INTERLACE
RESTORING URBAN ECOSYSTEMS
RECUPERANDO ECOSISTEMAS URBANOS

INSTITUTO HUMBOLDT COLOMBIA

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The INTERLACE NBS Assessment Framework

Monitoring Nature Based Solutions
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interlace-project.eu

Tracking strengths and weaknesses of Nature-based Solutions

- Since the term was included in international agendas in 2015 (EU) and 2016 (IUCN) a large number of SBNs have been implemented.

- Source: Figueroa & Ruiz, 2020

Protected areas

Urban forest

Parks and gardens

Green infrastructure

De-sealed areas

Vegetation engineering systems for erosion control

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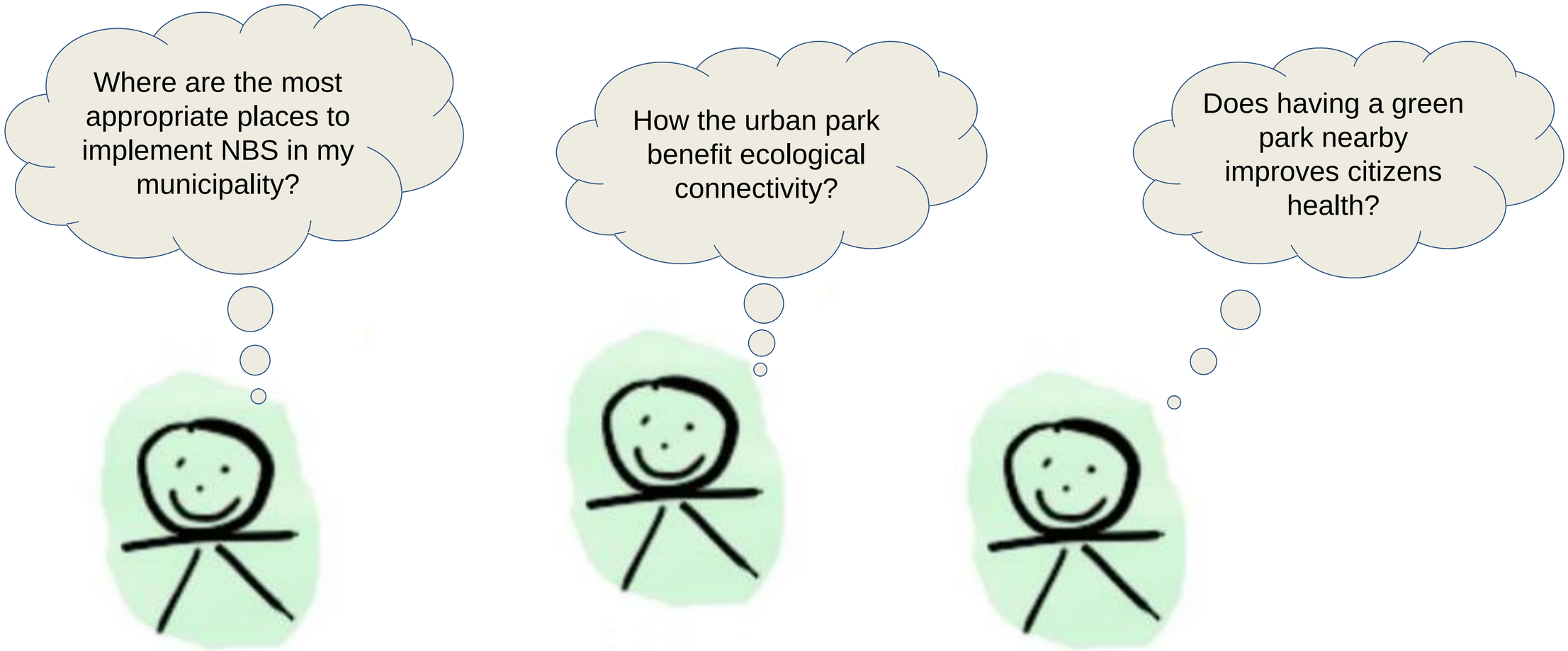
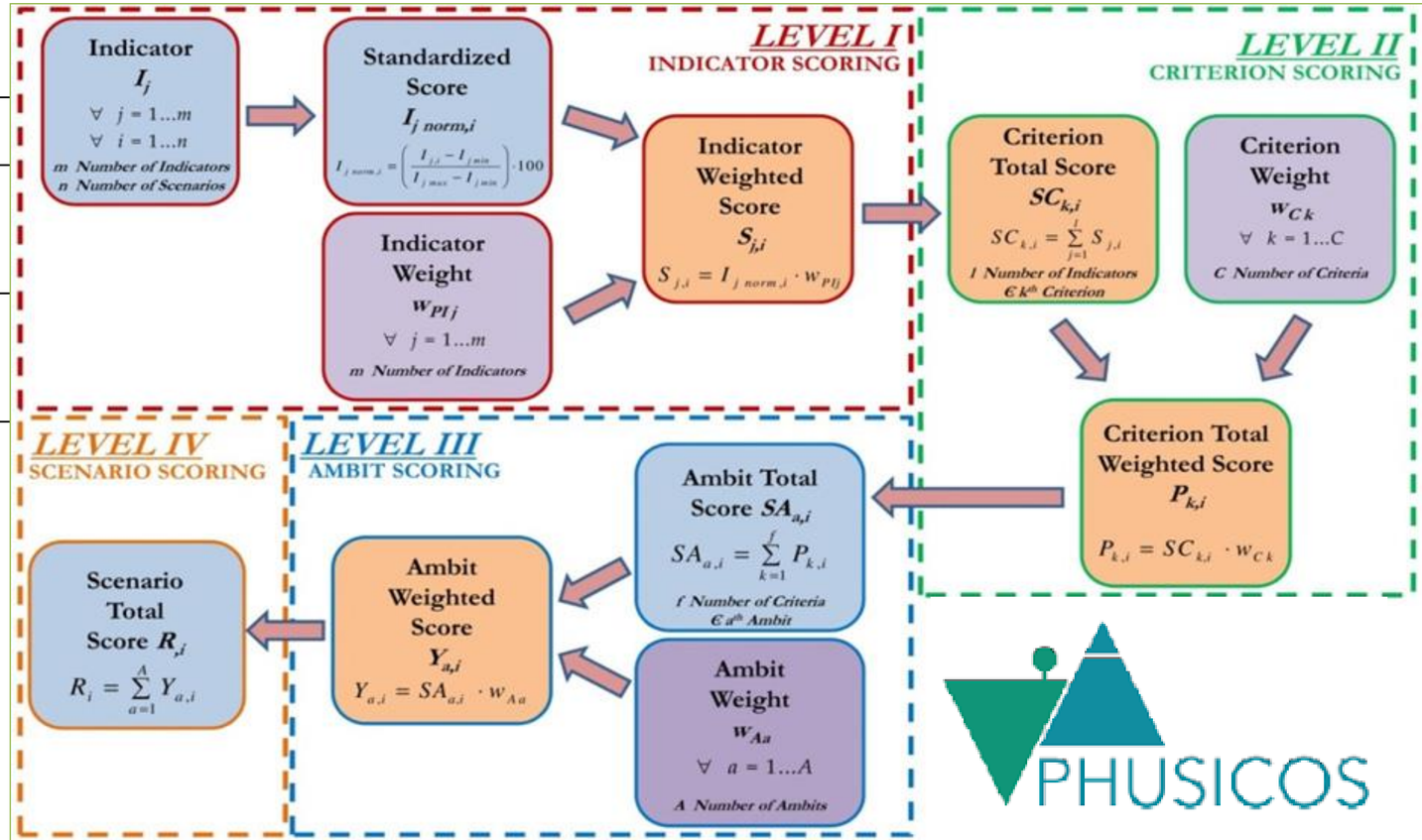
What if we had proper information to make better decisions?



