



# Kelani River Park

Integración de infraestructura de emergencia en Sri Lanka

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**aldajover**  
arquitectura y paisaje

**CONAMA**

 **Viladecans**  
**2030**



 **Diputació**  
**Barcelona**





# KELANI RIVER PARK

## SRI LANKA

URBAN, LANDSCAPE AND SOCIAL  
INTEGRATION OF THE FLOOD  
PROTECTION SYSTEM

36 km OF RIVER TRANSFORMED INTO  
72 km OF LINEAR RIVER PARK

10 NEW BRIGES  
26 BATH AREAS  
55 PIERS  
34 PARKS

FROM COLOMBO TO HANGWELLA:



9h:00min



2h:20min



2h:40min



1h:25min



WORLD BANK GROUP



**CRIP**  
Climate Resilience Improvement Project



JAPAN EMBASSY

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# CONAMA LOCAL VILADECANS 2025

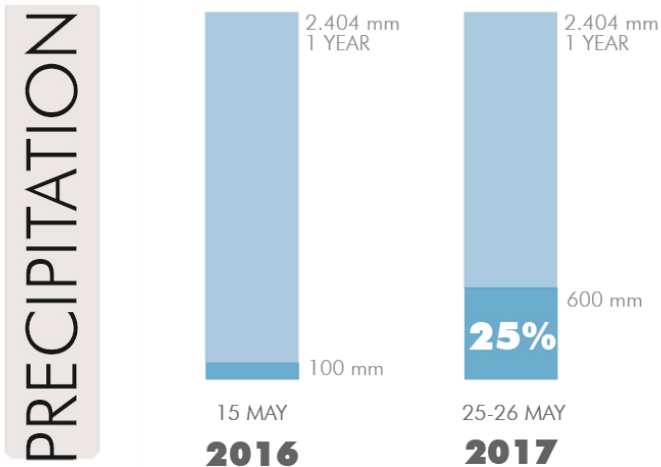
KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER



FLOODS IN MAY 2016



MAY 19, 2016



FLOOD AREA IN KELANI RIVER BASIN

The lower floodplains **suffer** from the floods without any protection

The areas located in the lower part of the River, have a **higher density** of population

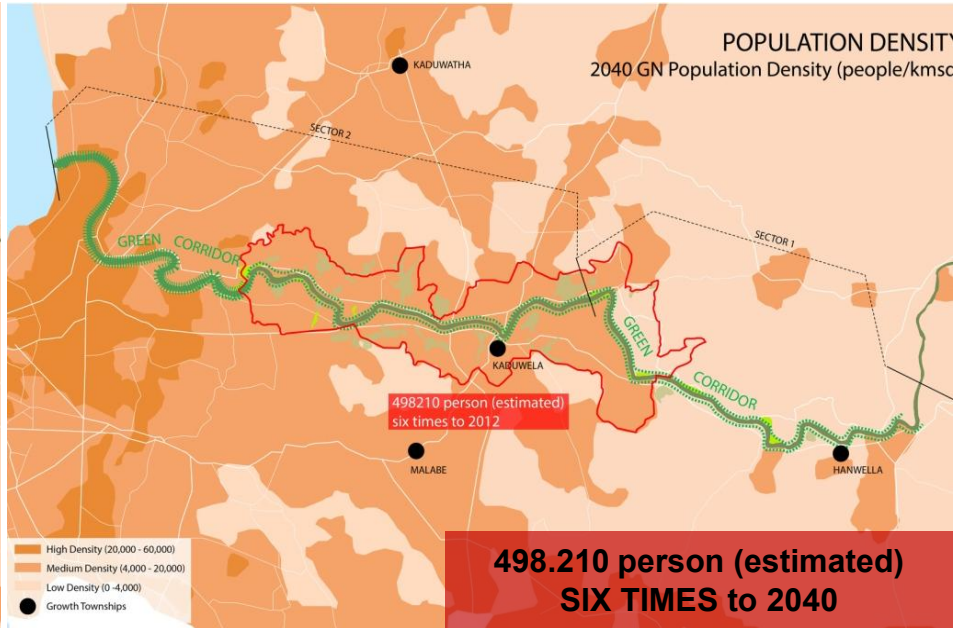
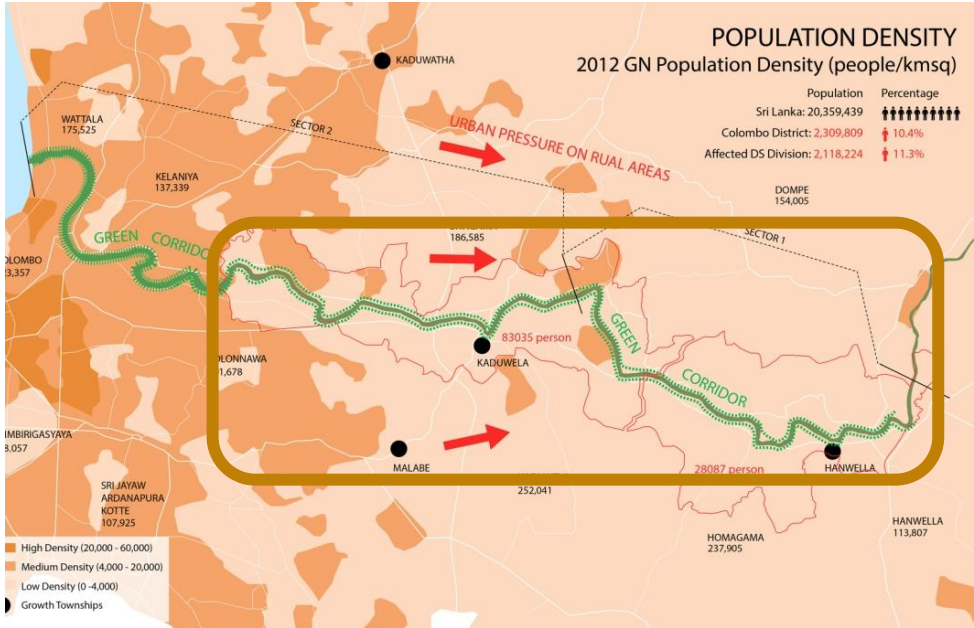
POPULATION x 6  
TO 2040

17 Districts in Sri Lanka were affected by severe floods and landslides during 5 days. 500.000 affected, of which 223,687 were displaced from their homes either due to the floods, landslides or threat of landslides.





KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER

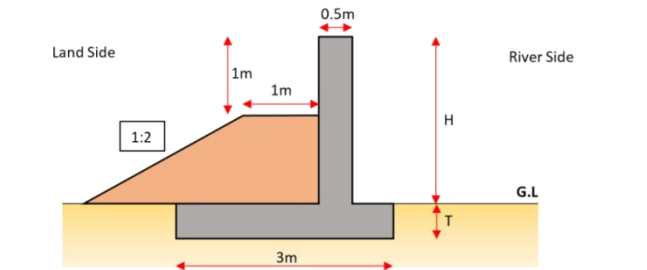
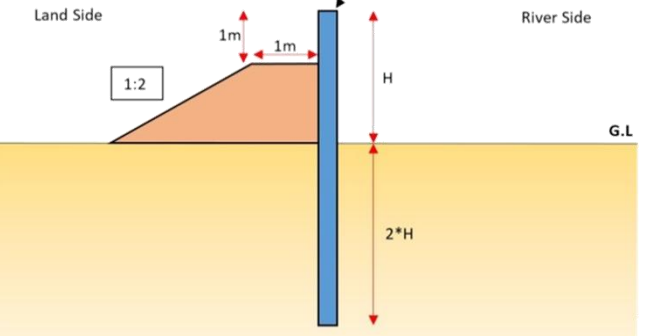
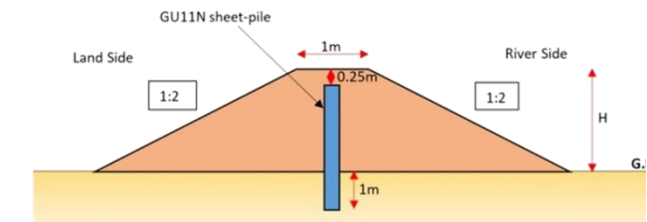
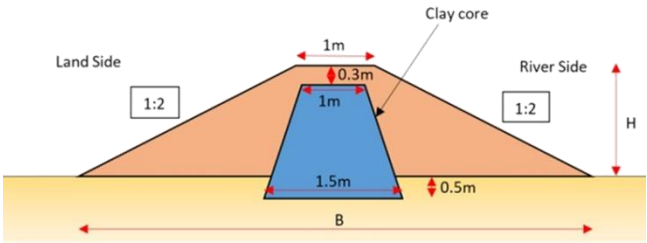
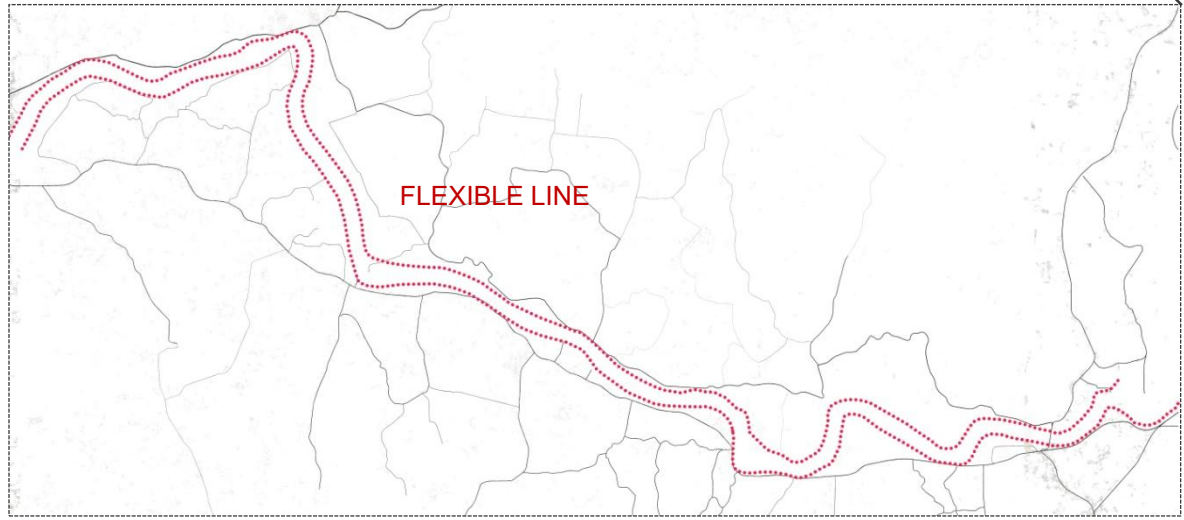
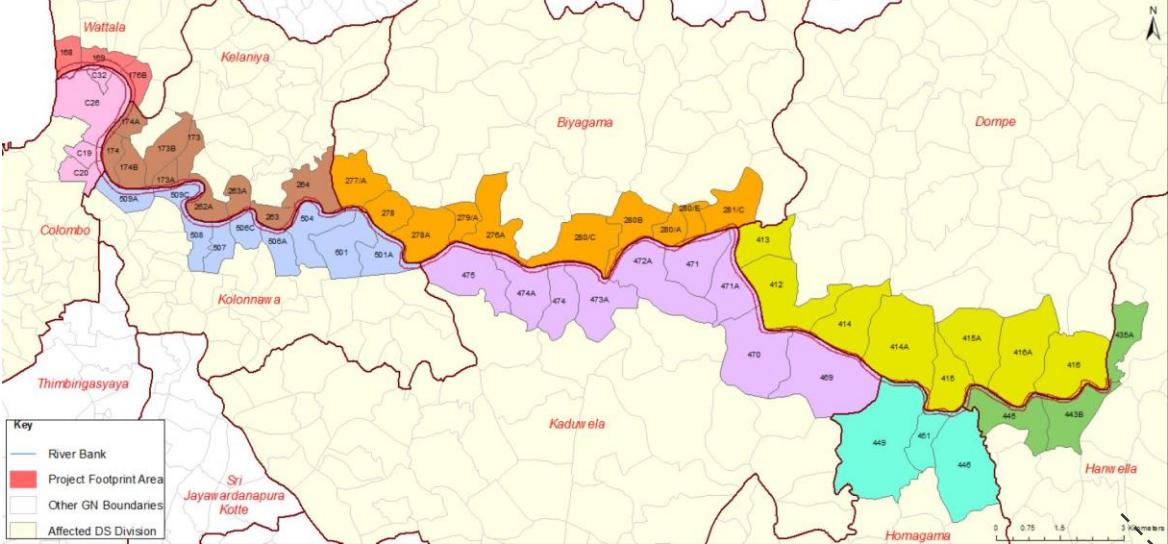


## TRANSFORMATION OF THE COLOMBO METROPOLITAN REGION

Future urban  
pressure on rural  
areas: x 6 to 2040



GN and DS Divisions Affected by the Project



CLIMATE  
RESILIENCE  
IMPROVEMENT  
PROJECT



**CRIP**  
Climate Resilience Improvement Project

Flood embankment.  
Hydraulic  
infrastructure



1860



2018



ROOTS IN THE  
KELANI RIVER





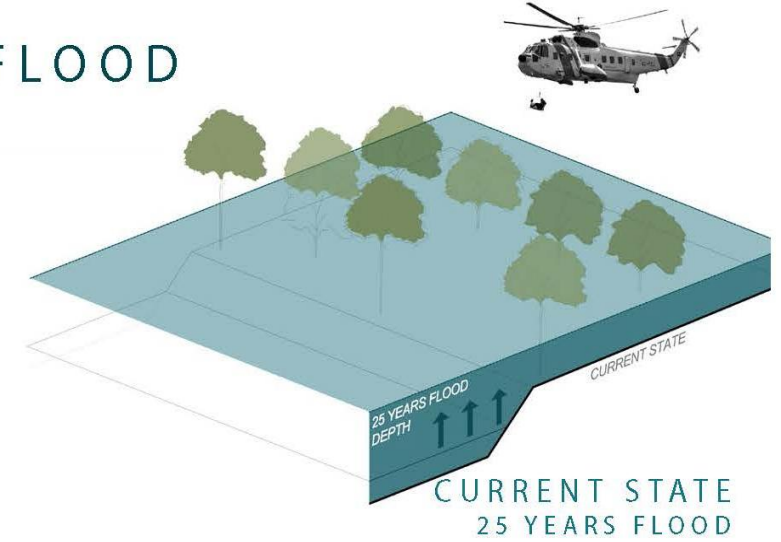
ROOTS IN THE  
KELANI RIVER

SAFE CONNECTION BETWEEN  
THE COMMUNITIES AND THE RIVER  
FOR RECREATION, CULTURE AND SPIRITUALITY

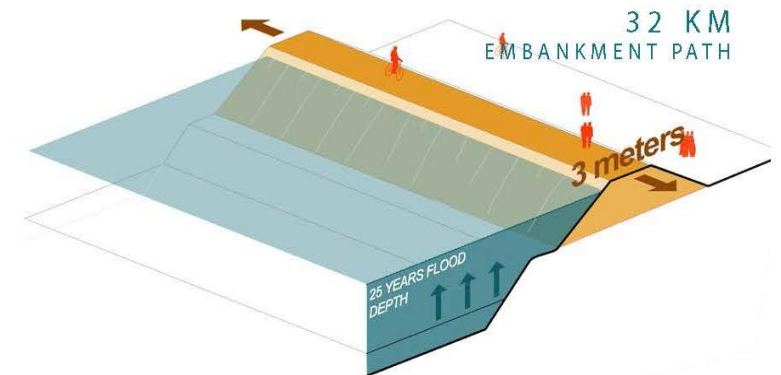




FLOOD



FLOOD PROTECTION / POPOSED DYKE



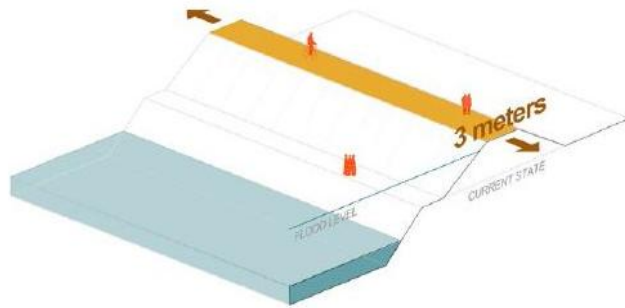


# CONAMA LOCAL VILADECANS 2025

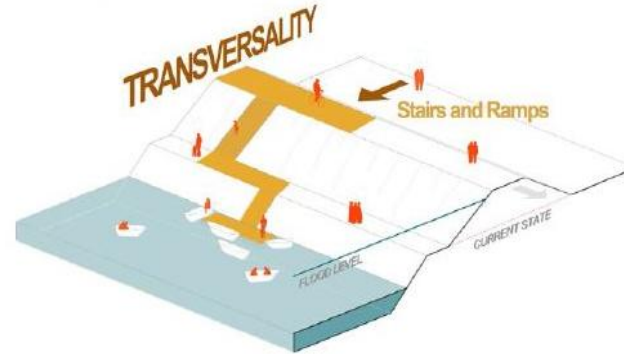
KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER



