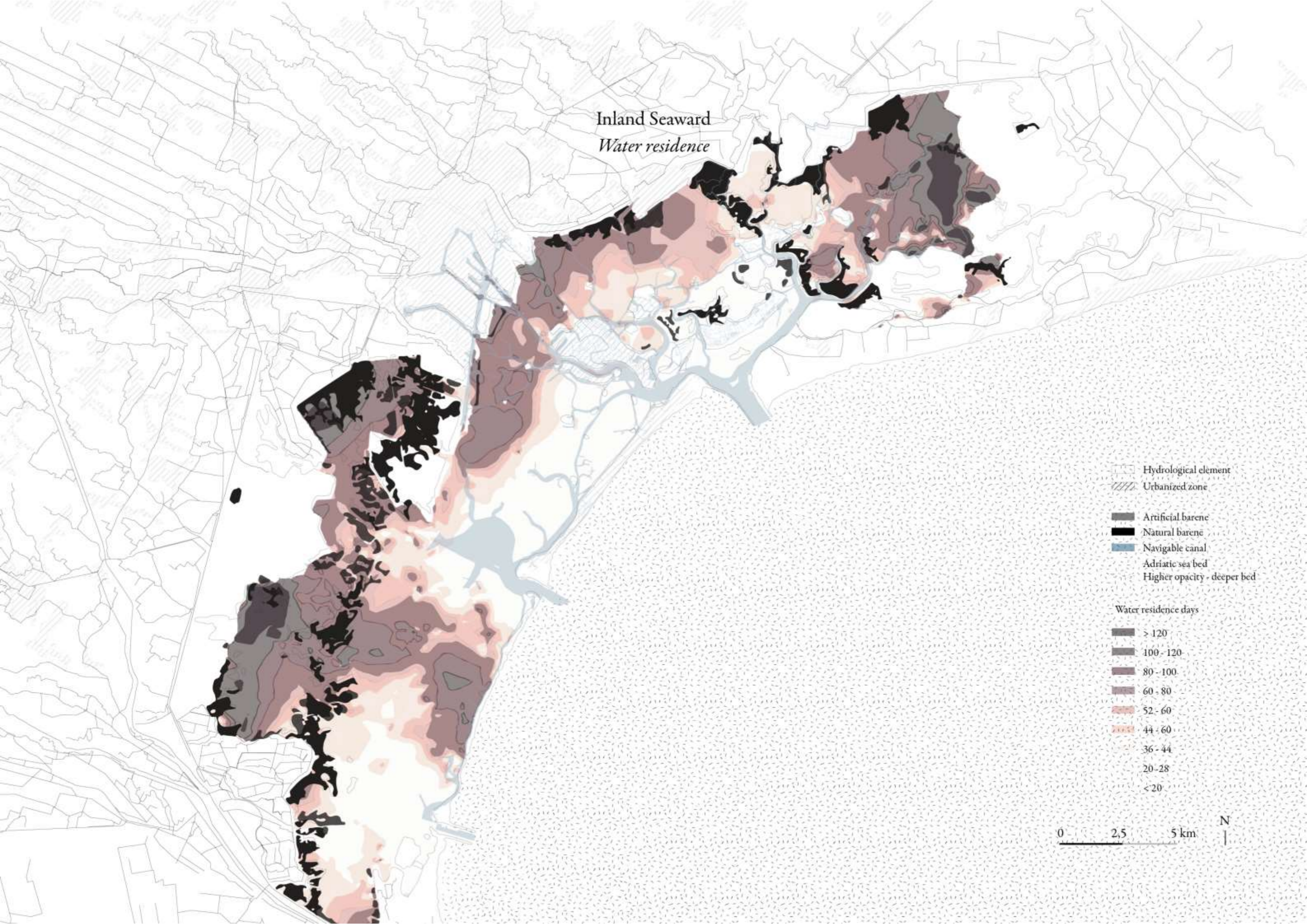


Hydrological element	(m) ASL
Urbanized zone	< 10
Artificial barene	-10/-5
Natural barene	-5/-2.5
'Casse di colmata'	-2.5/-2
Adriatic sea bed	-2/-1.5
Higher opacity - deeper bed	-1.5/-1.25
Clay	-1.25/-1
Balanced clay and pluvial residue	-1/-0.75
Balanced clay	-0.75/-0.5
Balanced pluvial residue	-0.5/-0.25
Soil types vulnerable to subsidence	-0.25/-0.1
	+0.1/+0.25
	+0.25/+0.5
	>+0.5





Inland Seaward  
*Water residence*



- Hydrological element
- Urbanized zone
- Artificial barene
- Natural barene
- Navigable canal
- Adriatic sea bed
- Higher opacity - deeper bed

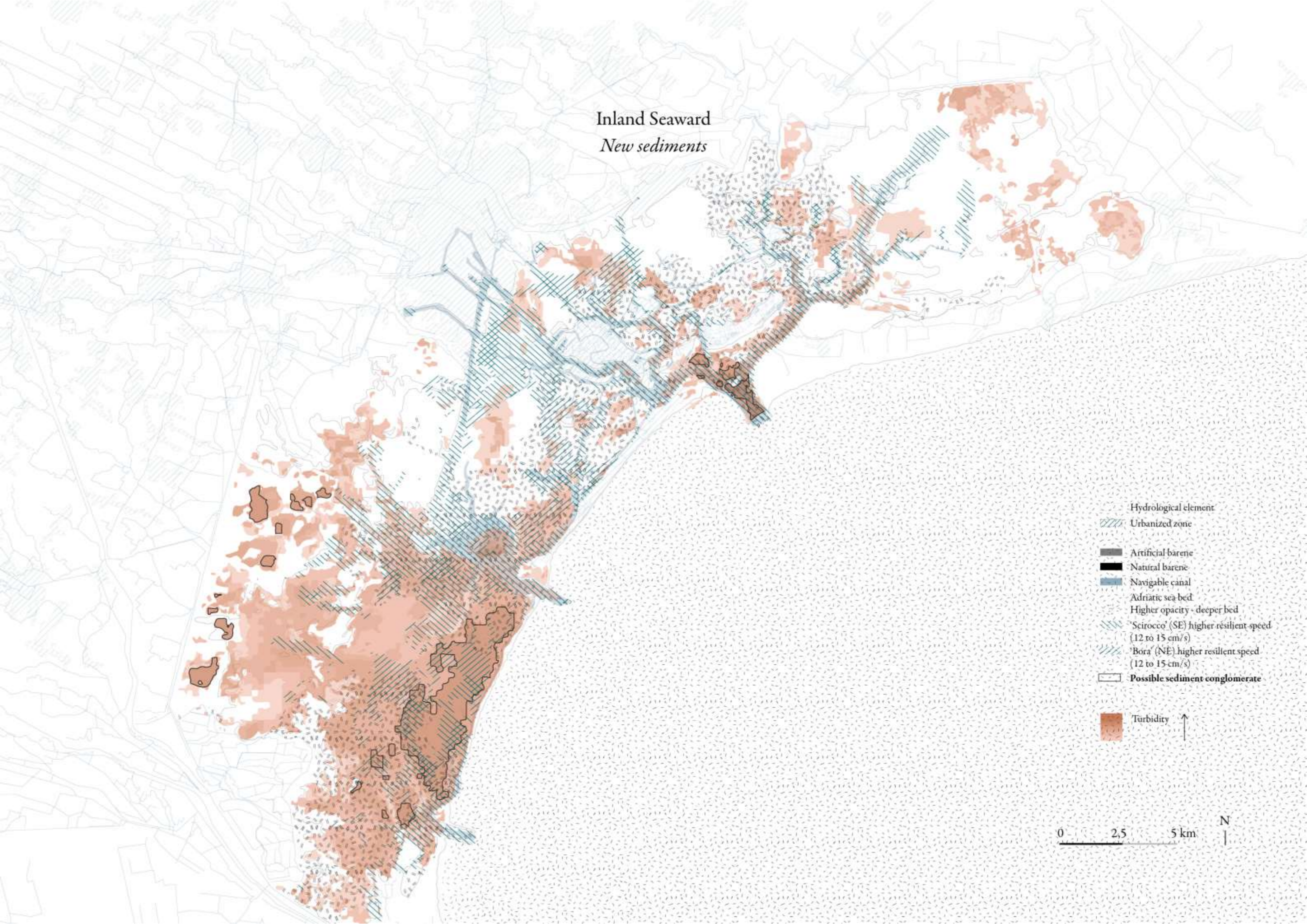
Water residence days

- > 120
- 100 - 120
- 80 - 100
- 60 - 80
- 52 - 60
- 44 - 60
- 36 - 44
- 20 - 28
- < 20





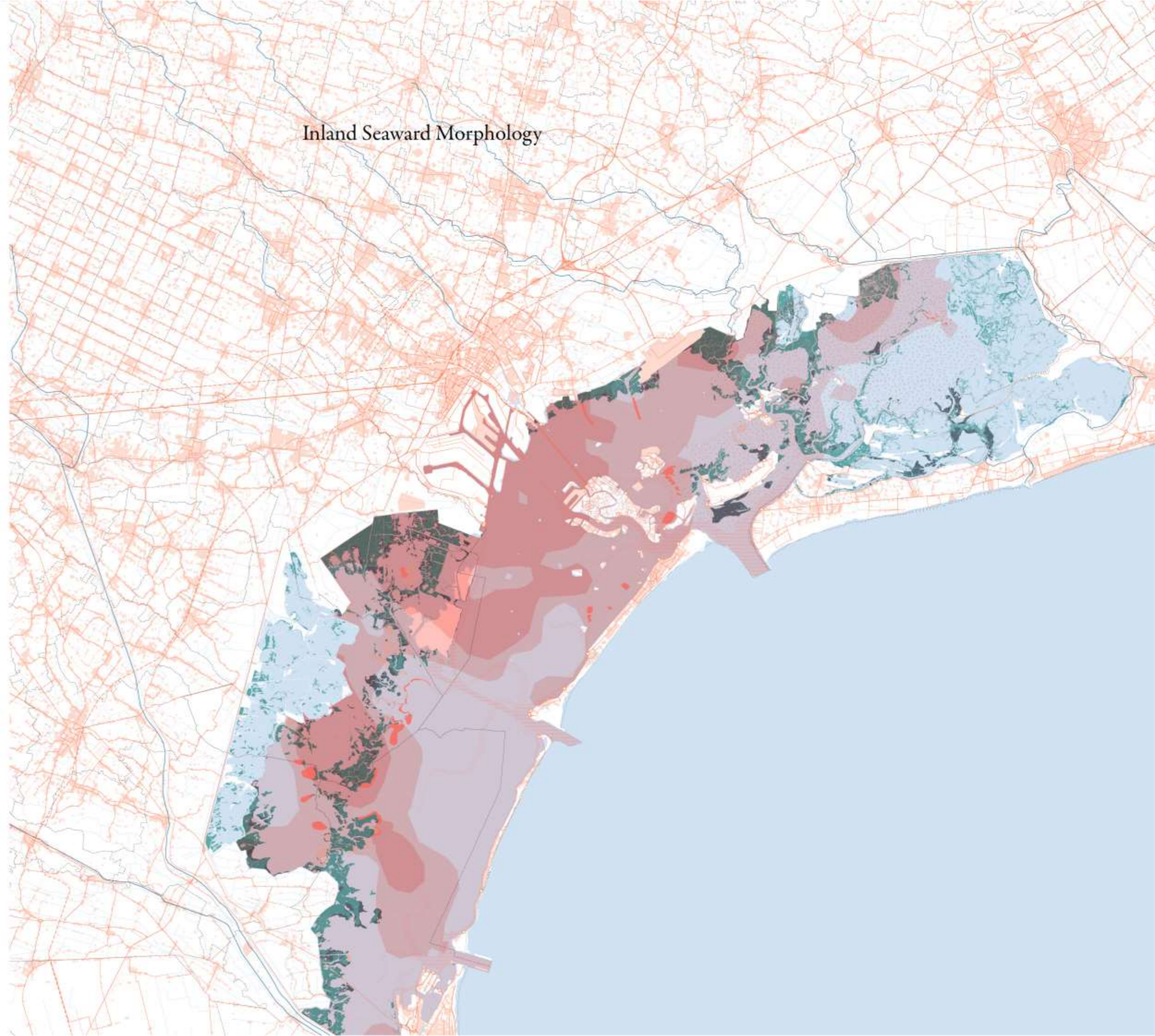
Inland Seaward  
*New sediments*



- Hydrological element
- Urbanized zone
  - Artificial barene
  - Natural barene
  - Navigable canal
  - Adriatic sea-bed
  - Higher opacity - deeper bed
  - 'Scirocco' (SE) higher resilient speed (12 to 15 cm/s)
  - 'Bora' (NE) higher resilient speed (12 to 15 cm/s)
  - Possible sediment conglomerate
  - Turbidity ↑







## Inland Seaward Morphology

- Inland**
- Urban fabric
  - Railway
  - Road Infrastructure
  - Canals jurisdiction
  - Ex - Magistrato alle Acque
  - Veneto Region
  - Genio Civile opere maritime
  - Municipality of Venice
  - Proposed borders of the project 'Parco Laguna'
  - Artificial Barene
  - Artificial Velme
  - Pollution of sediment
  - PCCDF between:
  - 1-2
  - 2-3
  - 3-6
  - Municipality borders
- Seaward**
- Water bodies
  - Primary rivers
  - Hydrological elements
  - Natural Barene
  - Natural Velme





