

An aerial photograph of a lush green valley with a winding river and terraced fields. The image is slightly faded to allow text to be overlaid.

# The Honduran Production Valleys

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*Finding Balance Between People and Environment*

Jade Appleton P5  
Landscape Architecture MSc Thesis January 2018

# Palm Oil Products



# *Palm Oil Agriculture*

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**theguardian**

Honduras and the dirty war fuelled by  
the west's drive for clean energy

Two more Honduran land rights activists  
killed in ongoing violence

*Palm Oil Agriculture*

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An aerial photograph of a river valley. A river flows from the top left towards the bottom center. On the right side, a large dam structure is visible, with a reservoir behind it. The surrounding landscape is lush green with dense vegetation. The text and arrows are overlaid on the image, following the river's path.

Research : Global Scale



Research : Local Scale



Spatial Design Explained

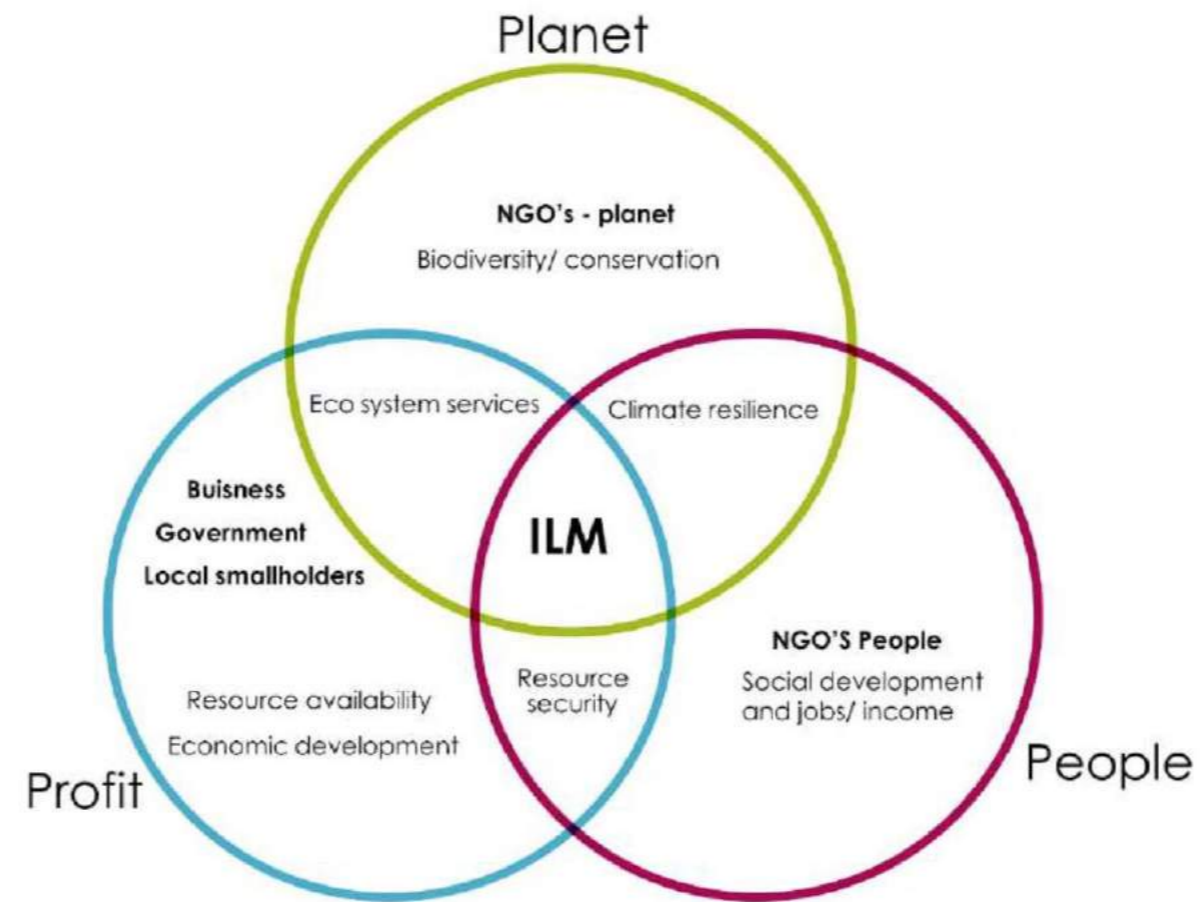


Implementation of design.