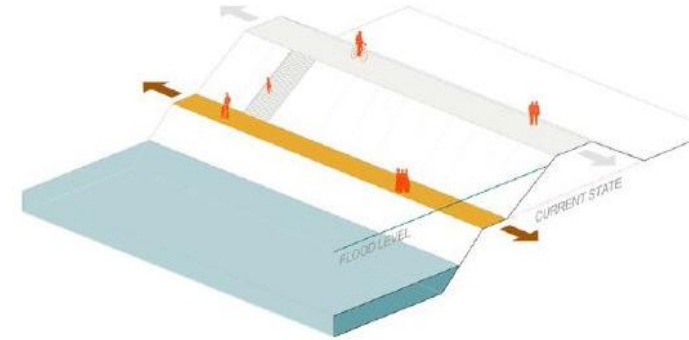
## MOBILITY A SUSTAINABLE MODEL



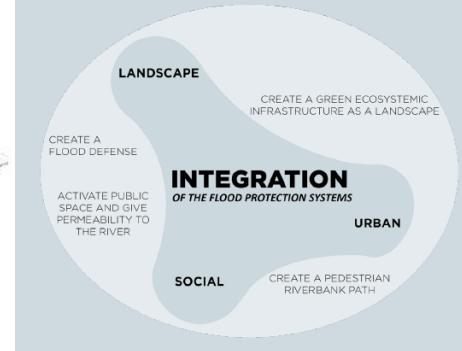
## WINDOW TO THE RIVER GATH, PIER & BATH AREAS