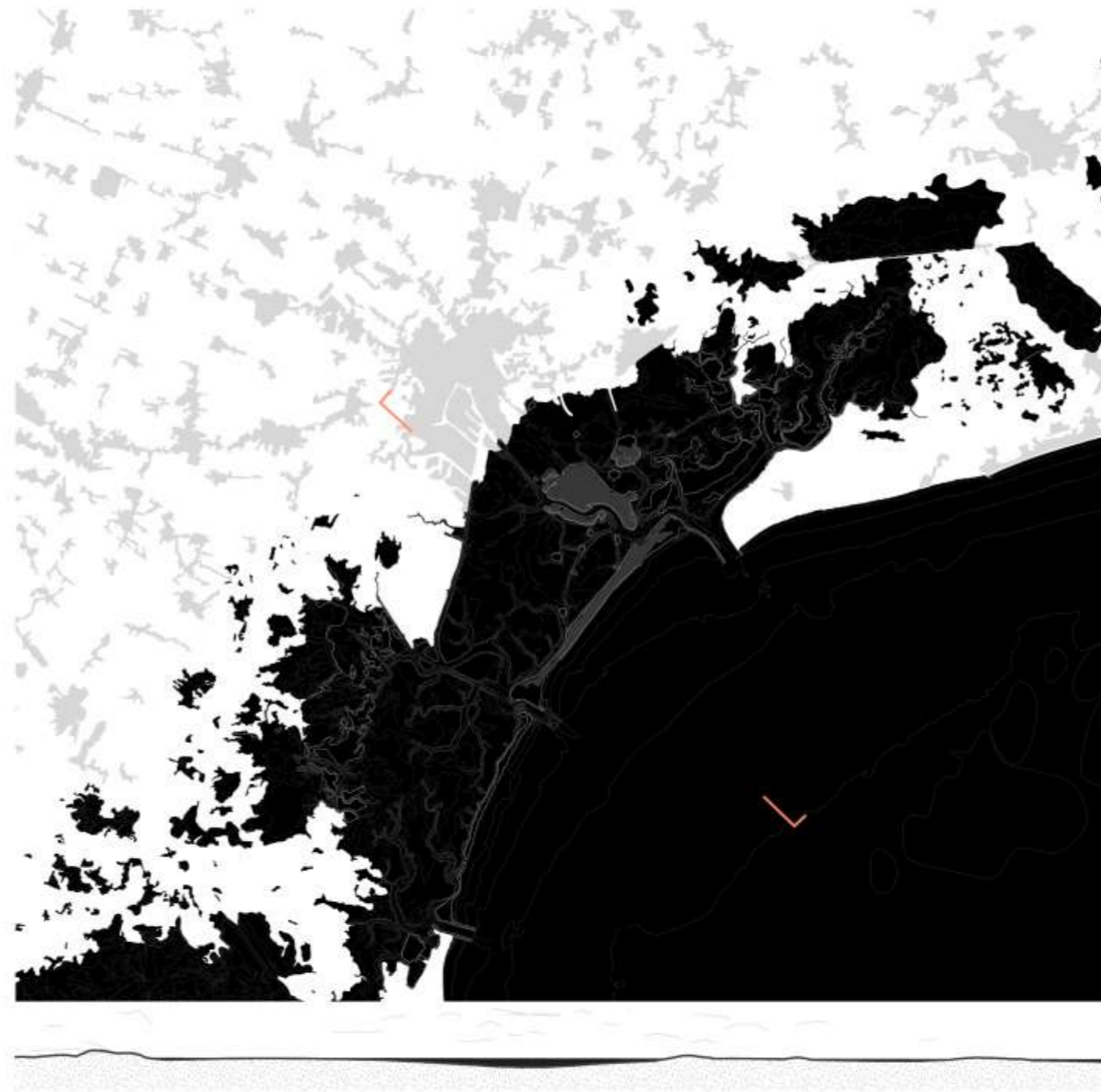
RSL scenarios

Analysis - RSL  
*Current situation*



# Analysis - RSL

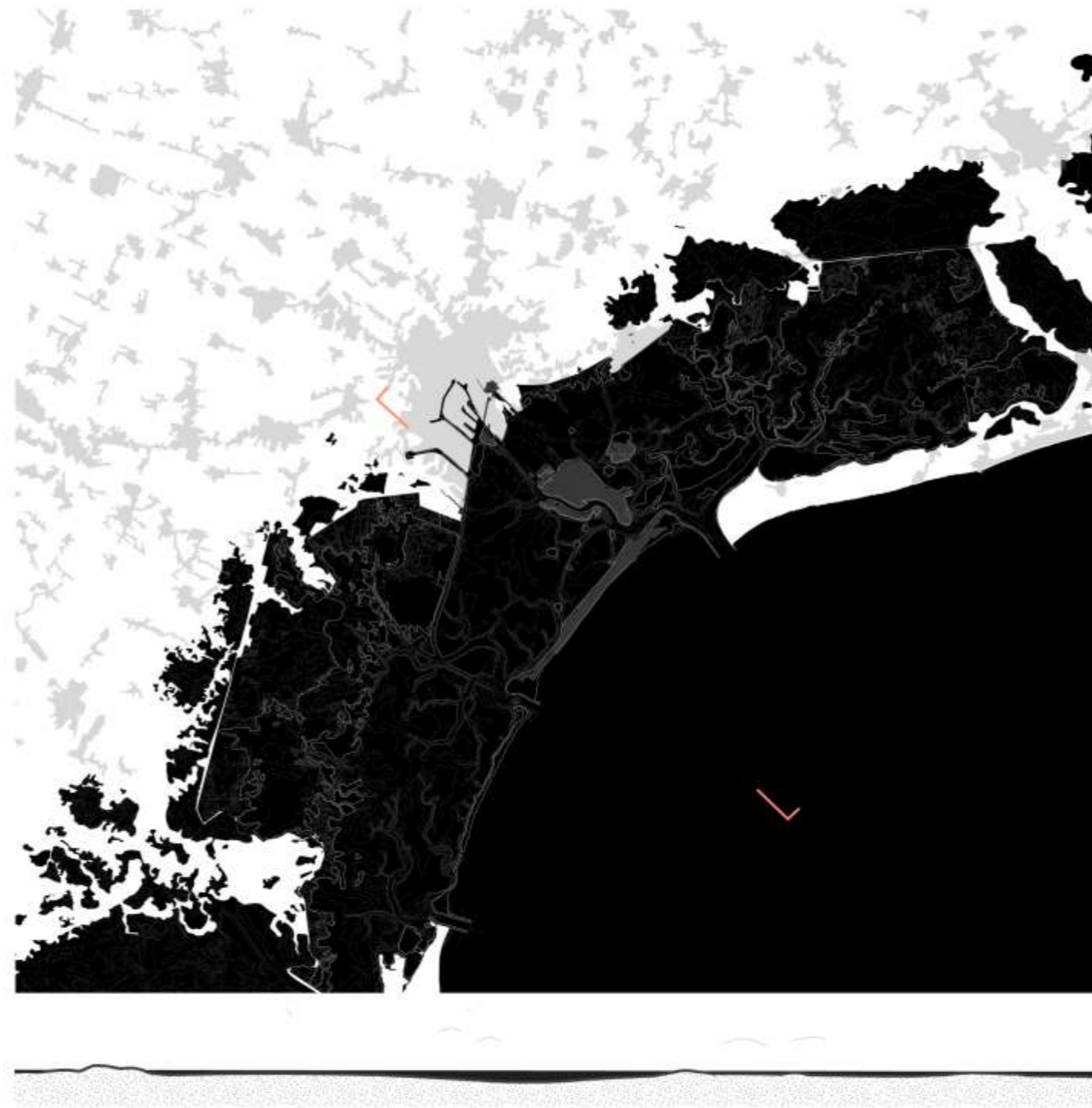
## *Transition 1*



Scenario definition	Year	RSL projection - median (m)	RSL projection - Worst case (m)	Subsidence (average 1.5 mm/y)	Altimetry	Action
1	2030	+0.15	+0.175	-12 mm	< 0 m	Process of preparation

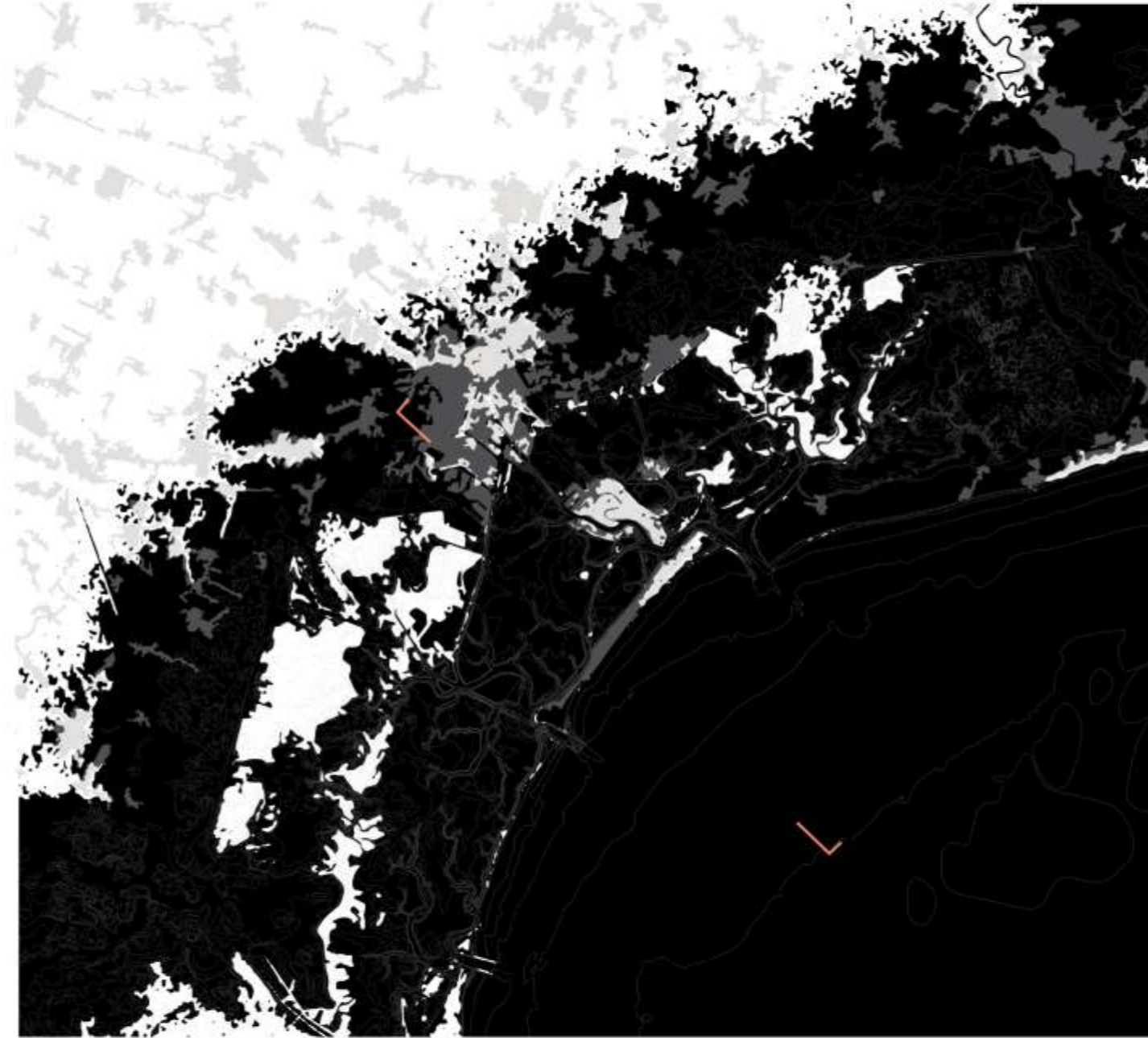


Analysis - RSL  
*Transition 2*



Scenario definition	Year	RSL projection - median (m)	RSL projection - Worst case (m)	Subsidence (average 1,5 mm/y)	Altimetry	Action
Phase 2	2050	+0,325	+0,45	-57 mm	< 0,5 m	Process of Non-Resistance

Analysis - RSL  
2100



Scenario definition	Year	RSL projection - median (m)	RSL projection - Worst case (m)	Subsidence (average 1,5 mm/y)	Altitude	Action
Phase 3	2100	+0,75	+0,1	-117 mm	< 1,0 m	Terraforming

(savemedcoasts-2, 2018)



