



Nature-Based Solutions and Wetland Restoration at Nong Loup Ian Wetland

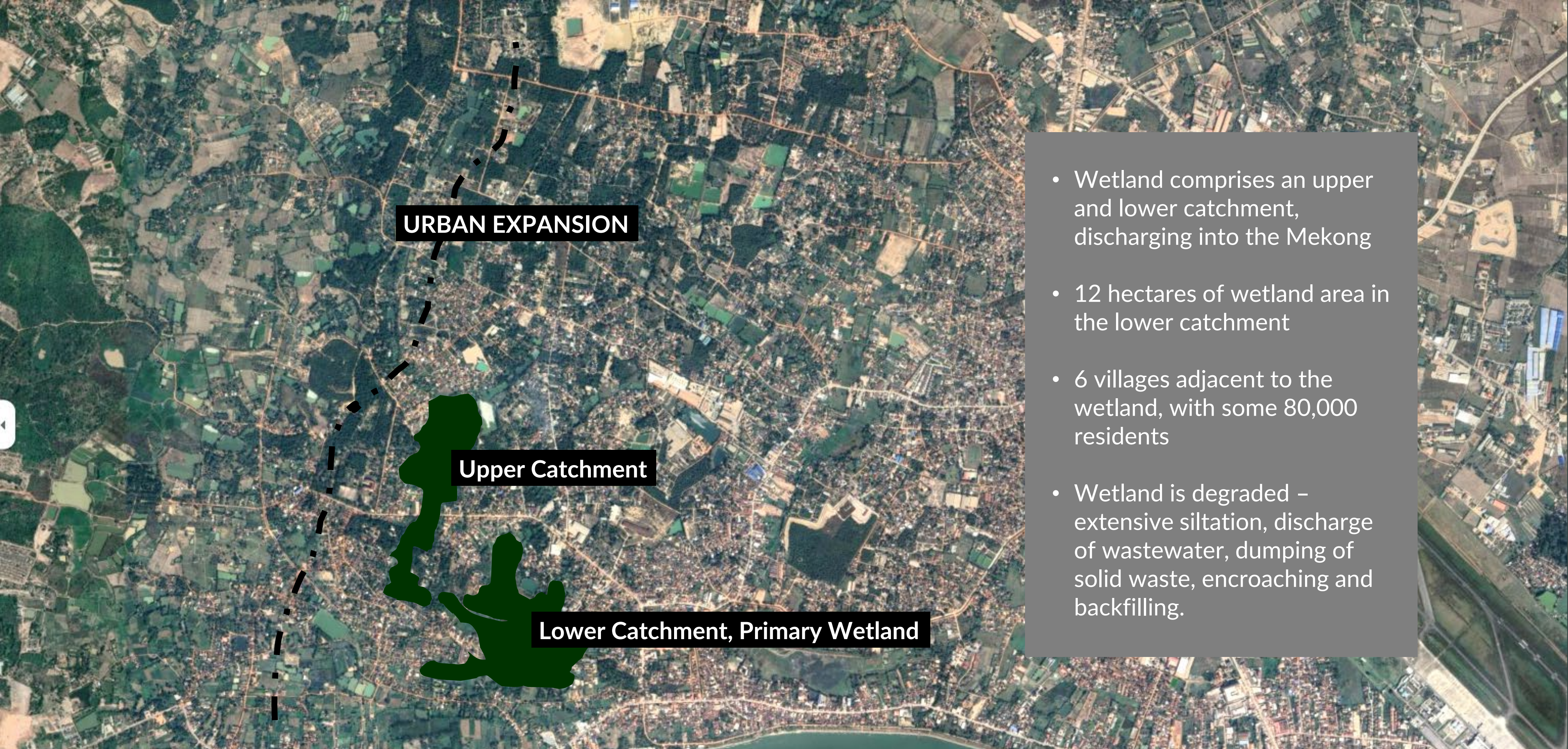
Vientiane Capital
Lao PDR

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September 2024



Wetland Loss, Monsoon Intensity and Pluvial Flood Events

NATURE-BASED SOLUTIONS FOR URBAN ADAPTATION



URBAN EXPANSION

Upper Catchment

Lower Catchment, Primary Wetland

- Wetland comprises an upper and lower catchment, discharging into the Mekong
- 12 hectares of wetland area in the lower catchment
- 6 villages adjacent to the wetland, with some 80,000 residents
- Wetland is degraded – extensive siltation, discharge of wastewater, dumping of solid waste, encroaching and backfilling.

