



Country / City the Netherlands, Amsterdam  
University / School Academy of Architecture  
Academic year 4th year  
Title of the project Flowing Force, a 'go with the flow' design for the Dutch river delta as one dynamic nature area  
Authors Mirte van Laarhoven



# PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

September 2018 **Barcelona**

SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC  
ETSAB- Escola Tècnica Superior  
d'Arquitectura de Barcelona  
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## TECHNICAL DOSSIER

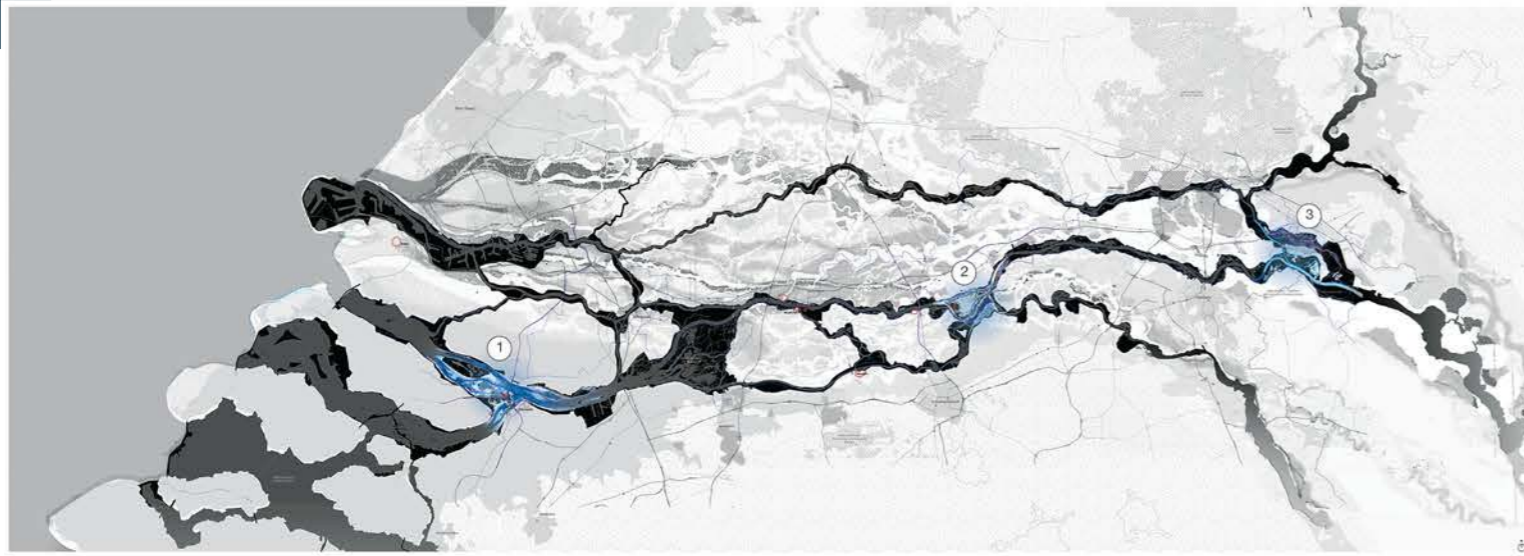
Title of the project Flowing Force, a 'go with the flow' design for the Dutch river delta as one dynamic nature area  
Authors Mirte van Laarhoven  
Title of the course Graduation project, final thesis. Honorable mention Archiprix 2018  
Academic year 4th year  
Teaching Staff Bruno Vermeersch, Eric-Jan Pleijster, Eric Frijters  
Department/Section/Program of belonging Landscape architecture department  
Topic of study: how to design sustainable environments for man and nature by the use of landscaping processes.  
University/School Academy of Architecture, Amsterdam.

Written statement, short description of the project in English, no more than 250 words

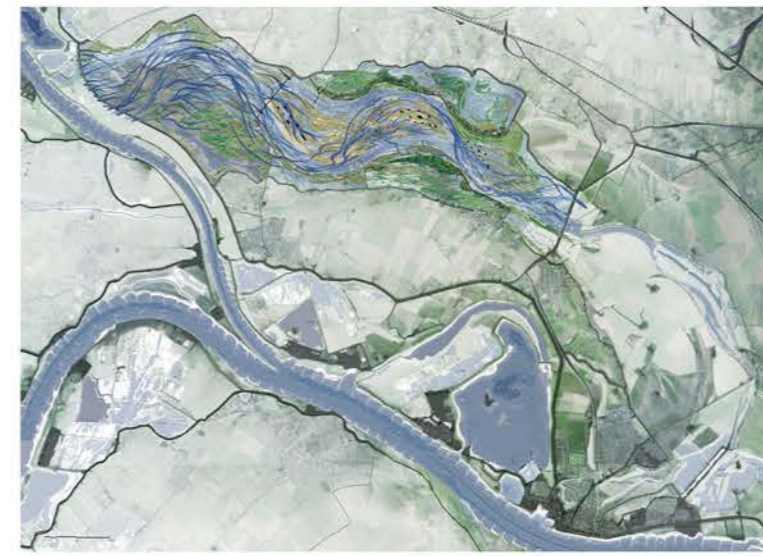
Flowing Force is a 'cultural design' for the Dutch riverdelta. Its aim is to make stakeholders rethink their approach to this area. The project takes the original DNA of the Delta as a starting point for spatial designs. It allows the various river branches to augment their own character by a series of 'go with the flow' design solutions. By this it shows that landscape processes can partly do the work for us and create a richer, more robust and more dynamic river landscape. The Dutch Delta plays a major role in our national identity and our economy. We have designed it so that we can live safely, are able to sail our ships through it efficiently, and can cycle along it when we want to. After decades of building, however, we have lost sight of the beautiful nature area that passes straight through our country. Functionality prevails, the recreational value does not fulfill its potential, the natural dynamic is low, and the maintenance-prone waterways are facing more and more challenges due to climate change. Flowing Force therefore proposes to transform the river delta into a more sustainable, self-sufficient system in which all important functions work together. A system that makes use of the natural forces in order to shape the landscape once again. A landscape that is not only safe and economical but also attractive to visit and with a richer biodiversity. Flowing Force demonstrates how the vision for dynamic rivers can be rendered in practice on three locations.