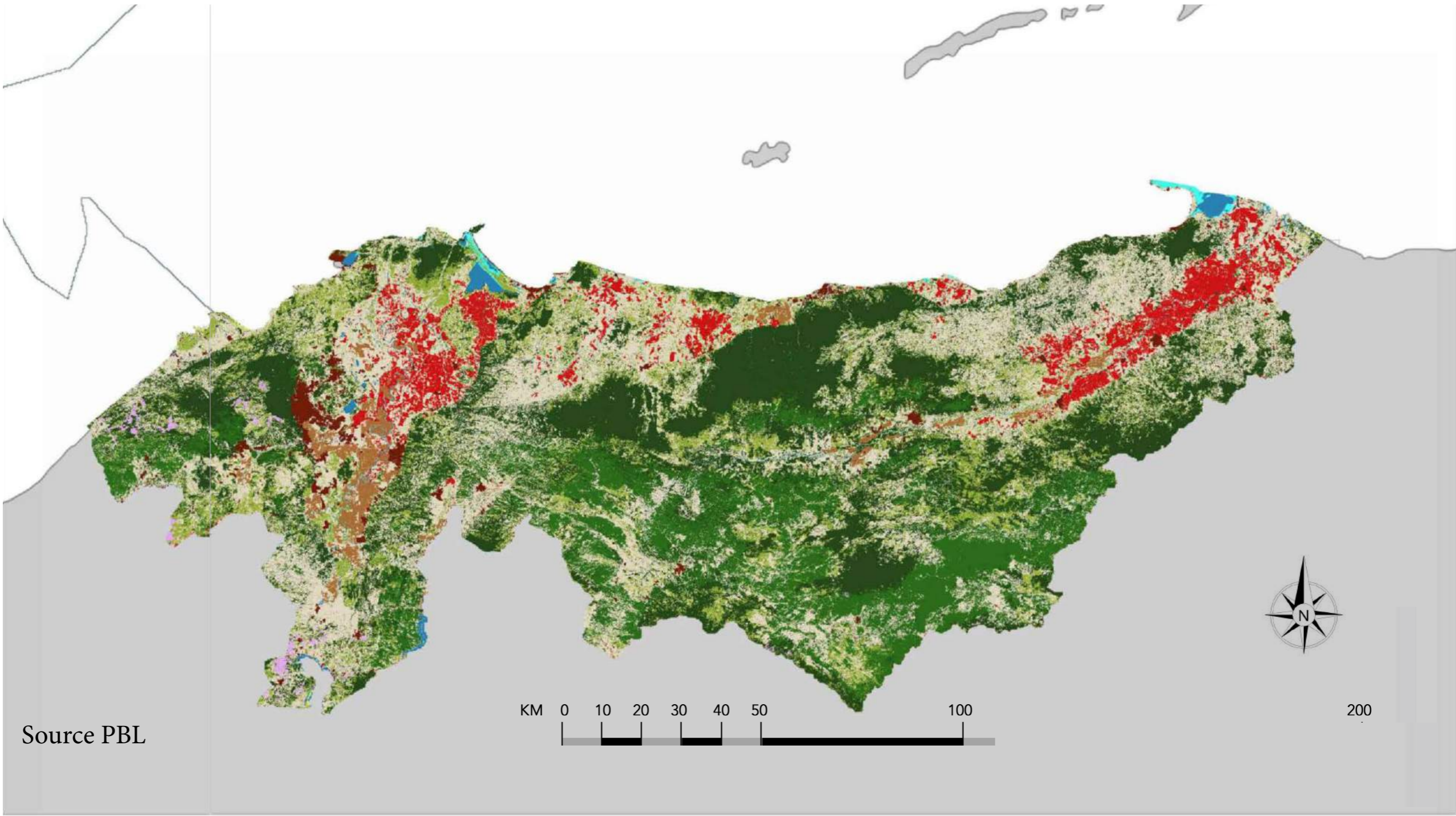
*Research Lens : Global*

# The Landscape Approach





*The Present Landscape*



Urban



Intensive agriculture



Palm Oil



Extensive agriculture with spruce



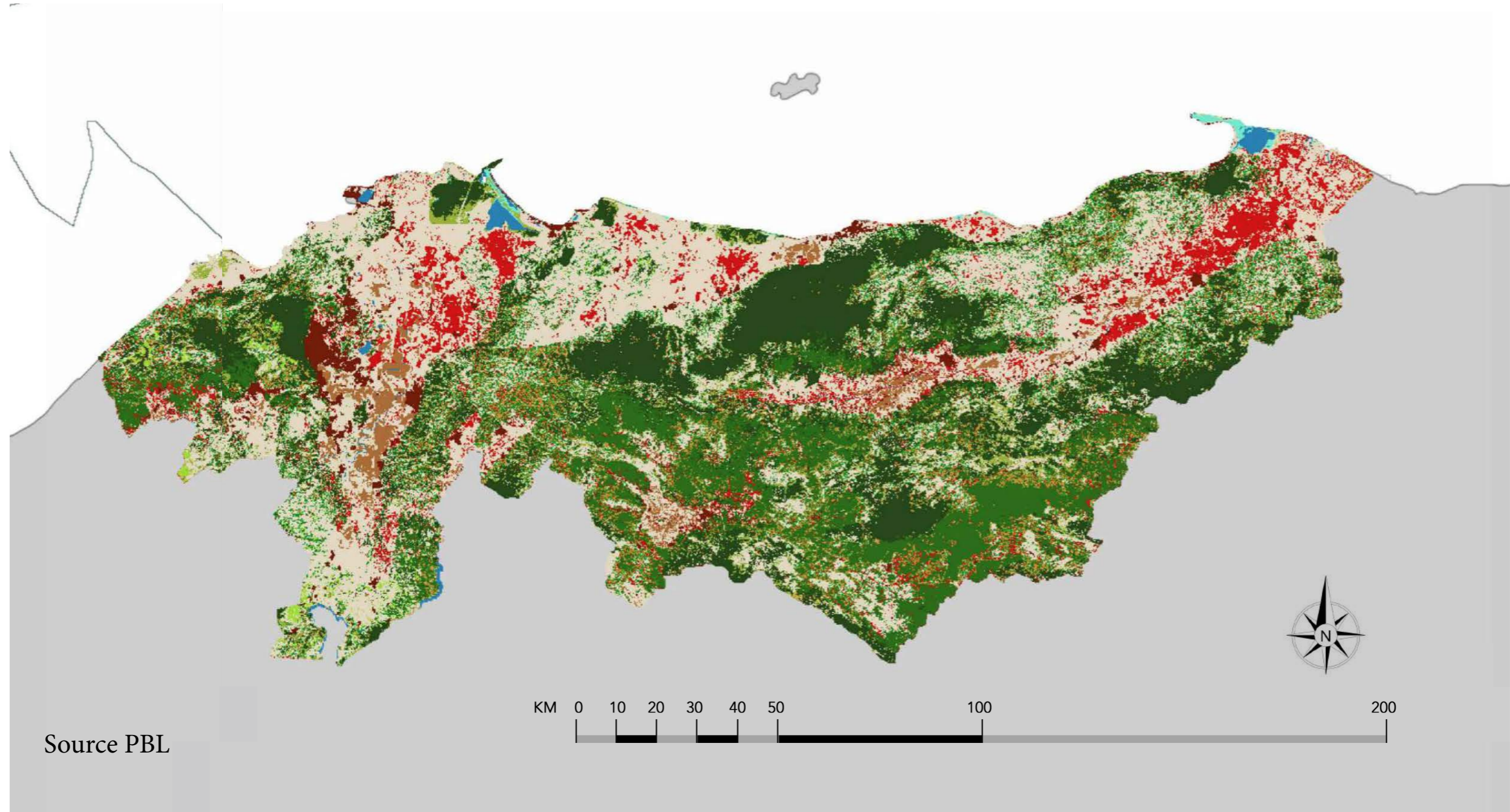
Forest Needleleaf



Forest Broadleaf



# The ILM Landscape



Urban



Intensive agriculture



Palm Oil



Extensive agriculture with spruce



Forest Needleleaf

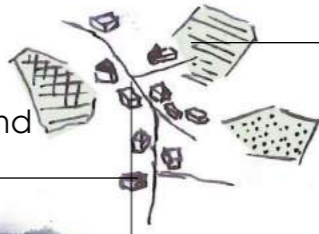


Forest Broadleaf



# Themes in the Landscape

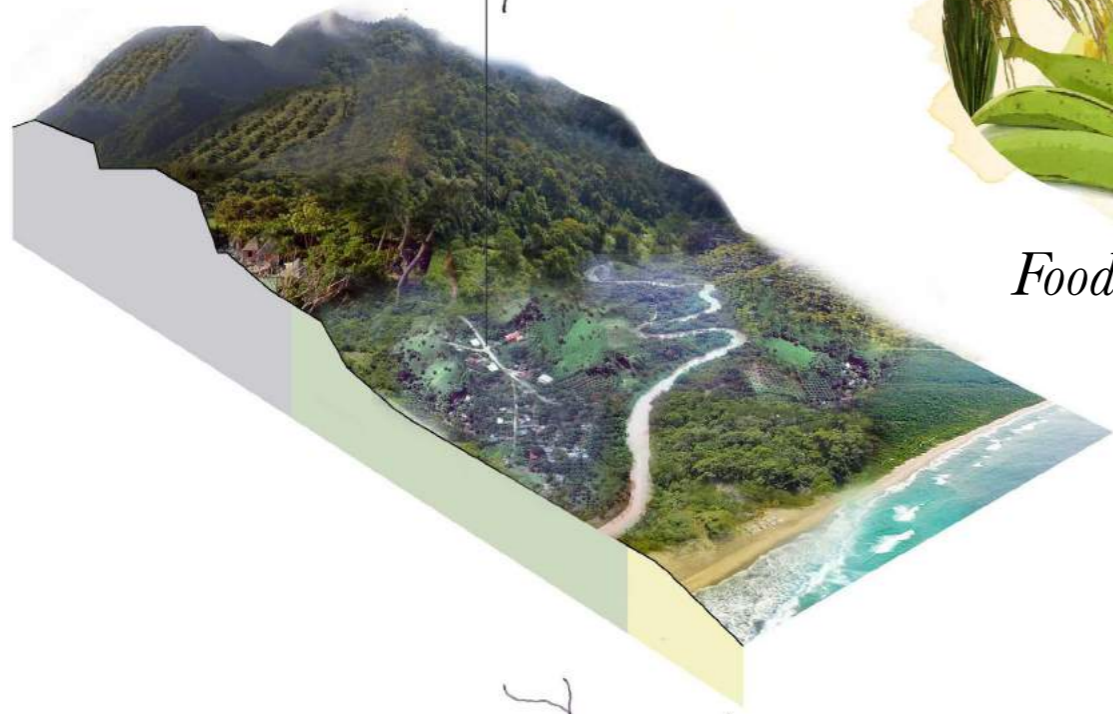
Diversity of agriculture, owned by small holders and cooperates



Focus on rural development



*Food Security*



Ecological corridors ensure biodiversity is kept



*Sustainable Palm Oil*



River buffer and water storage

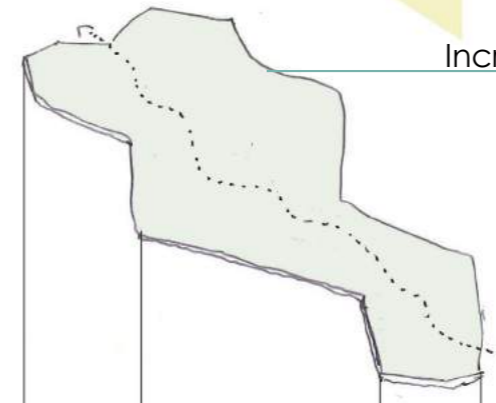


*Water Management*

Reforestation



Increase of protected areas



*Eco Tourism*

Nature protected by tourism



Coast developed in tourism

## *Stakeholder Discussions*

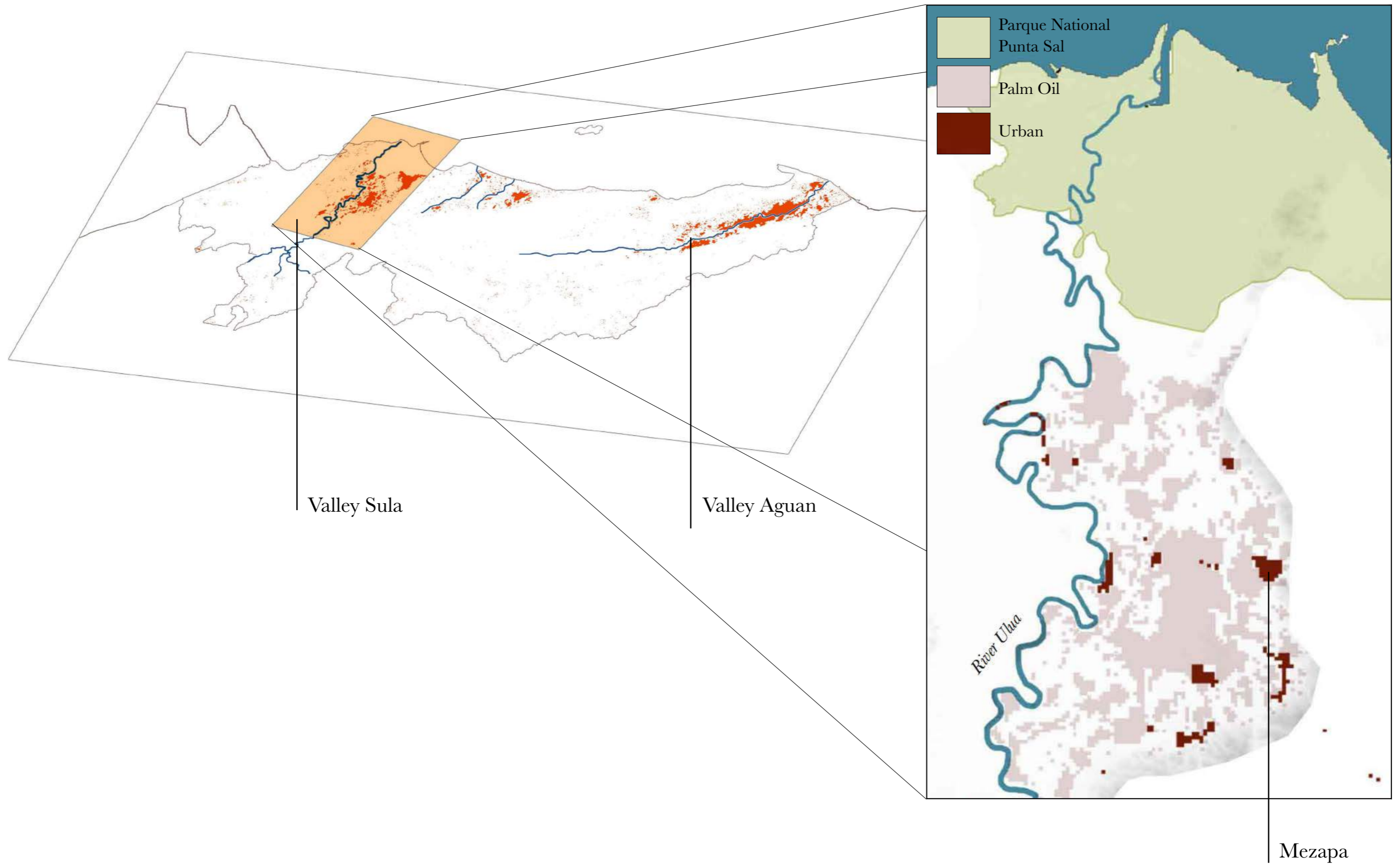
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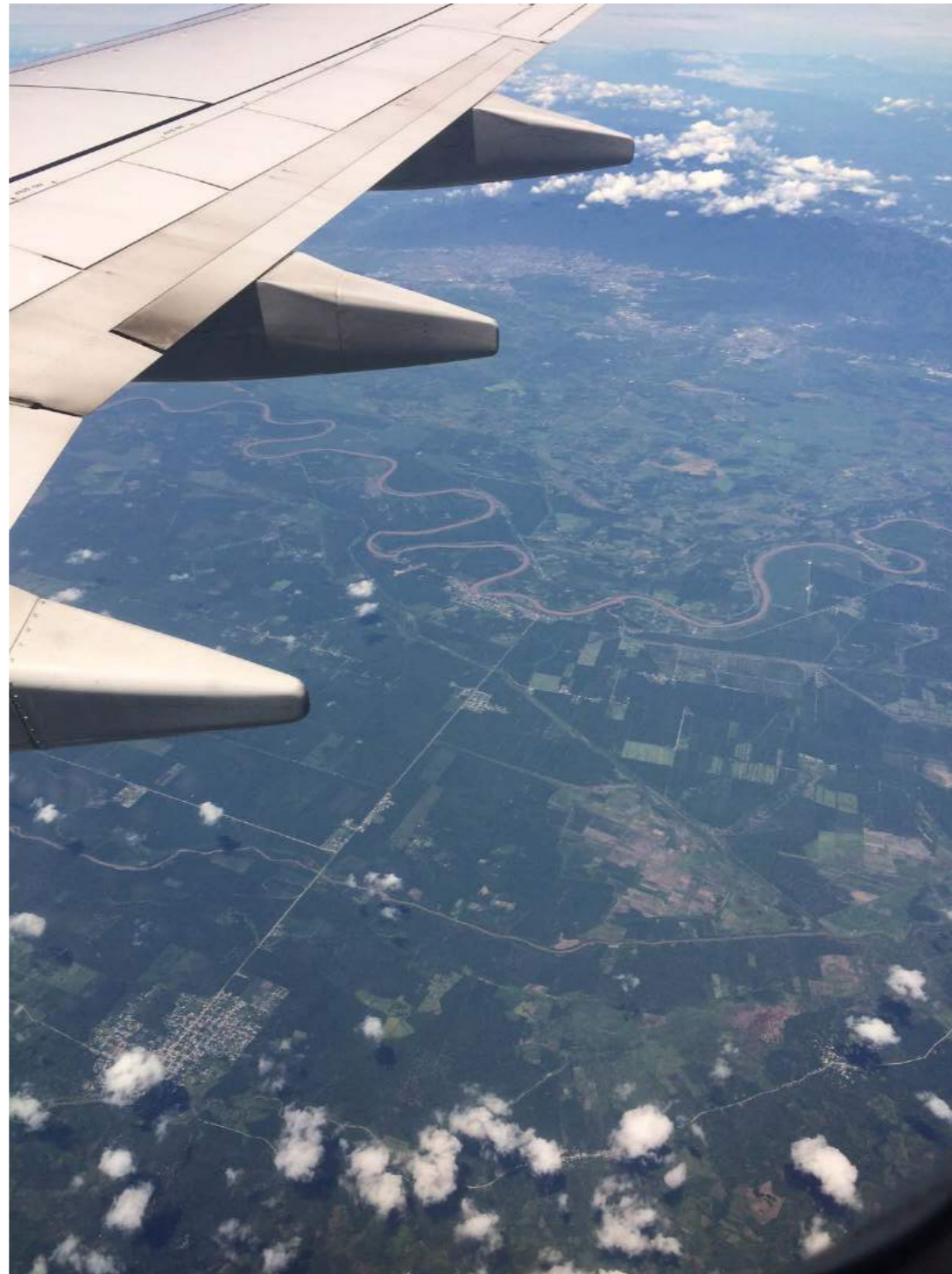
*Research Lens: Local*

