



Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology





Introduction

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OUTLOOK

- introduction round
- TransLearnN project
- the course
 - purpose
 - content & formats
 - agenda
- later: software & groups

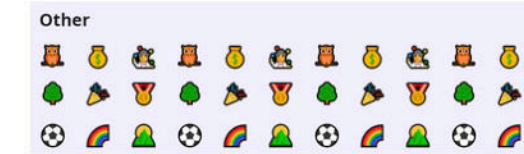


WHO IS IN THE ROOM?

miro link



WHAT MOTIVATED YOU TO JOIN THE COURSE?





TRANSFORMATIONAL LEARNING NETWORK FOR RESILIENCE

Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine



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the European Union**

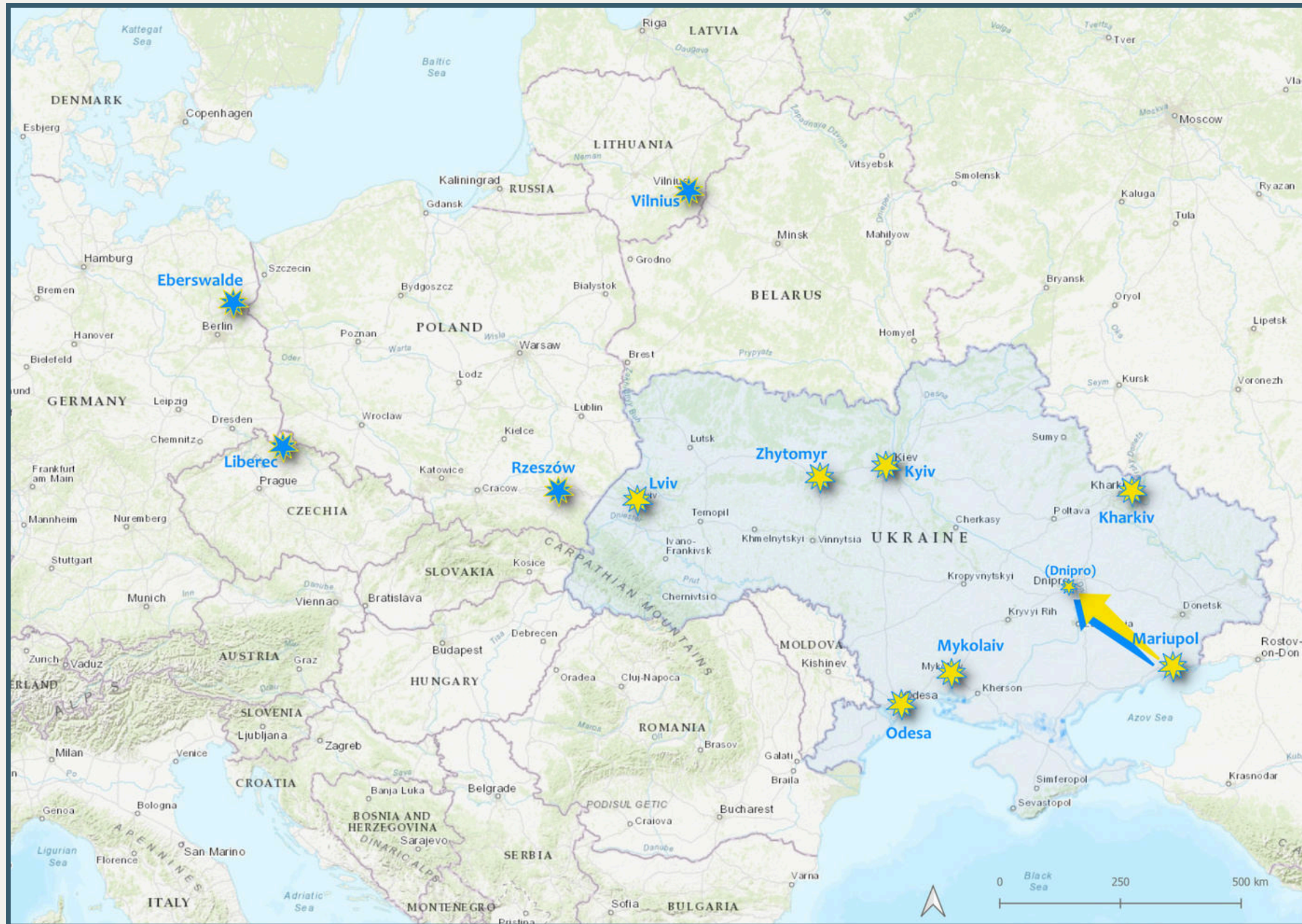




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the European Union

Enabling Ukrainian higher education to ensure a sustainable and robust **reconstruction** of (post-war) Ukraine

- to strengthen the social and political **leadership role** of Ukrainian universities
- to support a sustainable **transformation** of Ukraine
- to create an inter- and transdisciplinary educational **network**
- to develop and test innovative approaches to sustainability in **teaching and applied research**
- to support Ukrainian universities on their way to sustainable **university management**
- to **empower students** to act as change agents for sustainable and risk-aware development



Consortium

- Eberswalde University for Sustainable Development
- Rzeszow University of Technology
- Technical University of Liberec
- Vilnius Gediminas Technical University
- Ukrainian National Forestry University
- National Transport University
- Zhytomyr Polytechnic State University
- Kharkiv National Automobile and Highway University
- Admiral Makarov National University of Shipbuilding
- Odessa State Environmental University
- Pryazovskyi State Technical University
- +14 associated partners

Work Package 2 Diagnostics

Desk research & workshops on:

1. Teaching and learning sustainability and sustainability management of Ukrainian partners
2. Needs and requests of the sectors
3. Sustainability management of the EU Partners
4. Teaching and learning sustainability by EU partners