What decisions would we make or what actions would we take differently on the basis of that information?

Background

H2020 project	Assessment framework
Connecting Nature	Reflexive Monitoring and Impact Assessment
CLEVER Cities	CLEVER Monitoring and Evaluation Framework
Nature4Cities	Assess an NBS project
PHUSICOS	Comprehensive Framework for NBS Assessment
ThinkNature	A Framework for Assessing Benefits of Implemented NBS



The INTERLACE NBS Assessment Framework

- A framework for participatory assessment and evaluation of nature-based Solutions. It can be applied ***ex ante,*** to formulate and design participatory solutions specific to the context and challenges of each city, or ***ex post*** to **monitor and evaluate** their impact, generating a learning process based on experience.

- It proposes a step-wise, modular and hierarchical evaluation framework with flexibility to adapt to the specific needs of the design and evaluation of restorative NBS.

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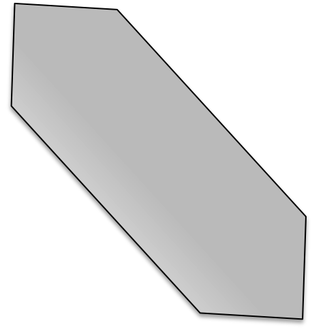
Assessment Framework

Guiding Principles

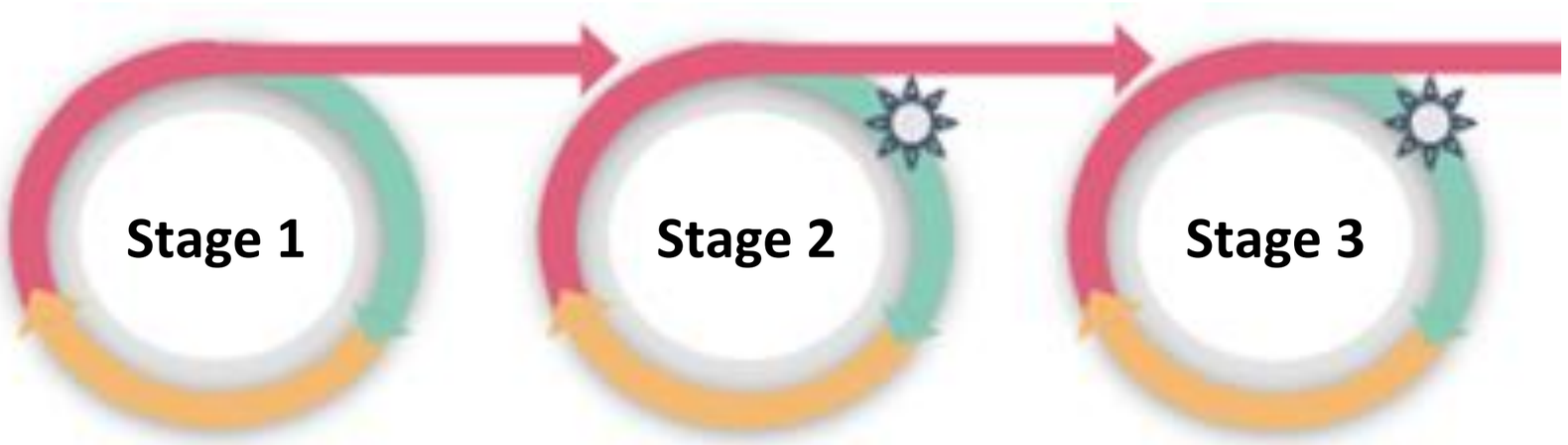
- Adaptability and transformative change
- Transparency and plural values
- Justice and social inclusivity