Nong Loup Ian Wetland

NATURE-BASED SOLUTIONS FOR URBAN ADAPTATION



- 95% of households experienced flooding in or around their home during the monsoon
- 67 % of households showed socio-economic characteristics of vulnerability
- 71% migrated to the project site from other areas of Lao PDR
- 76% of households felt 'very vulnerable' or 'rather vulnerable' to floods

Protect:

- The wetland and farming practices

Convert:

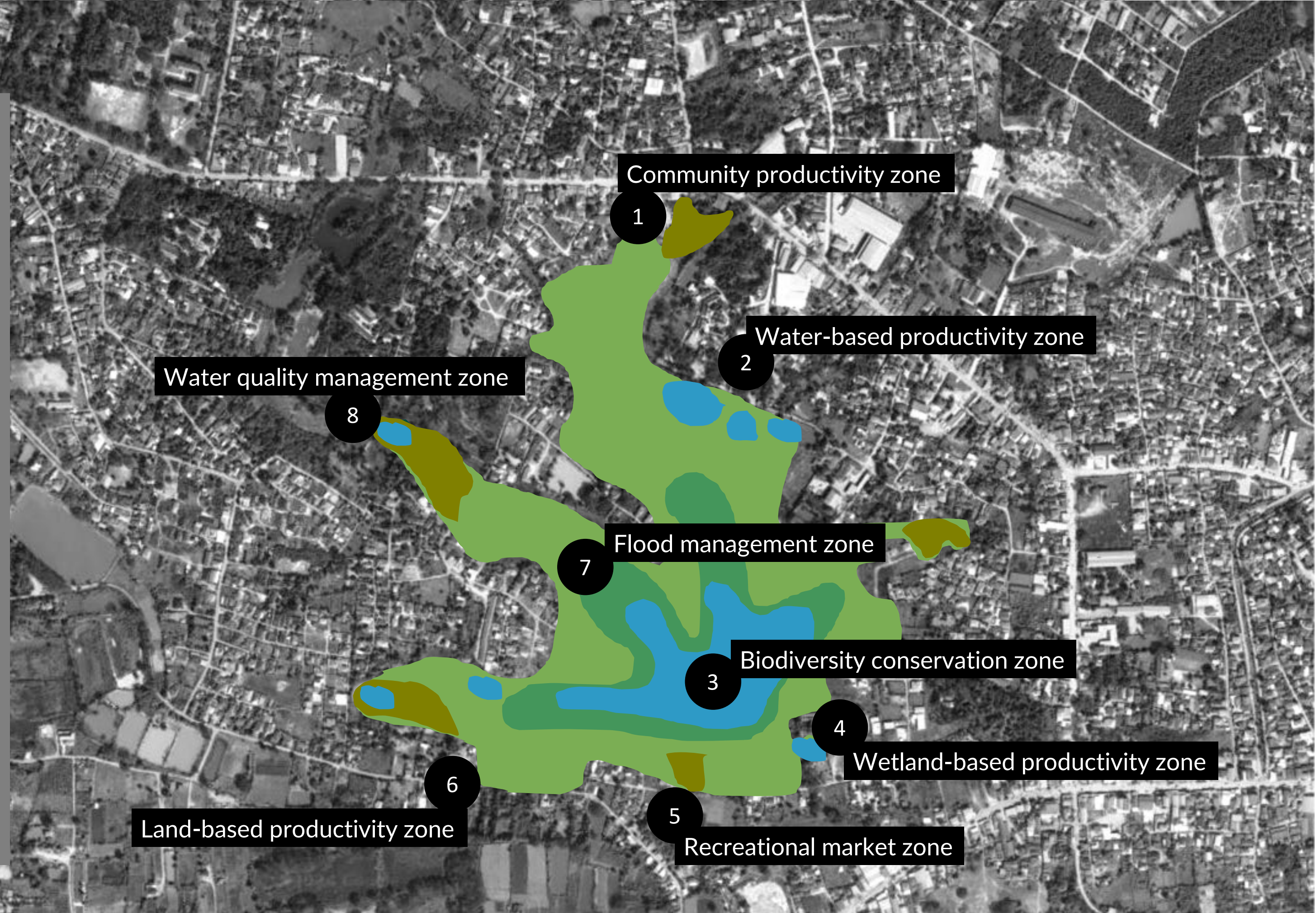
- Marginalized green space to constructed wetland