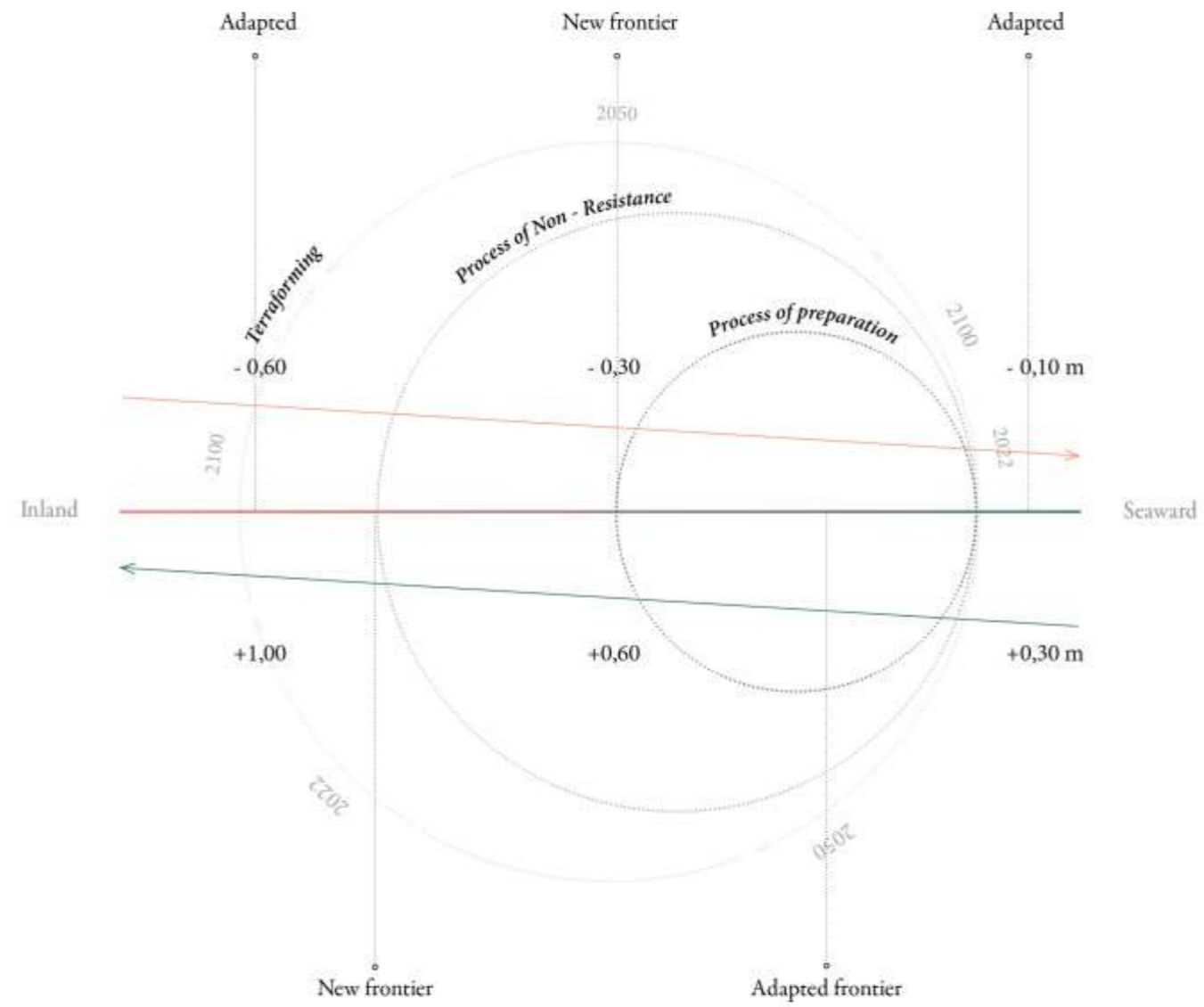
## Reconstruction



Design strategy

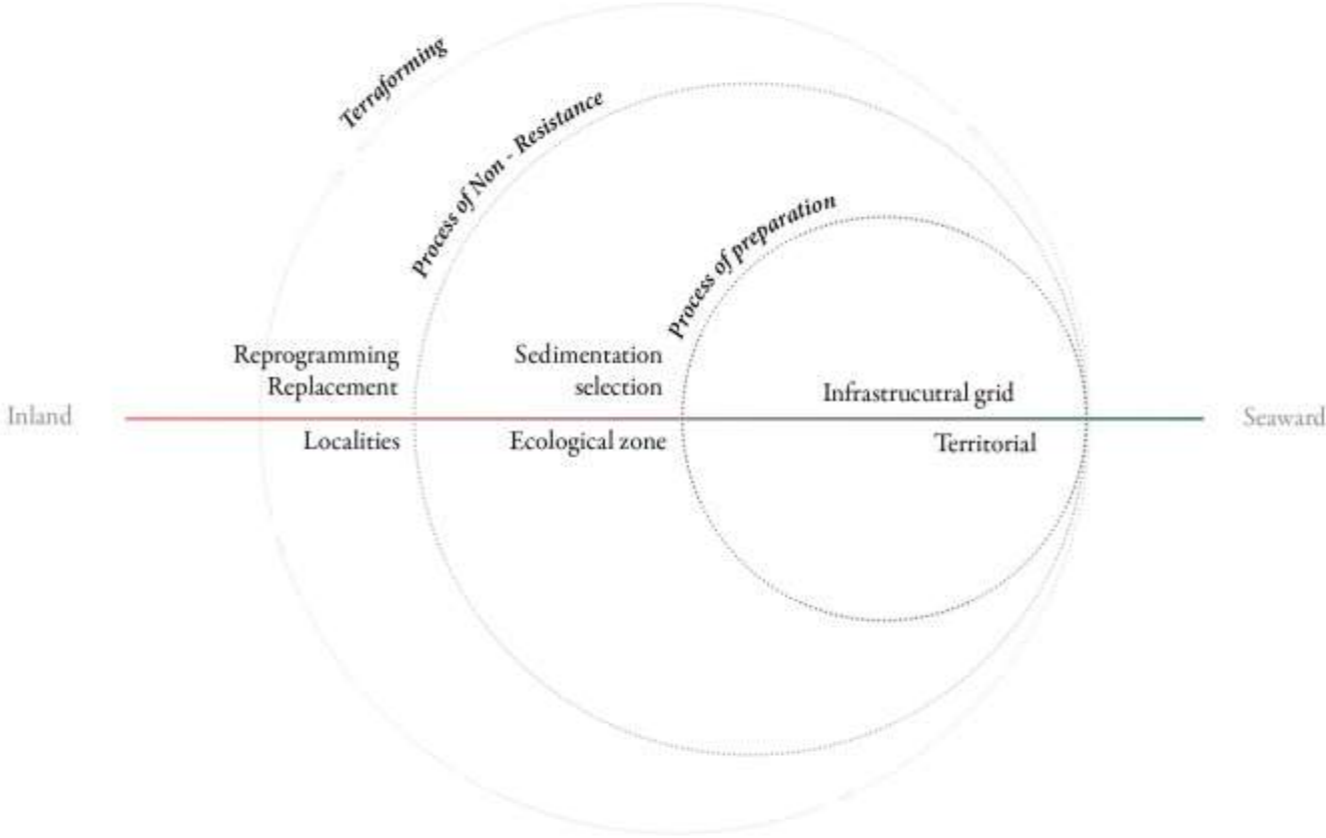


# Design framework

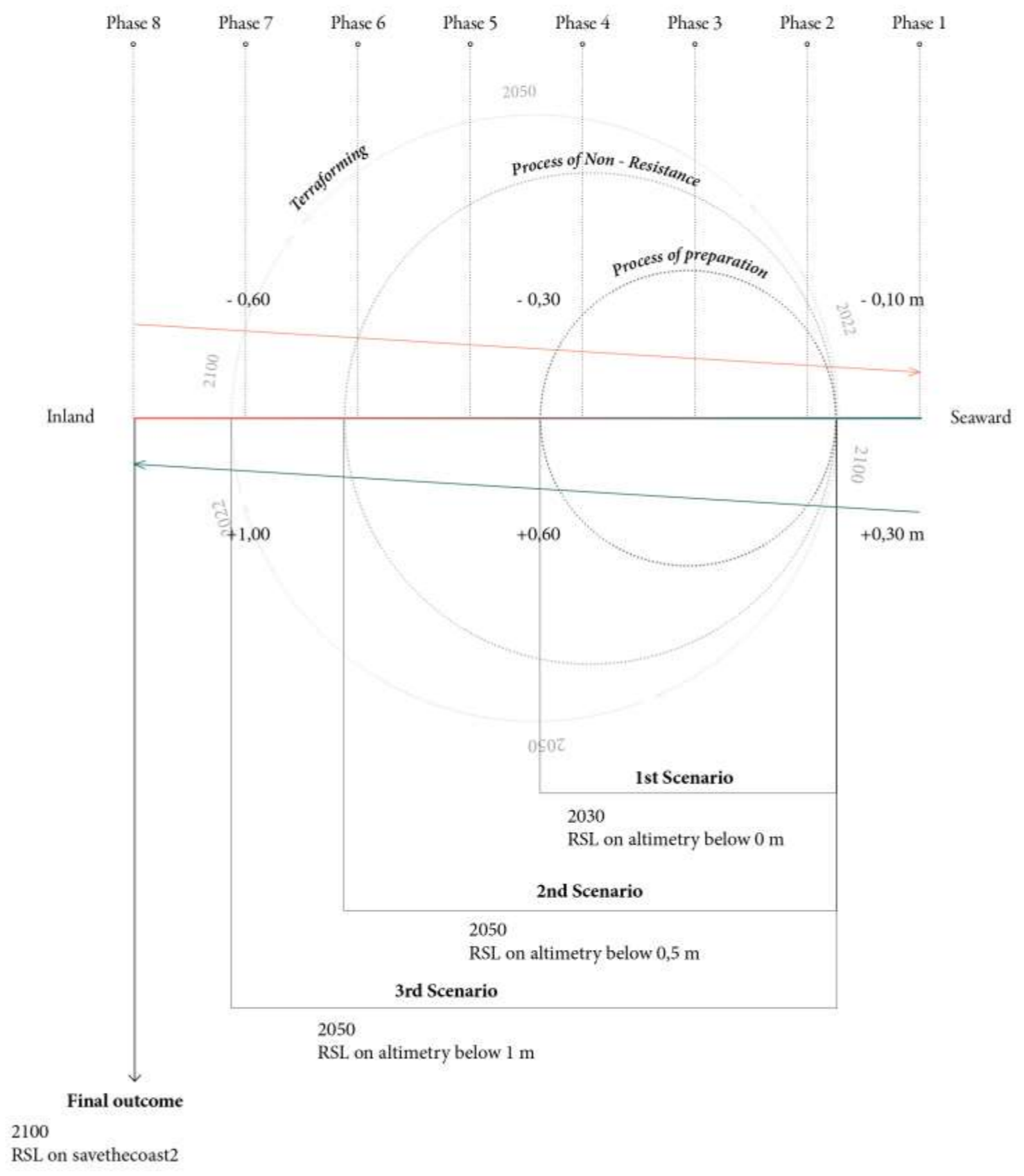


- Time - Circular Movement
- Matter - Downward Movement
- Water - Upward Movement
- ..... Action of Clearance