# Area of Focus



*Area of Focus*

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World Wide Fund For Nature



Red of Women Cocoa and  
Chocolatiers of Honduras  
(REDMUCH)

**HONDUPALMA**








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*How can the Landscape Approach provoke a spatial design in the Northern coastline of Honduras to create a future sustainable environment, accounting for the area's landscape values?*

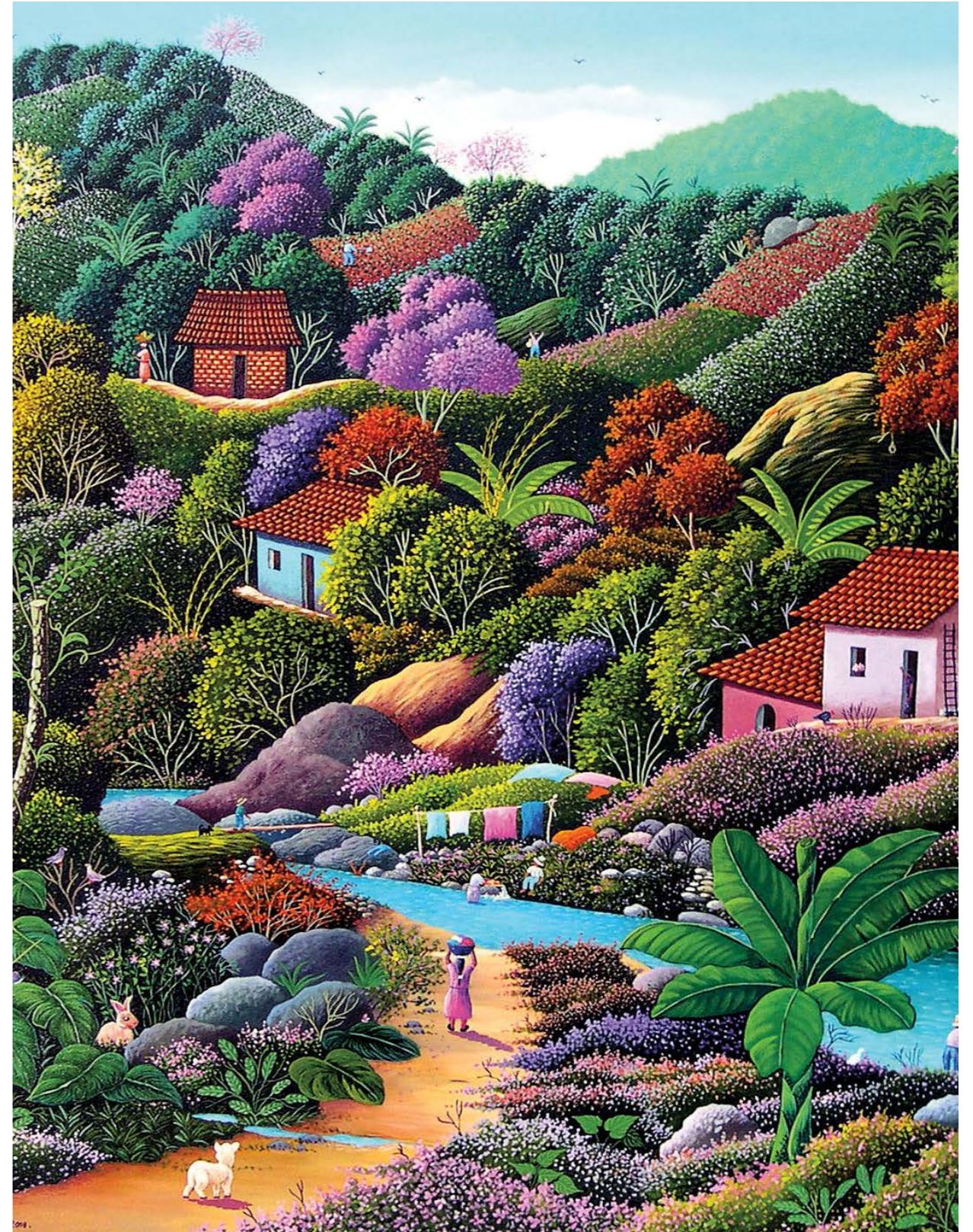
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An aerial photograph of a lush, green forested landscape. A river flows through the lower portion of the image, with several meanders and a large, cleared area on the right side. The forest is dense and vibrant green, with some lighter patches indicating cleared land or different vegetation types. The overall scene is a mix of natural beauty and human impact.