Work Package 3 Trans-Learning Network

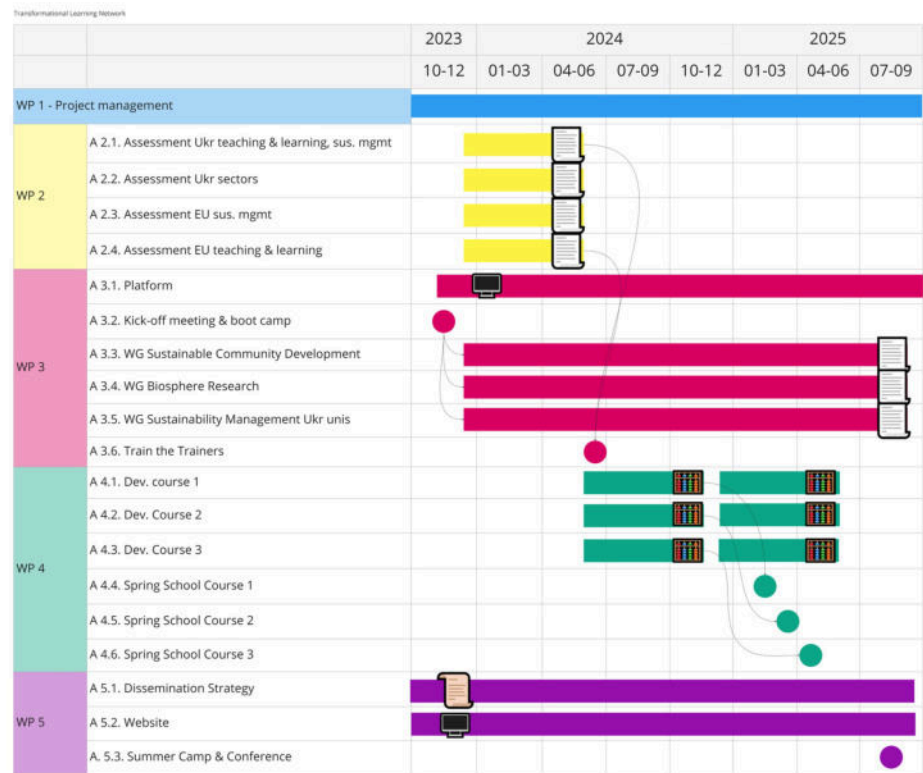
1. Online Platform
2. Kick-off meeting & boot camp
3. Working groups on
 - a. Sustainable Community Development
 - b. Sustainable University Management
 - c. Biosphere Research Network
4. Train the Trainers seminar

Work Package 4 Course Development

1. Development of course 1
2. Development of course 2
3. Development of course 3
4. Spring school of course 1
5. Spring course of course 2
6. Spring course of course 3

Work Package 5 Dissemination

1. Dissemination strategy and continuous communication and dissemination
2. Website
3. Summer Camp & Conference



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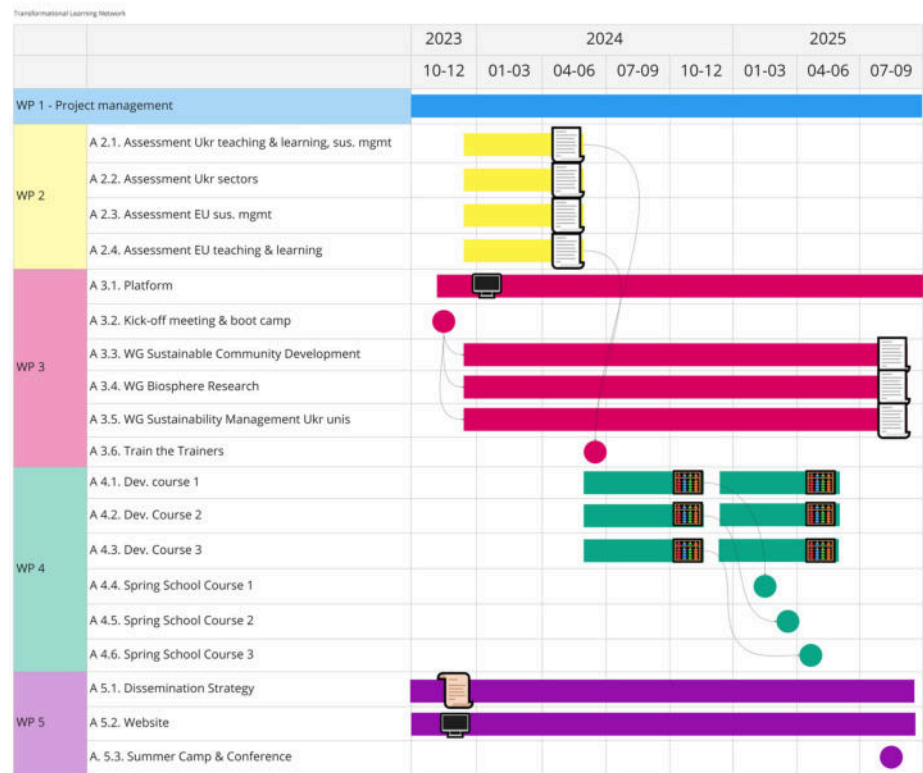
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Courses

Strategic adaptive mgmt for sustainable reconstruction and restoration

Sustainable business models

Sustainable pathways and risk mgmt in times of crises

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<https://translearnn.ztu.edu.ua>



<https://ukraine-oss.com/translearnn-platform/>



Introduction

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PURPOSE

of the Spring School

- test the newly developed course
- improve the course
- train the teachers
- train students



AIM

of the Course

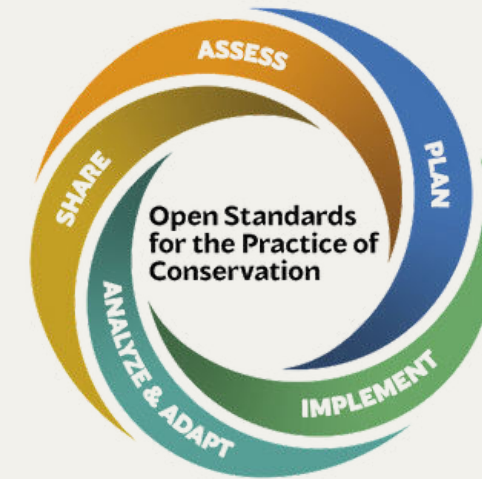
Students

- get introduced to principles and practices for adaptive management
- learn to assess and deal with uncertainty in complex and dynamic systems
- learn the basics of the project development logic
- develop skills for a sustainable reconstruction of Ukraine



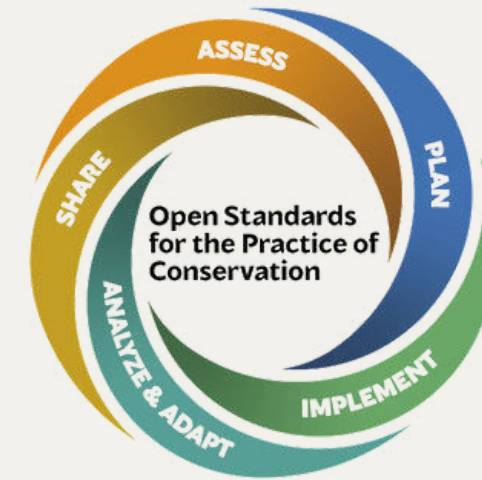
HOW?