Scientifically robust

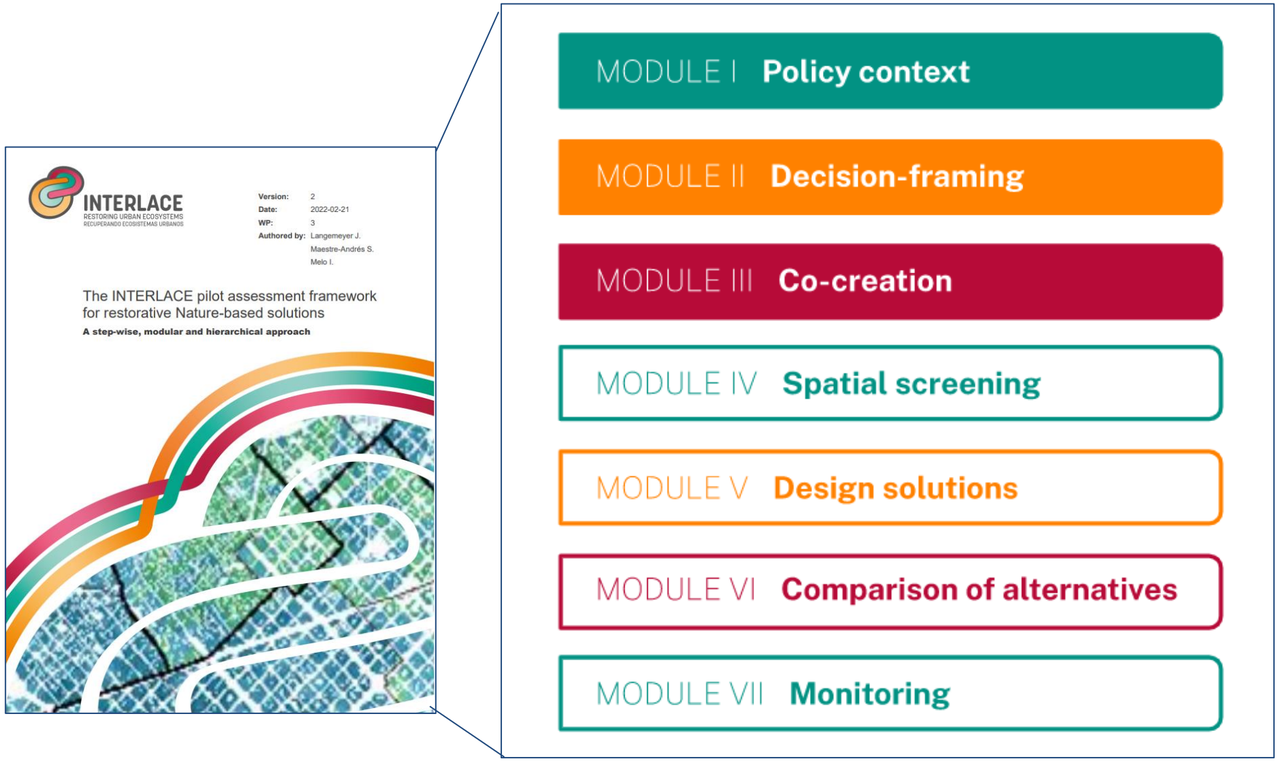


Co-creation

AGILE approach



The process in a nutshell



Revision of assessment tools