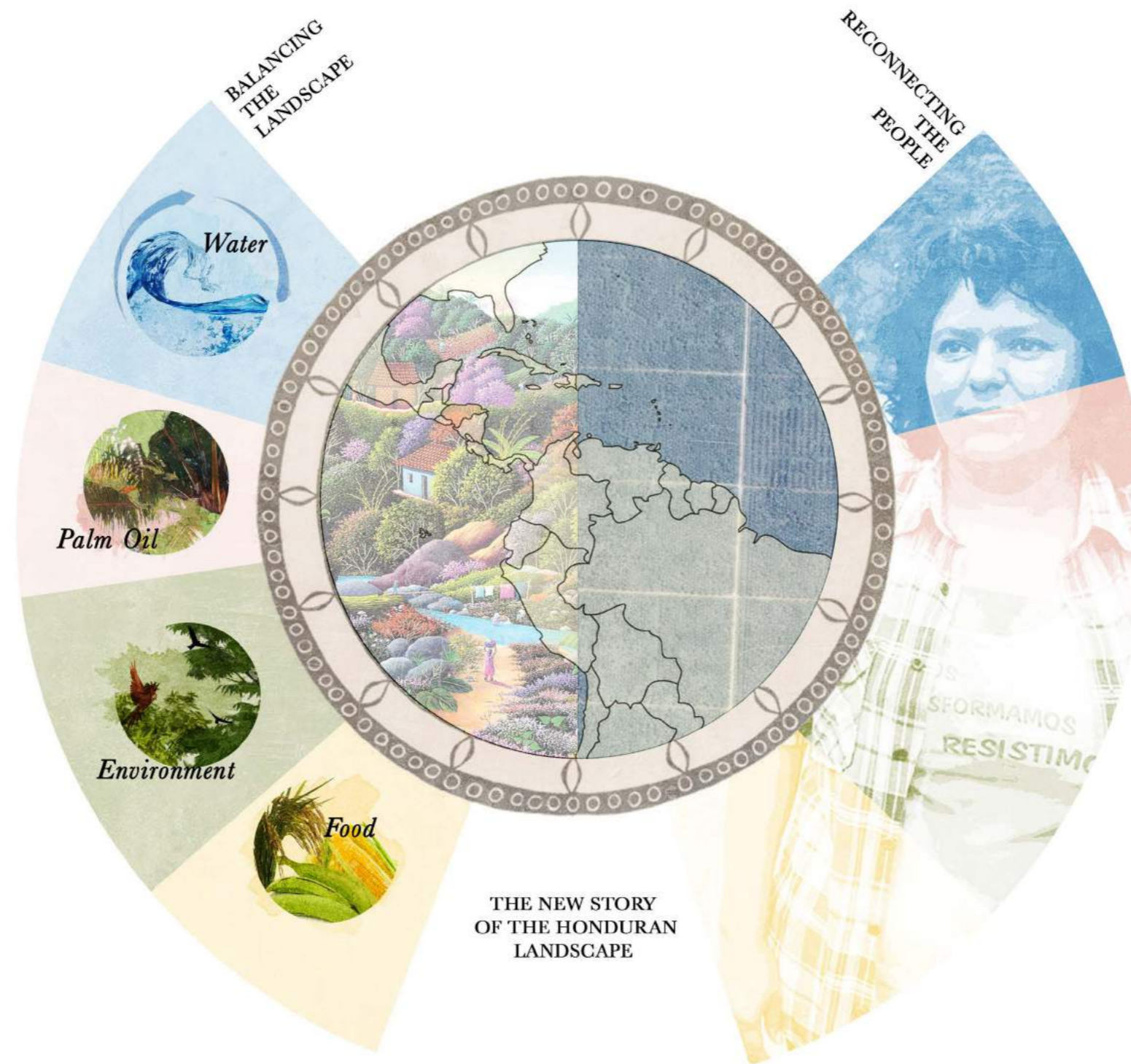
*A New Story of Honduras*

*Image of Honduras*

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# Concepts to Design





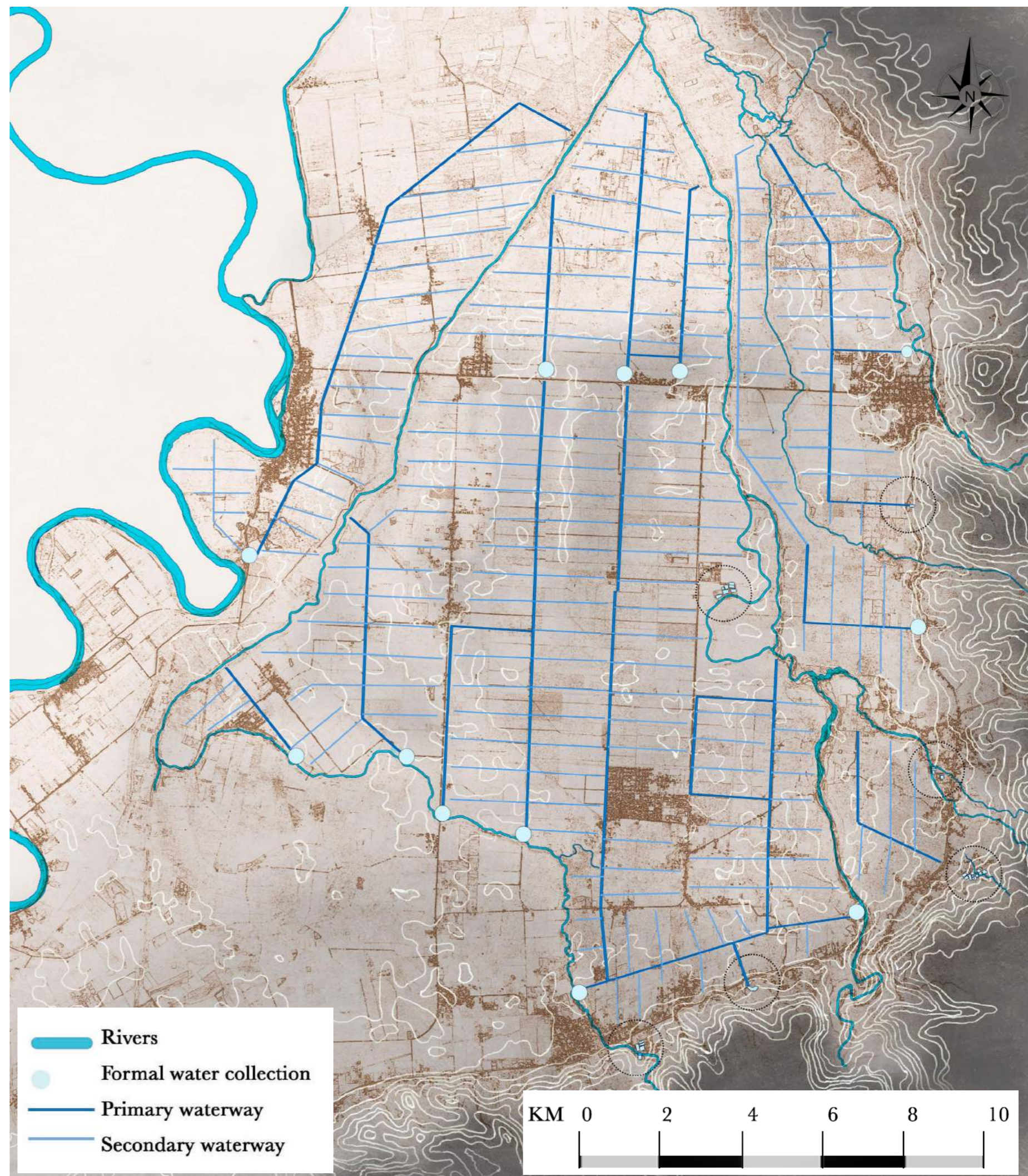
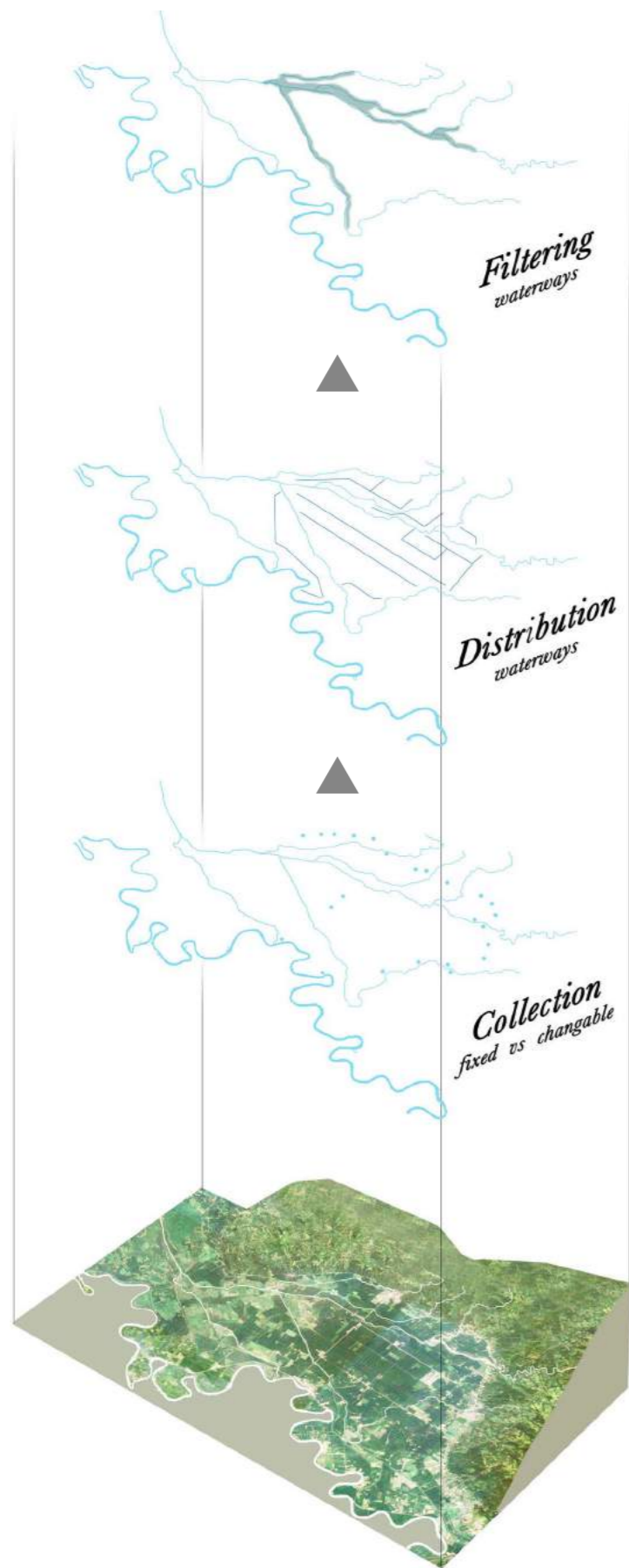
*Design Interventions to Concepts*

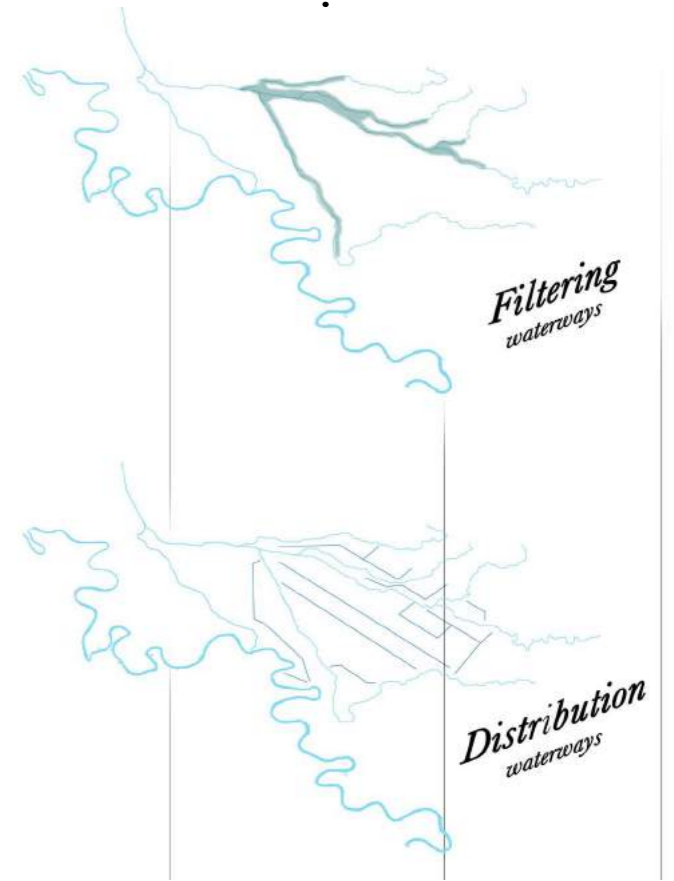
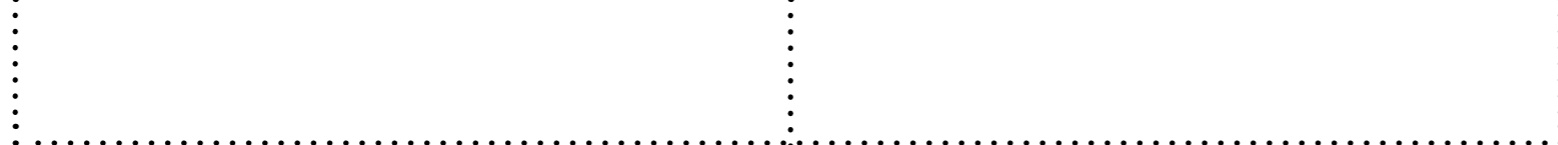
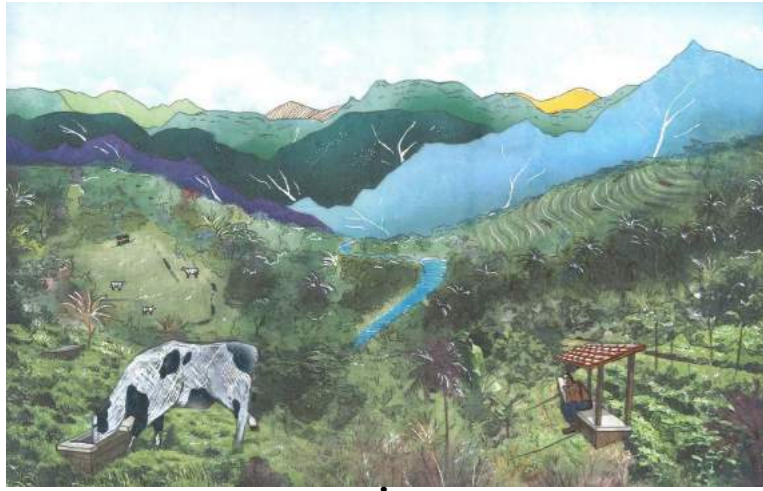
	<i>Balancing the Landscape</i>	<i>Technical Landscape Interventions</i>	<i>Reconnecting People back to their landscape</i>
<i>Blue System</i>	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span> <i>Water management</i></li> </ul>	<i>River water collectors</i>	<i>Recreation and space in landscape</i>
	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <span style="color: yellow;">●</span> <i>Soil erosion and food production on hills</i></li> </ul>	<i>Hill water collectors</i>	<i>Water and power access</i>
	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <i>Flooding prevention</i></li> </ul>	<i>Town water collectors</i>	<i>Water points through town</i>
	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <span style="color: red;">●</span> <span style="color: yellow;">●</span> <i>Food production on valley and more productive palm</i></li> </ul>	<i>Distributing water ways</i>	<i>Water access across landscape</i>
<i>Green System</i>	<ul style="list-style-type: none"> <li><span style="color: red;">●</span> <span style="color: green;">●</span> <span style="color: yellow;">●</span> <i>Egoloical diversity watershed restoration</i></li> </ul>	<i>Agroforestry and extensive agriculture</i>	<i>Food security/ power for people</i>
	<ul style="list-style-type: none"> <li><span style="color: green;">●</span> <i>Egoloical diversity green movement</i></li> </ul>	<i>Green corridor</i>	<i>Natural route and connection through landscape</i>
	<ul style="list-style-type: none"> <li><span style="color: yellow;">●</span> <i>New economies Food security</i></li> </ul>	<i>Community gardens and tourism activities</i>	<i>Food security/ new economy space and power for people</i>
	<ul style="list-style-type: none"> <li><span style="color: blue;">●</span> <span style="color: green;">●</span> <span style="color: yellow;">●</span> <i>Flooding protection Ecological diversity</i></li> </ul>	<i>River buffers and marshland</i>	<i>Reconnection to true nature</i>