- Conservation Standards methodology



HOW?

- Conservation Standards methodology
- group work



HOW?

Your common and
specific knowledge &
experiences

HOW?

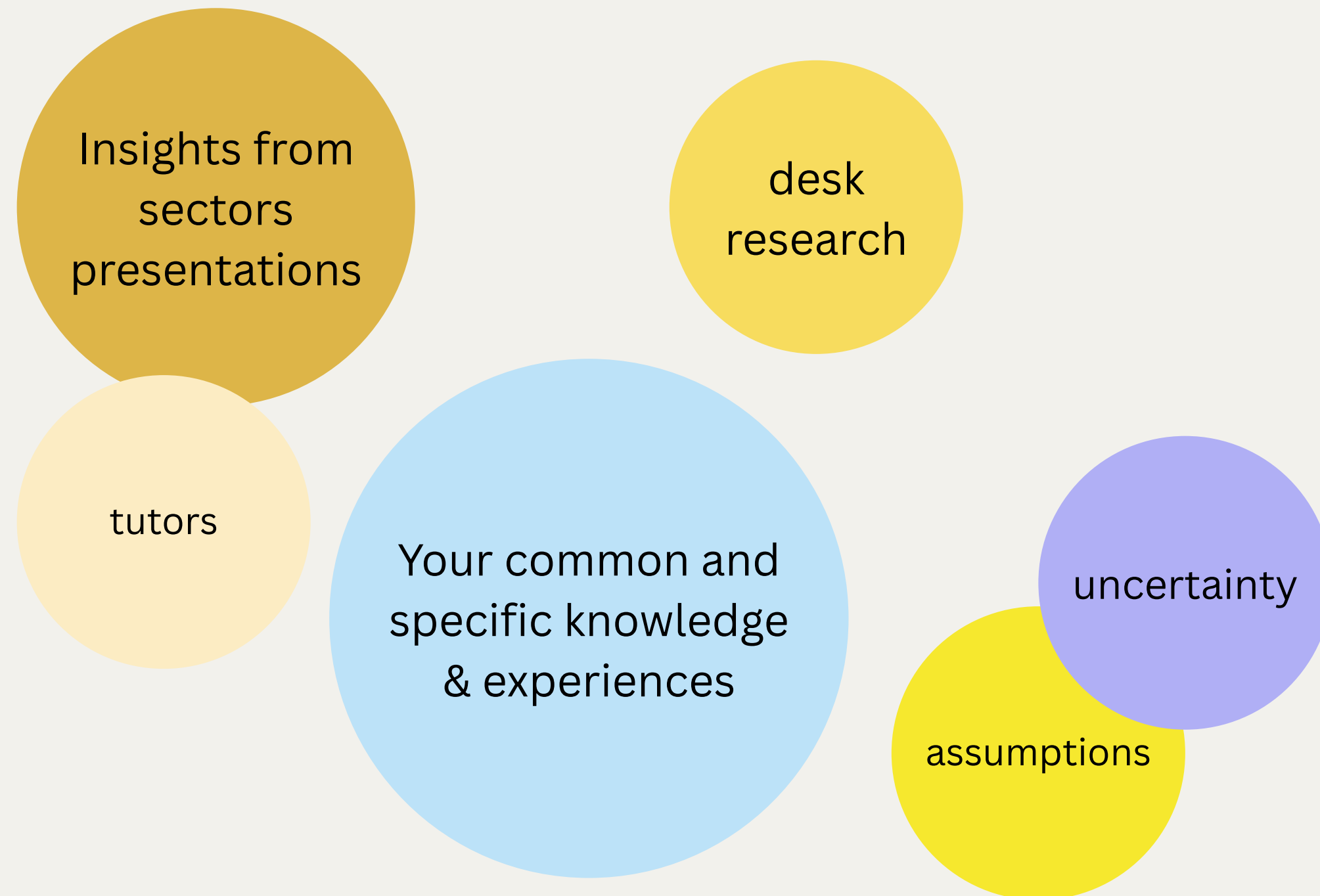


Insights from
sectors
presentations

desk
research

Your common and
specific knowledge
& experiences

HOW?



HOW?



TASK

1. Analysis of current situation

HOW?