Pilot assessment framework

6 cities co-create tailored assessment systems

General assessment framework

Feedback form learning processes at different stages

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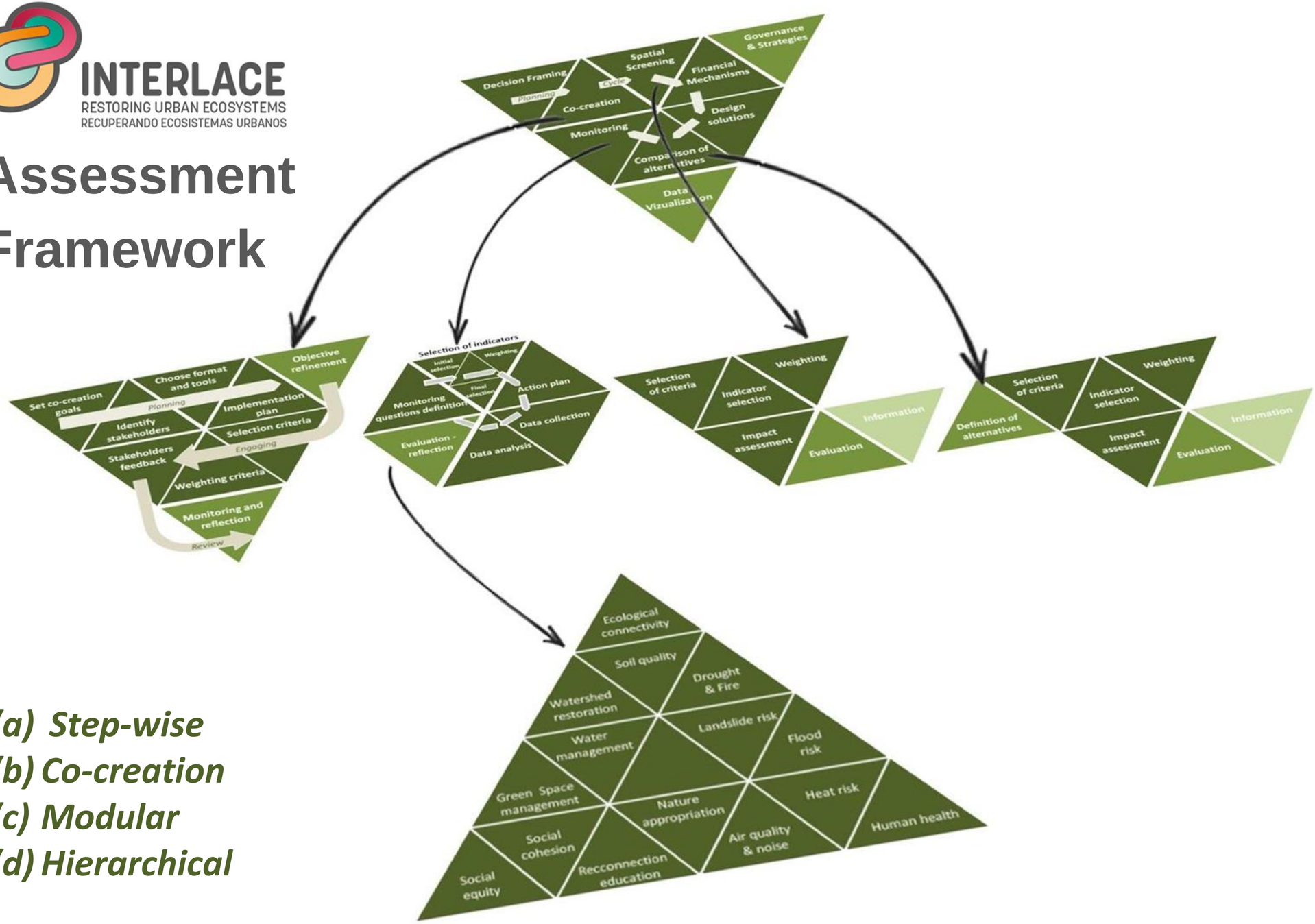
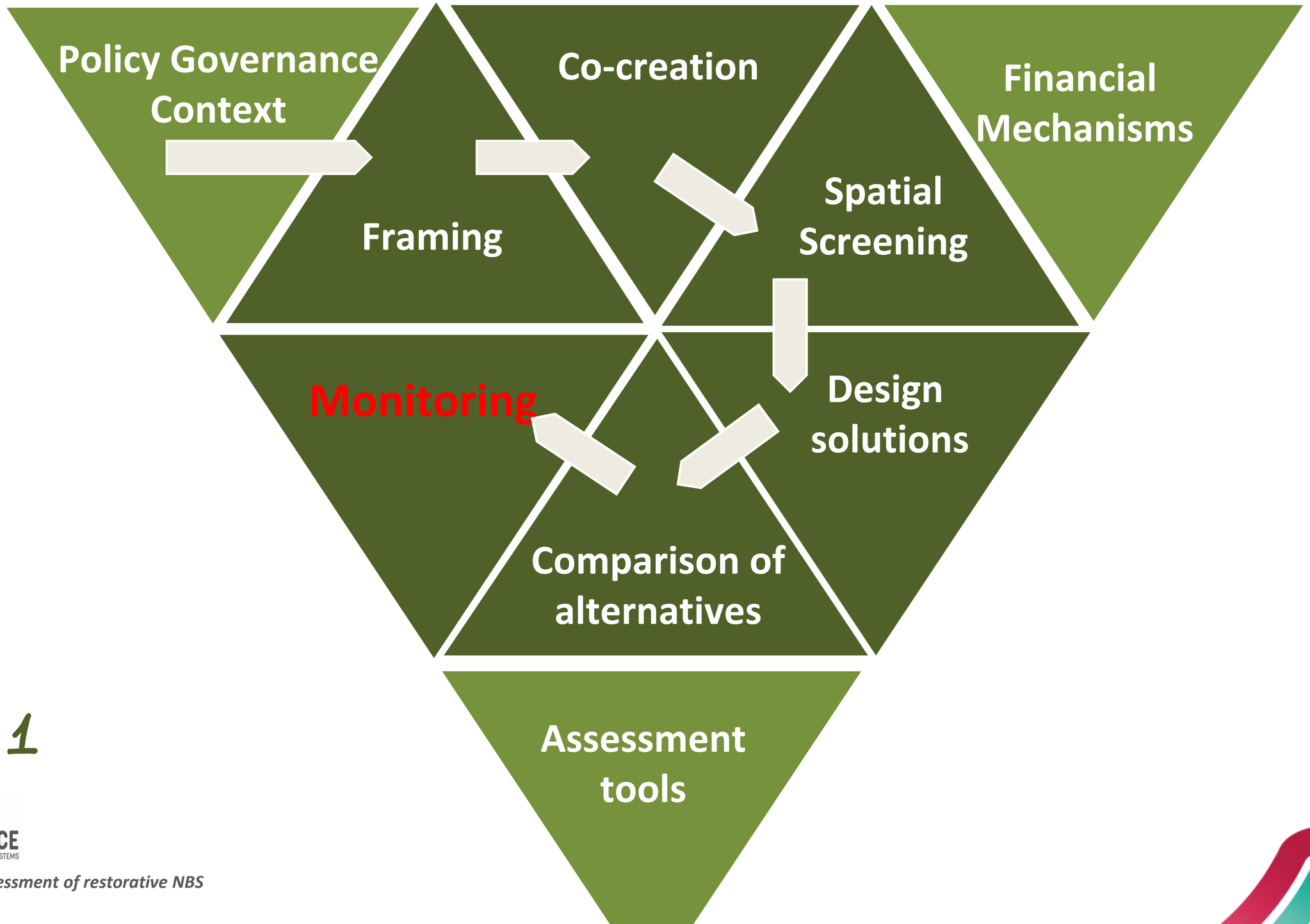
Assessment Framework