● *Food Security*     
 ● *Sustainable Palm Oil*     
 ● *Water Management*     
 ● *Eco Tourism*

*The Blue System*



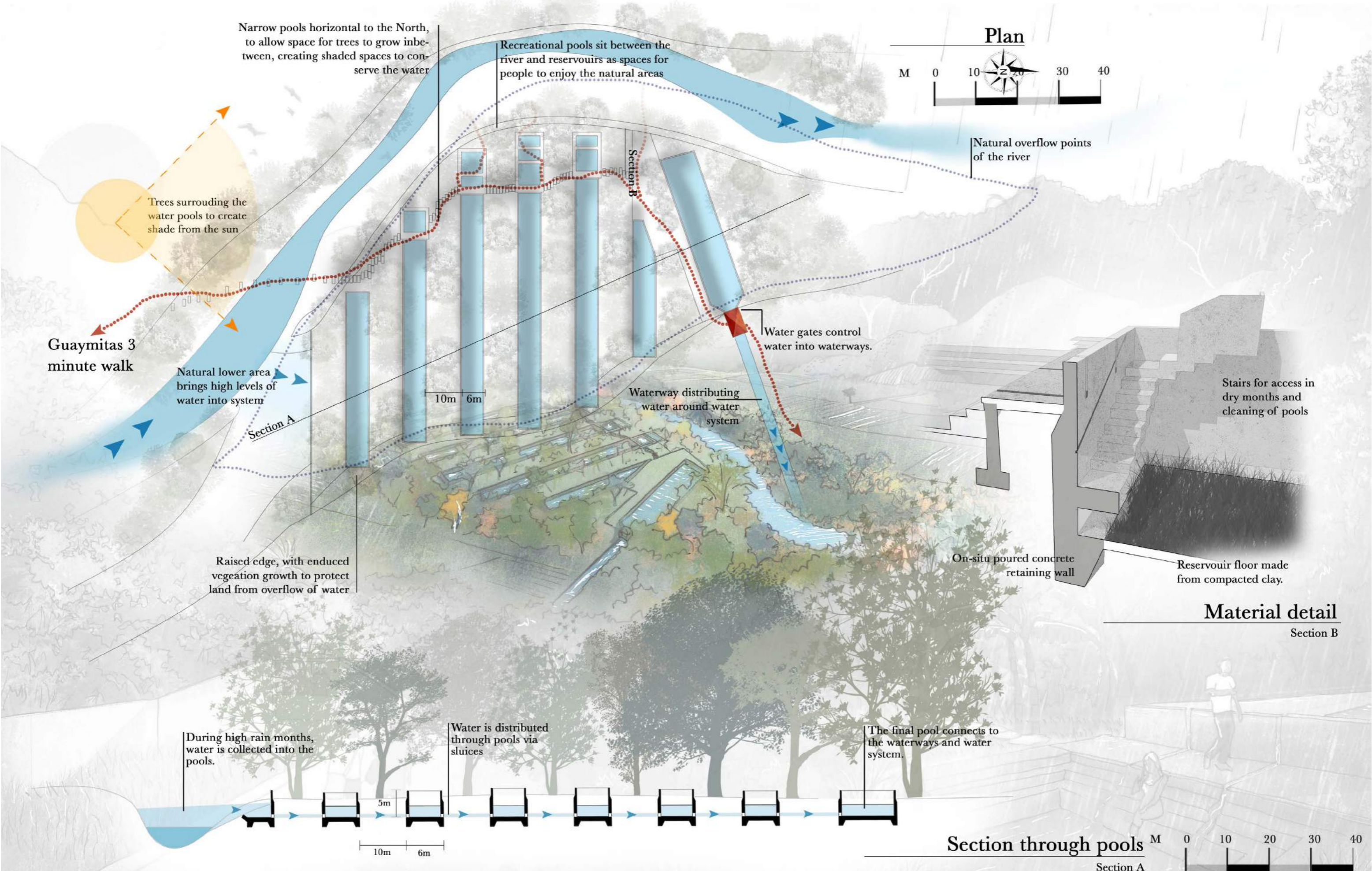




*RIVER WATER COLLECTION*



# RIVER WATER COLLECTION | Technical



# HILL AND URBAN WATER COLLECTION

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# *DISTRIBUTING WATERWAYS*





# DISTRIBUTING WATERWAYS | Technical

The waterways are to be dug by trenches, and lined with compacted clay (from the clay landscape itself). The compacted clay will hold the water and allow the waterway edges to be natural in appearance.

Water from secondary waterways connects to individual farms. Farmers can attach hand pumps to access water for use.

Waterways connected through pipes (under existing infrastructure). 1.5m  
Water can be powered through via water powered pump.

Plants can be introduced to clean the water, which can become polluted from pesticides used in farms.

Water level in rainy months

Water level in dry months



Tropical papyrus



Nelumbo Nucifera

## Primary Waterway Section

Main water channels following topography distributing water from collection points to secondary channels and to farms.

## Secondary Waterway Section

Smaller water channels linking water to individual farms.



