

Current situation



Scenario at one century



City expansion area

Agricultural park

Redeveloped wetland

Beach extension

Defensive islands

Hydroponic field

Metropolitan route



Country /City Italy, Ferrara

University / School University of Ferrara

Academic year 2019/2020

Title of the project SETÚBAL, TOWARDS A NEW LAGOON - Adaptation proposal for a changing landscape, Santa Fe, Argentina

Authors Lucia Radoccia

TECHNICAL DOSSIER

Title of the project SETÚBAL, TOWARDS A NEW LAGOON - Adaptation proposal for a changing landscape, Santa Fe, Argentina
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Title of the course Landscape architecture and infrastructure
Academic year 2019/2020
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Written statement, short description of the project in English, no more than 250 words

In the middle trait of the Paraná the delta of Leyes River is advancing in the Setúbal, the lagoon the city of Santa Fe is located on. In the last forty years almost the 37% of lagoon surface has disappeared; in less than a century a new river with his islands will take the place of the Setúbal. The flood defence systems of urbanized areas must continue to work efficiently in relation to this scenario. Moreover, there is to adjust the land use of the involved areas. Assuming two different strategies, it's been studied a controlled process for the delta advancing so it can settle in the basin in the way that best suits for the city. The new islands can be thought as an integral part of the existing defence system; at the same time the new emerging lands are analysed in relation to the involved context, starting from those pertaining the suburban area, up to those pertaining the urbanized bank southernmost, to evaluate a possible transformation coming with the formation of a new topography. The proposed uses are: floating hydroponic agriculture for the islands, a natural park crossed by a driving route, the extension of the city promenade and beach on the lagoon. The intention is to integrate the management of the phenomenon in the planning process of the city, building an overview on the future development of the lagoon and Santa Fe.

For further information

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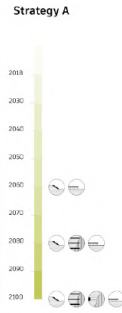
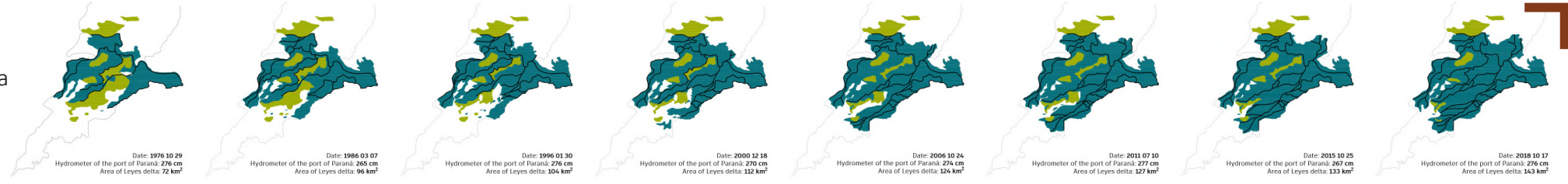
SCHOOL PRIZE