# Design framework

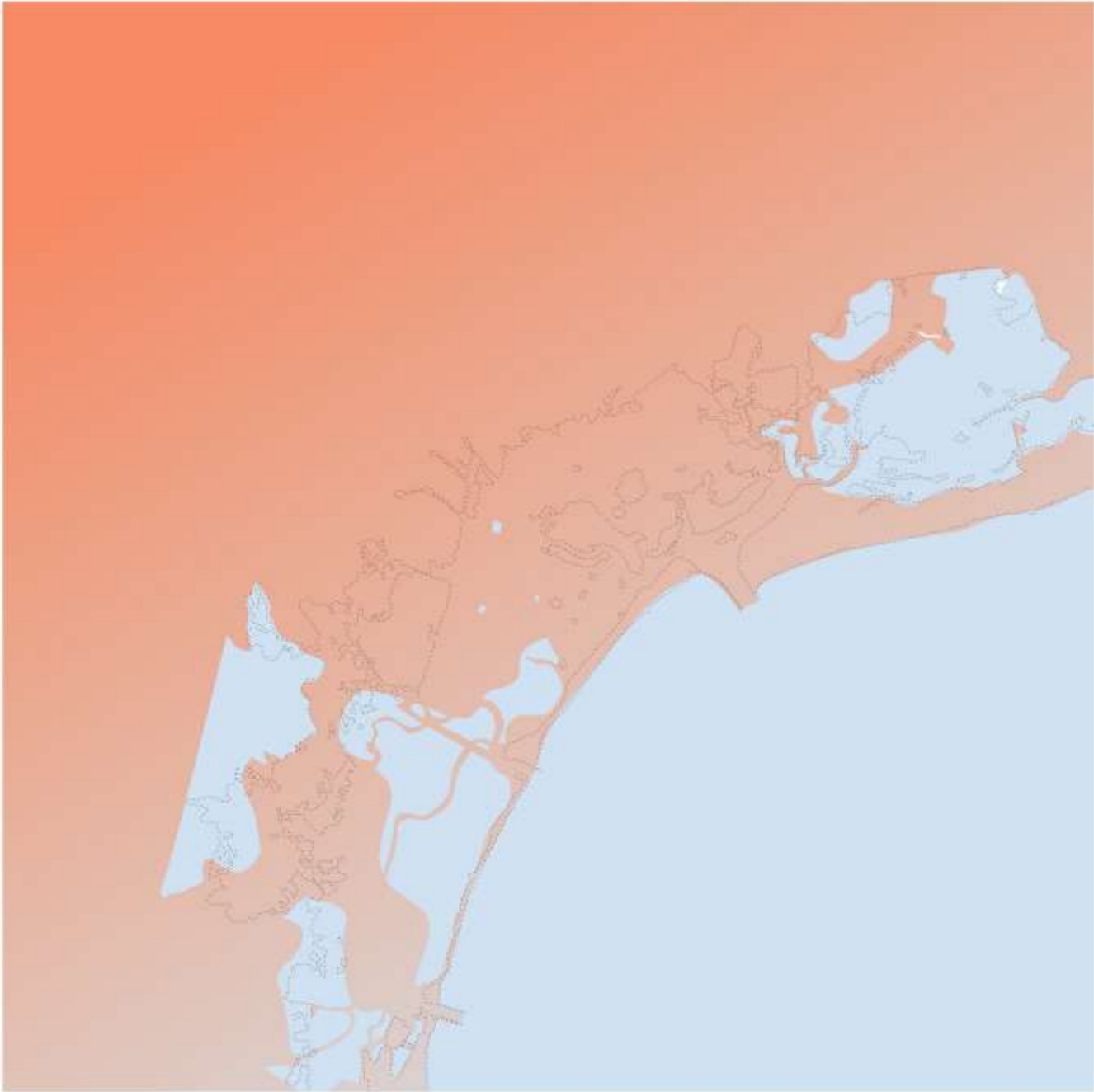


# Design - Strategy

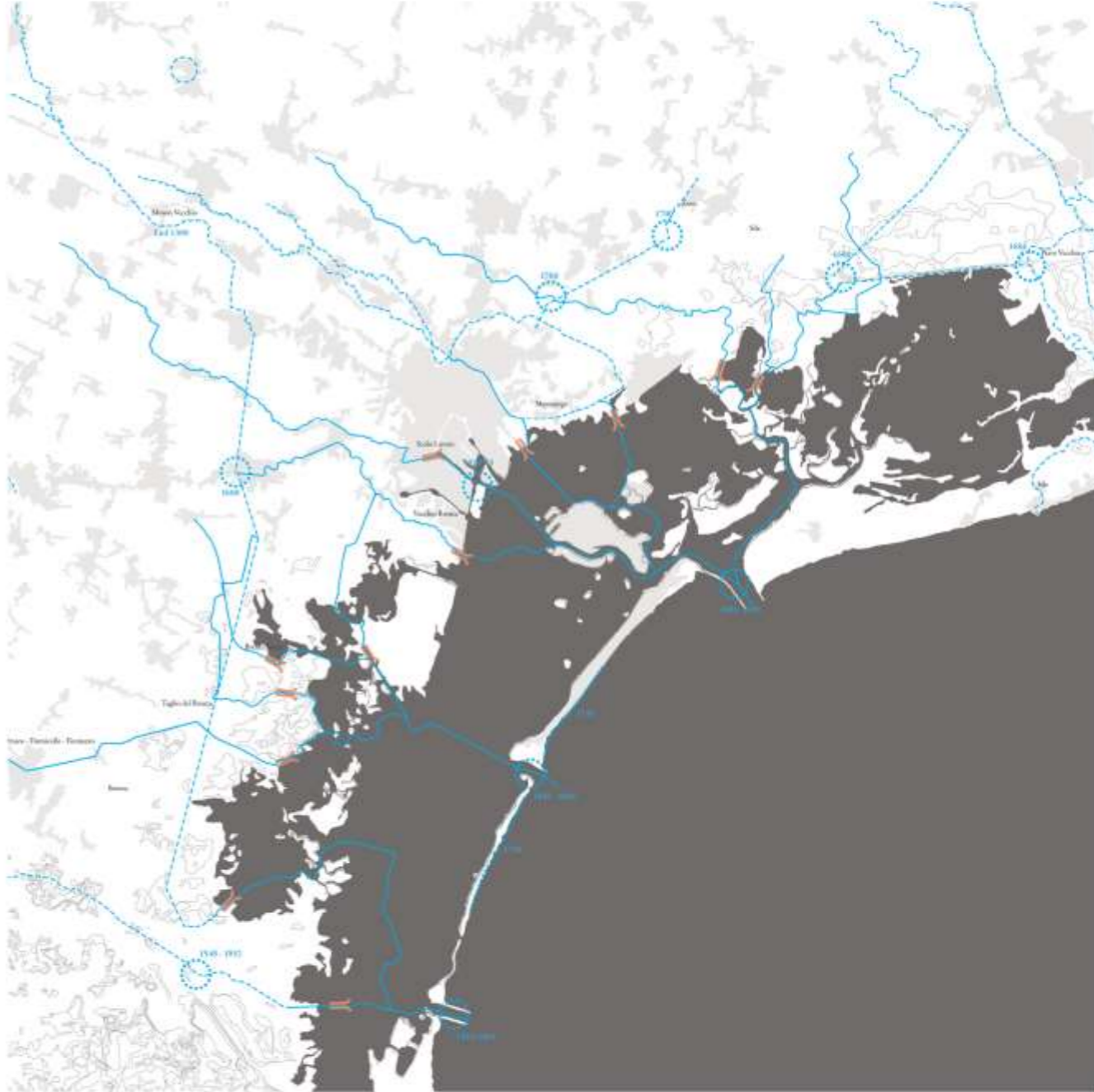




Strategy elementals



*Inlandseaward*



*Water Infrastructure*

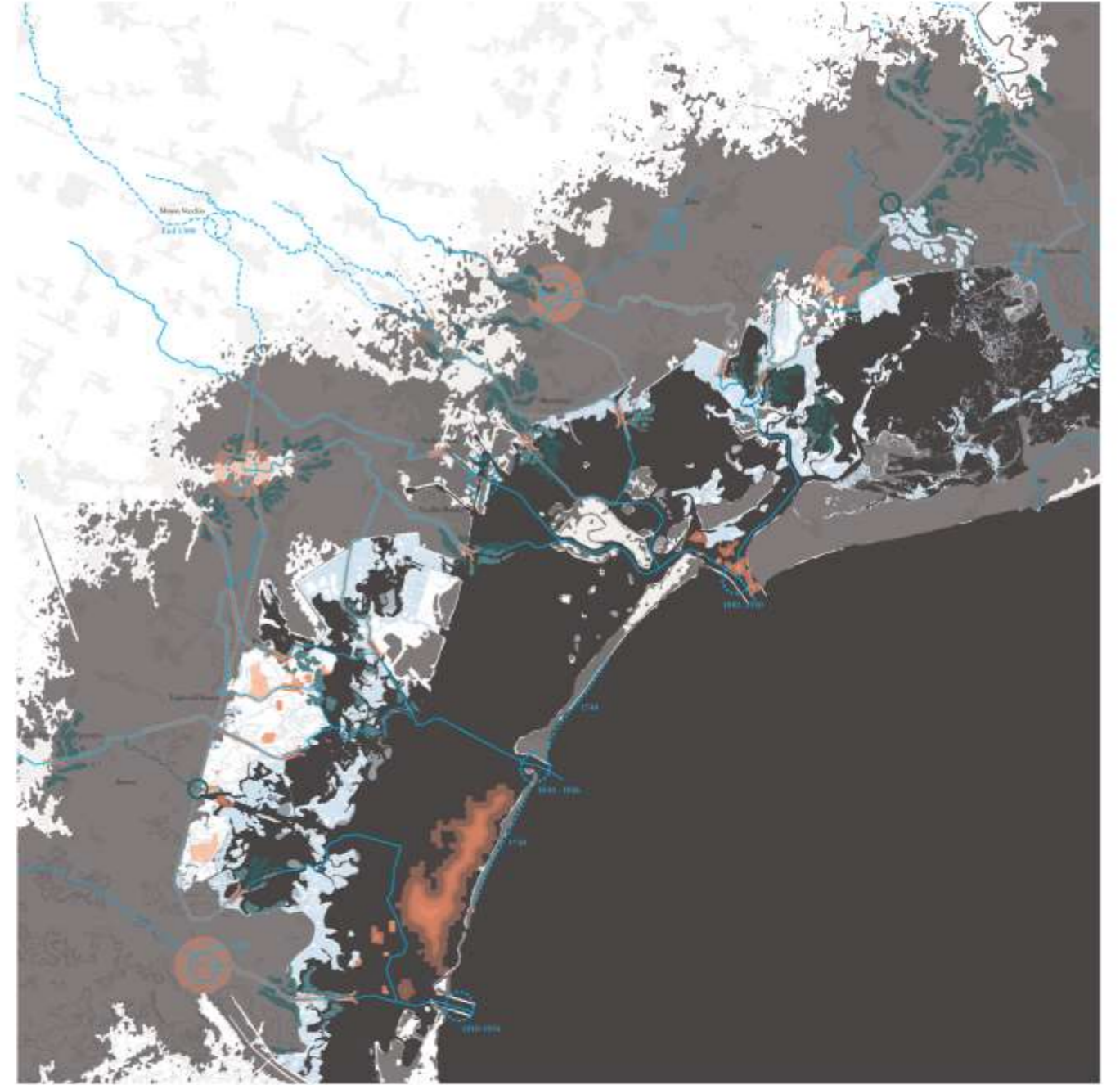
# Design - Strategy



2100 Condition

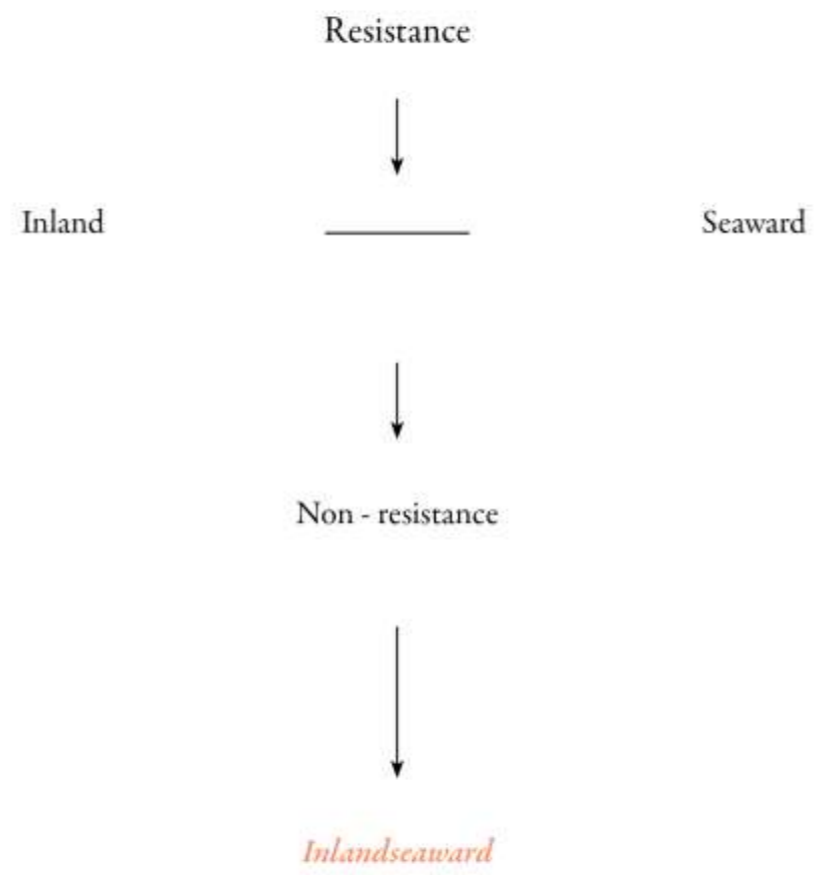


*Inlandseaward*



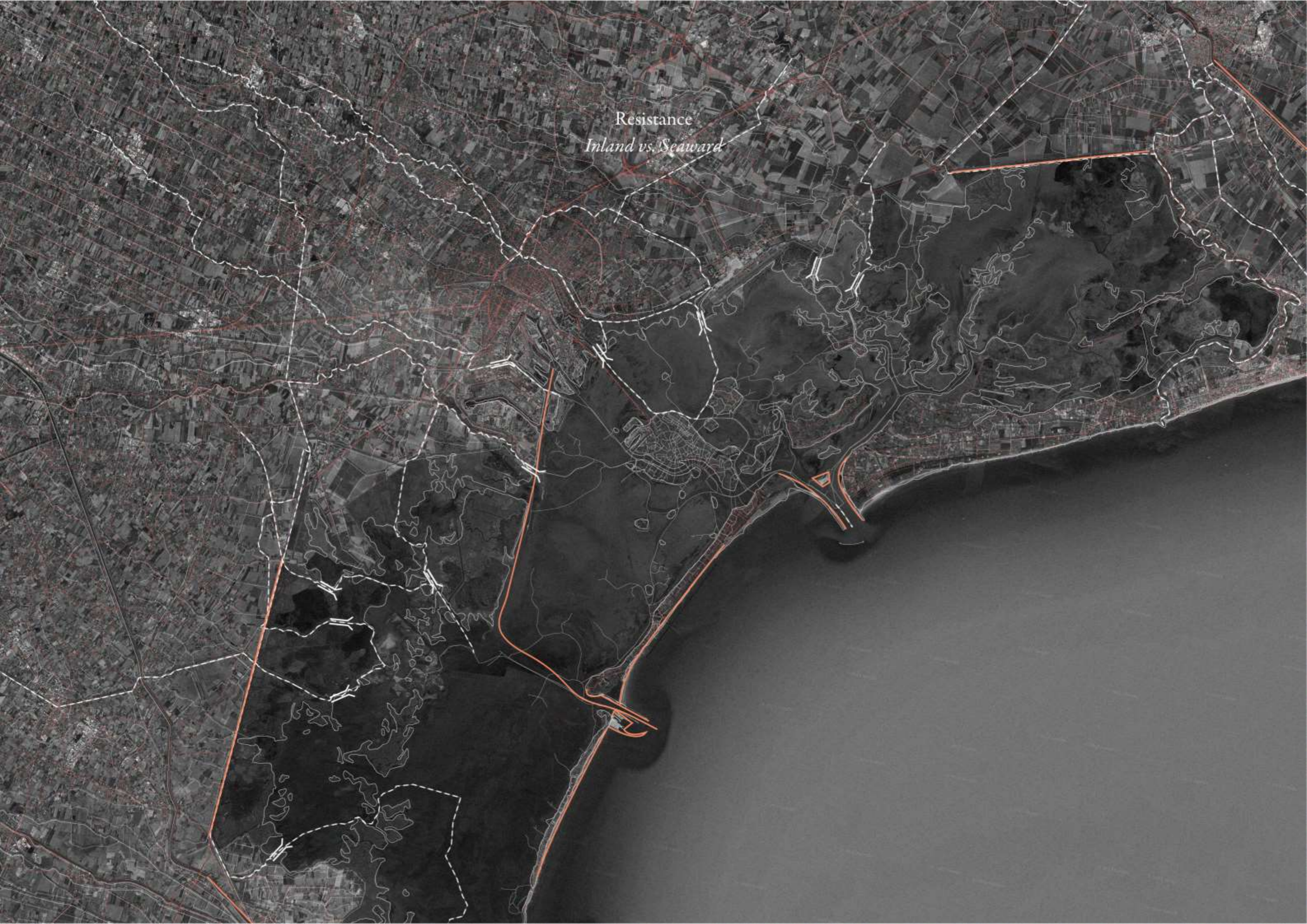
*Water Infrastructure*





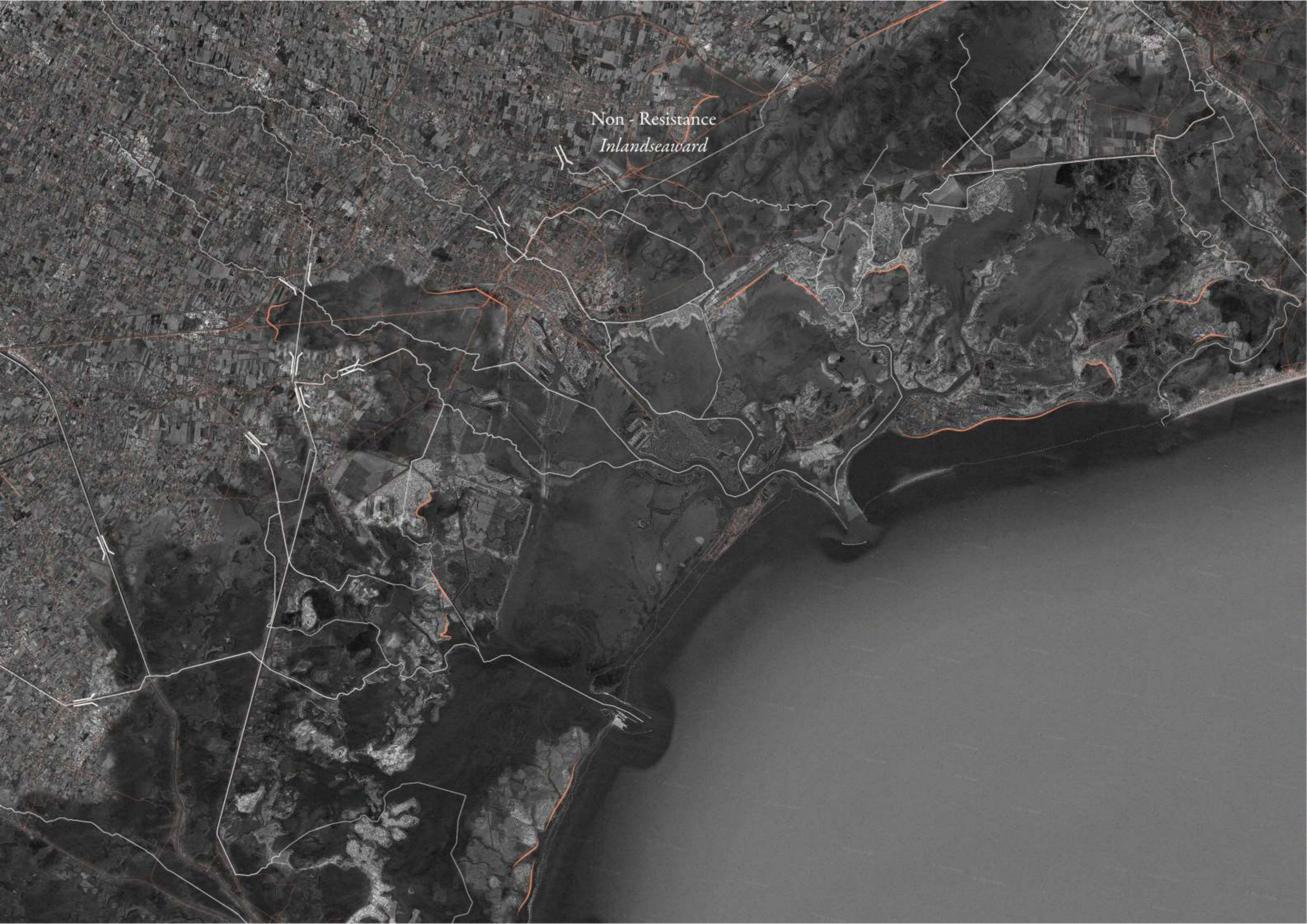


Resistance  
*Inland vs. Seaward*



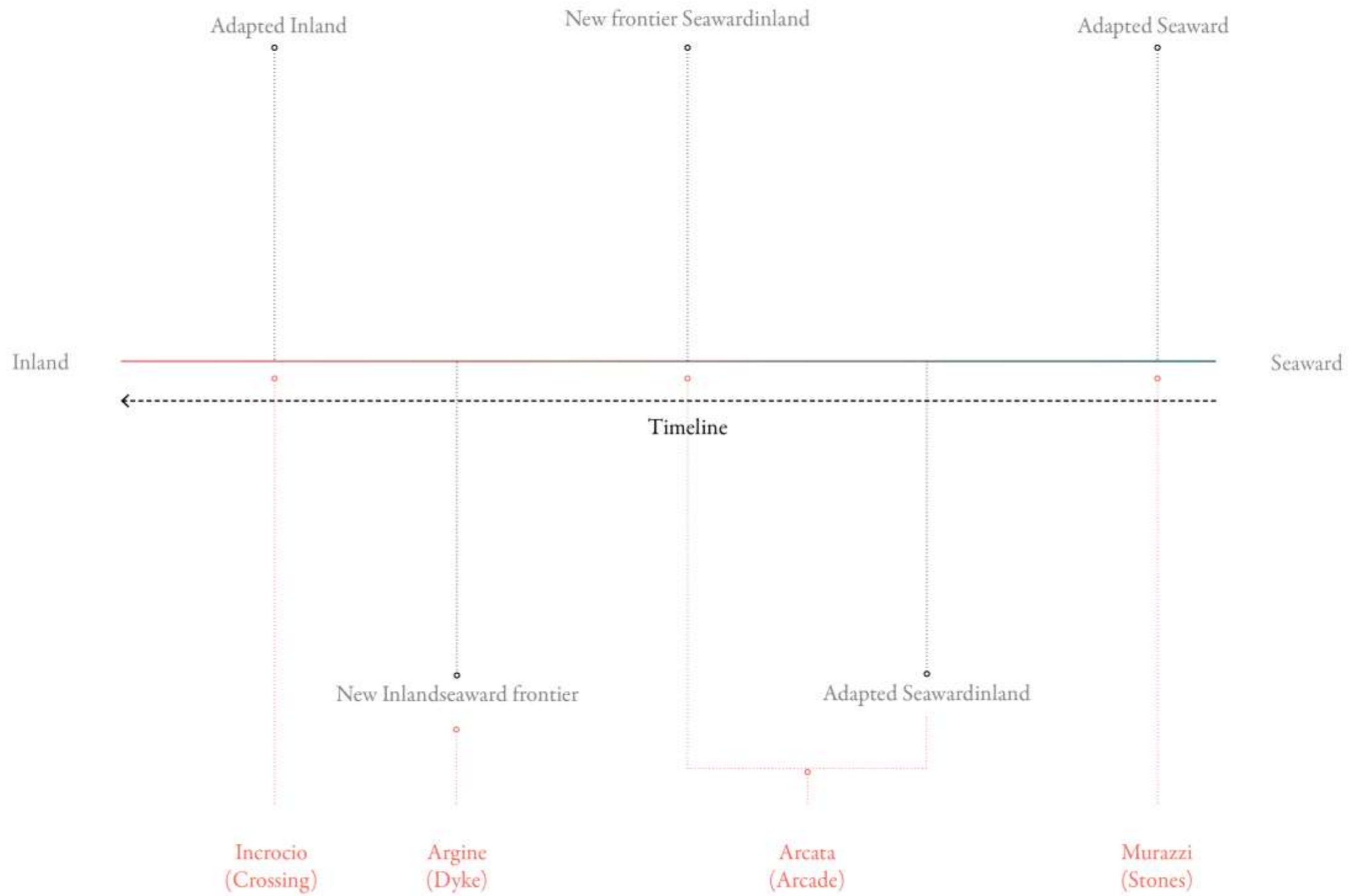


Non - Resistance  
Inlandseaward

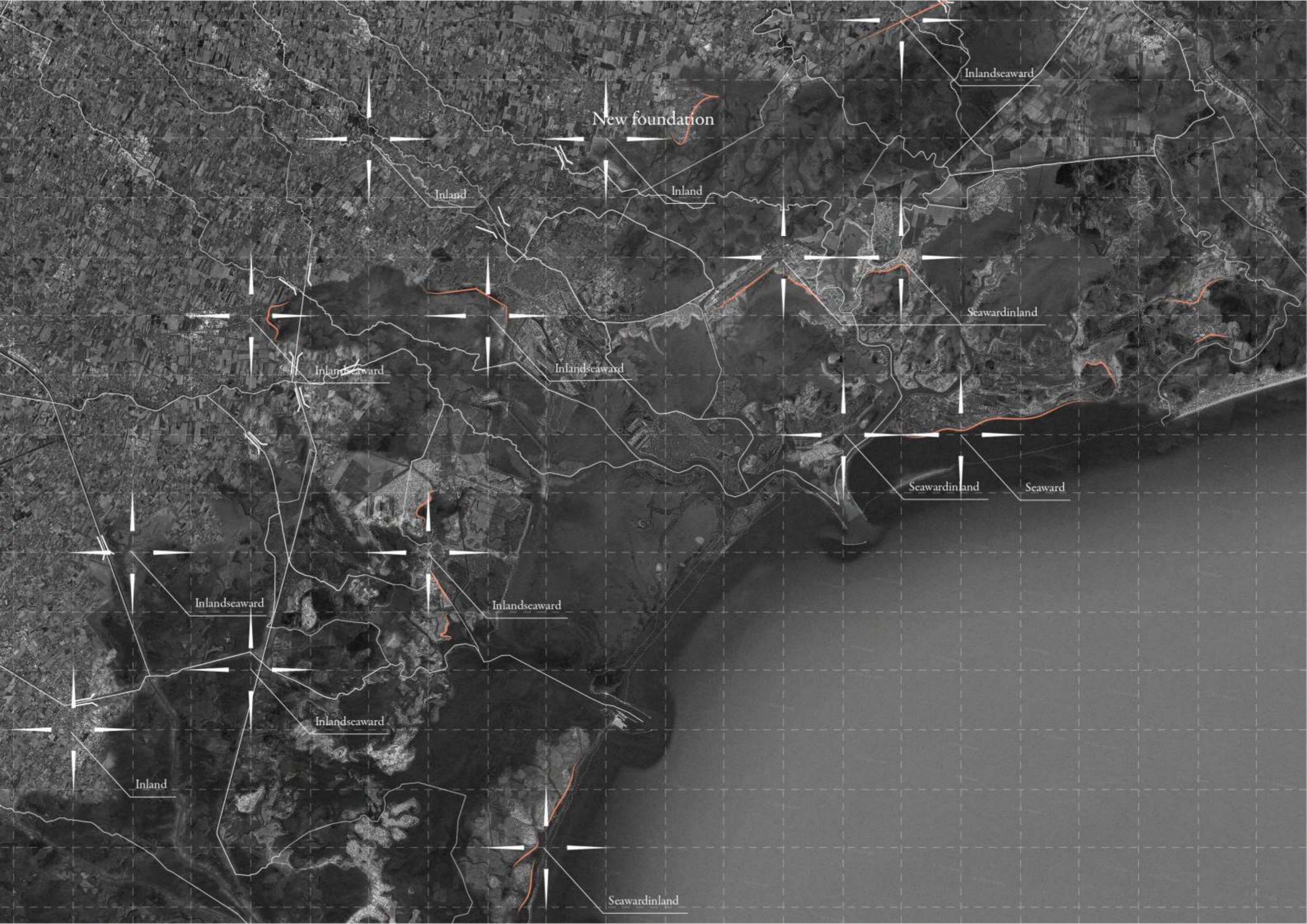






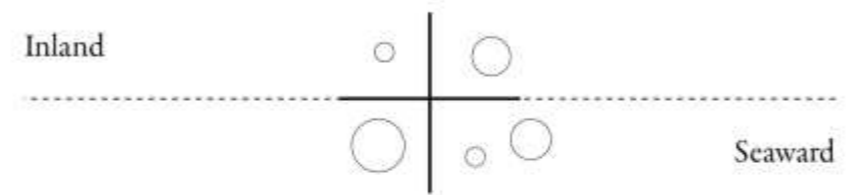
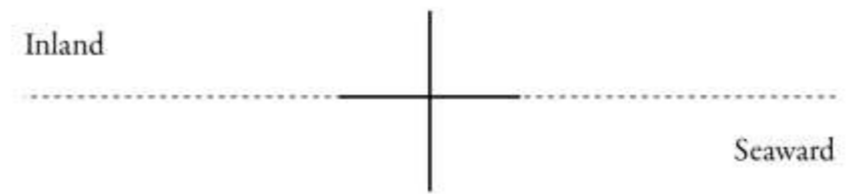
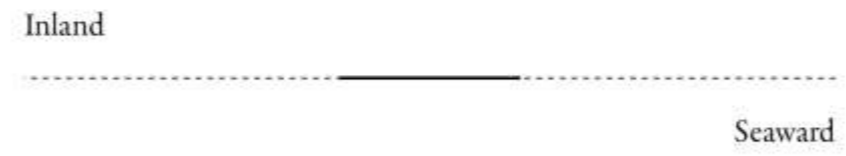