Individual handpumps for farmers to access the water



Water powered system to pull water from primary to secondary waterways

Solar panels on roof to generate energy

Red clay tiles

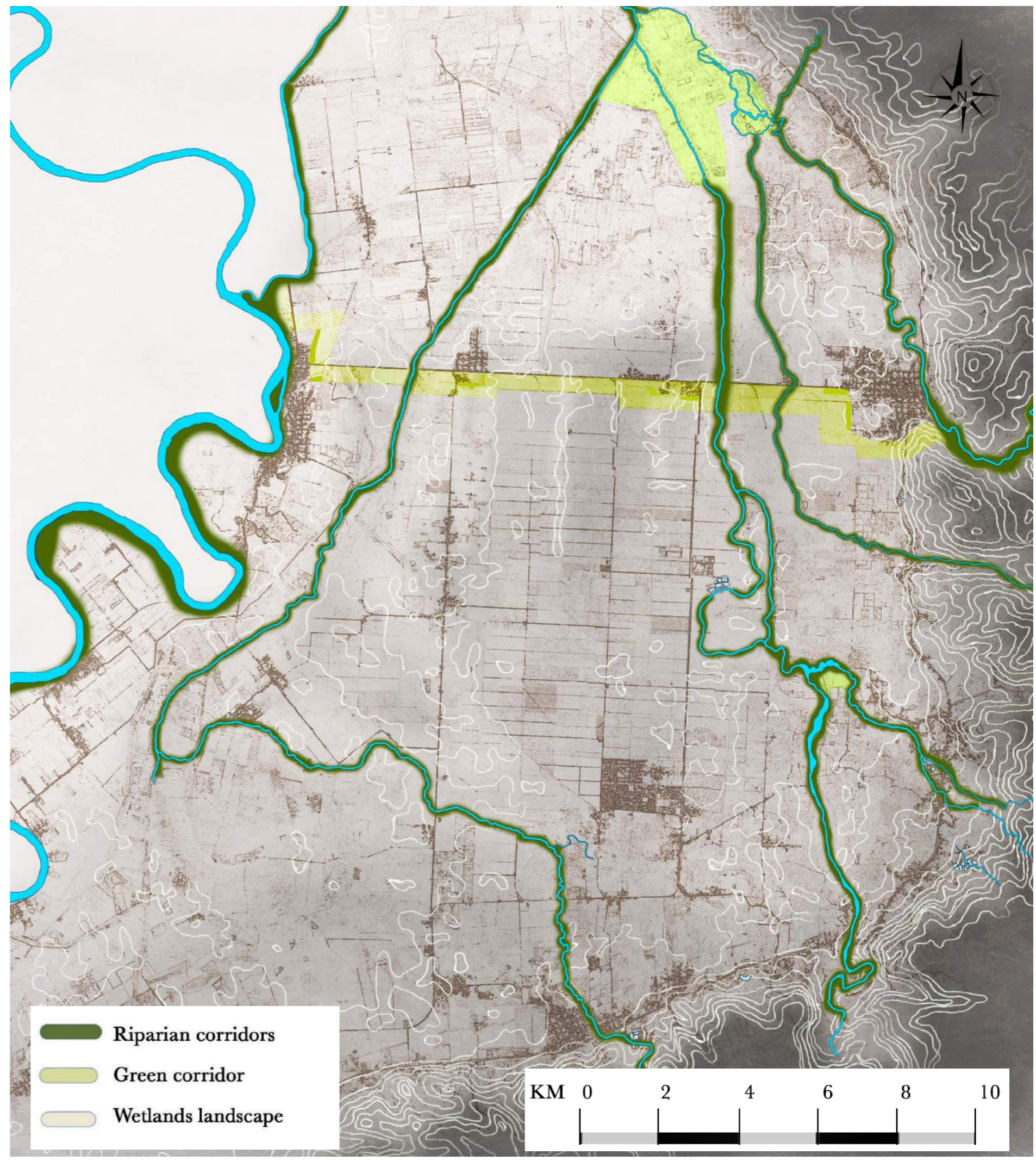
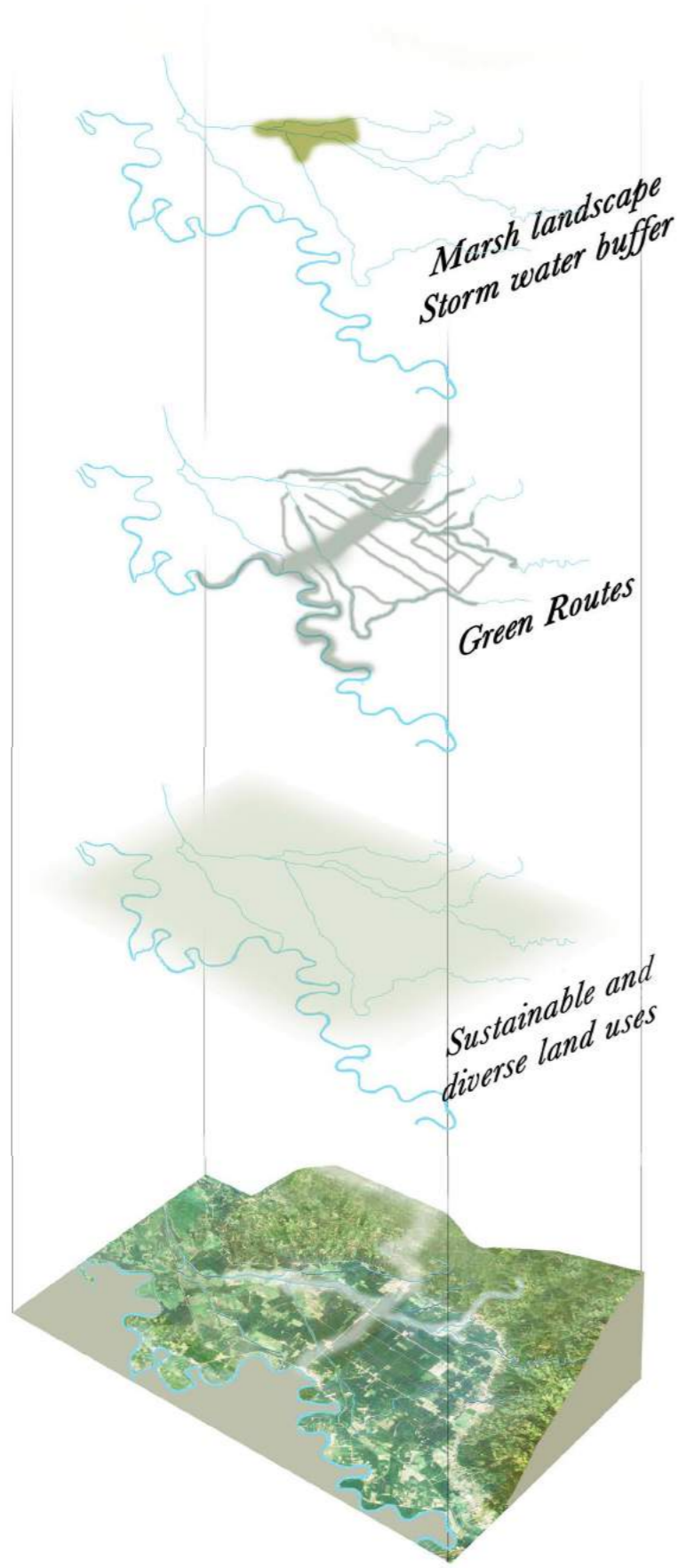
On situ poured concrete

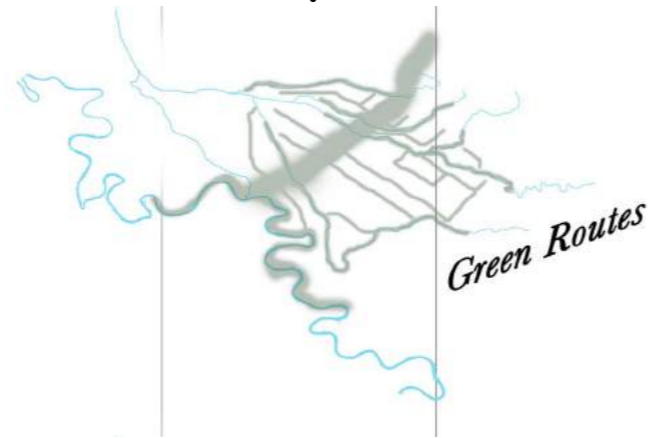
Control Gates to control the distribution of water. The red clay roofs have coherence through landscape, identifying one system.

Control Gates are staggered across the landscape, to control the movement of water through the landscape itself. The waterways follow the natural topography, allowing gravity to level the water through the system.

*The Green System*





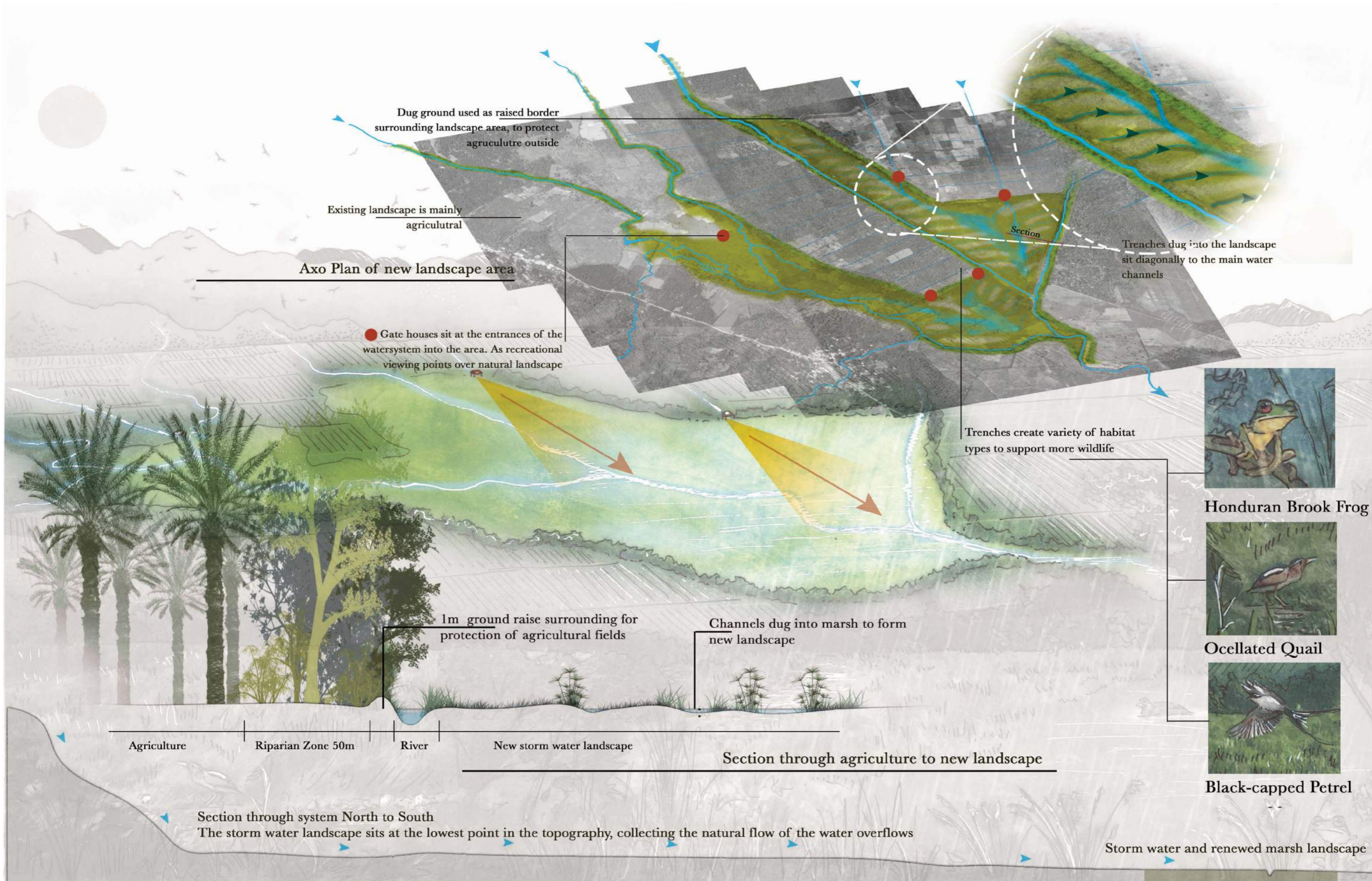


*STORM WATER LANDSCAPE*

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# STORM WATER LANDSCAPE | Technical