(a) Step-wise
(b) Co-creation
(c) Modular
(d) Hierarchical



Tier 1

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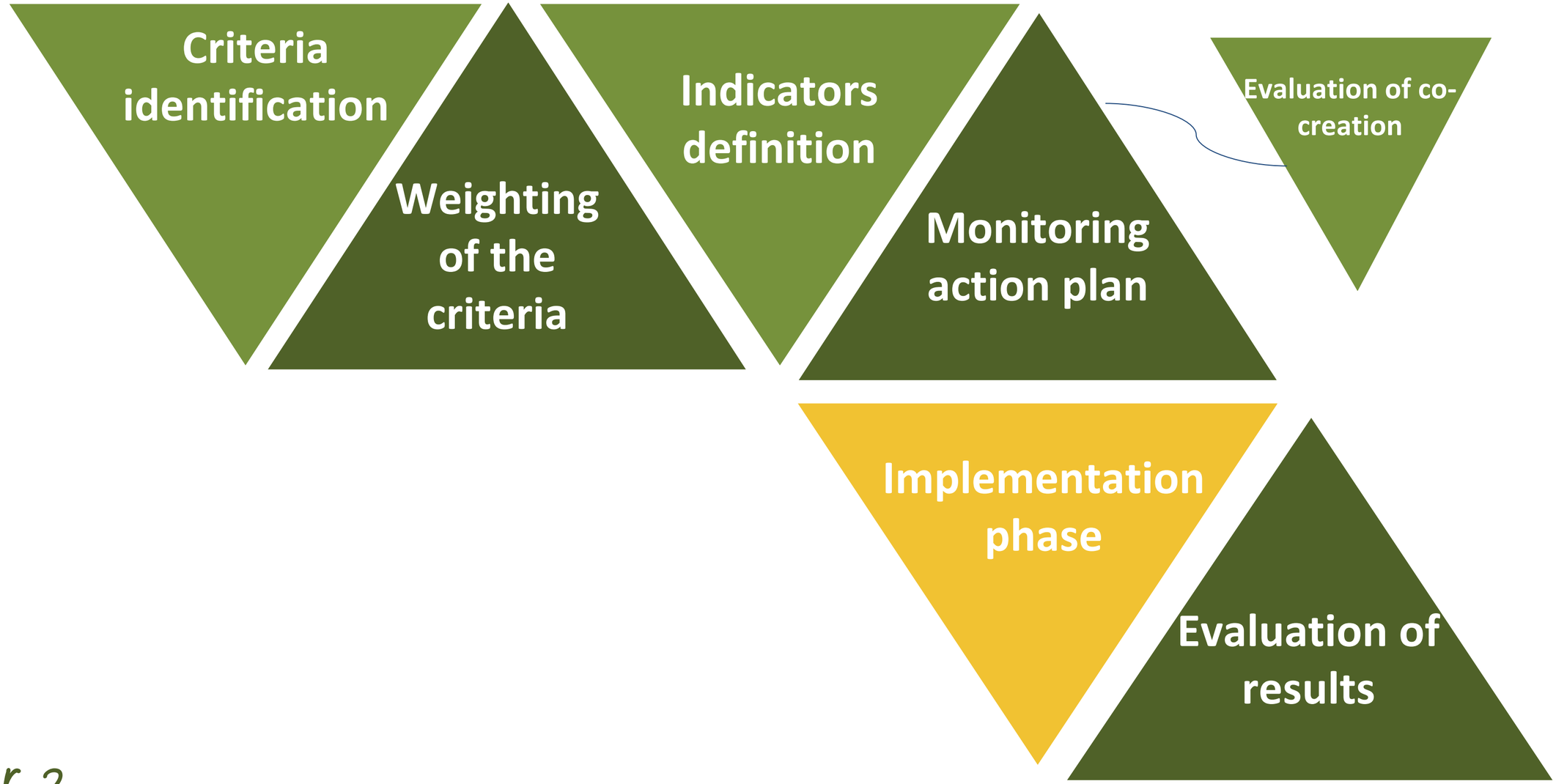
Tools for the assessment of restorative NBS



Tier 2

Monitoring Module

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Criteria identification

Break down the SBN into the actions and the challenges that each action will address.