TASK

1. Analysis of current situation
2. Development of ideas for reconstruction

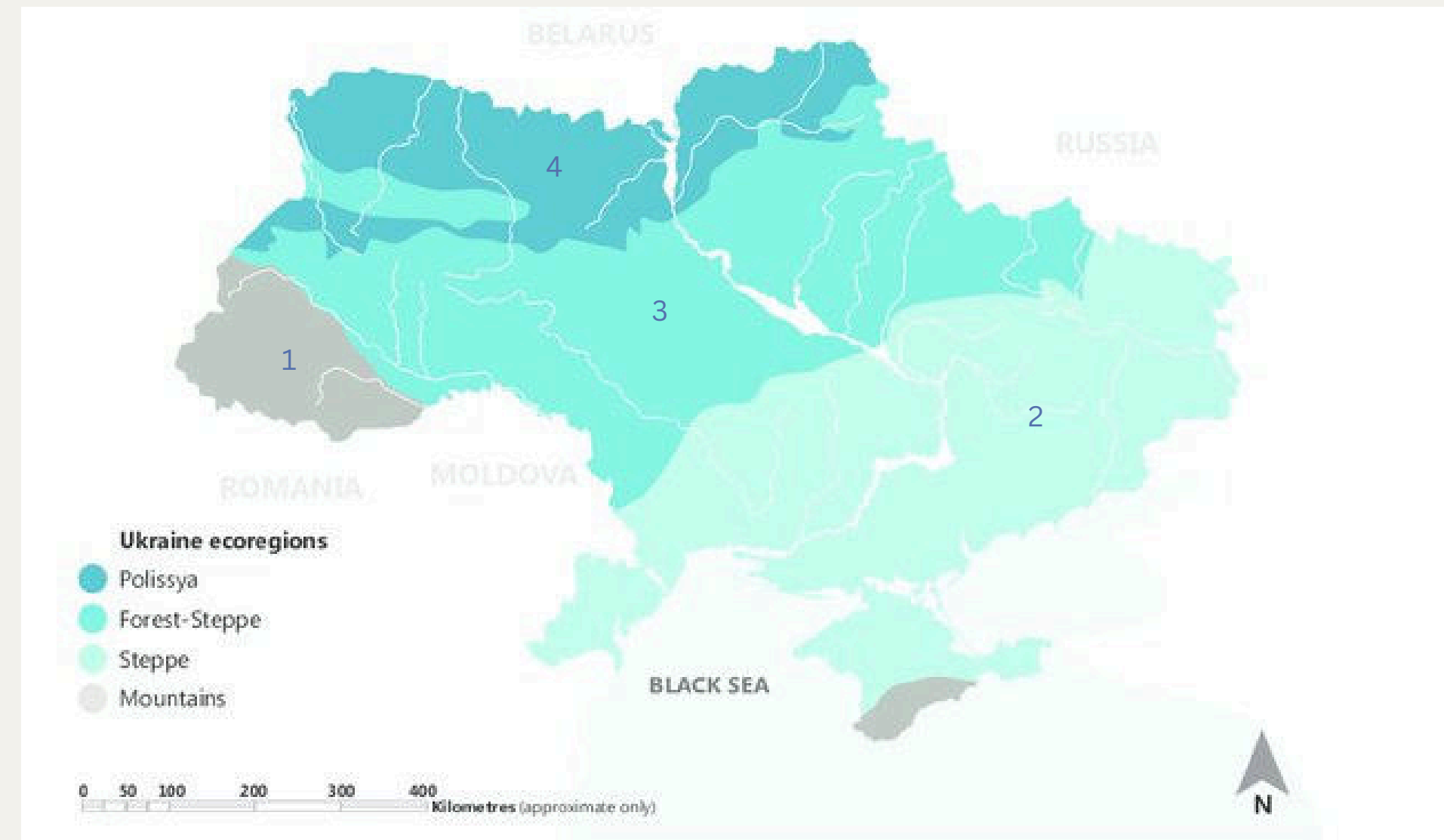


HOW?

TASK



1. Analysis of current situation
2. Development of ideas for reconstruction



HOW?

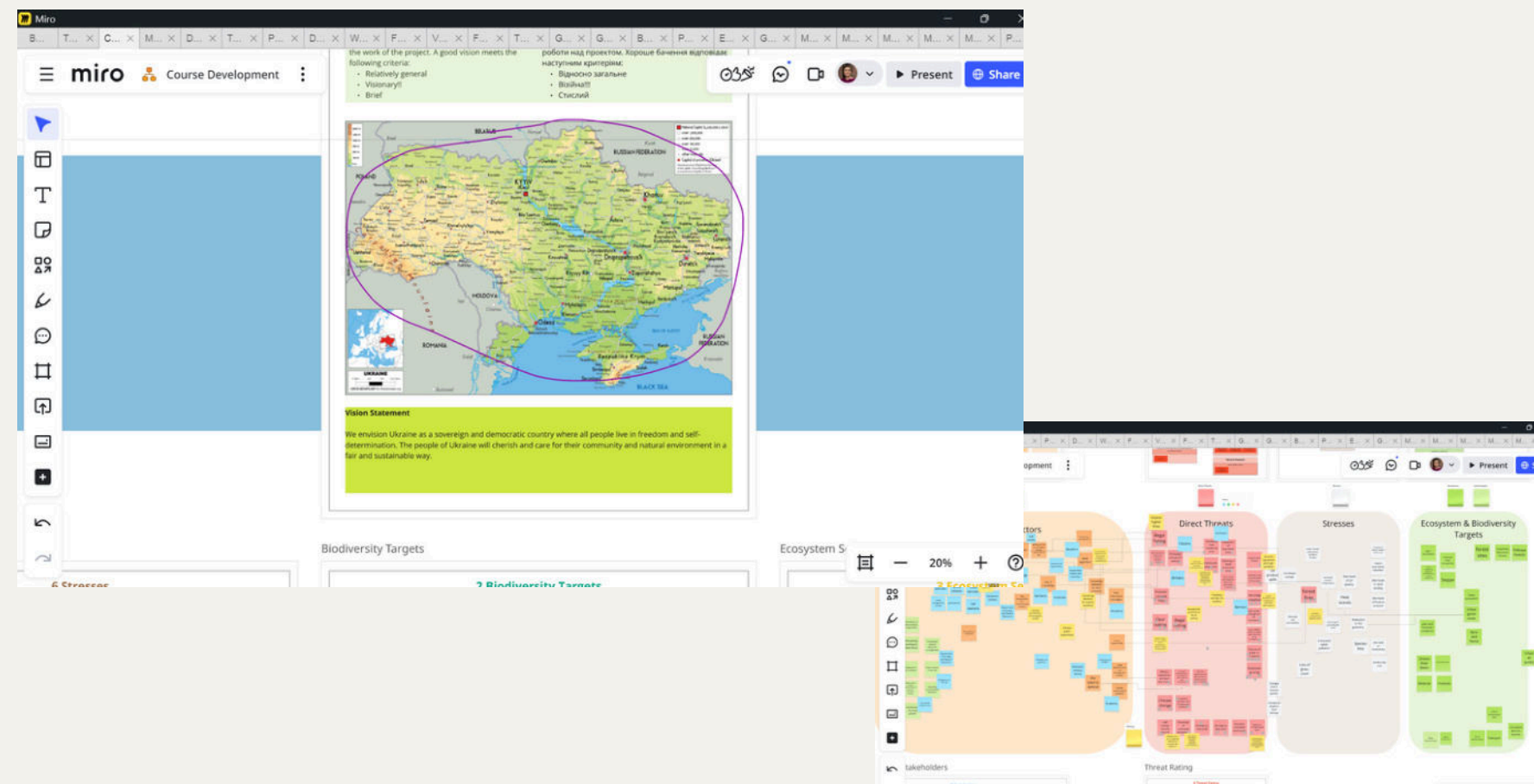


TASK

Miro Board

1. Analysis of current situation

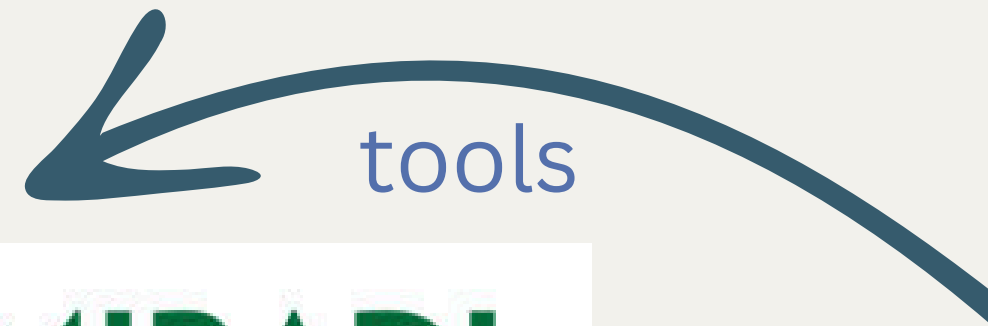
2. Development of ideas for reconstruction



HOW?