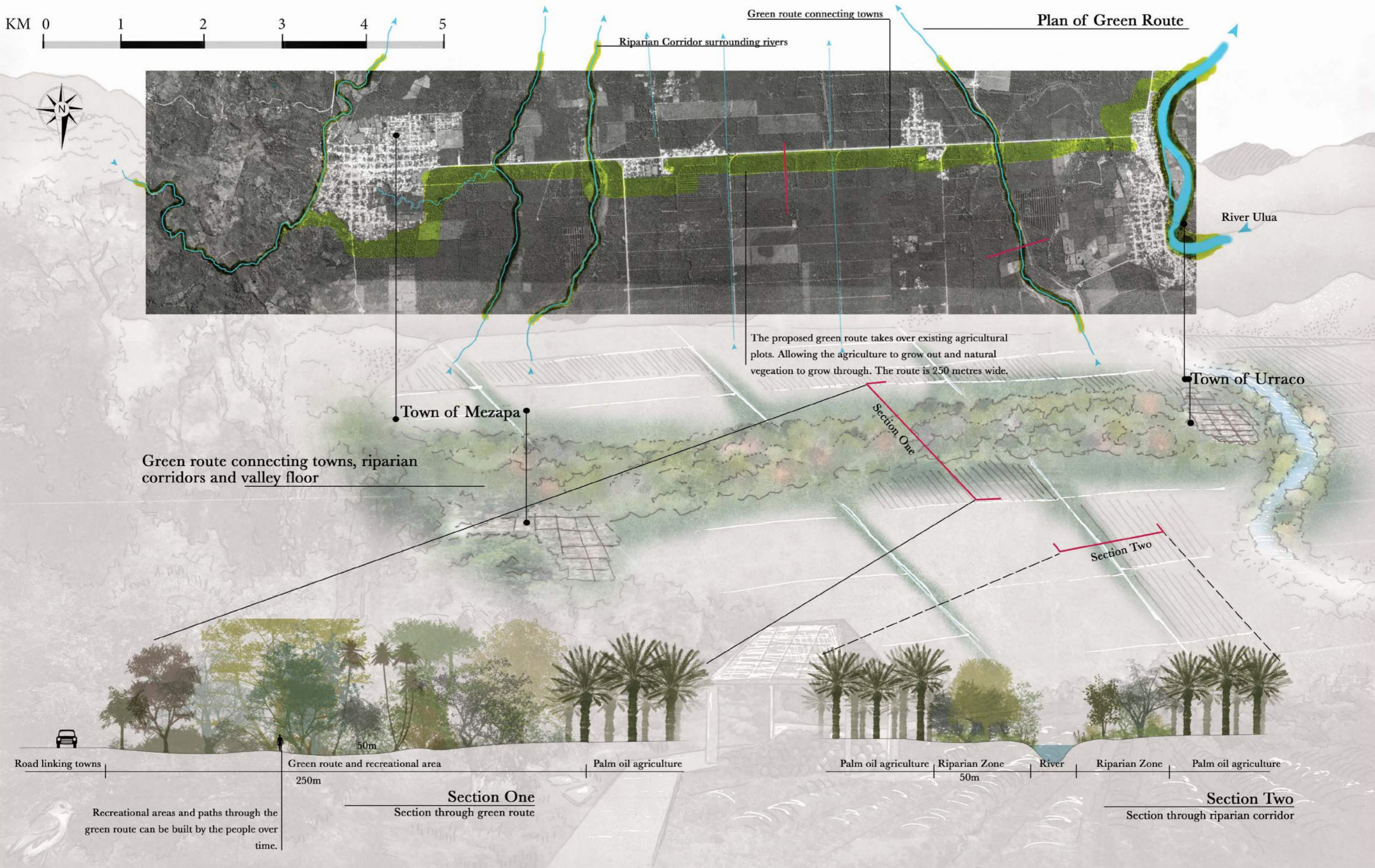


*GREEN ROUTE*

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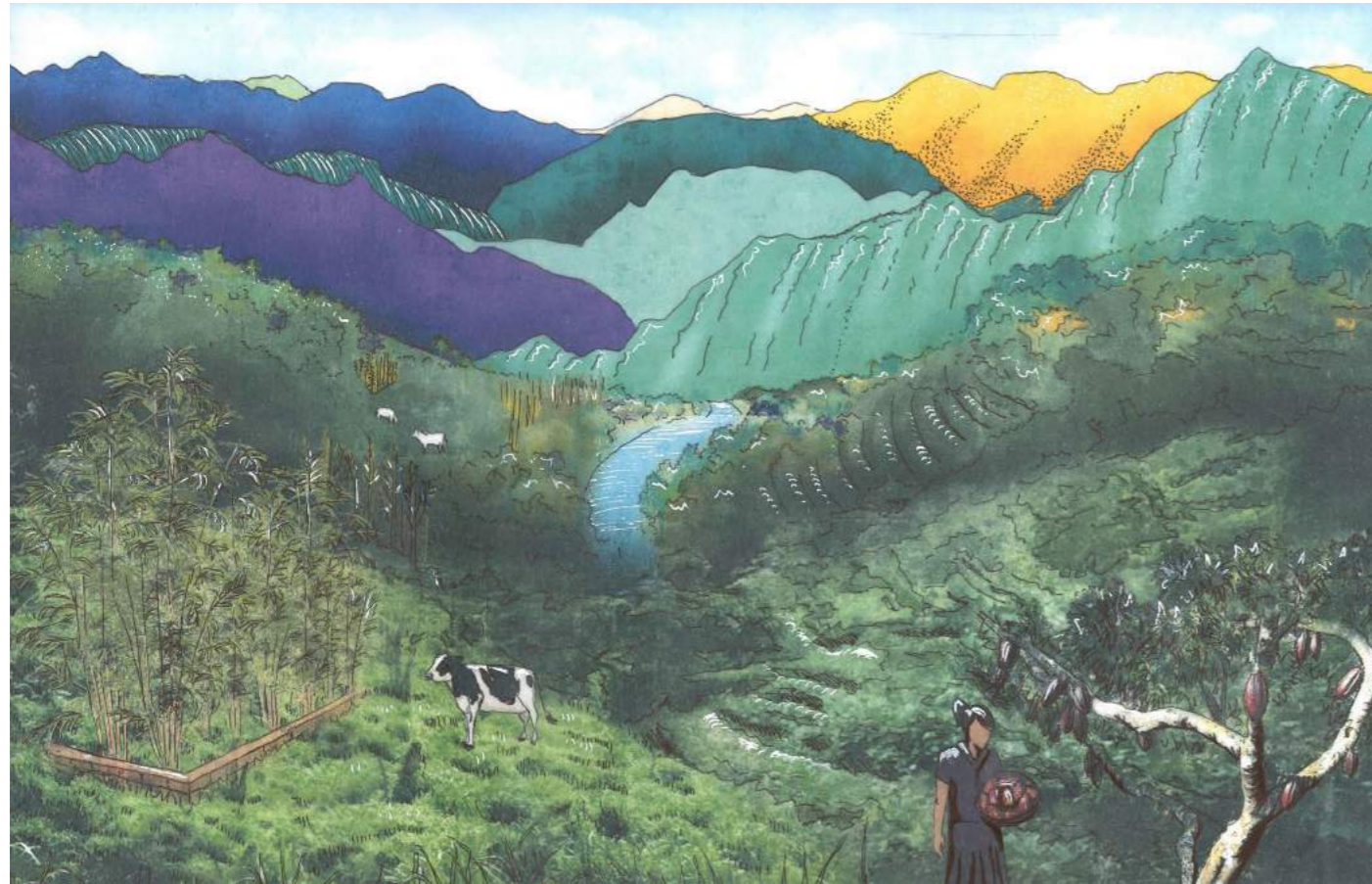
# GREEN ROUTE | Technical