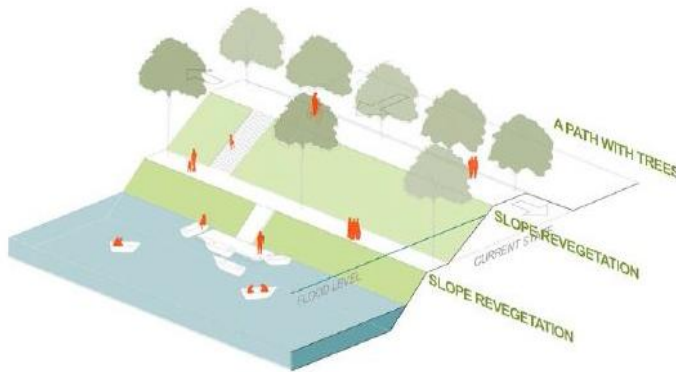
## WORKING PLATFORM WHEN IT'S POSSIBLE



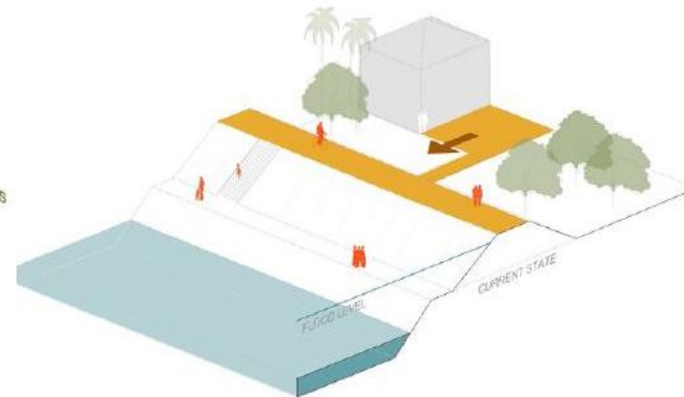
## KELANI RIVER PARK NOT JUST A FLOOD PROTECTION



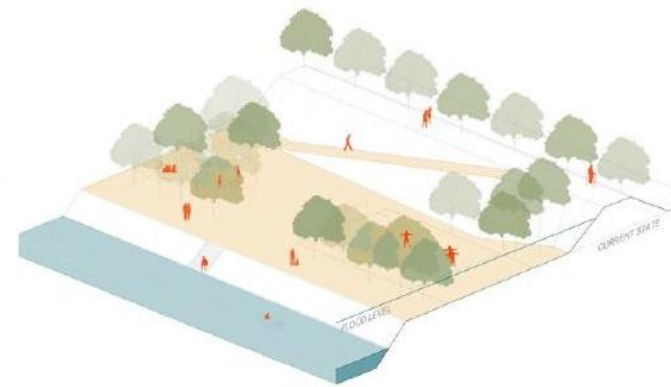
## GREEN INFRASTRUCTURE A NEW LANDSCAPE



## PUBLIC SPACES NETWORK INTEGRATION OF OPEN SPACES



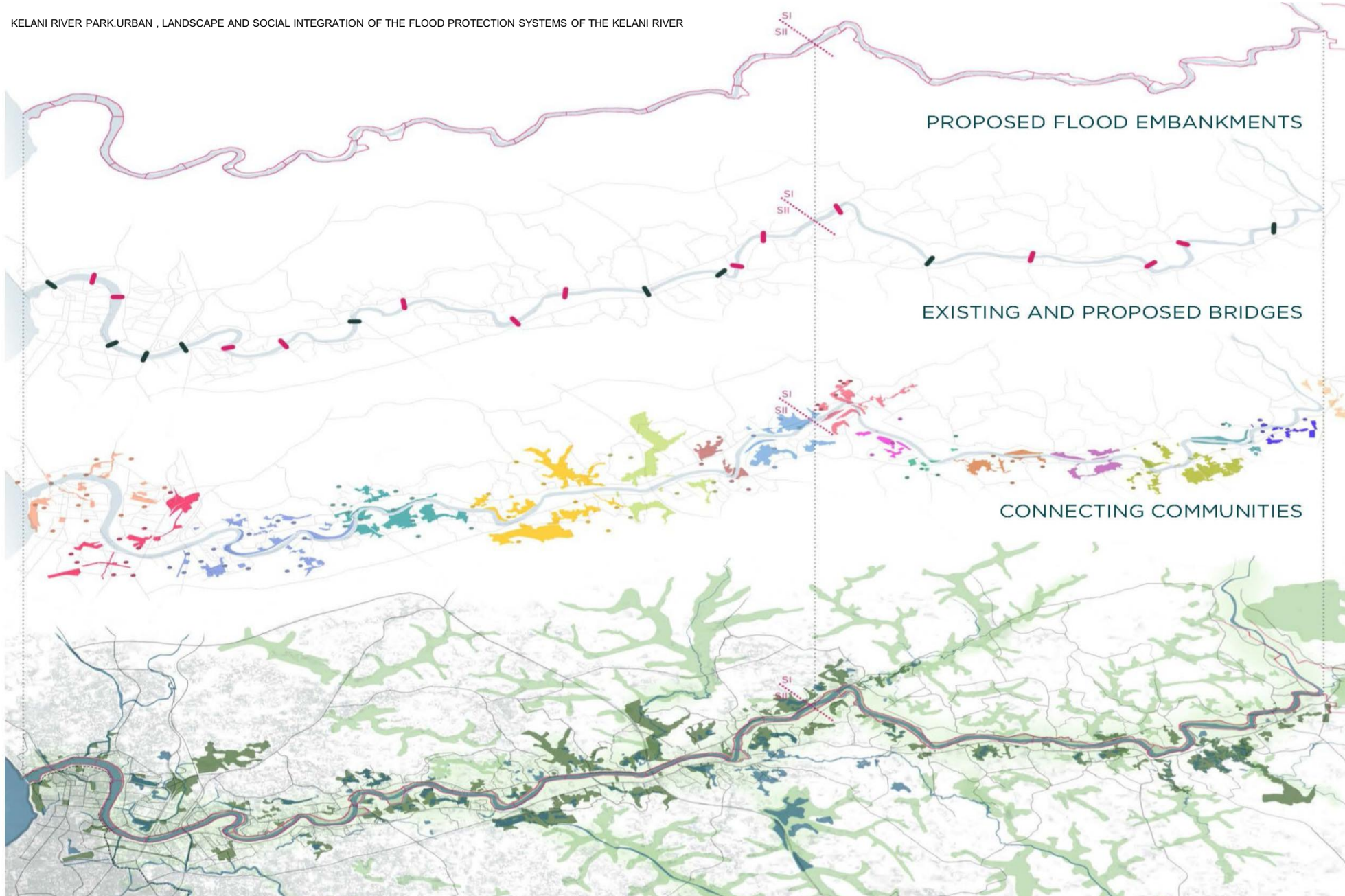
## ROOM SPACES WHEN IT'S POSSIBLE





# CONAMA LOCAL VILADECANS 2025

KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER



OPPORTUNITY TO  
CONNECT  
COMMUNITIES AND  
PROVIDE THEM  
WITH PARKS AND  
FACILITIES

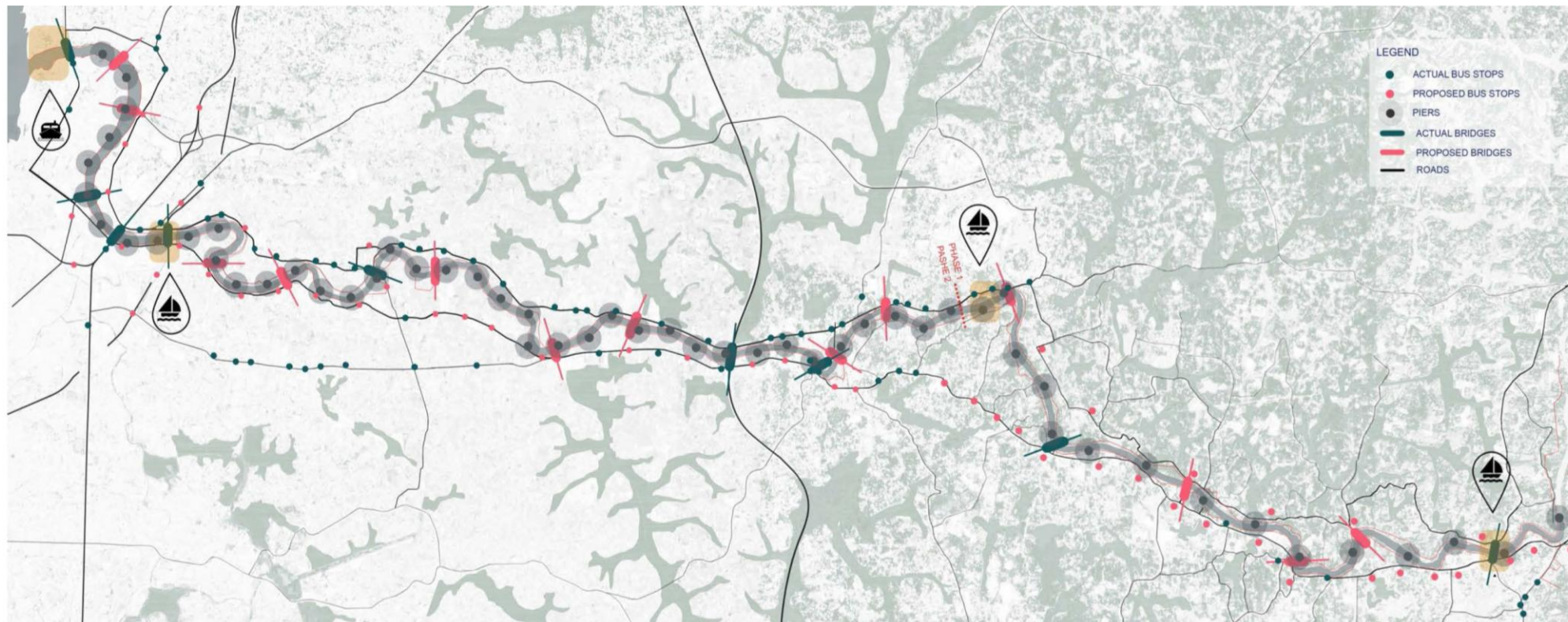
36km  
2 shores  
58 municipalities  
benefited by the  
metropolitan park

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# CONAMA LOCAL VILADECANS 2025

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COLOMBO'S  
GROWTH GIVING  
ITS FACE TO THE  
KELANI RIVER



New smart mobility

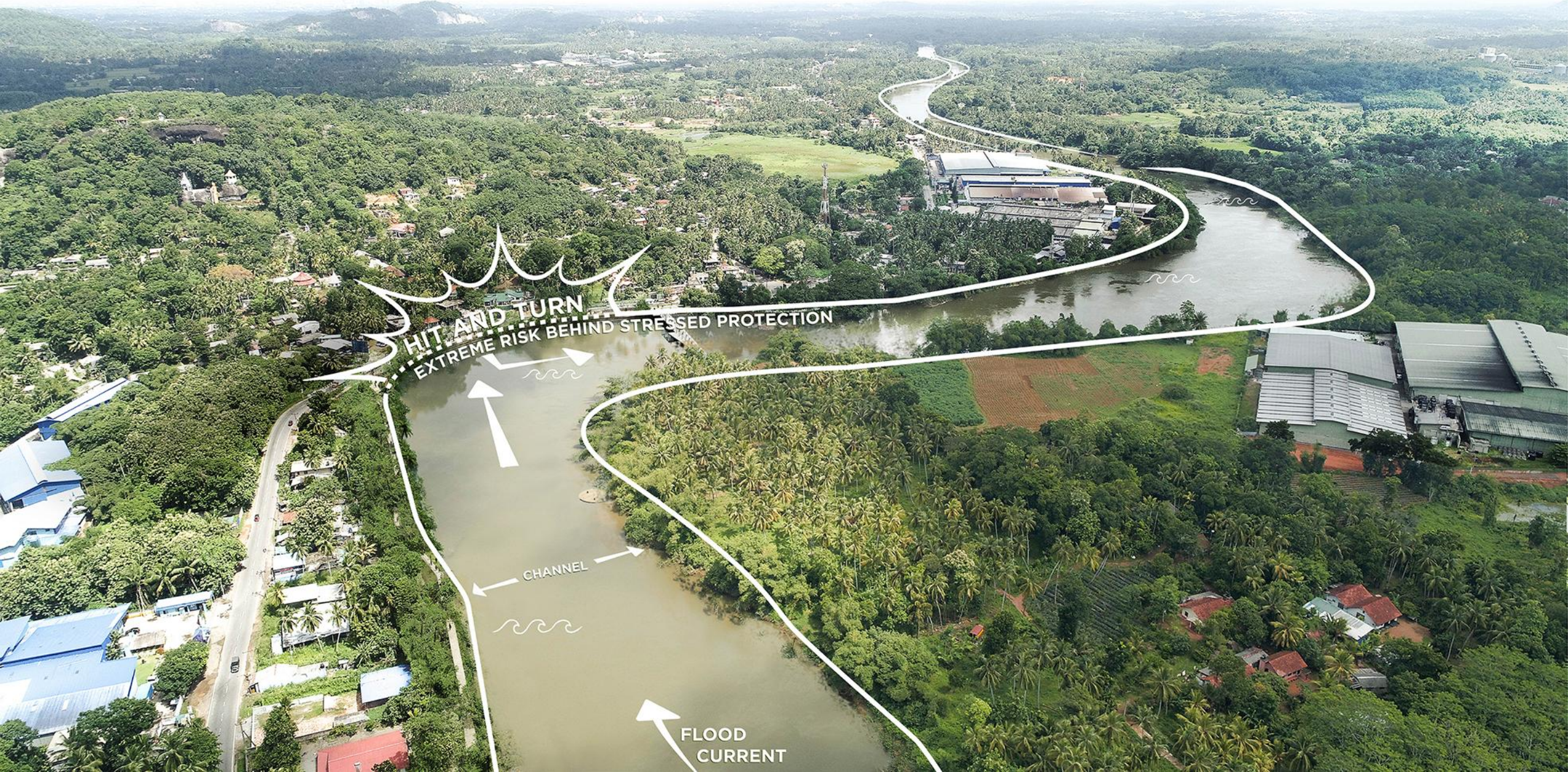
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**CURRENT STATE**



