Identification of the criteria for nature-based solutions

Nature based solution name:

Table 5. List of actions, criterion addressed and goals for each nature-based solution

Action	Criterion addressed	Goal

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Criteria identification

Break down the SBN into the actions and the challenges that each action will address.

Identification of the criteria for nature-based solutions

Nature based solution name: URBAN PARK

Table 5. List of actions, criterion addressed and goals for each nature-based solution

Action	Criterion addressed	Goal
TREE PLANTING	TEMPERATURE DECREASING	
TREE PLANTING	GREEN CONNECTIVITY	
TREE PLANTING	RECONNECTION TO BIOSPHERE	
LAUNCHING EDUCATION CAMPAIGN	HEALTH IMPROVEMENT	
COMMUNITY GARDIN IMPLEMENTATION	INCREASE OF POLLINATOR NETWORKS	
COMMUNITY GARDIN IMPLEMENTATION	APPROPRIATION OF THE TERRITORY	

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Weighting of the criteria

- Weights reflect relative importance to each criterion, and then a prioritization takes place

- At the end of the workshop a list with a set of prioritized criteria to evaluate the NBS is obtained.

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Indicators definition

Indicators are observable and measurable characteristics that can be used to track change or progress towards achieving a specific outcome..

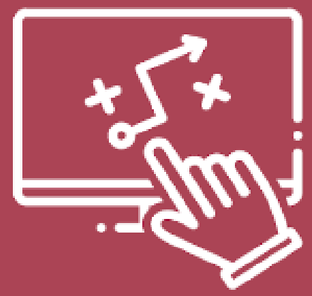
- Is the indicator relevant for measuring the action effectiveness?
- Is the indicator measurable in terms of data availability?
- Are there resources (financial, technical, and personnel) to measure the indicator over time?
- Is the indicator compatible with the project timing? That is, if there is enough time for the system to reflect the change that wants to be measured?

How / How much | **the action** | **improves / decreases** | **the criterion** | **through the** | **increase / decrease** | **in the** | **indicator ?**

How **planting trees** improves **green connectivity** through the increase in **species x richness**?

Monitoring action plan

Evaluation of co-creation

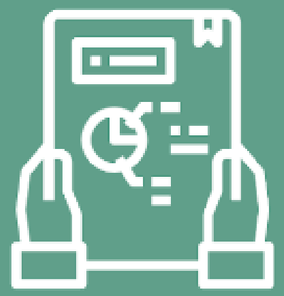


Planning

The action plan should include the number of samples to be taken, the data collection and data analysis methods, taking into account financial factors, the committed people to collect and analyse data, among others. This step should also include protocols for data collection. We suggest elaborating one factsheet per indicator.

Data collection

Ideally, data will be collected according to the plan set out in the previous step, bearing in mind that the need for changes to improve monitoring without compromising comparability must be weighed against the need for changes.



Data analyses

After each monitoring event, the data should be analysed according to the action plan, the raw data as well as the results of the analysis should be stored in pre-established formats. The results obtained from the analysis of each monitoring event will serve to get an idea of the response of the system to the intervention (or NBS).

Implementation phase

- During the NBS implementation, data collection to measure indicators is performed according to planned (specific frequency), and data are analysed in order to understand the impact the NBS is having on the different aspects (criteria) of the system.

  - T0 , T1, T2….

Evaluation of results

- After completing one monitoring cycle, a general evaluation of results is performed to reflect on the indicators performance and make any necessary change.

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Assessment Framework - Closing remarks

- By incorporating the voice of key stakeholders we hope to monitor aspects relevant to both implementers and users or potential users.

- By reflecting on the co-creation process we allow to learn from errors and incorporate changes in the planning stage of the monitoring plan.

- Ultimately, by monitoring a NBS we can know whether or not the it is effective and we can also make decisions and changes after evaluating its impacts.

- In addition, by providing information about the results of evaluations we can contribute to the NBS worldwide community to understand what works under which contexts.

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