The Paraná river basin

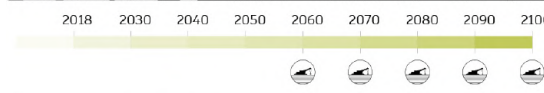
Setubal lagoon and Leyes delta



Growth of the Leyes delta



Landscape design



Strategy A Strategy B

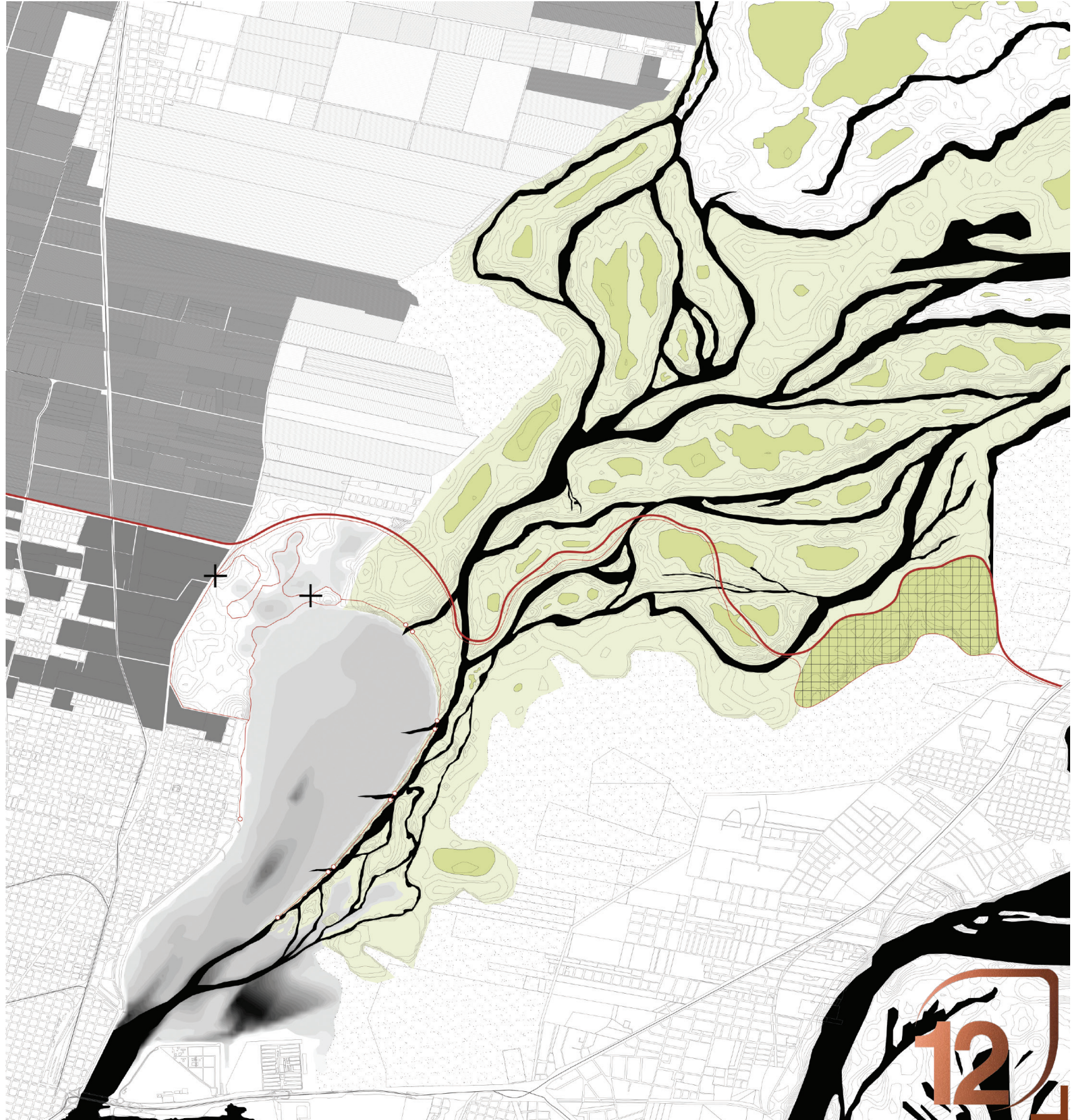


Legend

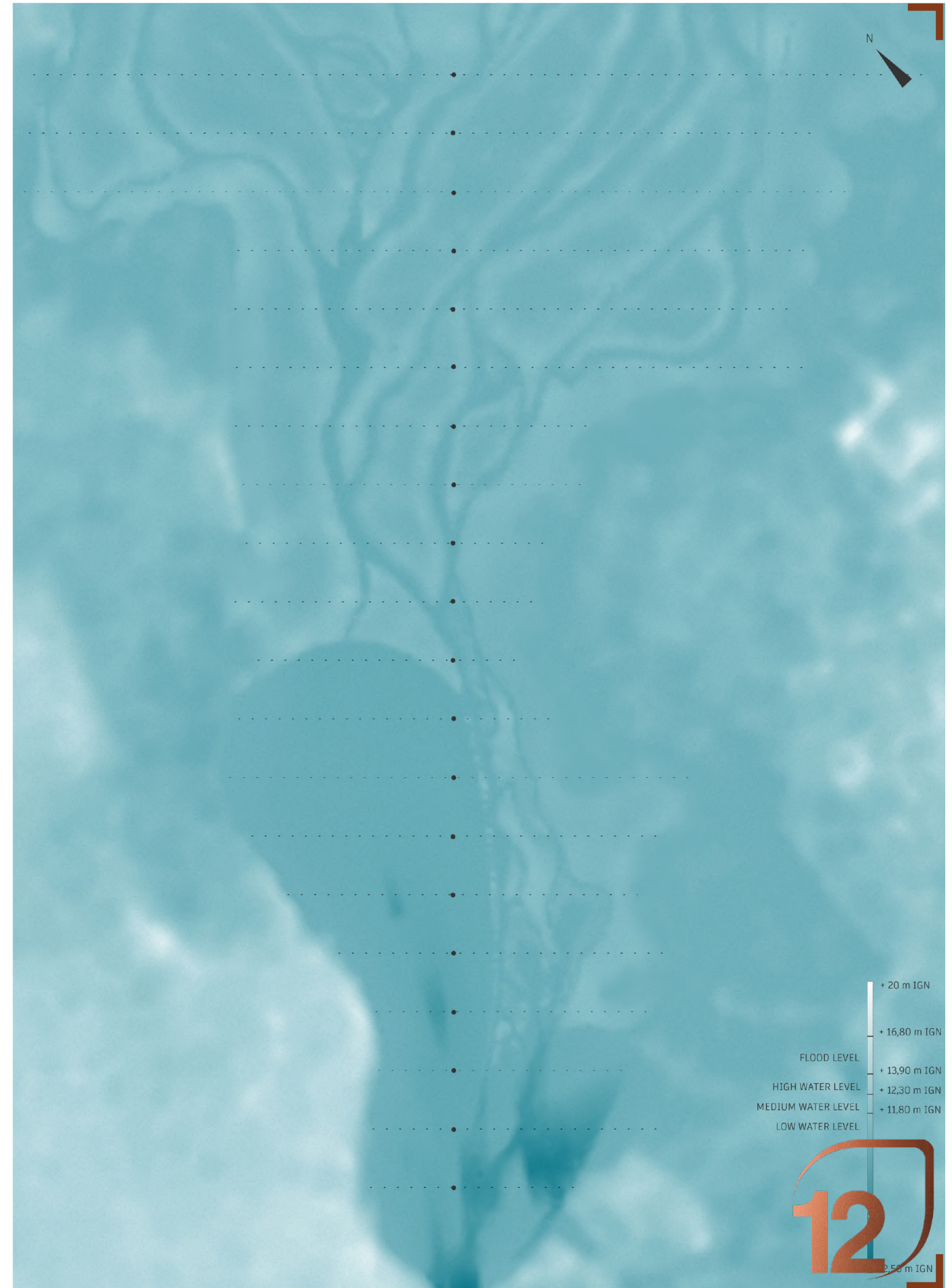
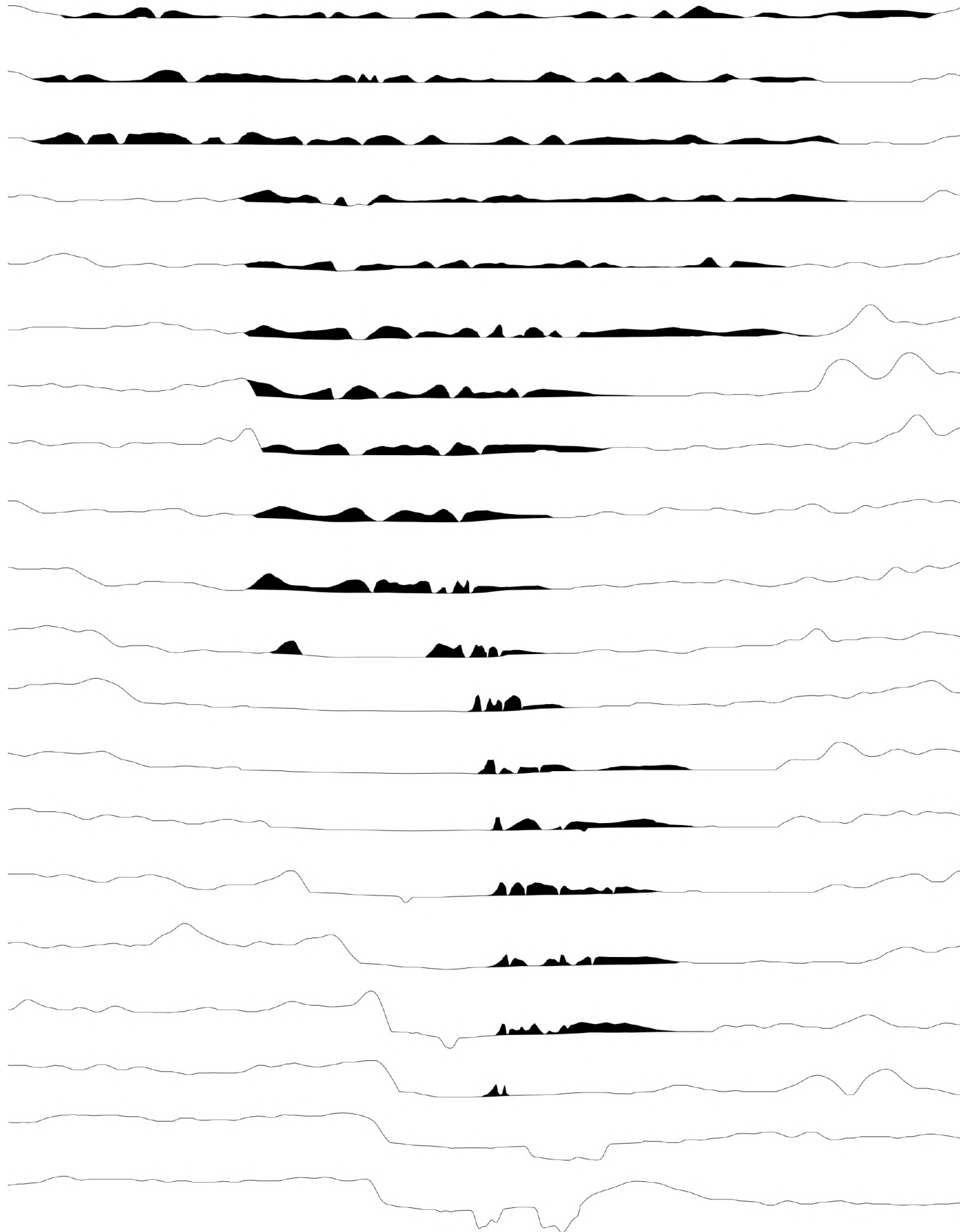
- Existing land
- New formations of the delta
- Isolines 0,50 m
- Agricultural plots
- Plots included in the agricultural park
- City expansion area
- Wetland
- + New urban centralities
- Driveway path
- Slow mobility path
- Extension of the city promenade and beach
- Hydroponic fields
- Fields with water control systems