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VILADECANS 2025



95% PEOPLE



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CONAMA LOCAL  
VILADECANS 2025



95% PEOPLE  
5% FLOOD



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95% PEOPLE  
5% FLOOD  
100% NATURE





CONAMA LOCAL  
VILADECANS 2025



95% PEOPLE  
5% FLOOD  
100% NATURE

SOCIO-  
ECOLOGICAL  
SPACE

FLOOD  
TRANSITION

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ACCESSIBILITY AND  
TRANSVERSAL CONNECTION





ACCESSIBILITY AND  
TRANSVERSAL CONNECTION

FLOOD PERIOD







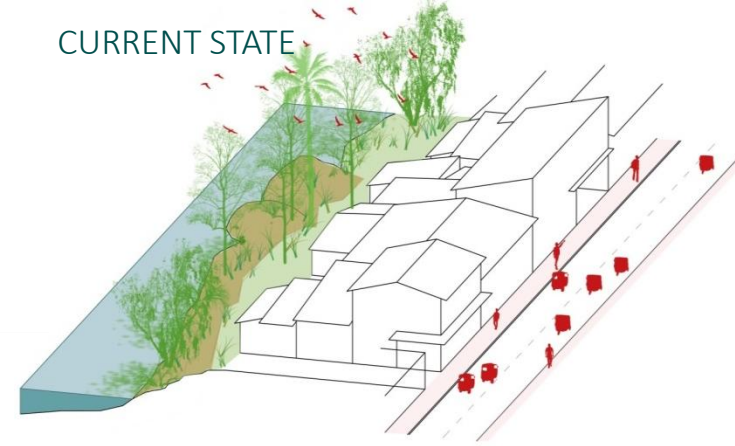
SERVING THE DIFFERENT NEIGHBORHOODS



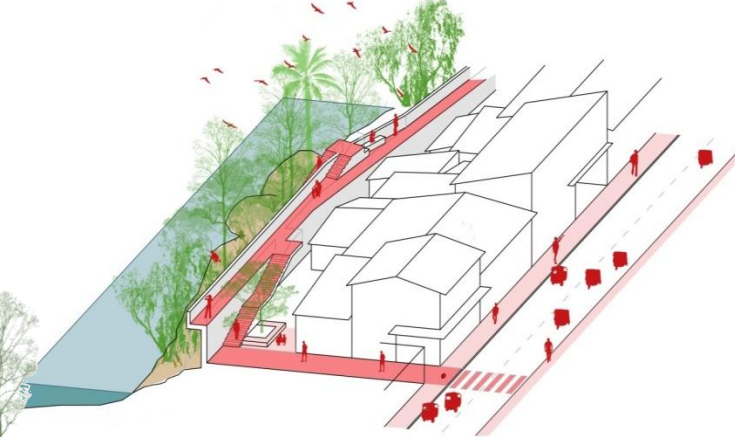
# CONAMA LOCAL VILADECANS 2025

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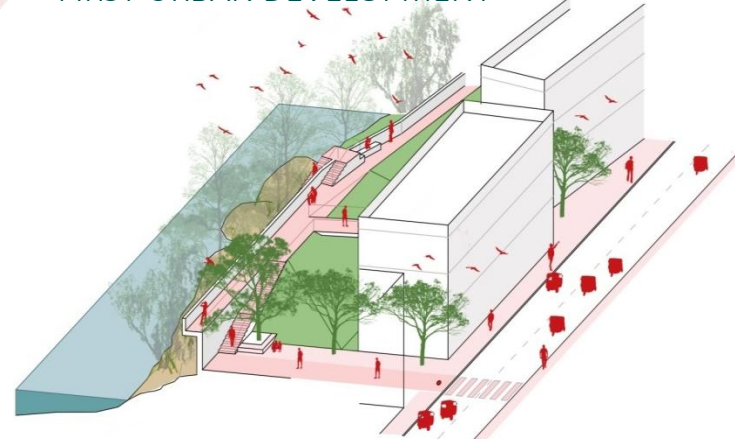
CURRENT STATE



EMBANKMENT CONSTRUCTION



FIRST URBAN DEVELOPMENT



SECOND URBAN DEVELOPMENT



OPPORTUNITY FOR  
LOW INCOME  
HOUSES  
IMPROVEMENT  
AND FOR NEW  
URBAN  
CENTRALITIES  
DEVELOPMENT

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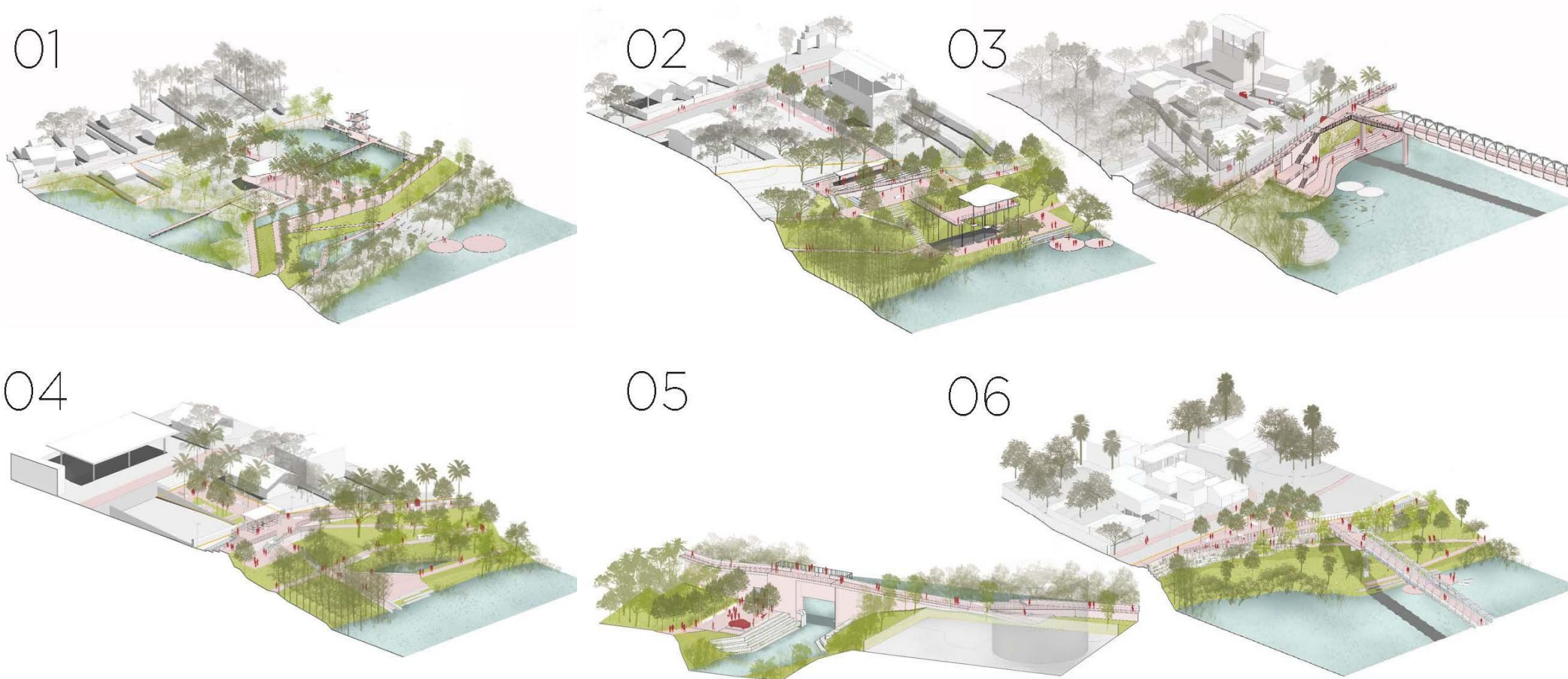