Miro Board

MiradiShare



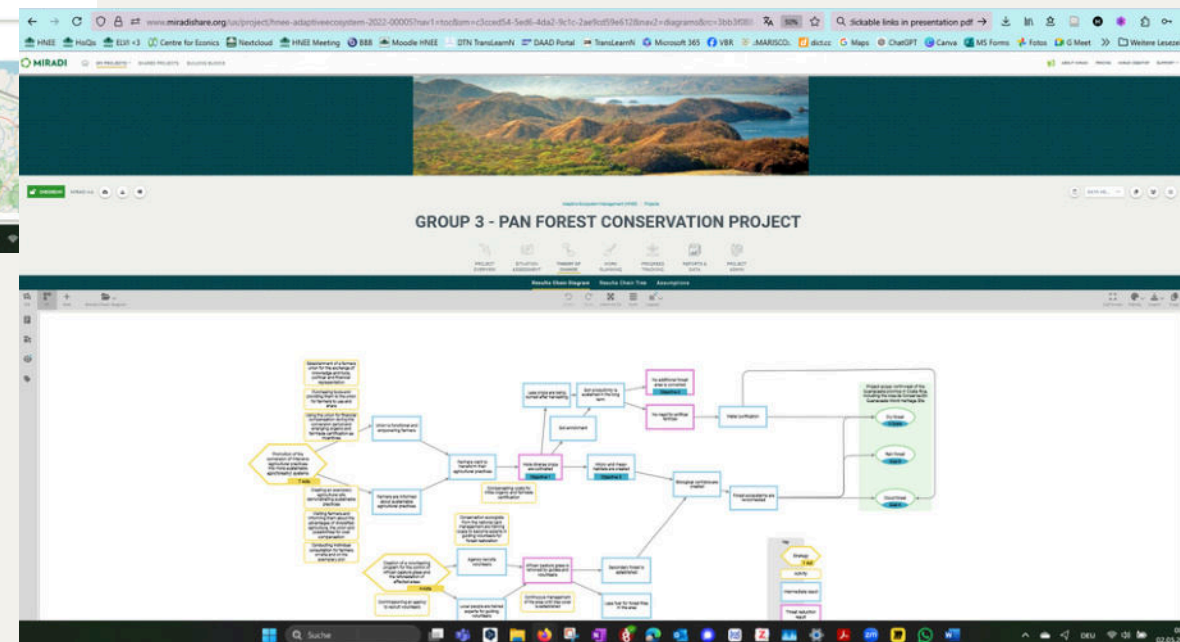
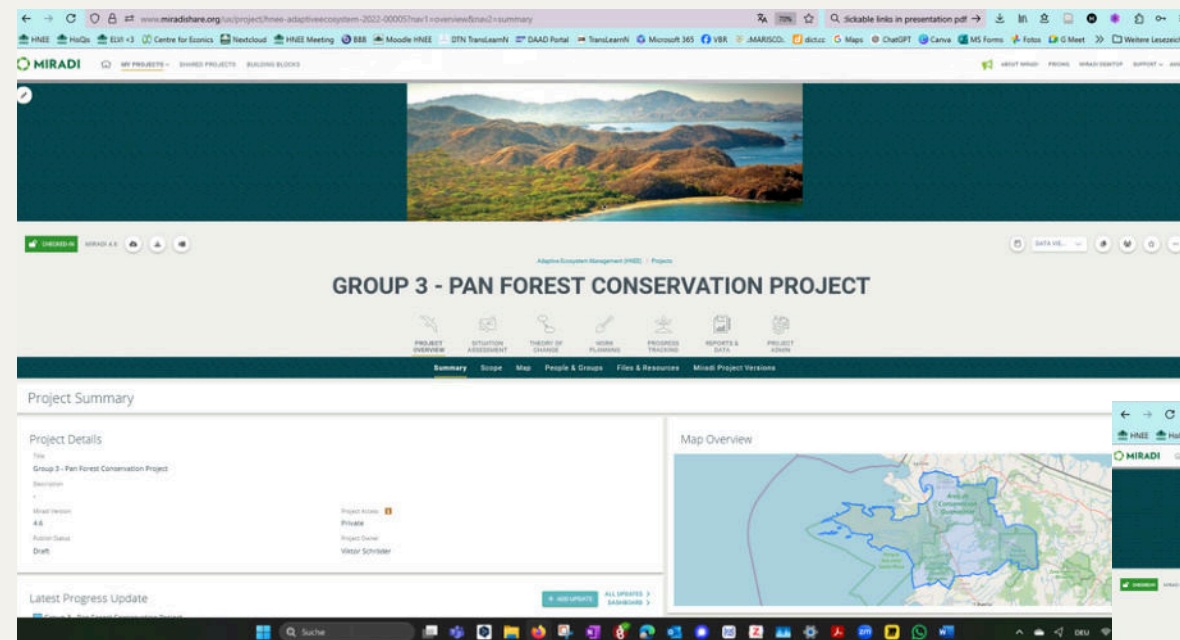
tools



TASK

1. Analysis of current situation

2. Development of ideas for reconstruction



HOW?