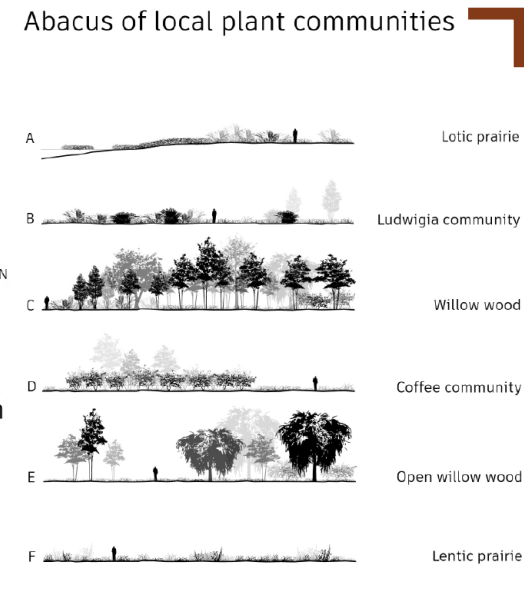
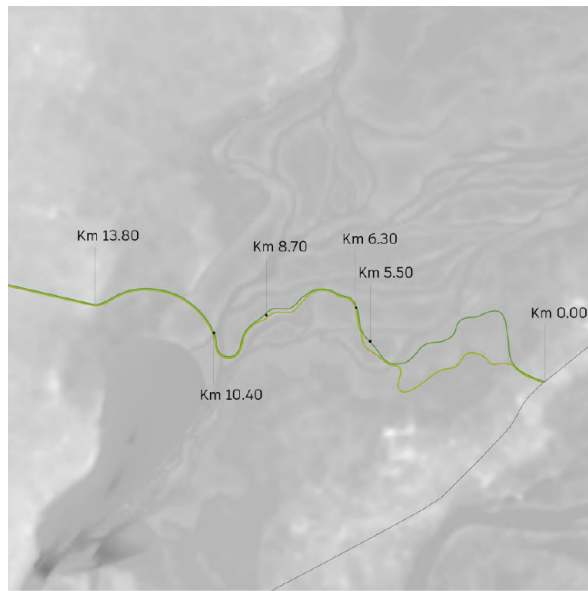
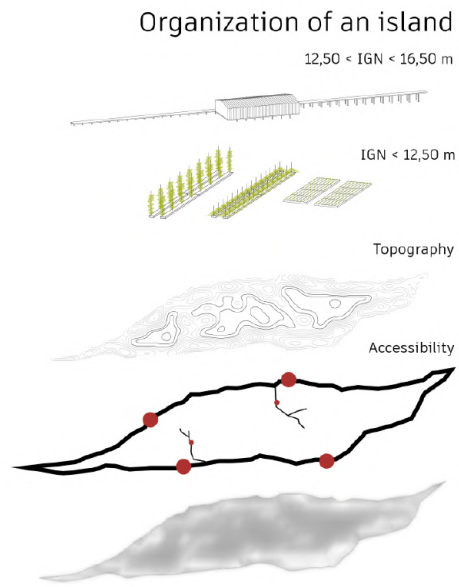
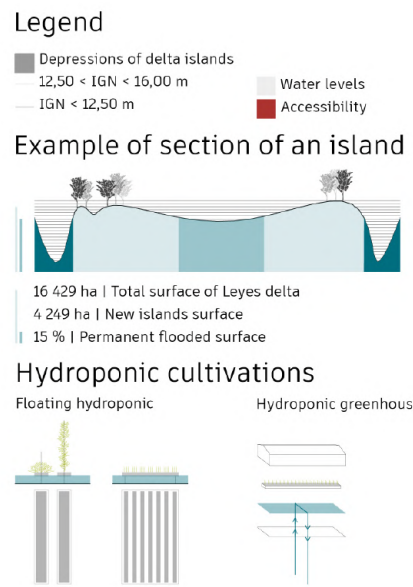