NEW HUBS OF  
ECONOMIC  
ACTIVITY

OPPORTUNITY FOR  
LOCAL SMALL BUSINESS AND  
METROPOLITAN NEW BUSINESS







## 6 PILOT PROJECTS

8 main SYSTEMS  
analyzed in each:

- Uses and potential activities
- Topography
- Mobility and accessibility
- Flood
- Drainage and permeability
- Landscape and ecology
- Materiality and maintenance
- Furniture



# CONAMA LOCAL VILADECANS 2025

KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER



## PILOT PROJECT 01

**SUB-URBAN AREA:**  
Enough space is available for full trapezoidal embankments.

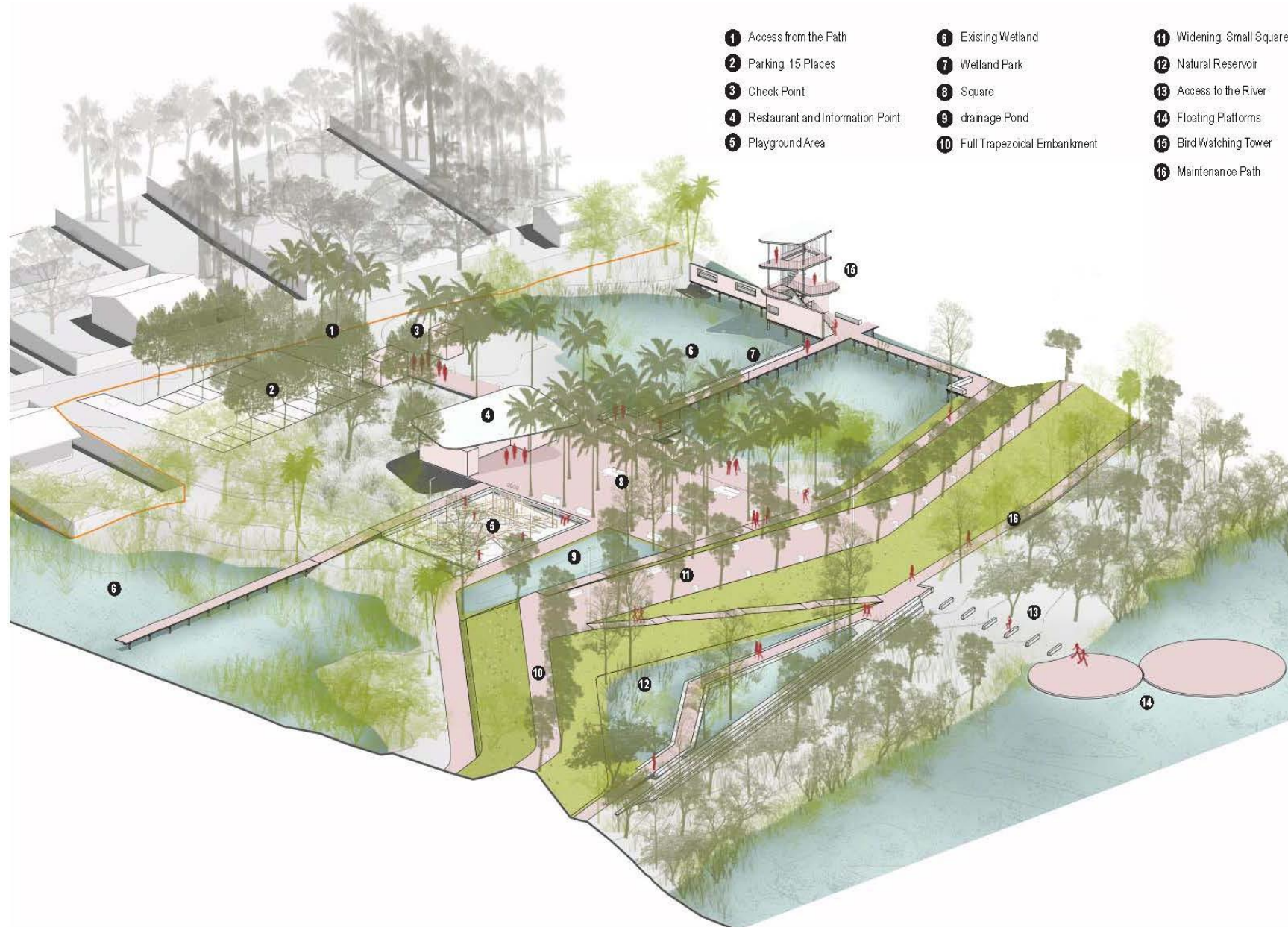
**RESERVOIR POCKET  
WEKEWATTA**

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- 1 Access from the Path
- 2 Parking. 15 Places
- 3 Check Point
- 4 Restaurant and Information Point
- 5 Playground Area
- 6 Existing Wetland
- 7 Wetland Park
- 8 Square
- 9 drainage Pond
- 10 Full Trapezoidal Embankment
- 11 Widening. Small Square
- 12 Natural Reservoir
- 13 Access to the River
- 14 Floating Platforms
- 15 Bird Watching Tower
- 16 Maintenance Path