# From frontier to new foundation





New foundation as historical pacification



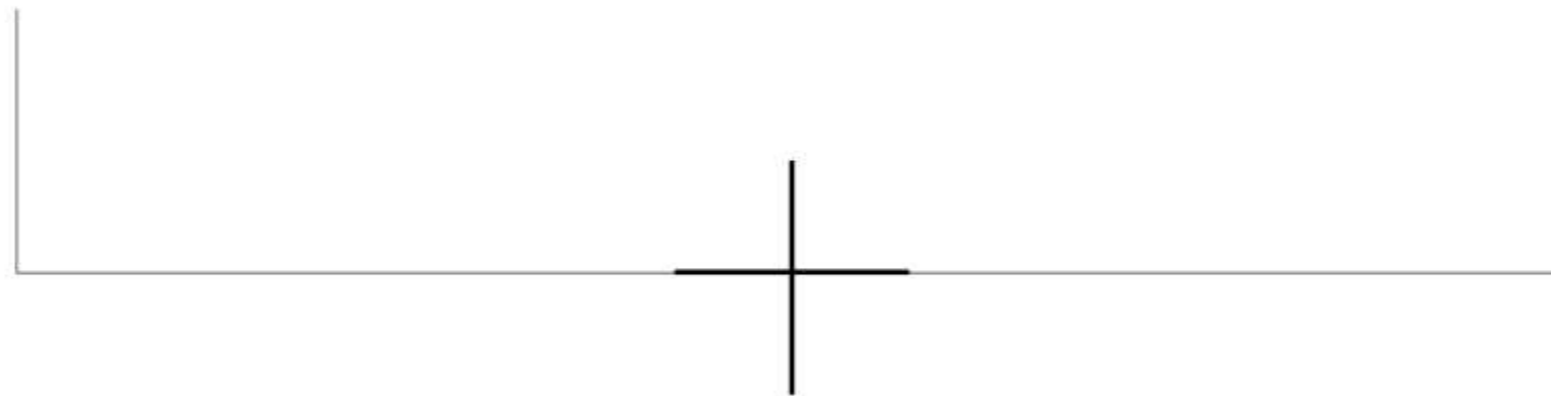
*Alvise Cornaro*

The wall

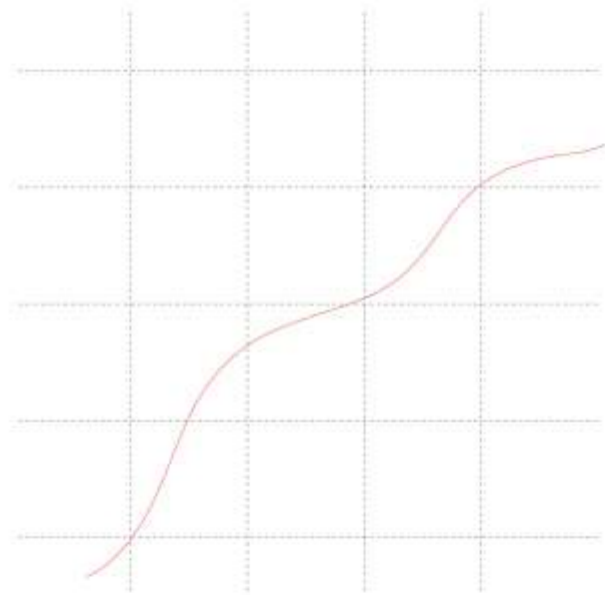


*Cristoforo Sabbadino*

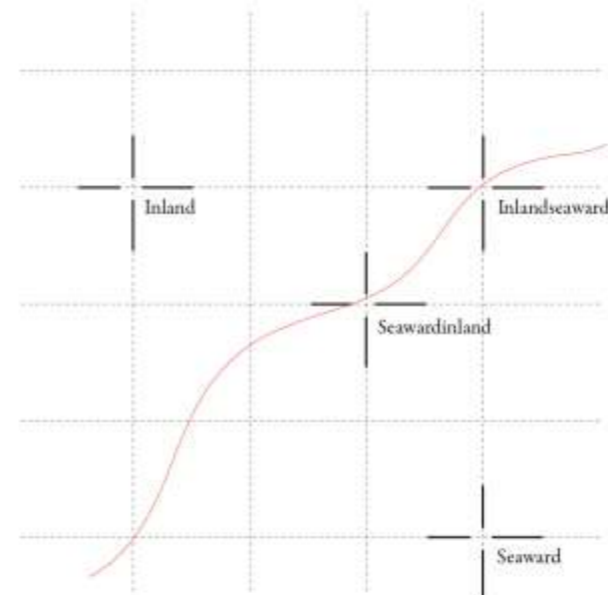
Sedimentation flow



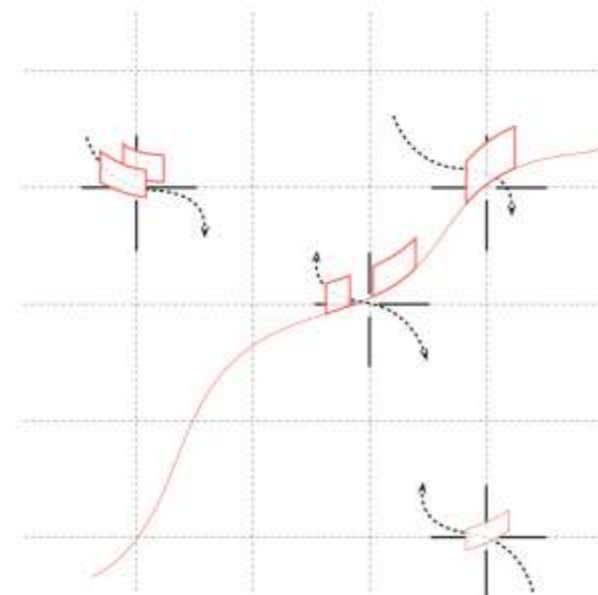
# Pole of foundation as activator



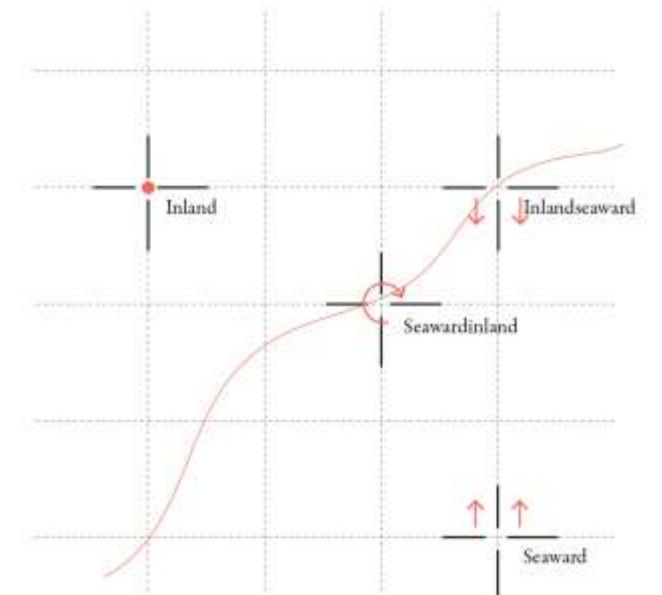
*Border*



*New foundation*



*Wall + Flow*

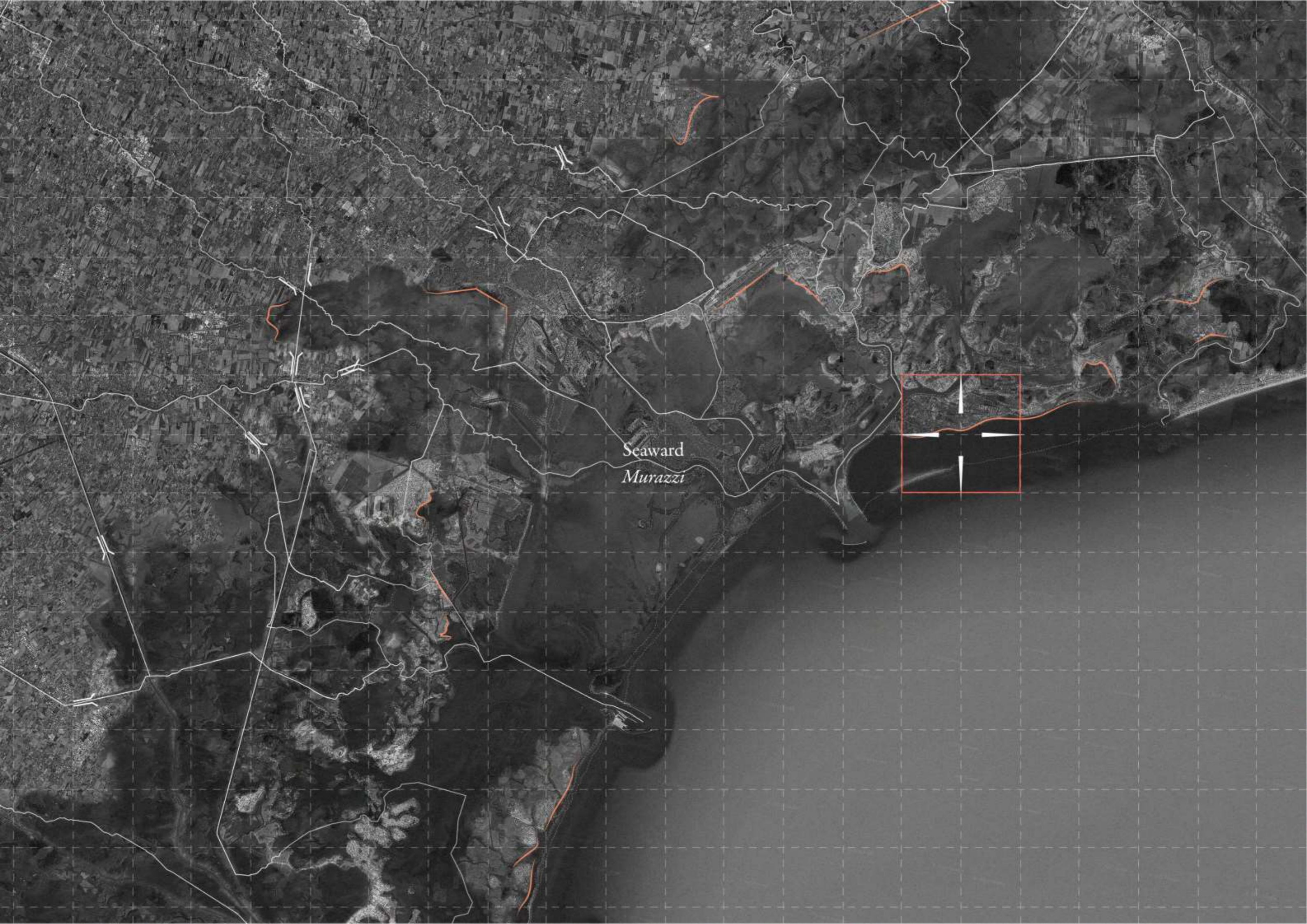


*Terraforming process*



Pali di Fondazione





Seaward  
*Murazzi*



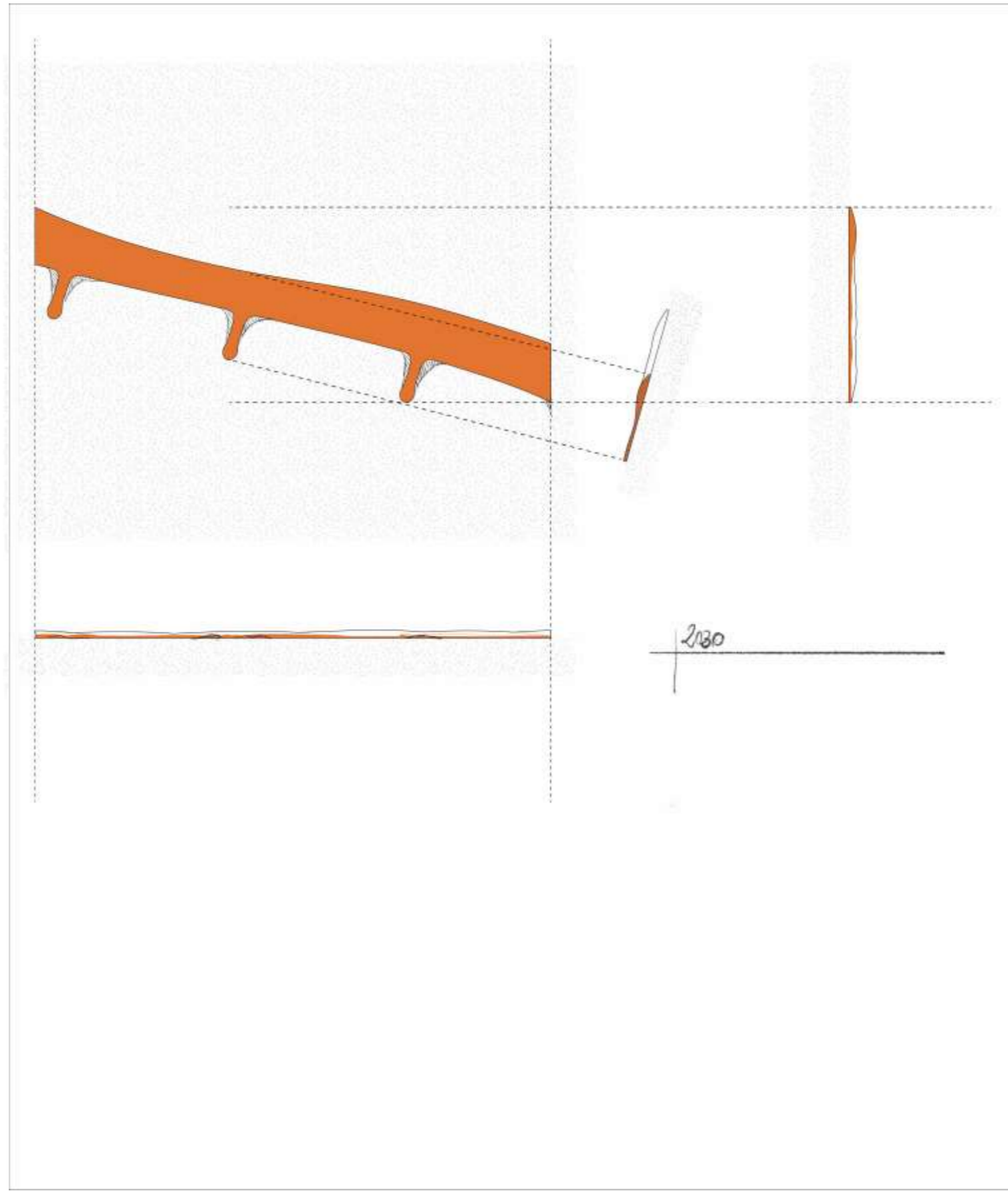
# Murazzi



0 250 500 m N

- Green areas
- Vineyards
- Urban system
- Buildings
- Palo di fondazione
- Water flow
- RSL projection 2100