Restore

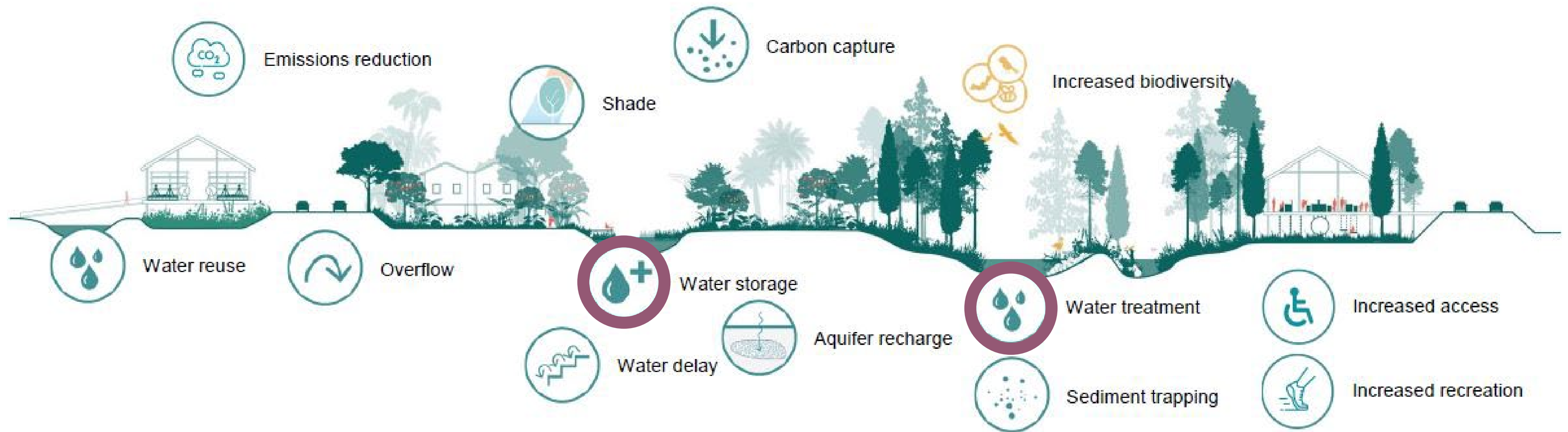
- Retention and detention ponds (desilting)
- Lateral connectivity throughout micro-catchment
- Local drainage systems and streams

Create

- New constructed wetland areas
- Community and recreational areas
- New areas for farming and aquaculture



Nature-Based Solutions and Zoning



Ecosystem Services and Environmental Benefits



1

Strengthened sustainable urban planning, regulation and enforcement

- Develop sub-catchment plan with nature-based solutions integrated
- Develop village urban plans with nature-based solutions integrated
- Strengthen regulation, monitoring and enforcement

2

Improved functioning of wetland ecosystem and infrastructure

- Prepare detailed feasibility and engineering designs
- Deliver ecosystem services restoration works
- Deliver infrastructure development works

3

Mobilized community groups for farming, business and preparedness

- Improve agriculture, fisheries and food sustainability
- Develop micro-enterprise and amenity services
- Improve community-level disaster preparedness

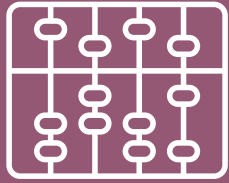
4

Enhanced capacity, awareness and evidence for localized resilience

- Strengthen government capacity and awareness of nature-based solutions
- Increase the evidence base for nature-based solutions for urban flood management

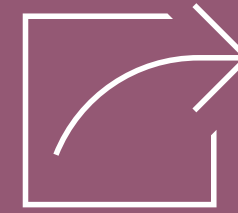
Project Outcomes and Outputs

NATURE-BASED SOLUTIONS FOR URBAN ADAPTATION



Anticipated Results

- 13 hectares of wetland restored
- 30,000 urban residents with increased community resilience
- 200 government officials with improved capacity for nature-based solutions
- 14 new community businesses launched and operated
- 10 knowledge products developed and disseminated



Regional Implications

- Many towns and cities across the Mekong subregion are urbanizing rapidly and prone to pluvial flood events
- Regional partnerships to facilitate dissemination (Monash), study tours and regional Mekong Knowledge Sharing Series
- Expansion of the evidence base for nature-based solutions in the Mekong
- Assess complementarity of natural and engineered solutions for flood management

Localized Project with Regional Implications

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