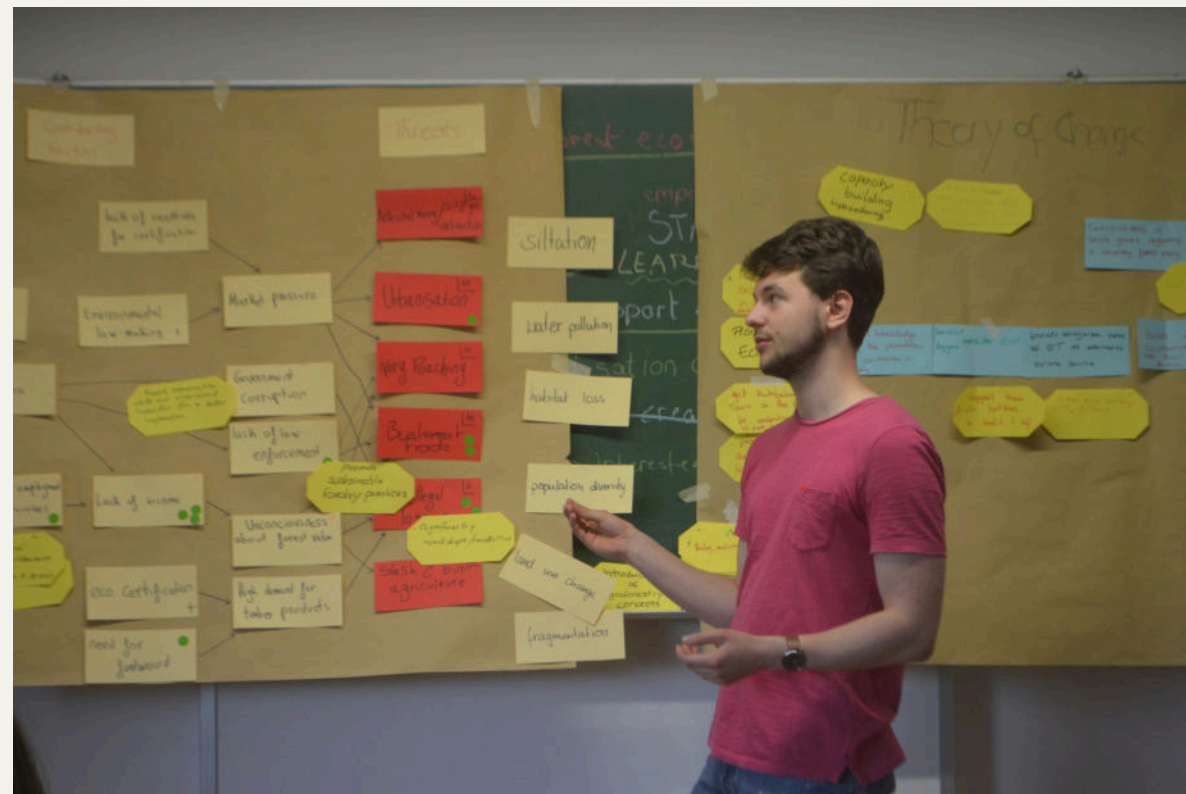
Miro Board
MiradiShare



TASK

on paper/ at the wall/table

1. Analysis of current situation
2. Development of ideas for reconstruction



HOW?

Miro Board

MiradiShare

on paper/ at the wall/table

+ Course Materials in DTN moodle



TASK

1. Analysis of current situation

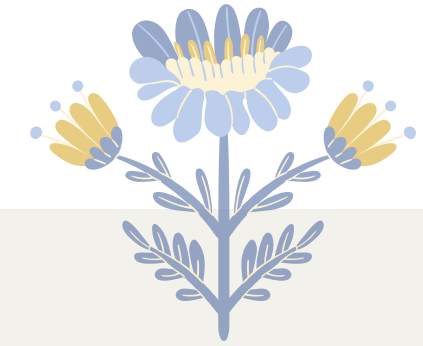
2. Development of ideas for reconstruction

The screenshot shows a web browser displaying the Moodle page for the Ukrainian-German Digital Teaching Network. The page features the network's logo, a tagline 'LEARN — GROW — CONNECT', and a description of the platform as an inter-university platform for informal education. It lists various topics covered in the e-courses, such as natural resource management and digital tools. A QR code is provided for more information, and contact details are listed at the bottom.

AGENDA



week 1 - online	week 2 - in Vilnius
Fri 02.05.25 - Introductions	Mon 12.05.25 - Welcome, set up, transfer
Mon 05.05.25 - Biodiversity and Human Well-being Targets <i>Start group work</i>	Tue 13.05.25 - Strategies & Theories of Change
Tue 06.05.25 - Viability Assessment <i>Insights from Forestry & Agriculture sectors</i>	Wed 14.05.25 - Operational Planning
Wed 07.05.25 - Stresses & Threats <i>Insights from Energy & Water sectors</i>	Thu 15.05.25 - Excursion & Completion
Thu 08.05.25 - Contributing Factors & Stakeholders <i>Insights from Waste mgmt, Transport & Road sectors</i>	Fri 16.05.25 - Final Presentations



Enjoy!