Murazzi  
*Adaptation*





Murazzi  
*Maquette*







Seawardinland  
*Arcata*



Arcata  
*New foundation*

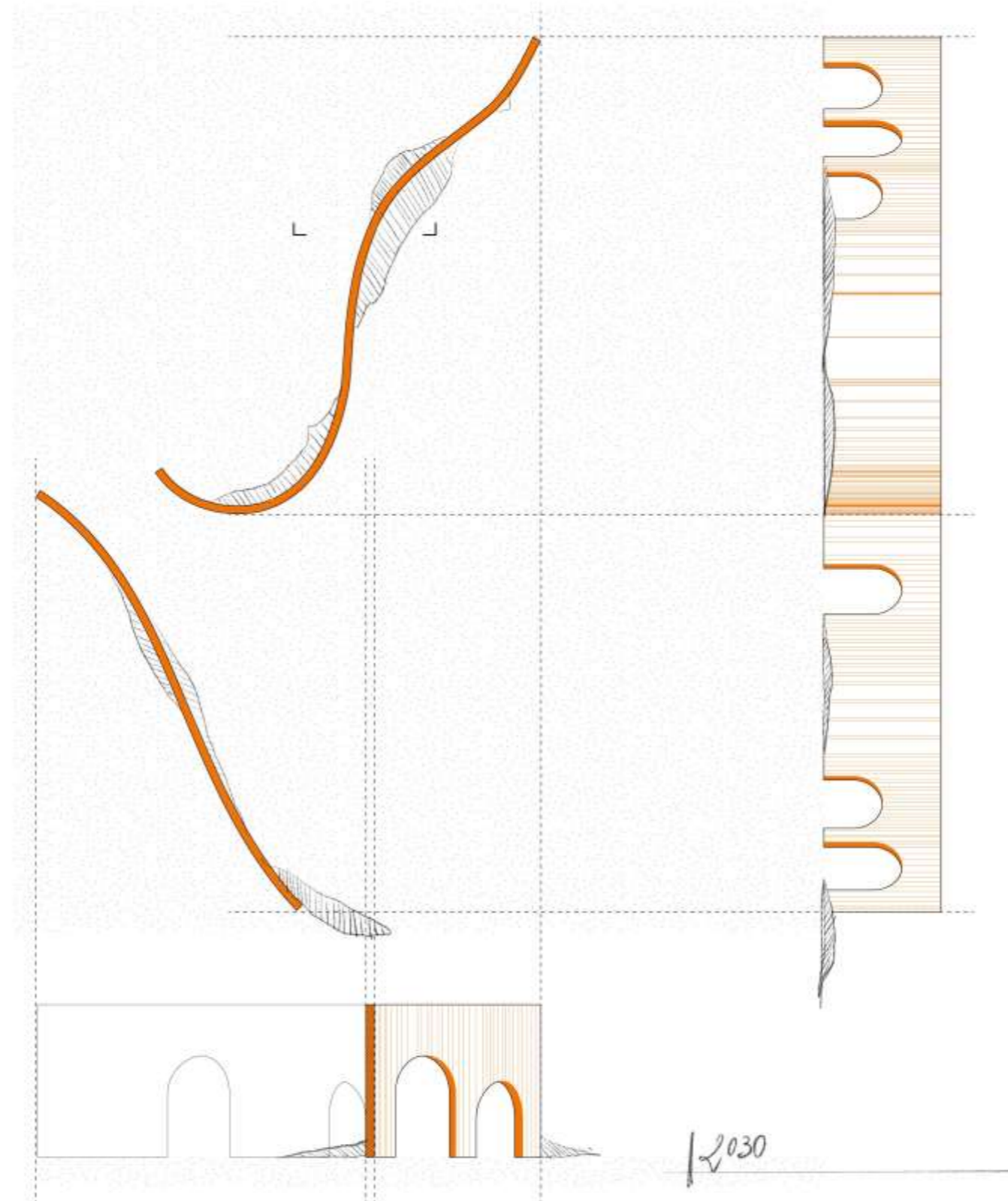


0 250 500 m

N

- Green areas
- Vineyards
- Urban system
- Buildings

Arcata  
*Adaptation*





Arcata  
*Maquette*







Inlandseaward  
*Argine*

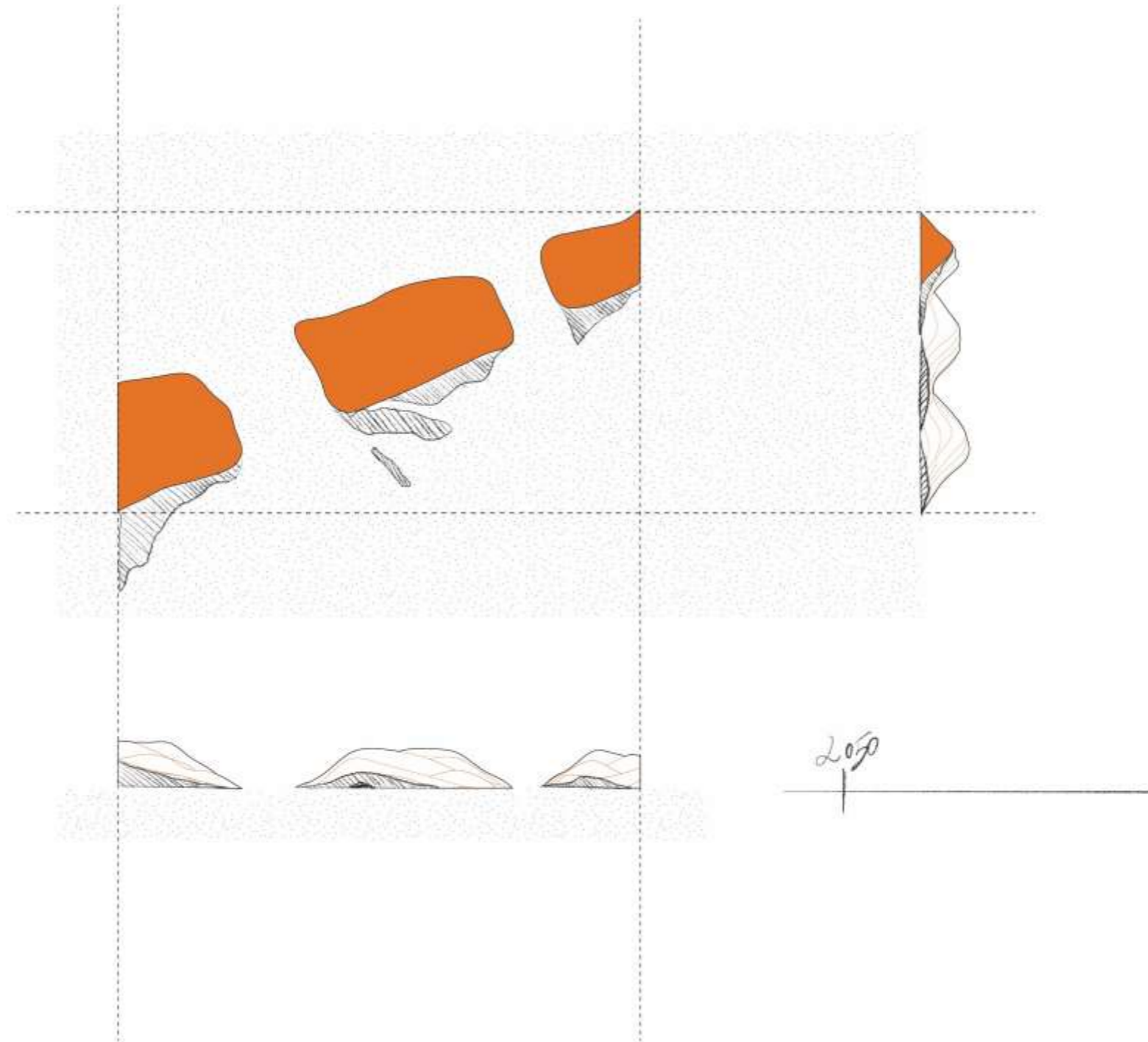


Argine  
*Current situation*



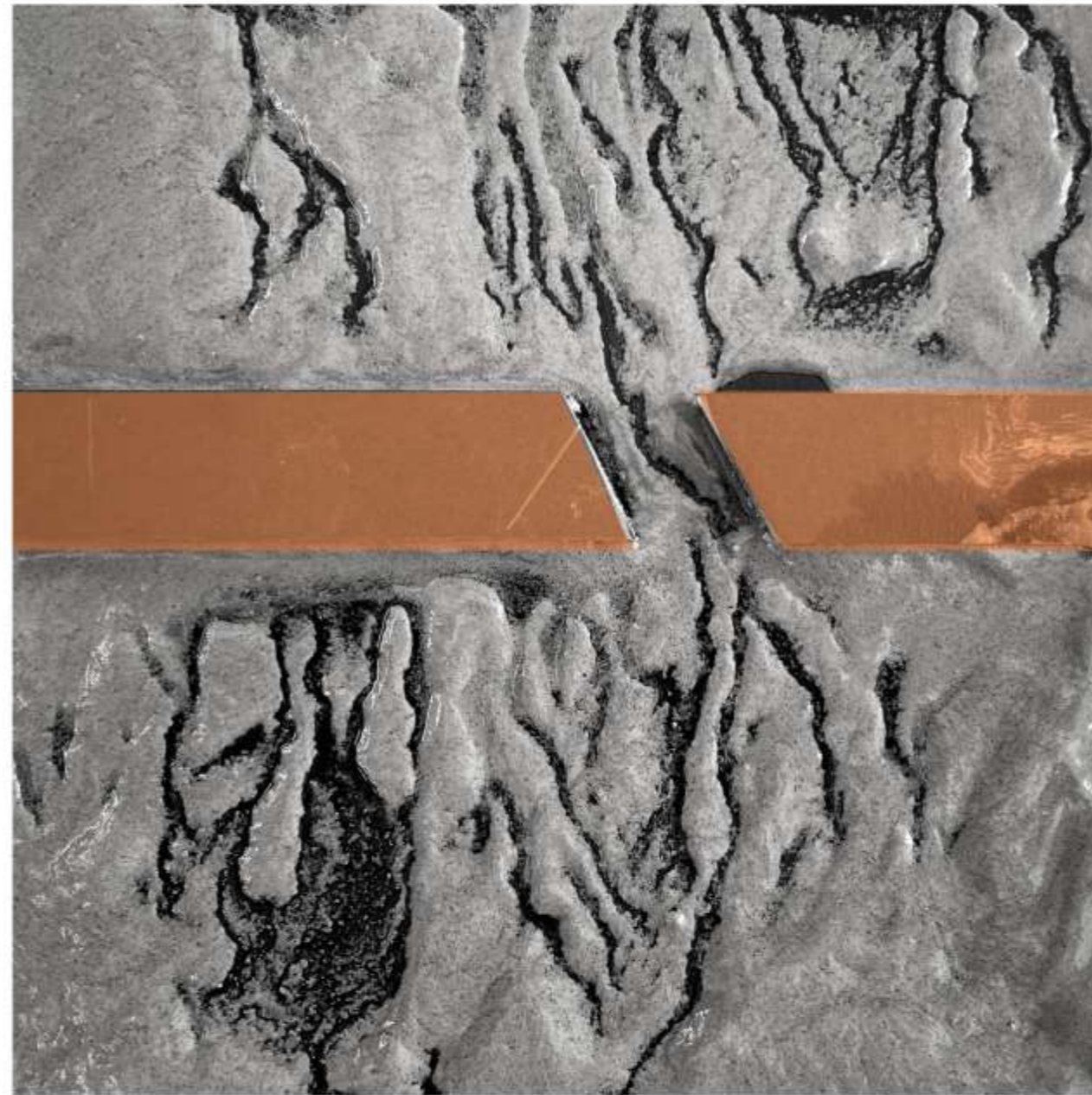
- Green area
- Vineyards
- Urban system
- Buildings
- Palo di fondazione
- Water flow