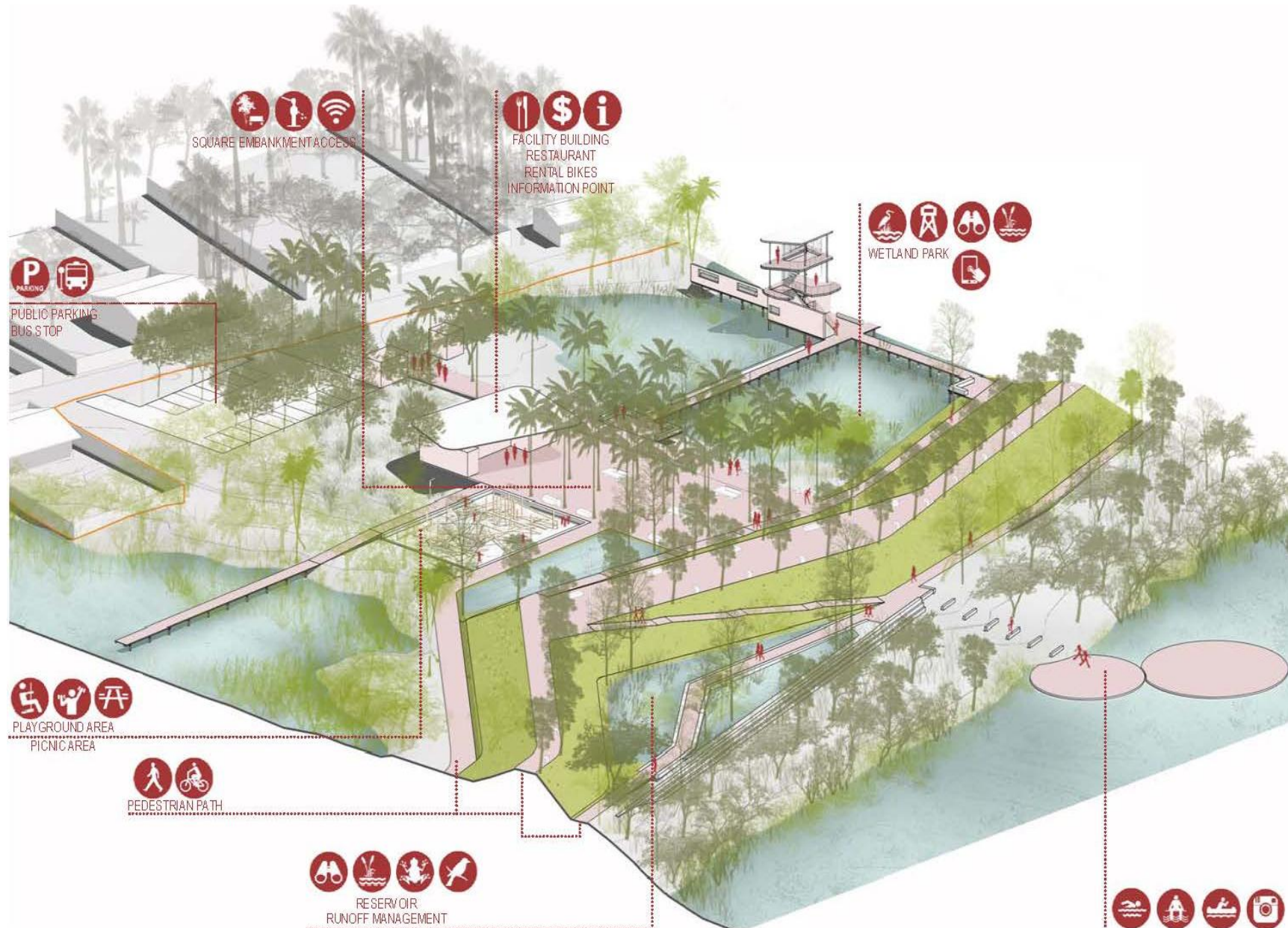
PILOT PROJECT 01  
PROPOSAL

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PILOT PROJECT 01

USES AND  
POTENTIAL  
ACTIVITIES

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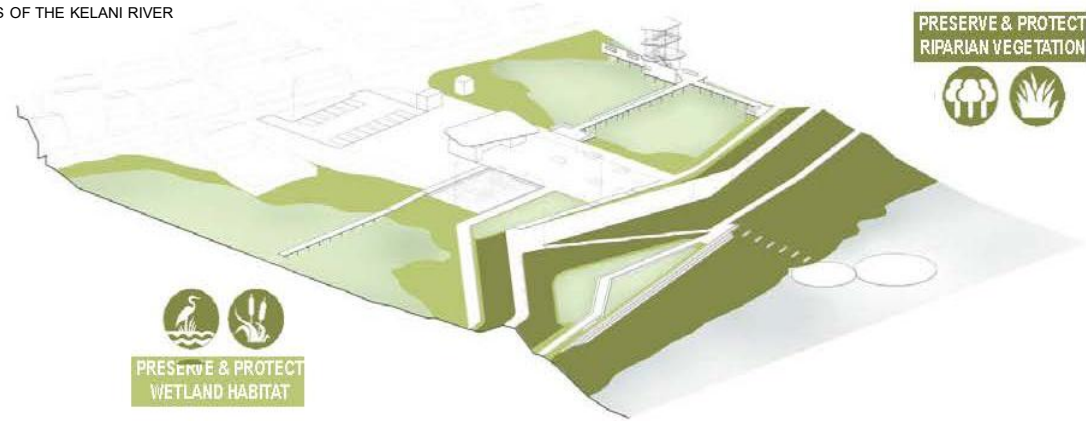


# CONAMA LOCAL VILADECANS 2025

KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER



Preserve and  
disseminate  
existing  
wetlands



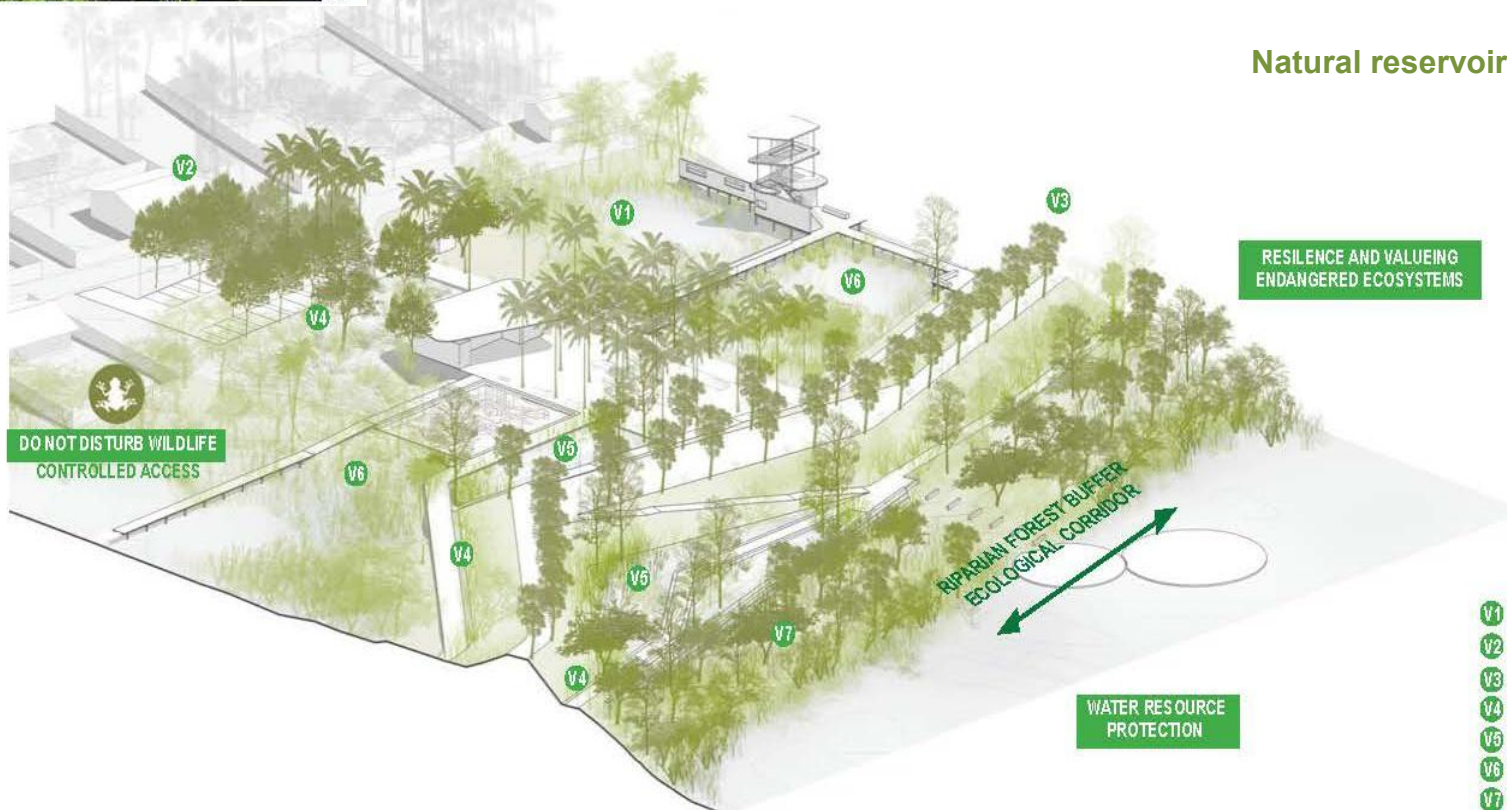
PRESERVE & PROTECT  
RIPARIAN VEGETATION

PRESERVE & PROTECT  
WETLAND HABITAT

Natural reservoir



RESILIENCE AND VALUING  
ENDANGERED ECOSYSTEMS



DO NOT DISTURB WILDLIFE  
CONTROLLED ACCESS

RIPARIAN FOREST BUFFER  
ECOLOGICAL CORRIDOR

WATER RESOURCE  
PROTECTION

- V1 Square Palms
- V2 Parking Trees
- V3 Embankment Trees
- V4 Ditch Vegetation
- V5 Pond Vegetation
- V6 Aquatic Plants
- V7 Riparian woodland