Current situation

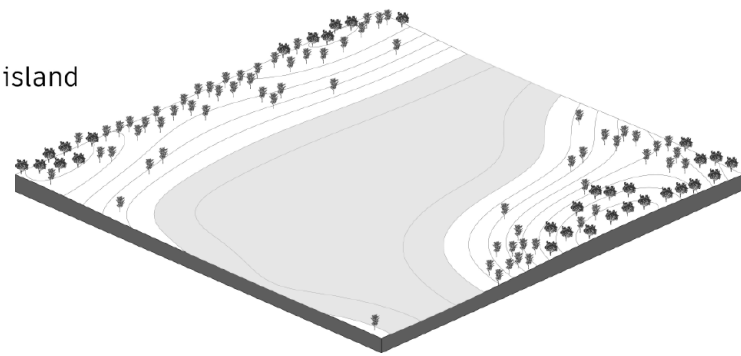


Progressive sections of the designed topography



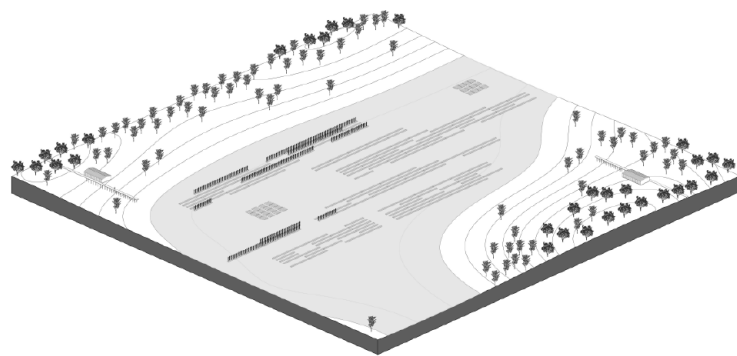


Section of the case study island



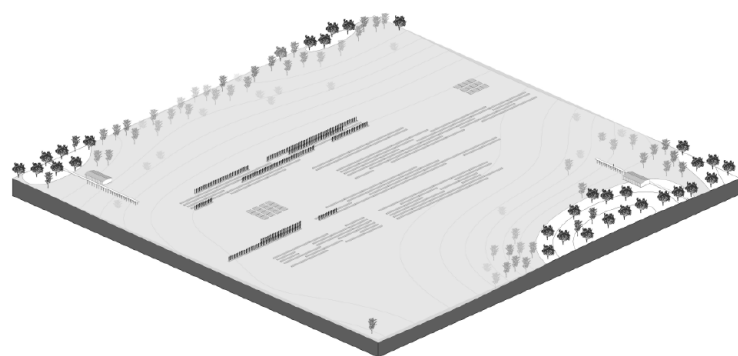
Hydroponic field

Medium water level condition | Example with IGN 12.50 m



Hydroponic field

High water level condition | Example with IGN 15.00 m



Abacus of the route sections