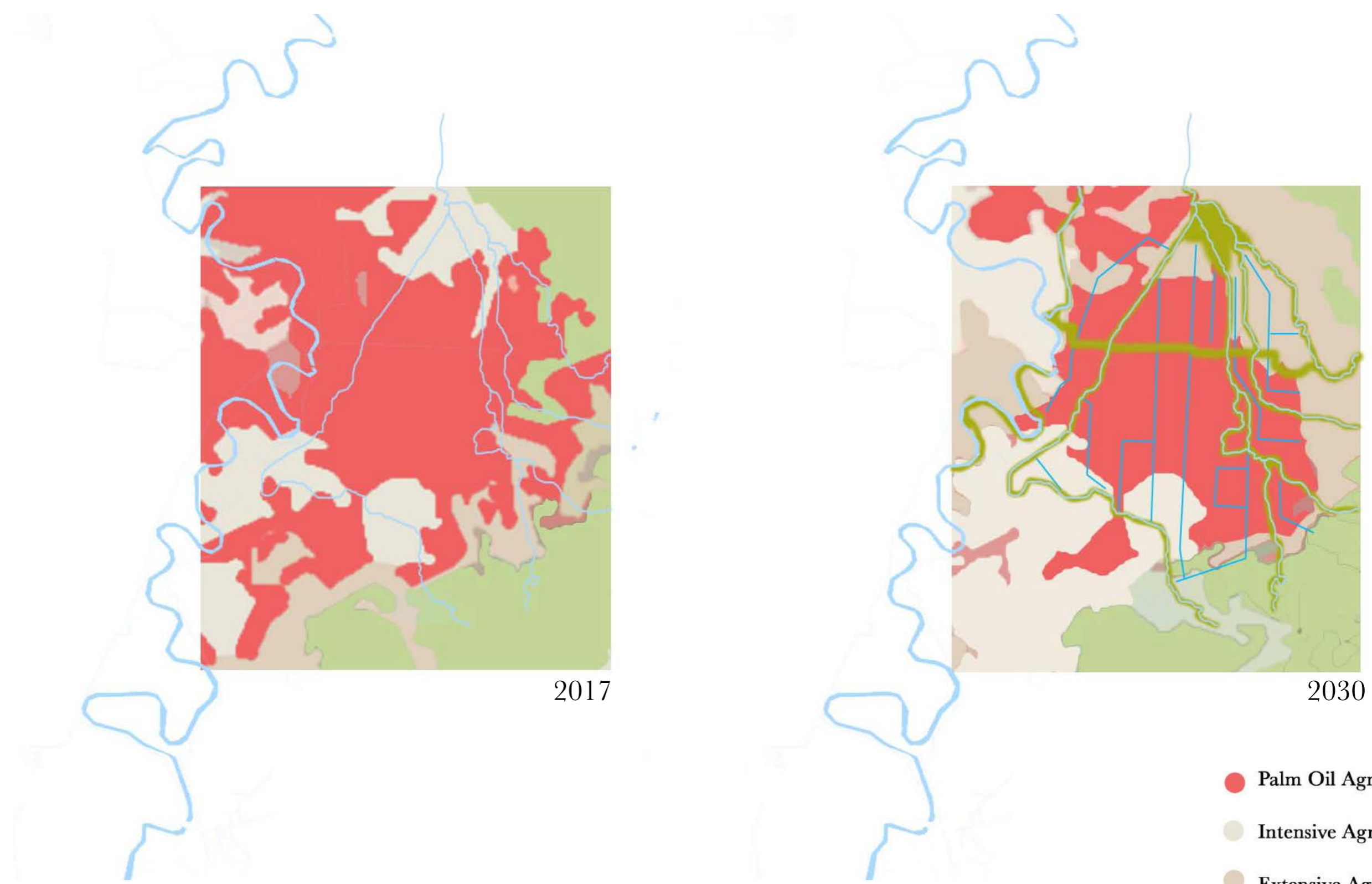
# LAND USE HILLSIDES

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# *New Ownership Plan*

Ownership by corporations ..... Democratic ownership

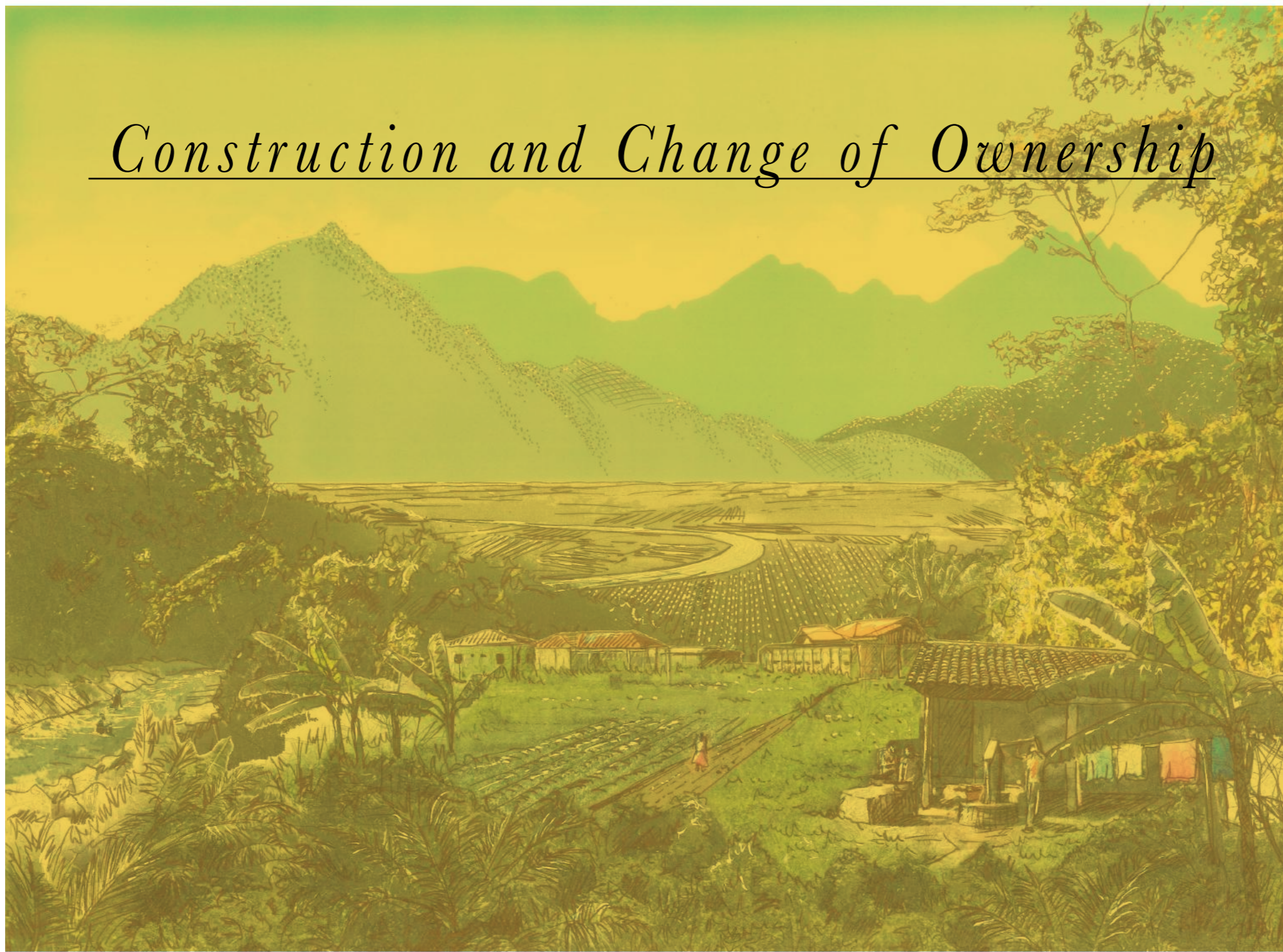


2017

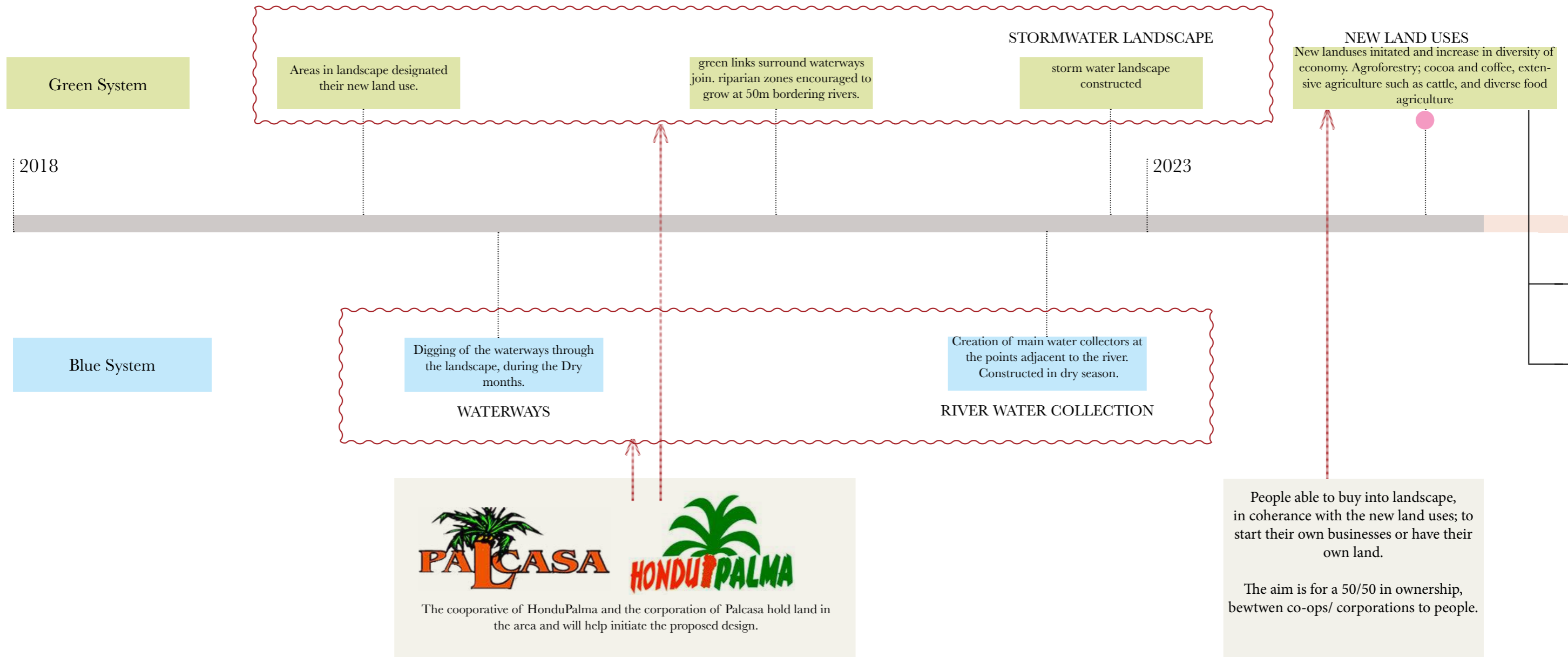
2030

- Palm Oil Agriculture
- Intensive Agriculture
- Extensive Agriculture
- Natural Areas

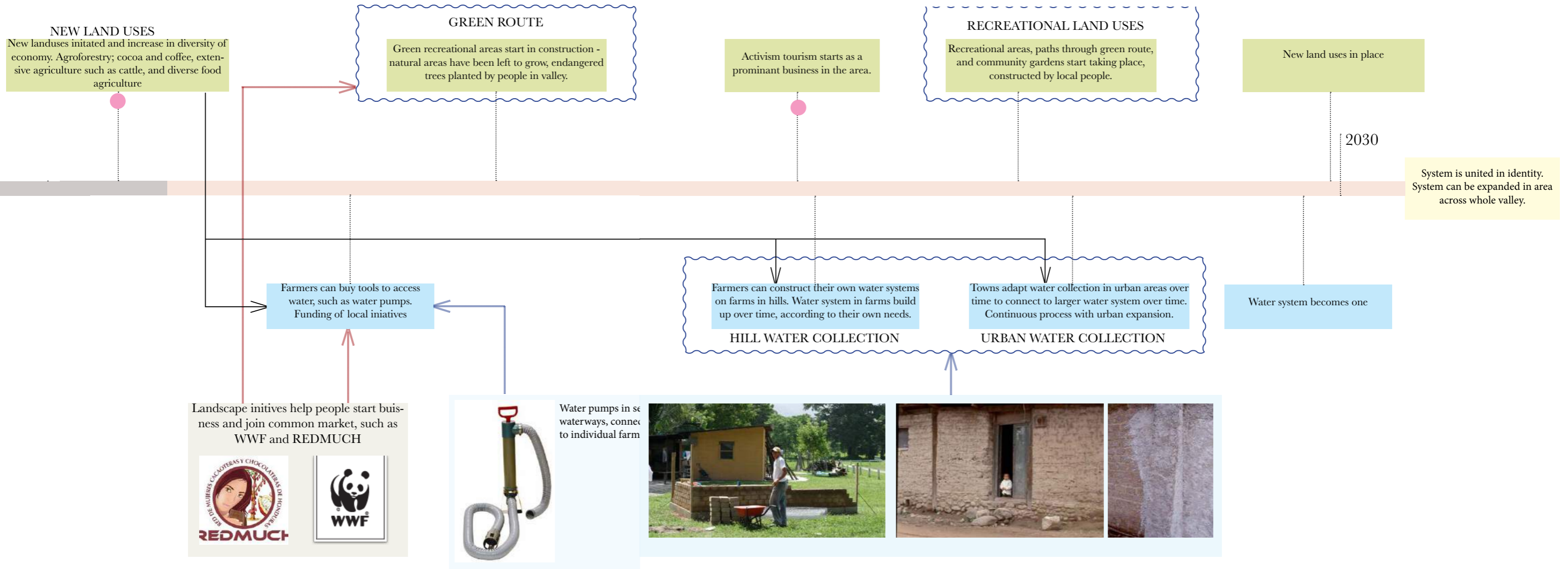
*Construction and Change of Ownership*



# Construction Timeline



# Construction Timeline



*Thank you for listening*