This material was developed in the course of the joint Erasmus+ project
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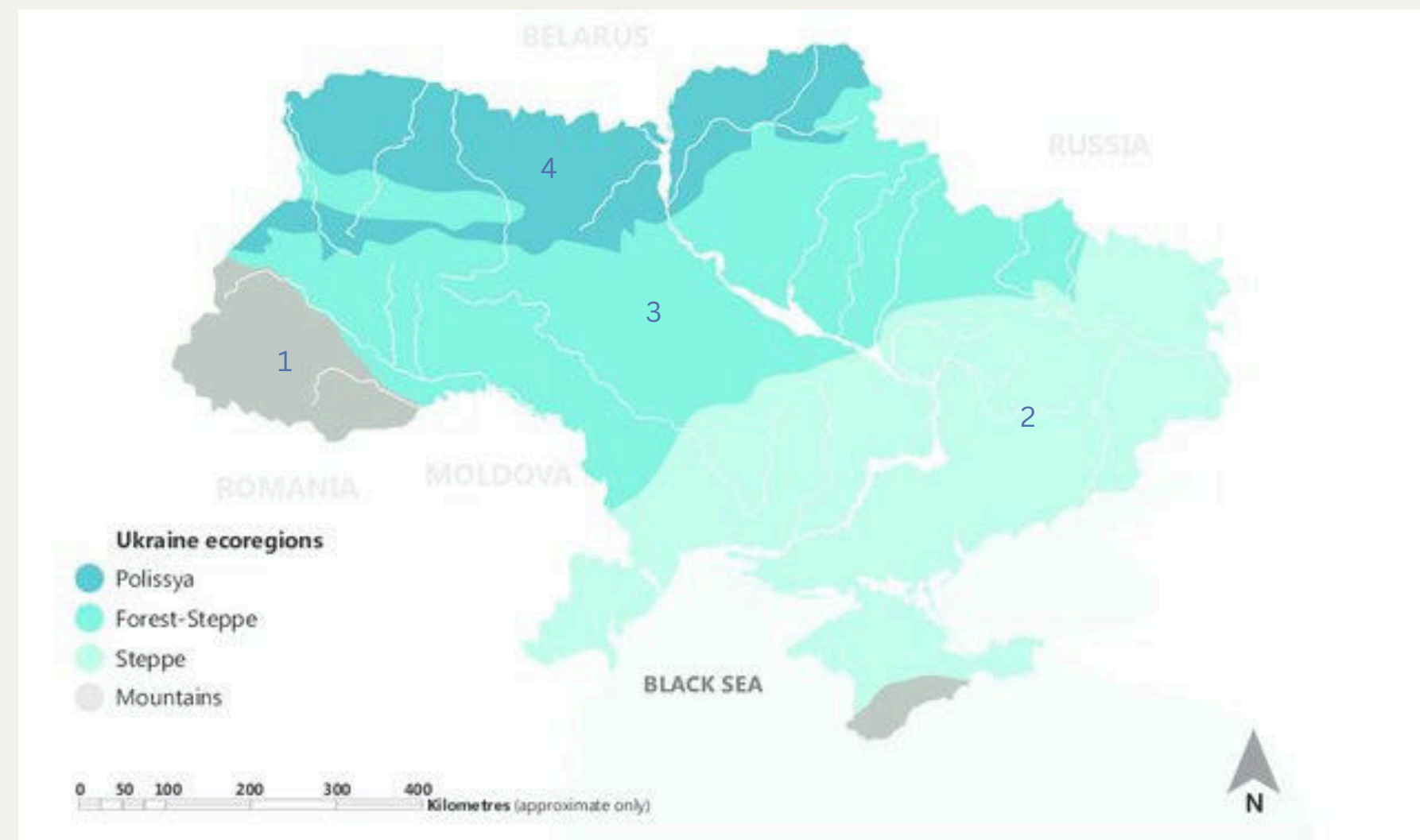


<https://translearnn.ztu.edu.ua>



GROUPS

1 Carpathians	Daryna Bezusenko Taisiia Petruk Jaroslav Kolyško Mariia Lototska Miglė Petruškevičiūtė	Iuliia Shvediuk
2 Steppe	Diana Hosteva Marharyta Ostrovska Sofiia Sashuk Antonina Verveiko Vaidotas Rabačius	Ganna Trokhymenko Veronika Prykhodko Mykhailo Vereskun
3 Forest Steppe	Elvira Nemchenko Anastasiia Moka Viktoriia Melnychenko Subham Shah Viktoriia Demianchuk	Maryna Barun Viktoriia Khrutba
4 Polissya	Albina Tkachenko Sofiia Piven Anastasiia Hloba Mariia Sorokina Kotryna Nagytė	Volodymyr Ustymenko



