



# Project Urban Living Lab

Toolkit for  
Implementation of  
Nature-based Solutions



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MINISTRY OF FOREIGN AFFAIRS  
OF DENMARK



ROYAL DANISH EMBASSY  
New Delhi



Green  
Strategic  
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India-Denmark



TRANSITIONS  
RESEARCH





# What is PULL?

PULL is India's first urban living lab. It will create a collaborative space for incubating and co-creating solutions to complex urban challenges.

## PULL will:

- Work towards sustainable and liveable cities integrating global solutions in India
- Enable the smooth implementation of the Smart Cities Mission



Image Source: Moishsokal Gallery



# Key Functions



## Experimentation

iteratively designing, testing and fine-tuning socio-technical innovations



## Co-creation

of urban solutions with citizens taking into account user-needs and local contexts



## Learning

through multi-disciplinary approaches to knowledge creation and capacity development

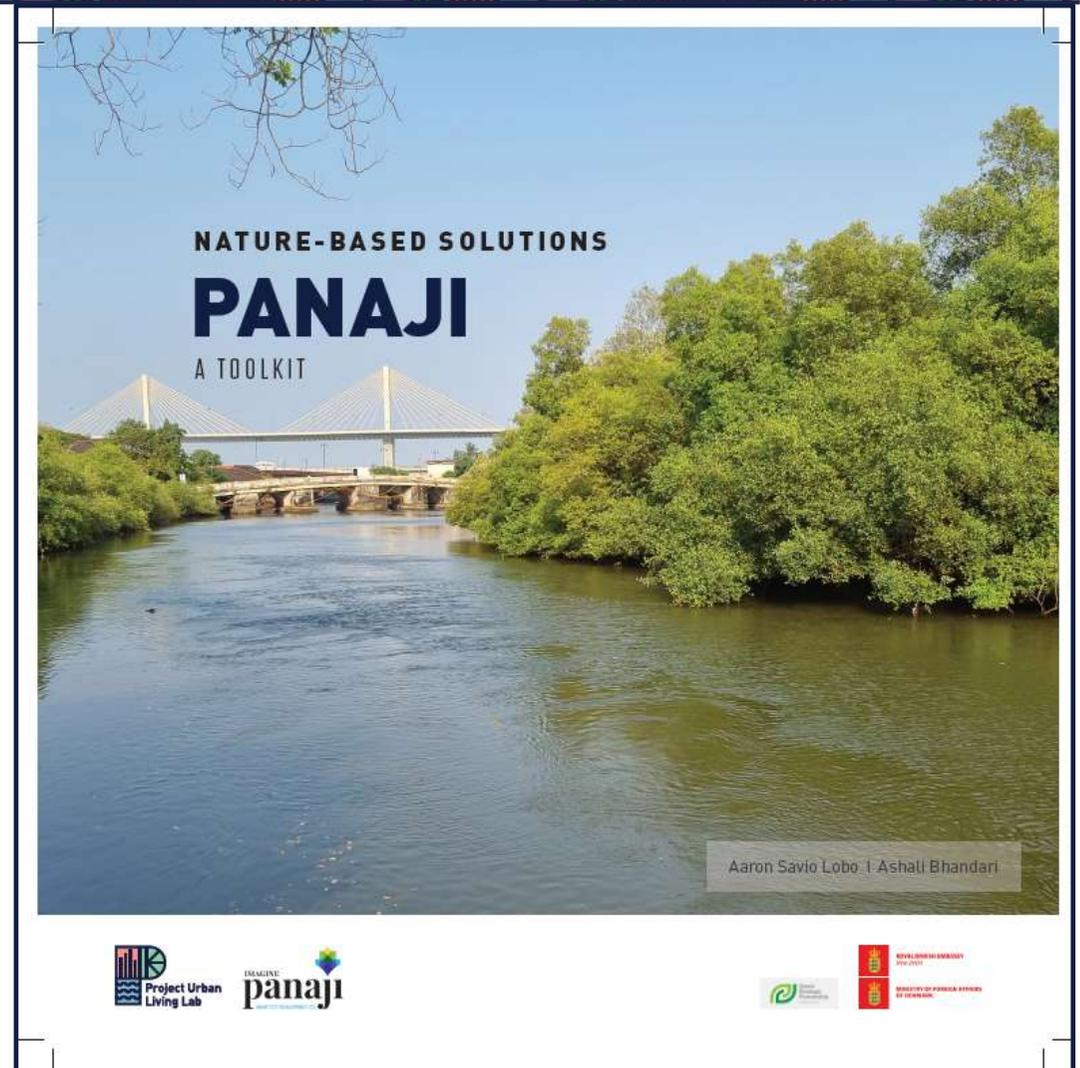


## Engagement

with multiple stakeholders including - citizens, governments, private-actors and knowledge institutions