Argine  
*Adaptation*

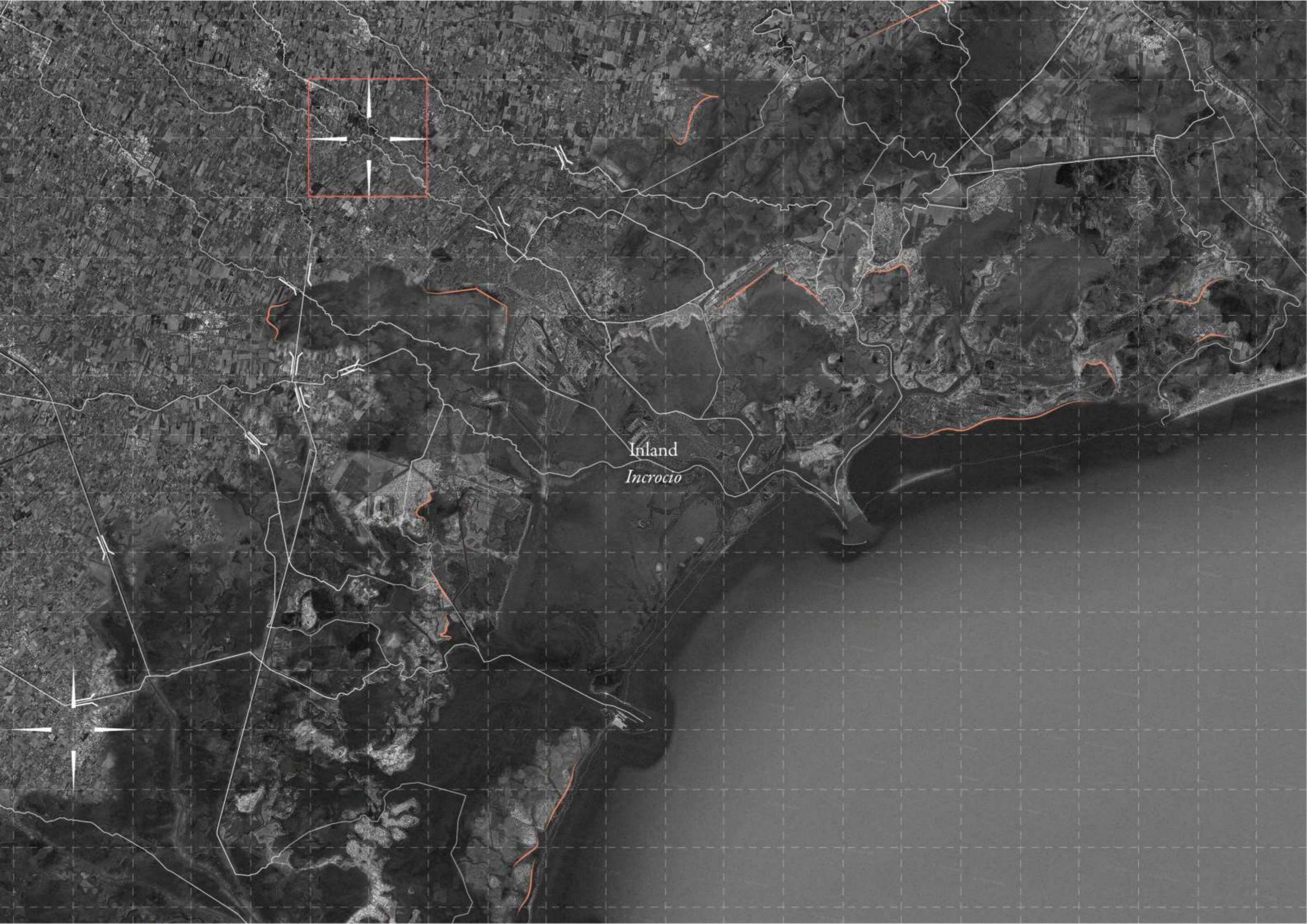




Argine  
*Maquette*



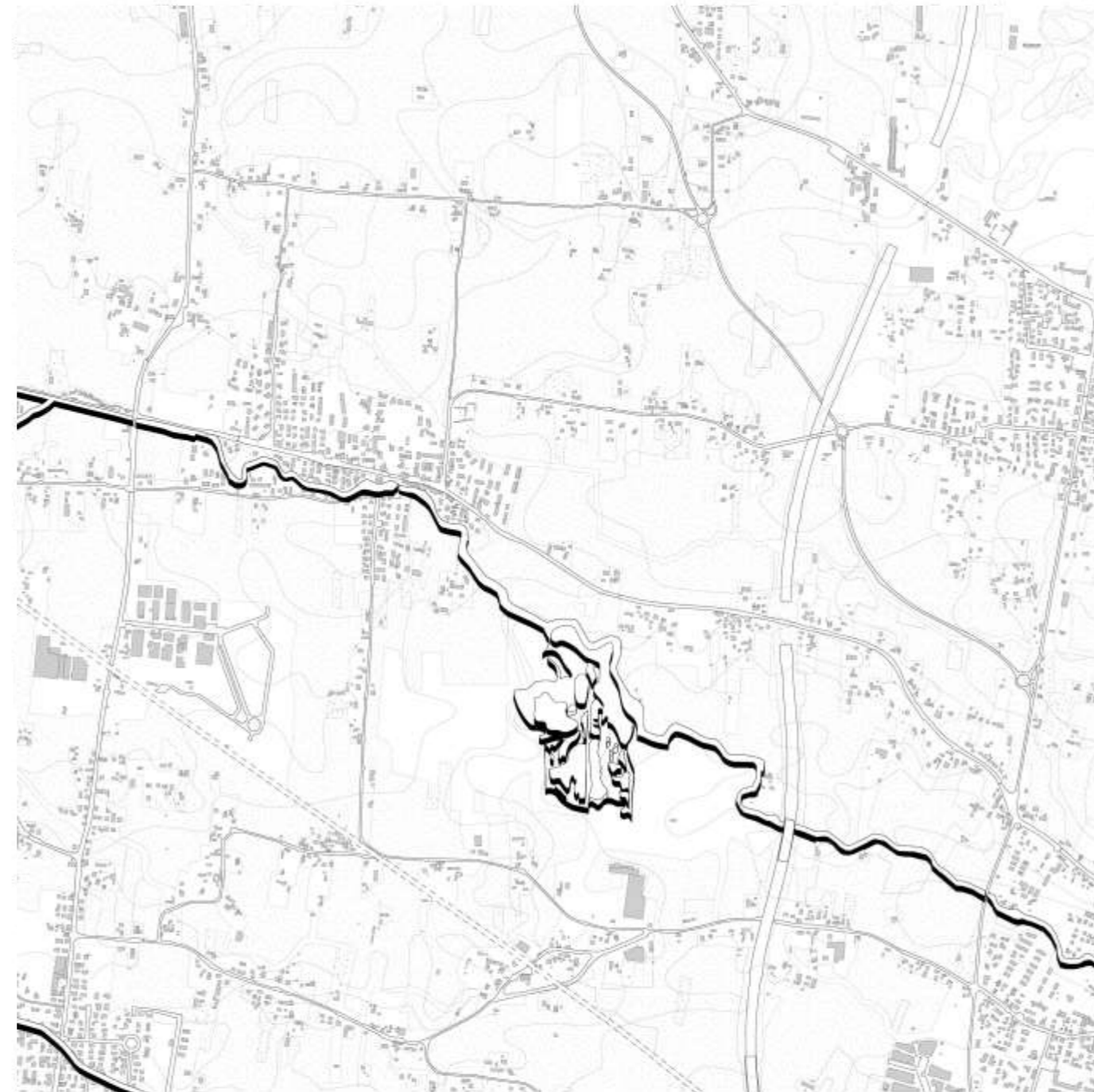




Inland  
*Incrocio*



Incrocio  
*New foundation*



0 250 500 m N

- Green areas
- Vineyards
- Urban system
- Buildings
- Palo di fondazione
- Water flow

Incrocio  
*Maquette*





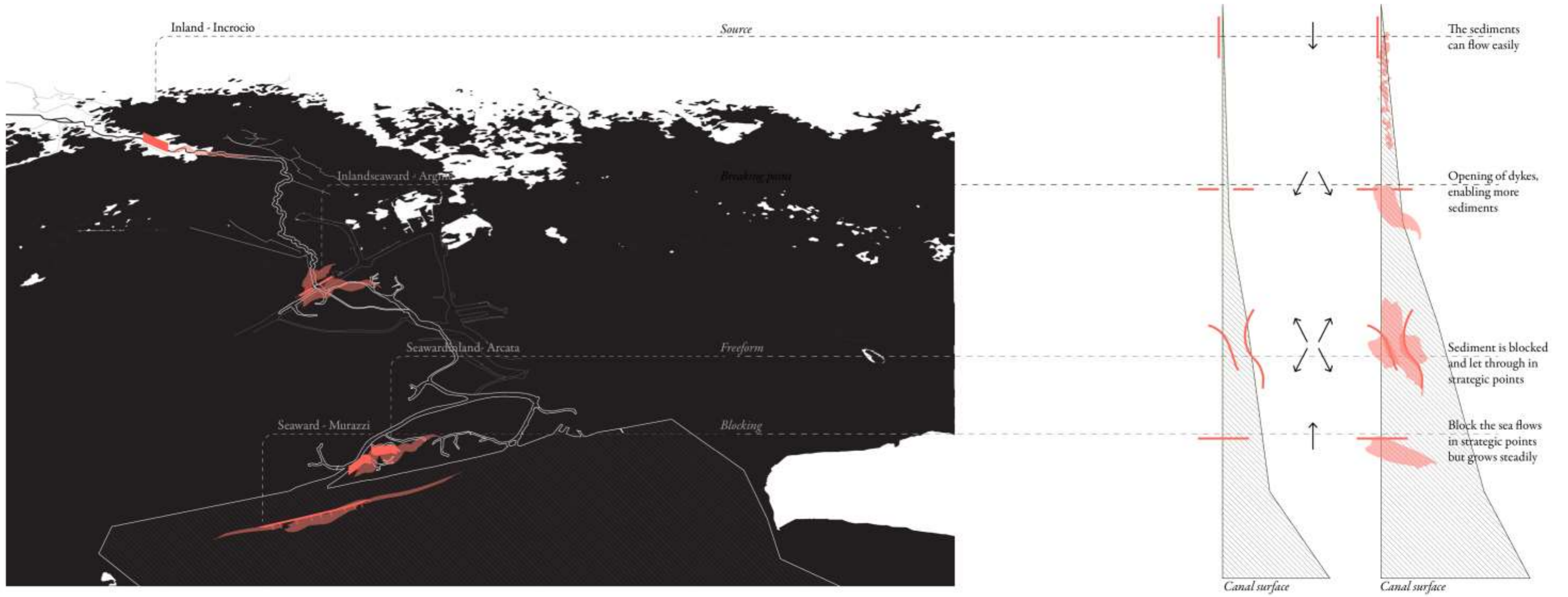
Territorial Foundation

# 2022 Condition



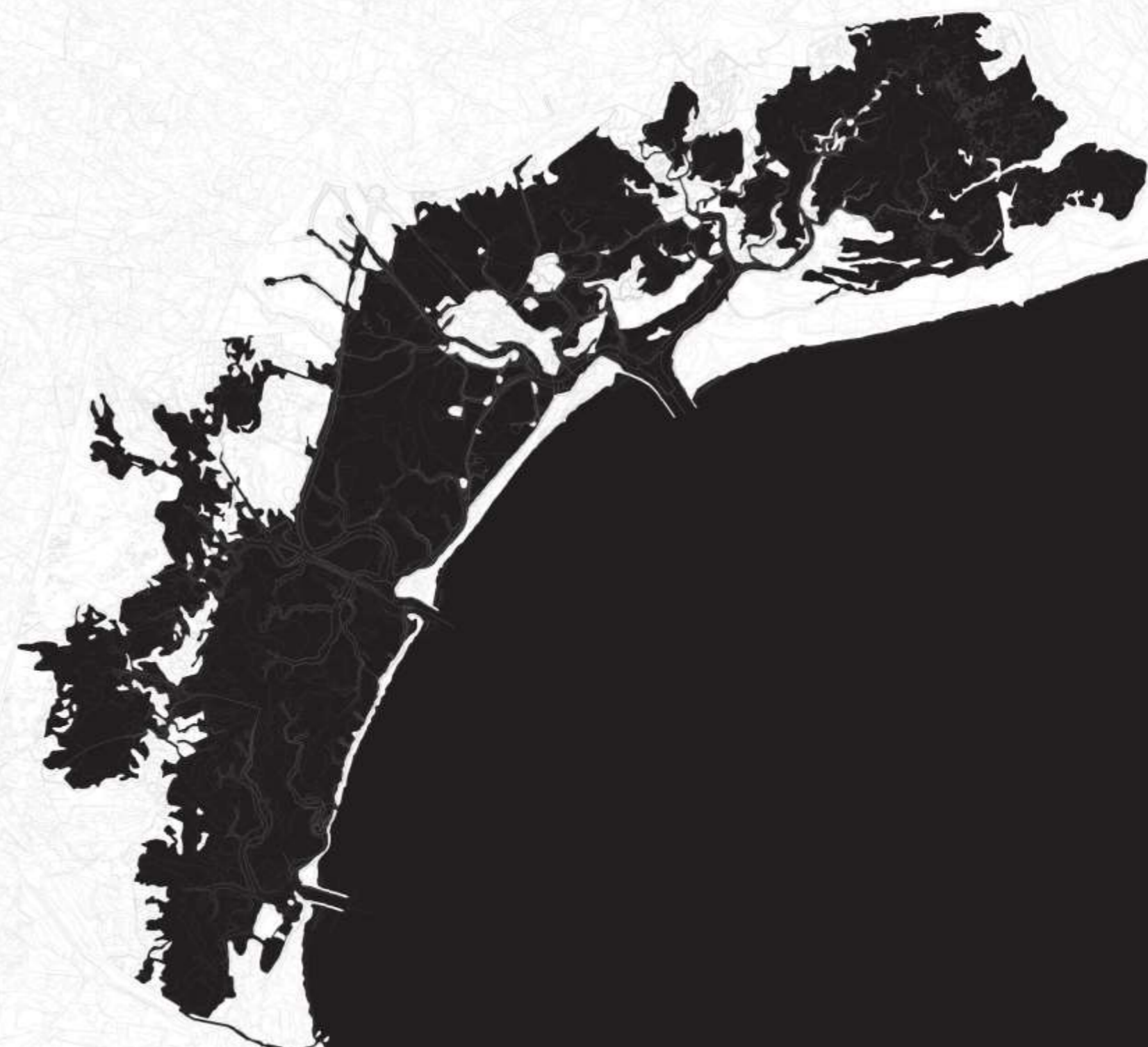


# 2100 Condition



2022  
Seaward |-----| Inland

2022



0 2.5 5 km N



2030  
Seaward ——— Inland  
-0,10 m Land  
+0,30 m Water  
-0,50 m Contours  
Arcata  
Argine

2030

Process of Preparation  
Phase 1 Water network on the foreground  
Phase 2 Enlargement River and Fiver  
Phase 3 Containment of new waterways