For further information  
**Máster d'Arquitectura del Paisatge -DUOT - UPC**

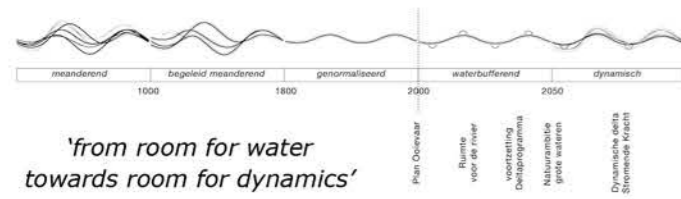
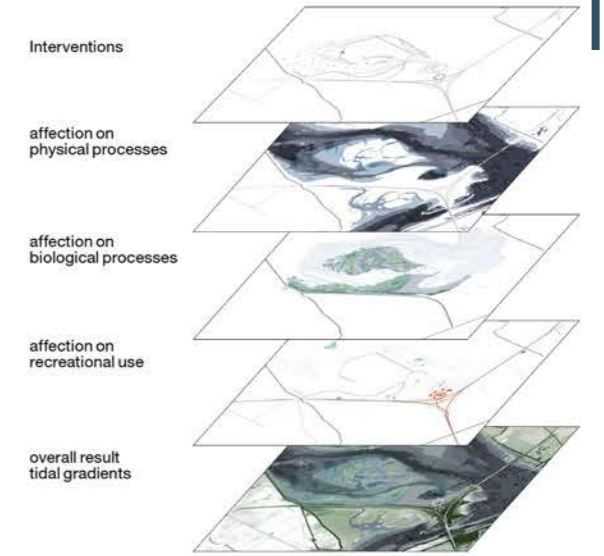
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Consult the web page <http://landscape.coac.net/>



**'Toward a river delta as one continuous nature conservation area'**  
 By an integral approach and by the aid of tree types of interventions tree hubs are transformed into dynamic anchor points.



**3. Demonstration Rijnstrangen;** from a former sedimented river bed that has been transformed into an agricultural water system to the reintroduction of flowing currents with a variety of streams, wetlands and marshes.



**2. Demonstration Bend of Sint Andries;** from clogging channels to two types of waterways. A navigation channel. A waterway without ships but with lots of fluctuation in water levels and sedimentation.

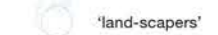


**1. Demonstration Ventjagersplaten;** from dissected embankments to gradual land-water transitions with tidal gradients.

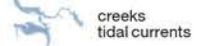
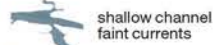
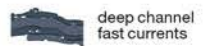
**Legend tidal gradients**

*Towards dynamic rivers by three types of interventions\**

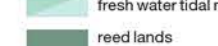
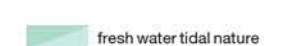
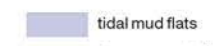
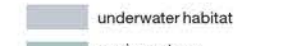
\* see next pages for details on interventions



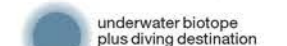
**Affection of interventions on landscaping processes**



**Mosaic of habitats**



**Enhanced landscape experience**



Delta wood  
trees in tidal water

Supporting elements  
in order to keep trees in upright position

Marking point  
Functioning as light beacon at night

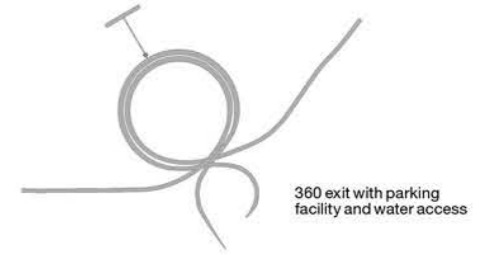
Checkpoint  
monitoring the changing underwater life  
as a consequence of an increasing amount  
seawater in the estuary in near the future



Underwaterforest: sediment capturing biotope habitable by divers and nature, constructed by dead trees and supporting elements.