PILOT PROJECT 01  
LANDSCAPE AND  
ECOLOGY

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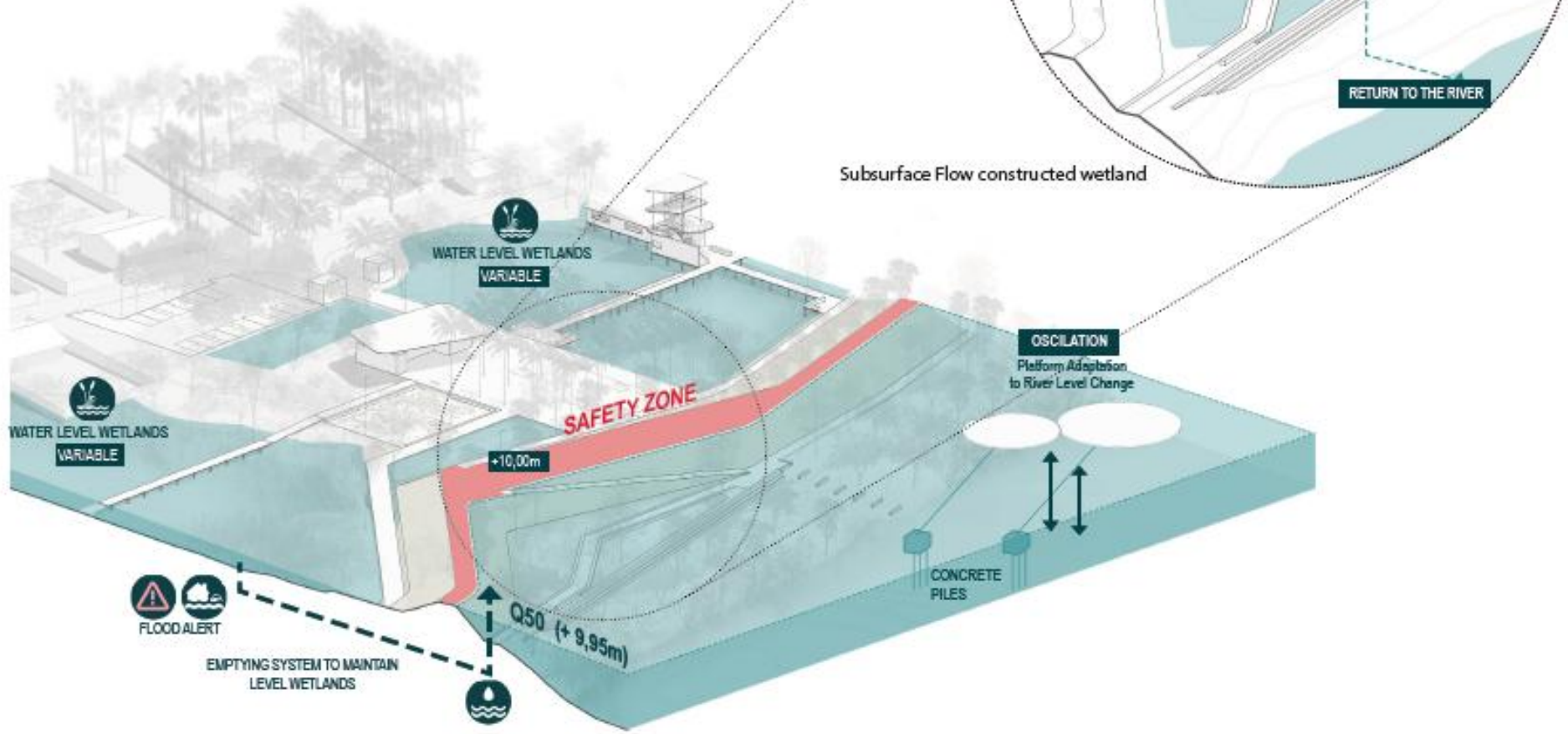


# CONAMA LOCAL VILADECANS 2025

KELANI RIVER PARK.URBAN , LANDSCAPE AND SOCIAL INTEGRATION OF THE FLOOD PROTECTION SYSTEMS OF THE KELANI RIVER

## FLOOD

The flood of this zone does not only concern the Kelani River. It also affects the Wetland's water level. So a hydrological automatic system is proposed to control it, activating the emptying by pumping from the Wetlands to the River, to protect the public space and the private properties in the town side.



PILOT PROJECT 01  
FLOOD

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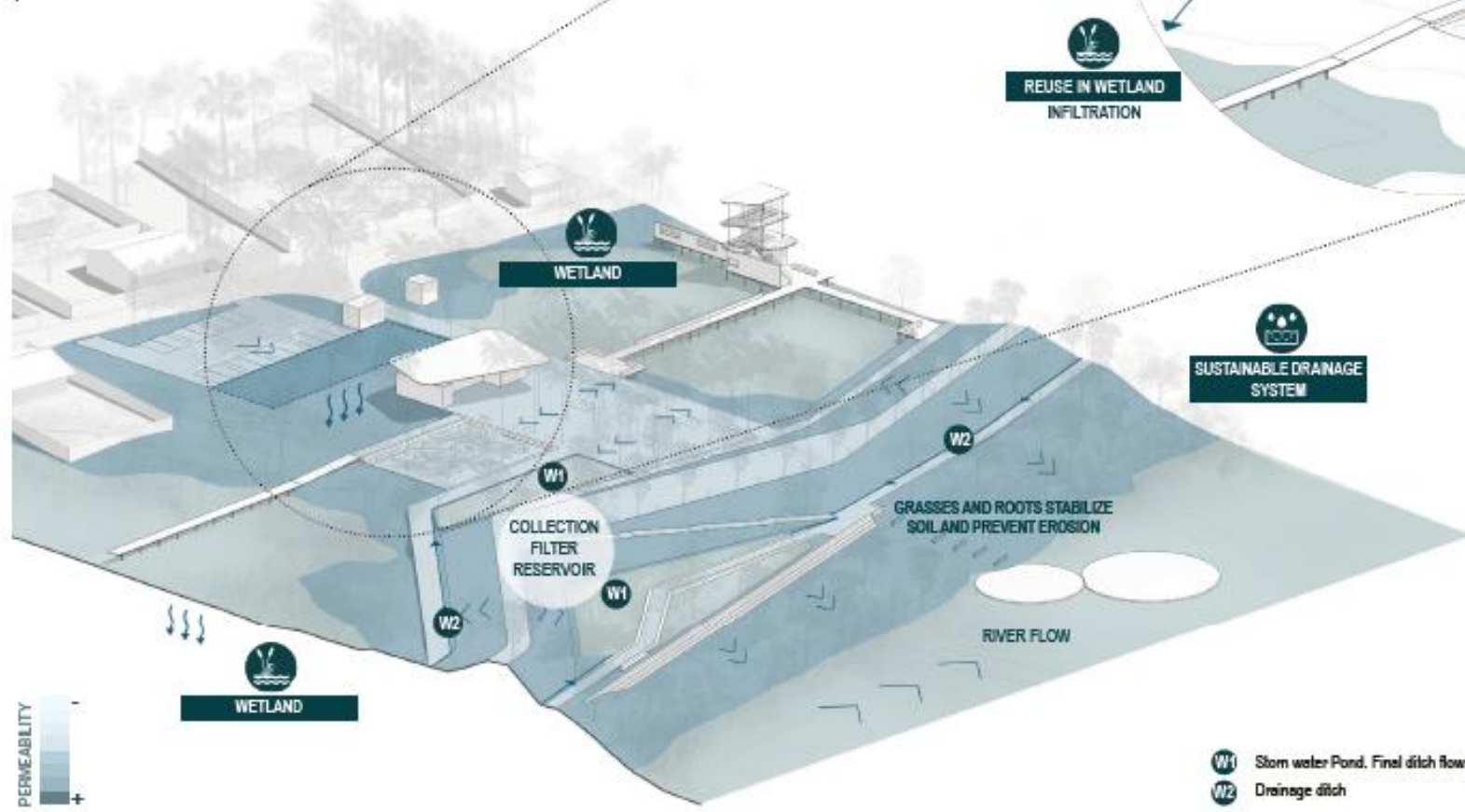




## DRAINAGE AND PERMEABILITY

Main routes and resting areas are mainly solved with permeable stabilized sand pavements delimited with precast concrete curbs. The paths that go into the wetlands will be raised wooden platforms that allow their use regardless of the level of water in each season.

A connection system between the different wetlands and the water collection areas of the embankment drainage is established with the aim of expelling the excess of water accumulated. The discharge of water into the River occurs after a phytodepuration process.



PILOT PROJECT 01

DRAINAGE AND  
PERMEABILITY



# KELANI RIVER PARK

## SRI LANKA





# Conecta. Actúa. Transforma

La transición ecológica empieza en tu ciudad

**CONAMA**