0 2.5 5 km N





Seaward ———— 2060 ———— Inland

-0.30 m Land  
+0.60 m Water  
-0.00 m Contours  
Aixca  
Arguix  
Morazan

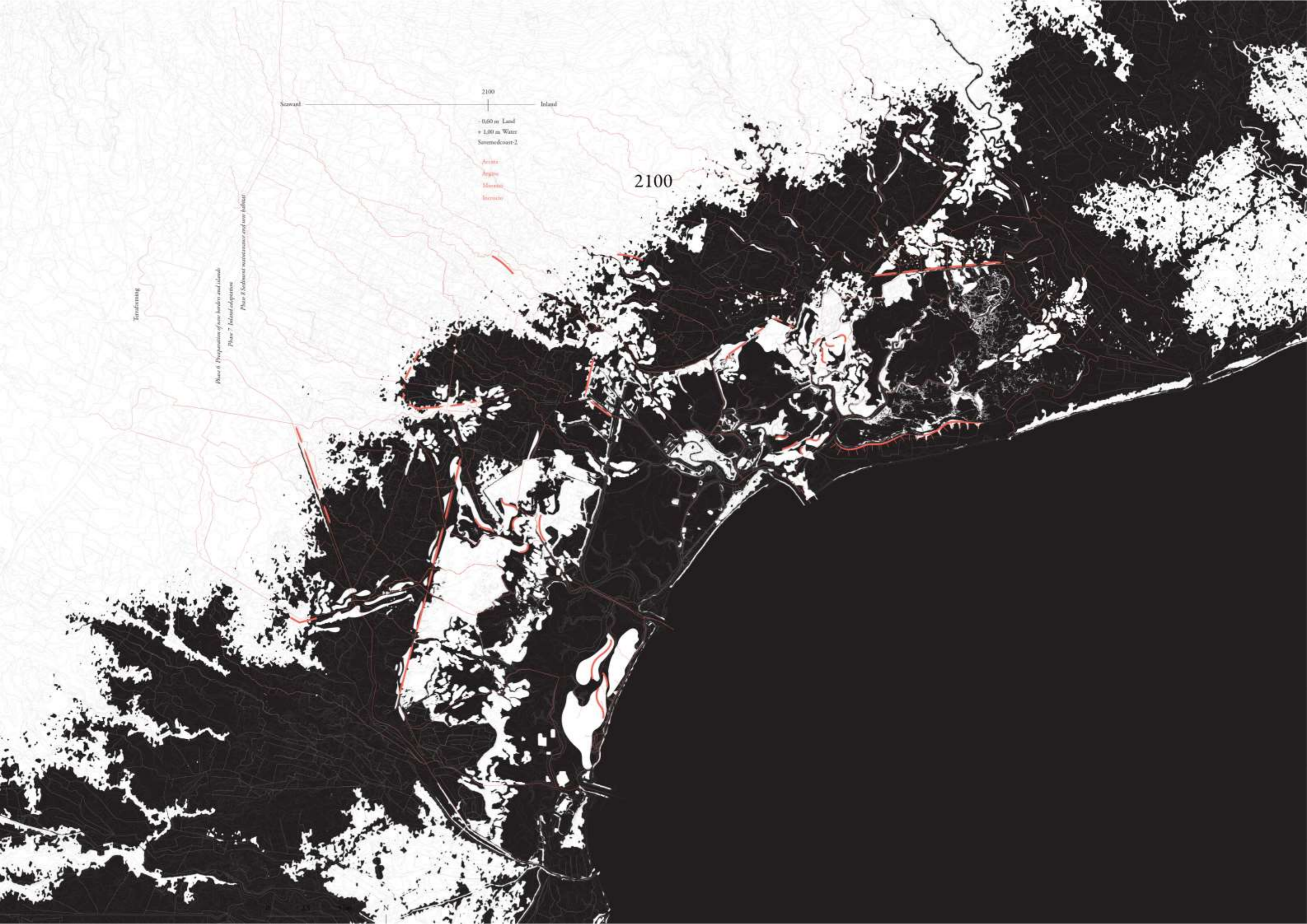
2060

Process of Non Resistance

Phase 4 Opening of new subaqueous fluxes  
Phase 5 Lagoon reconfiguration







Seaward Inland

2100  
-0,60 m Land  
+ 1,00 m Water  
Severedcoast-2

Arca  
Argos  
Munoz  
Inrocto

2100

Transforming

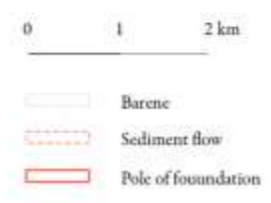
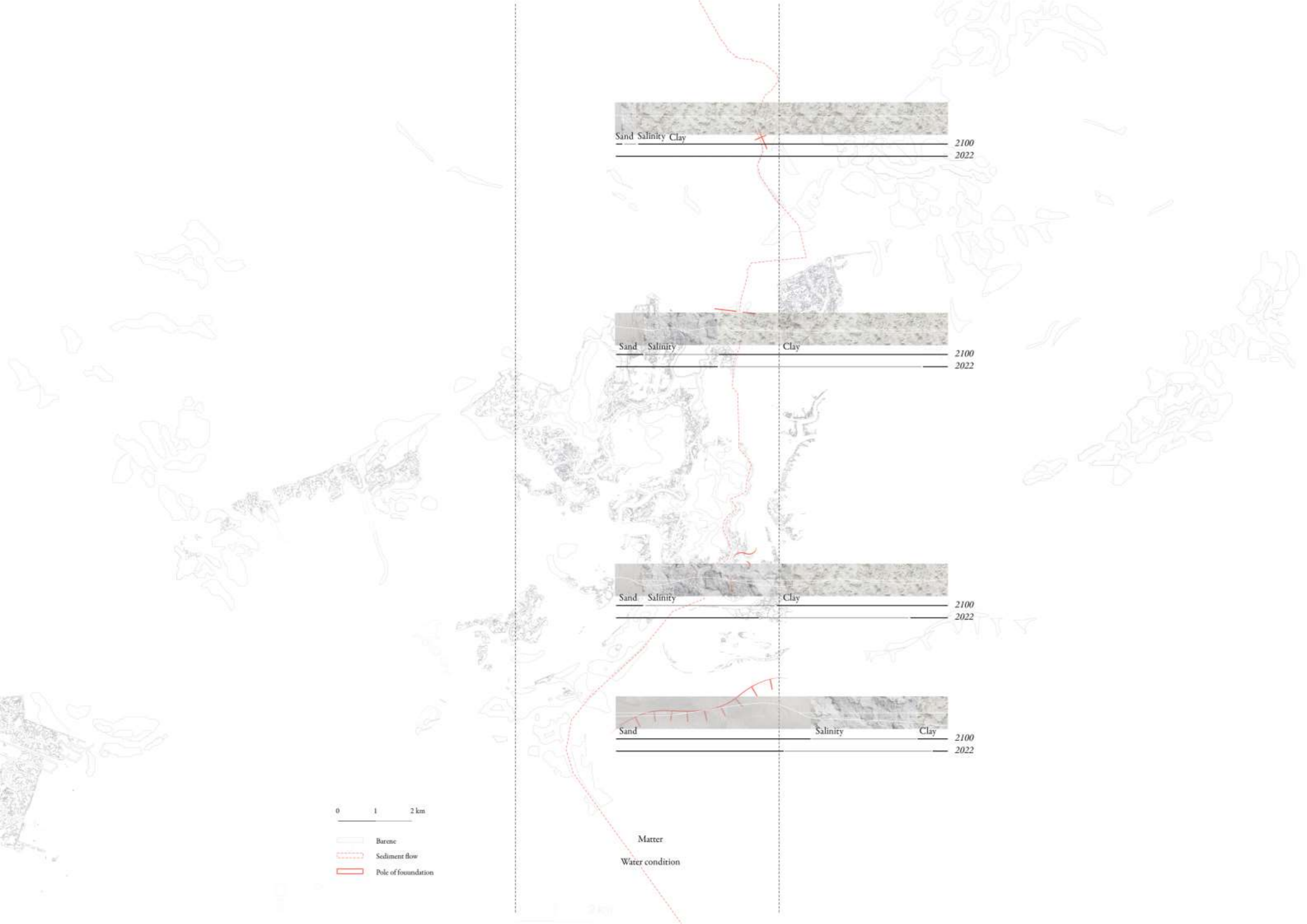
Phase 6 Preparation of new borders and island  
Phase 7 Island adaptation  
Phase 8 Softwood maintenance and use habitat



New foundation analysis

*Matter | Habitat | Topos | Geopolitics*





Matter  
Water condition



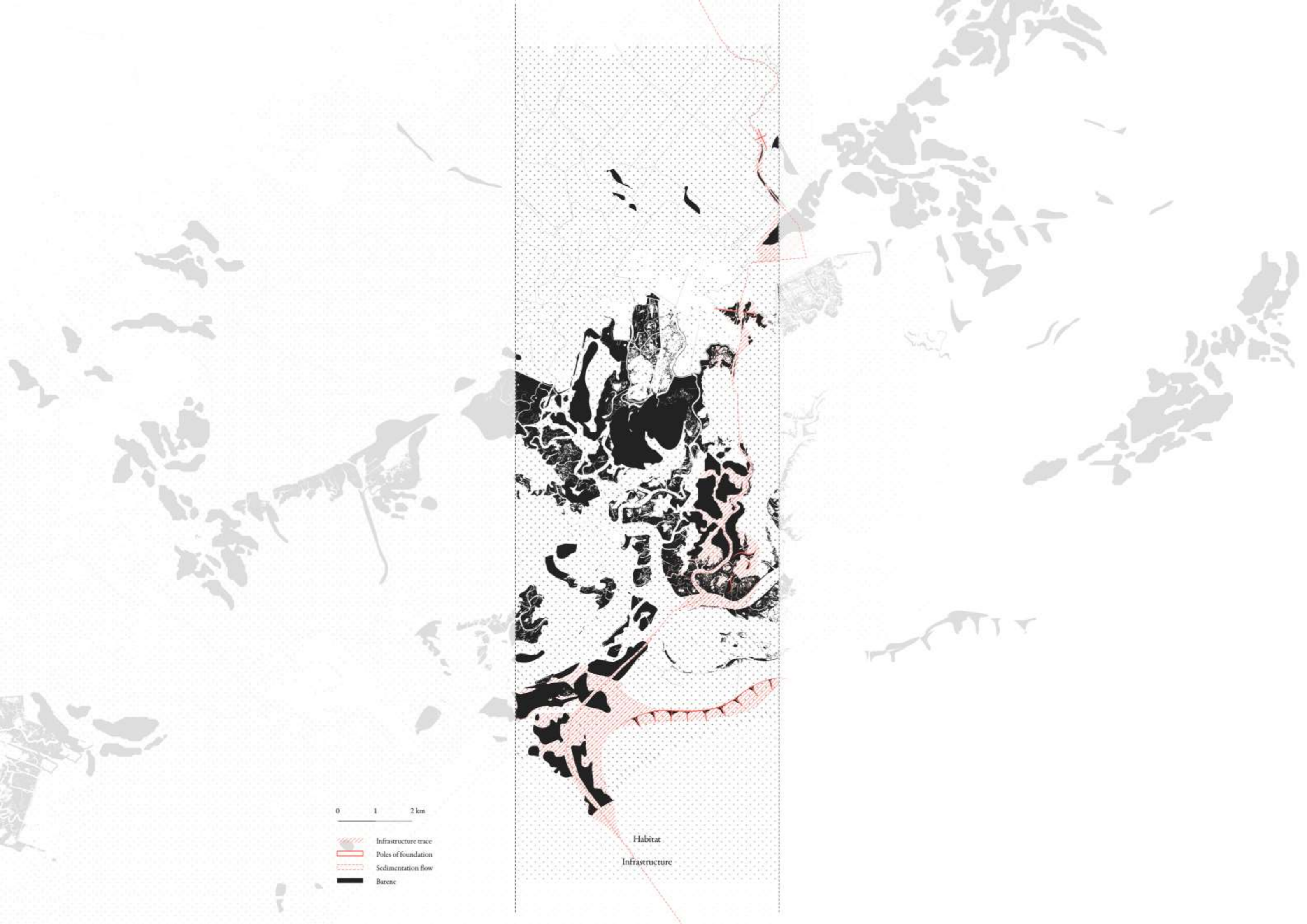
0 1 2 km

— Habitation trace

Habitat

Infrastructure





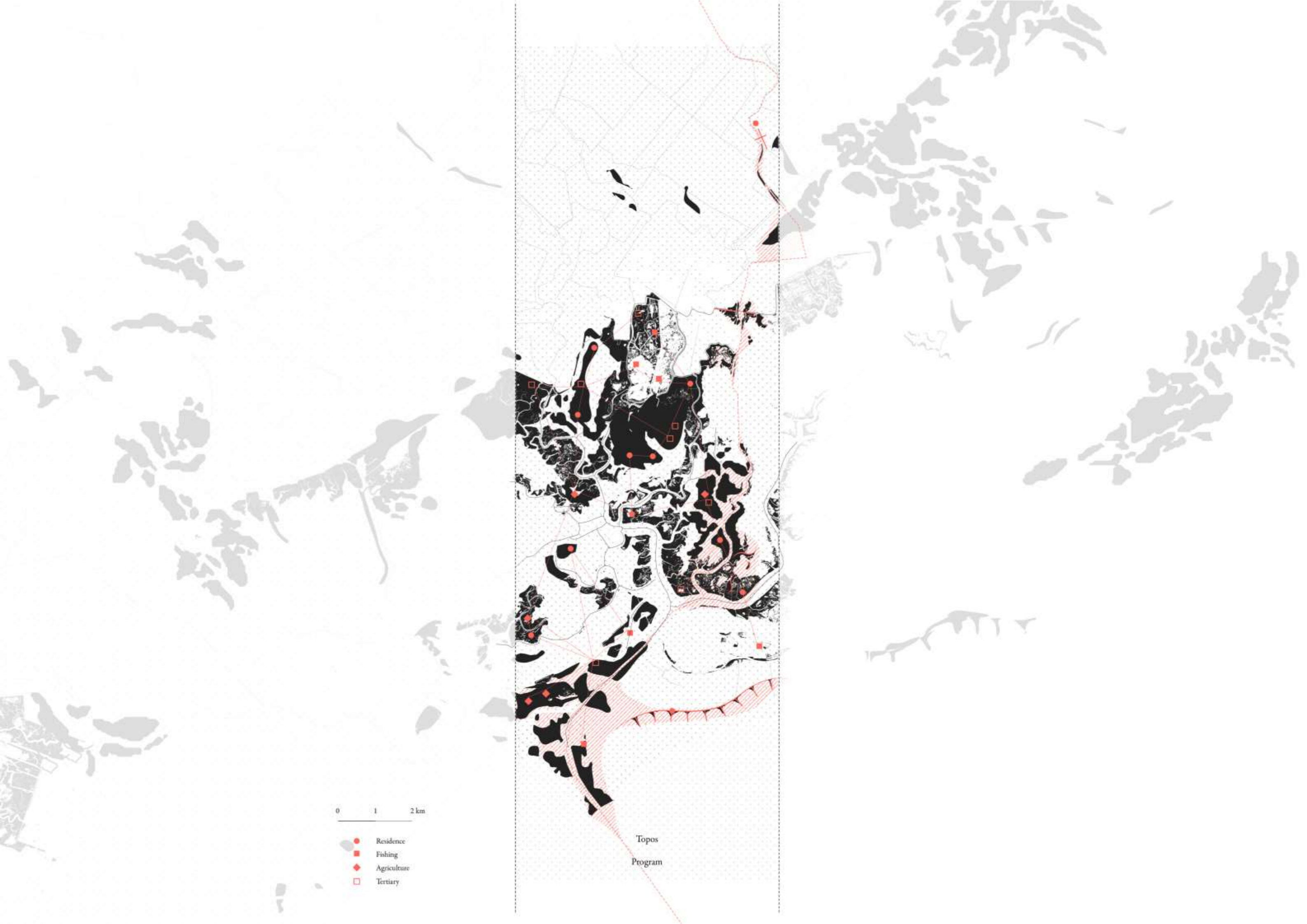
0 1 2 km

- Infrastructure trace
- Poles of foundation
- Sedimentation flow
- Barene

Habitat

Infrastructure





0 1 2 km

- Residence
- Fishing
- ◆ Agriculture
- ◻ Tertiary

Topos  
Program





0 1 2 km

- Residence
- Fishing
- Agriculture
- Tertiary
- Tourism hotspots
- Tourism Infrastructure
- Residence of tourism workers

Geopolitis

Re-Programming



Sense of Displacement



Human



Adptation potential







Inland

Seaward

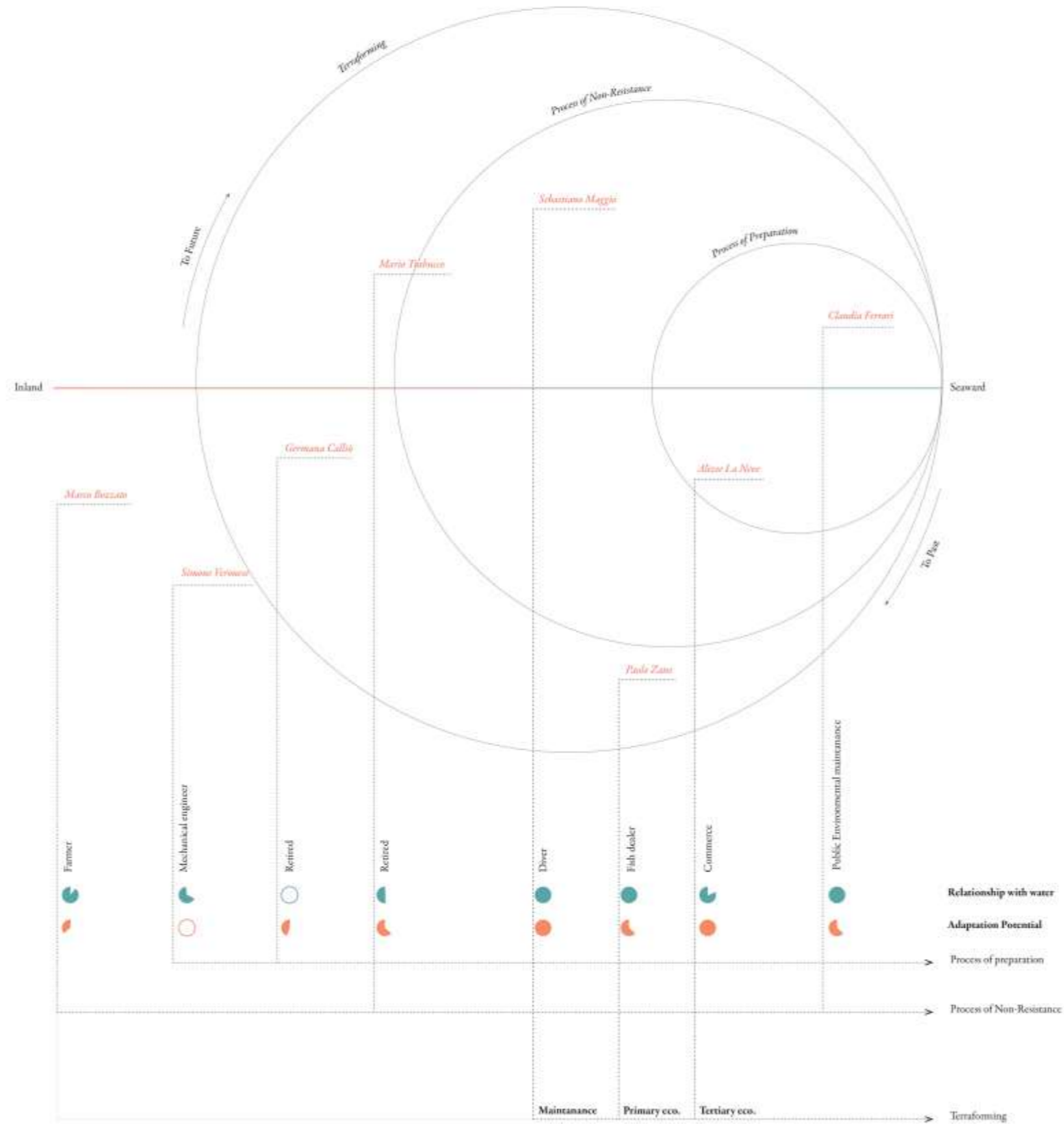
Incrocio  
(Crossing)

Argine  
(Dyke)

Arcata  
(Arcade)

Murazzi  
(Stones)

# Adaptation potential





Murazzi



9 Giugno 2037



Arcata





Argine





# Incrocio





Thanks

Simone

Alizee

Paolo

Mario

Claudia

Sebastiano

Marco

Germana and Roberta

Thank you!