## Improving Accessibility

Improvement of accessibility on specific locations so passers-by can experience flowing forces, without disturbing the peace.



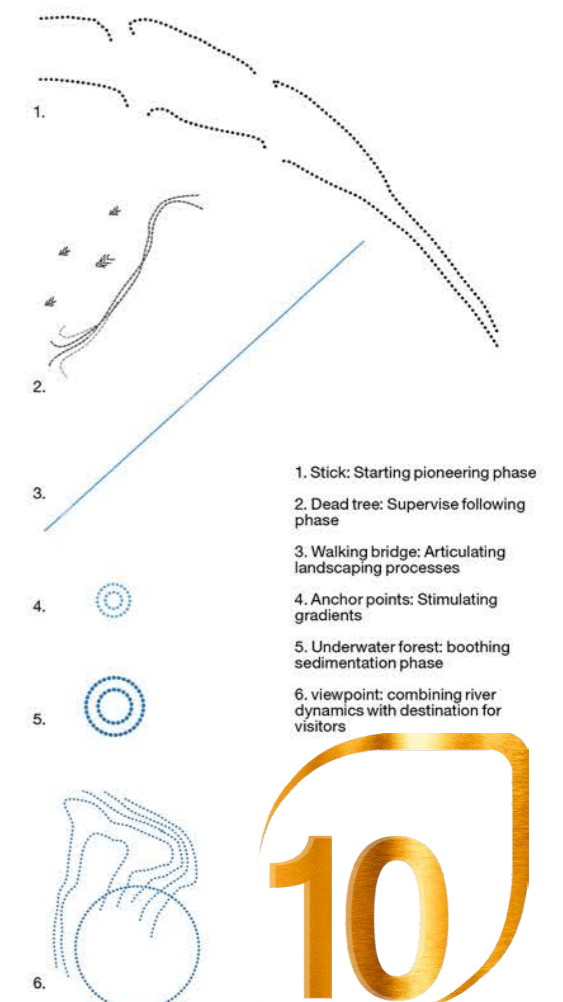
## Strategic Interventions

strategic interventions are activities linked to ongoing assignments concerning functional topics like water-safety and navigation.



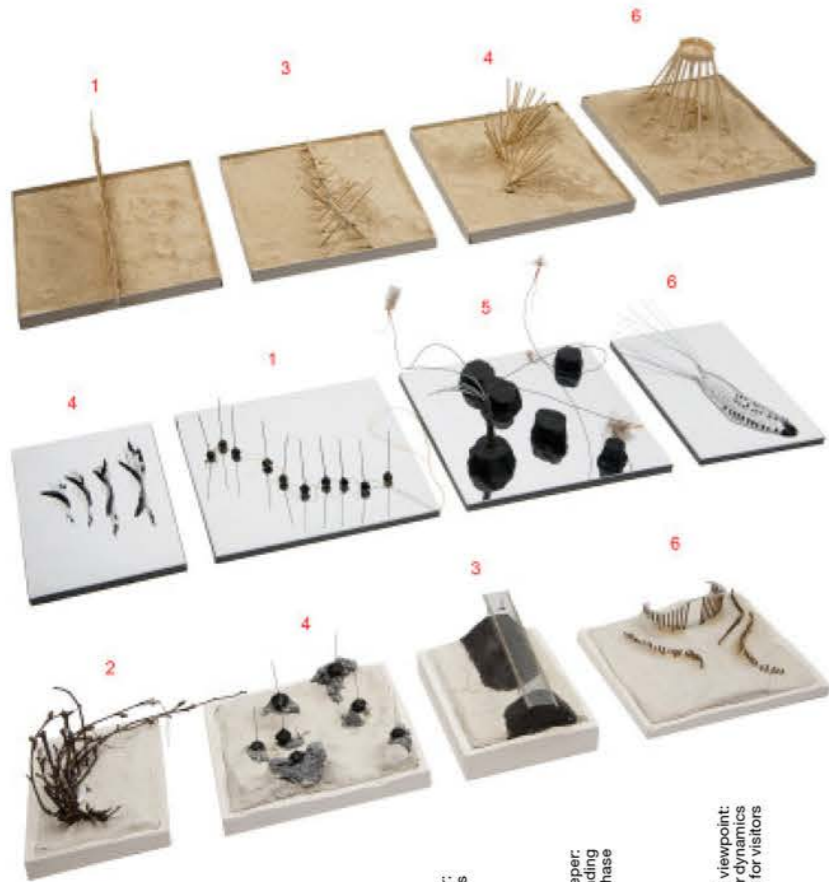
## 'Land-scapers'

a toolbox of small interventions activating natural forces, contributing to biodiversity and human exploration.





Visualization Ventjagersplaten



Toolbox 'Land-scapers'

1. Stick:  
Starting pioneering  
phase

2. Grid:  
Supervise following  
phase

3. Cruiser:  
Articulating landscaping  
processes

4. Farmer:  
Stimulating gradients

5. Sleeper:  
booting expanding  
phase

6. viewpoint:  
combining river dynamics  
with destination for visitors



Visualization Bent of Sint Andries



Visualization Rijnstrangen