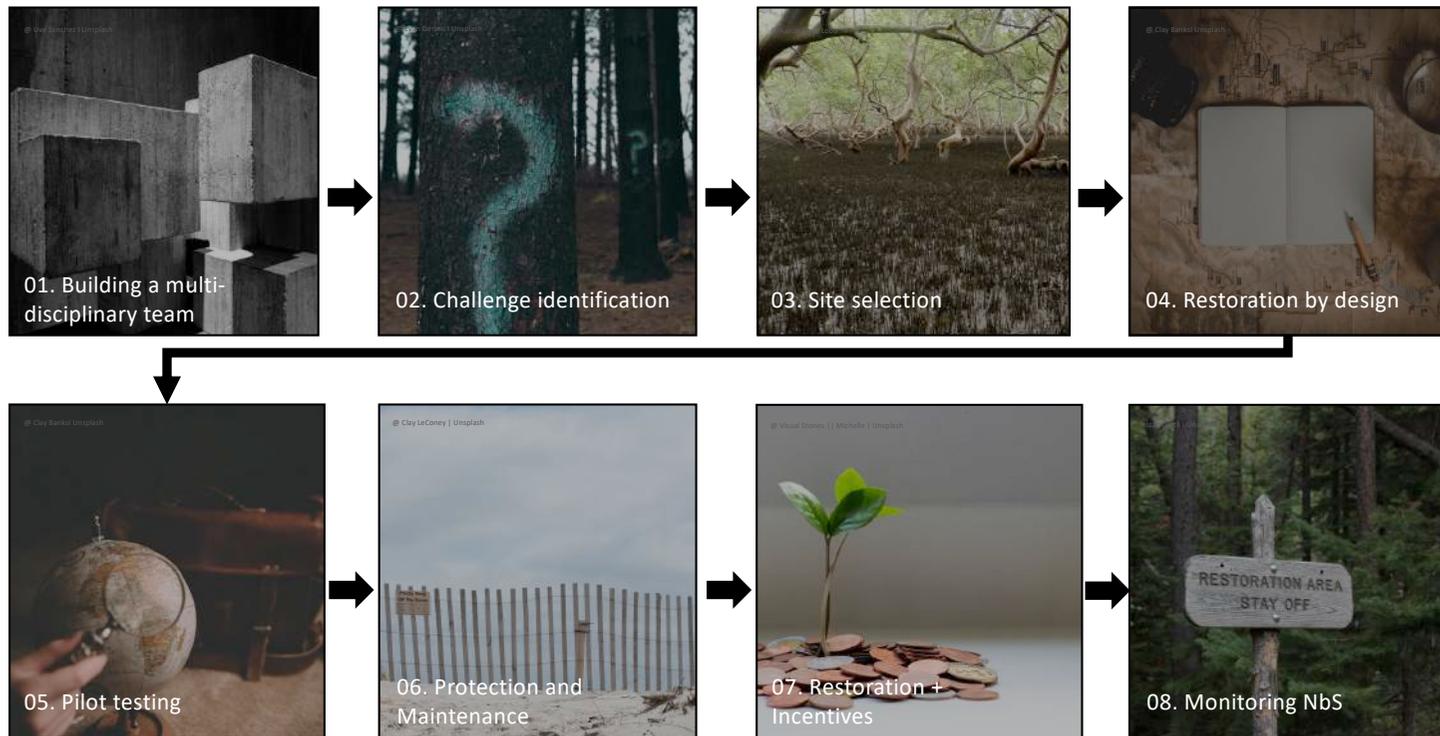
# Toolkit for Nature-based Solutions (NbS)

- Interdisciplinary approach to address climatic risks like flooding through urban ecology
- Contextualises global standards and implement NbS locally
- Multi-stakeholder process for implementation to ensure ecological and societal impact





# NbS Process





# 01. Building a multi-disciplinary team

The implementation of NbS requires domain and local expertise and thus requires a multi-disciplinary team consisting of:

- Urban planners
- Government decision makers from various departments (Forest, Environment departments)
- Ecologists
- Landscape architects
- Community representatives and/or civil society





## 02. Challenge Identification

NbS are an opportunity to address ecological and societal challenges.

- Community engagement must be carried out to identify climate risks in the local context.
- Ecological assets must be mapped out and assessed
- Long term projections (climate risks, development, demography) should inform implementation strategies for efficacy



## 03. Site Selection

Determining a site for the implementation of NbS requires collective decision making and an understanding of the following factors:

- Ecological systems are interlinked
- Tenure and land ownership
- Land-use, development control regulations
- Community history and issues





## 04. Ecological Restoration by Design

NbS must address the ecological and societal challenges identified in step 02 but must consider ecological principles such as:

- Species that are native and tolerant to site conditions
- Monocultures and plantations should be avoided as they compromise biodiversity and affect ecological functions





## 05. Pilot Testing

Pilot testing is essential before planning a large scale implementation effort of NbS

- Pilots can help determine if an intervention is likely to work before a full implementation
- Pilot testing can also help utilize resources effectively as implementation can be expensive





## 06. Protection and Maintenance

Long-term planning for the protection and maintenance of NbS after the completion of restoration includes:

- Marking sites with appropriate signage
- Community engagement and awareness about the project and ensuring degrading stresses are avoided in the future





## 07. Restoration and Incentives

To ensure that communities living near the NbS site benefit from and ensure the longevity of the restoration effort, incentives should be considered to build long-term support for NbS. Examples could include:

- Cash for work schemes
- Loan collaterals
- Restorative aquaculture activities
- Blue carbon activities





## 08. Monitoring NbS

A robust monitoring framework must be developed to include social and ecological indicators to monitor the site beyond implementation of NbS:

- Targets and timelines should be defined
- Restoration and incentives must be included
- Interventions in case targets are not being met should be defined
- Communication strategies between team members and communities should be created.





**Thank You**