MIRADI SHARE



Registration

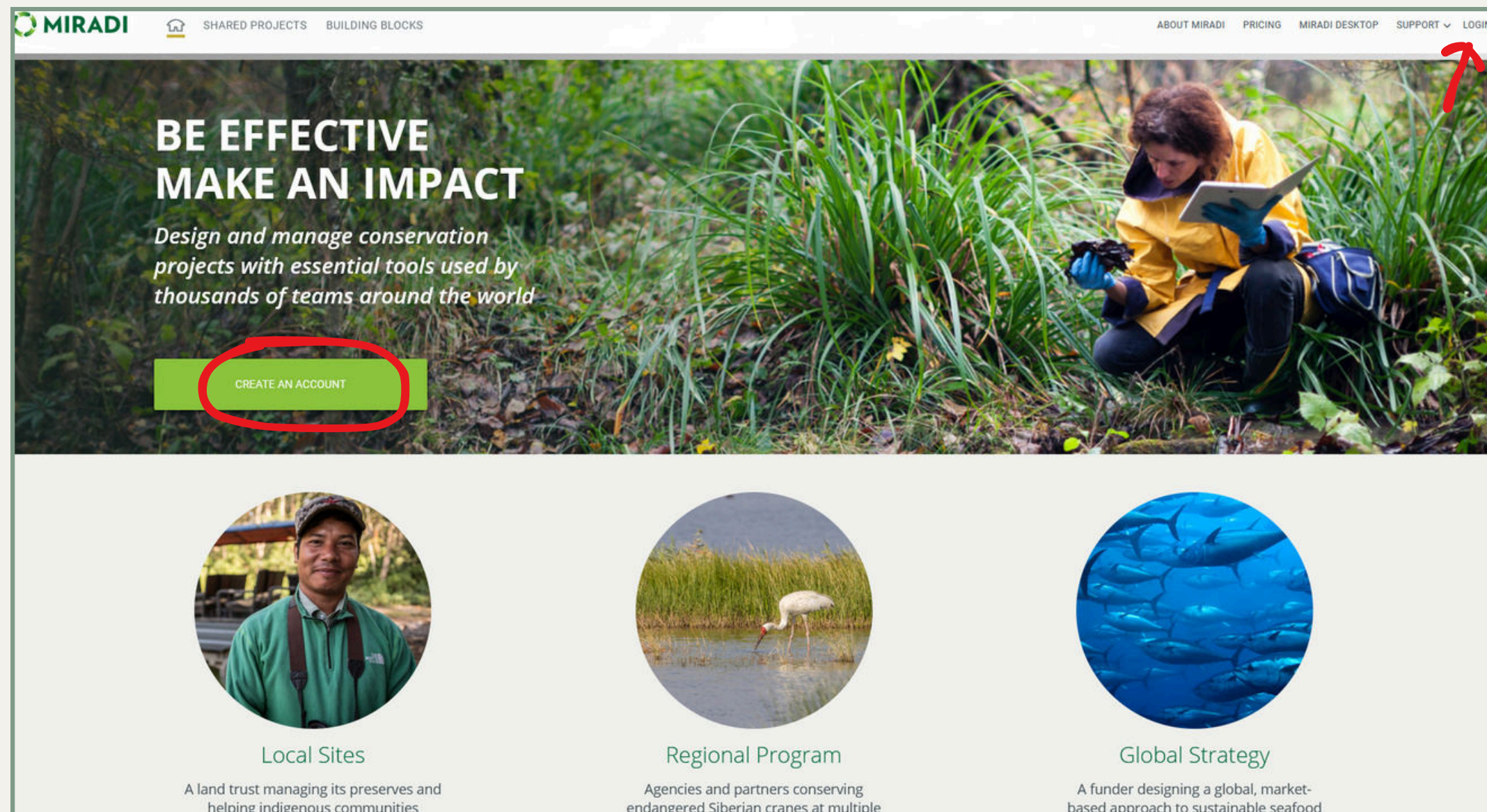
<https://www.miradishare.org>

MIRADI SHARE



Registration

<https://www.miradishare.org>



The screenshot shows the homepage of the MIRADI website. At the top left is the MIRADI logo, followed by navigation links for "SHARED PROJECTS" and "BUILDING BLOCKS". On the top right, there are links for "ABOUT MIRADI", "PRICING", "MIRADI DESKTOP", "SUPPORT", and "LOGIN". A red arrow points to the "LOGIN" link. The main banner features a photograph of a person in a yellow raincoat kneeling in a field, looking at a tablet. The text on the banner reads "BE EFFECTIVE MAKE AN IMPACT" and "Design and manage conservation projects with essential tools used by thousands of teams around the world". A green button with the text "CREATE AN ACCOUNT" is circled in red. Below the banner are three circular images with corresponding text: "Local Sites" (a man in a green shirt), "Regional Program" (a white crane in a wetland), and "Global Strategy" (a school of fish underwater).

MIRADI [SHARED PROJECTS](#) [BUILDING BLOCKS](#) [ABOUT MIRADI](#) [PRICING](#) [MIRADI DESKTOP](#) [SUPPORT](#) [LOGIN](#)

**BE EFFECTIVE
MAKE AN IMPACT**

Design and manage conservation projects with essential tools used by thousands of teams around the world

[CREATE AN ACCOUNT](#)

Local Sites
A land trust managing its preserves and helping indigenous communities

Regional Program
Agencies and partners conserving endangered Siberian cranes at multiple

Global Strategy
A funder designing a global, market-based approach to sustainable seafood

MIRADI SHARE



Registration

<https://www.miradishare.org>

The screenshot shows the Miradi Share website homepage. At the top, there is a navigation bar with the Miradi logo and links for "SHARED PROJECTS" and "BUILDING BLOCKS". On the right side of the navigation bar, there are links for "ABOUT MIRADI", "PRICING", "MIRADI DESKTOP", "SUPPORT", and "LOGIN". The main content area features a large background image of a person in a yellow raincoat using a tablet in a field. The text reads: "BE EFFECTIVE MAKE AN IMPACT" followed by "Design and manage conservation projects with essential tools used by thousands of teams around the world". A green "CREATE AN ACCOUNT" button is positioned below this text. Below the main image, there are three circular icons with corresponding text: "Local Sites" (a person in a green shirt), "Regional Program" (a white crane in a wetland), and "Global Strategy" (a school of fish).

CREATE ACCOUNT

for Miradi Share



* Username
This is the name you will use to login.

* Email
A link to activate your new account will be emailed to you. Don't worry, we will never sell, barter, or share your email.

* Email (again)

* First Name

* Last Name

(UTC+02:00) E. Europe

Are you requesting this account as a private individual, or as part of an organization?

Private Individual

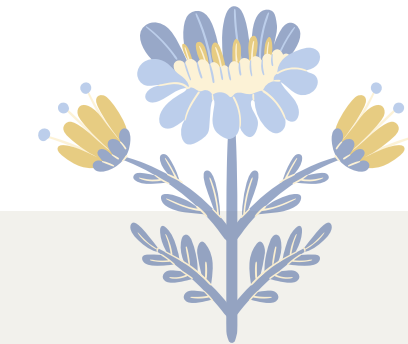
Associated with an Organization

Ich bin kein Roboter. reCAPTCHA
Datenschutzerklärung • Nutzungsbedingungen

Complete this reCAPTCHA challenge to let us know you're human.

Create Account

[Already have an account? Login](#) [Return to Miradi Share](#)



Let's get ready!

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Adaptive Management and Sustainable Development

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Associate Professor
of the Department of Management,
Institute of Business, Management and Marketing,
Ukrainian National Forestry University
Lviv, Ukraine



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<https://mm.nltu.edu.ua/>

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Content

1. Theoretical basis of strategic adaptive management

➤ The VUCA Concept

2. The role of the concept of sustainable development in the formation of the strategic adaptive management system

➤ The Nature-Based Solutions Concept

➤ The Ecosystem Approach

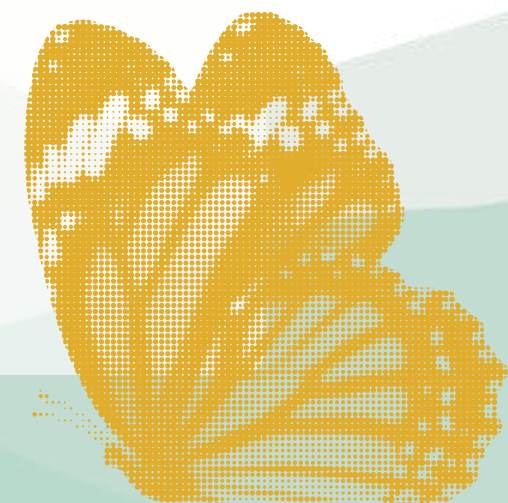
➤ The Ecosystem Services Classification

Adaptive management

Adaptive Management is an intentional approach to making decisions and adjustments in response to new information and changes in context.



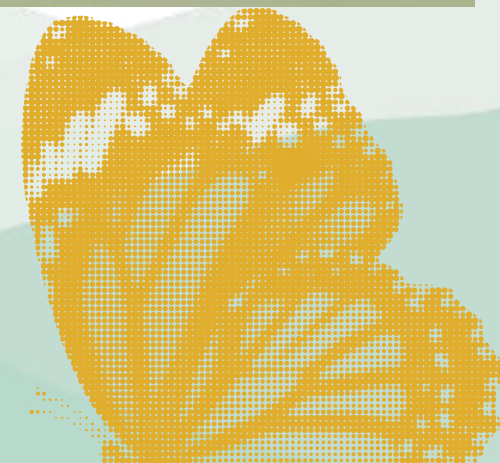
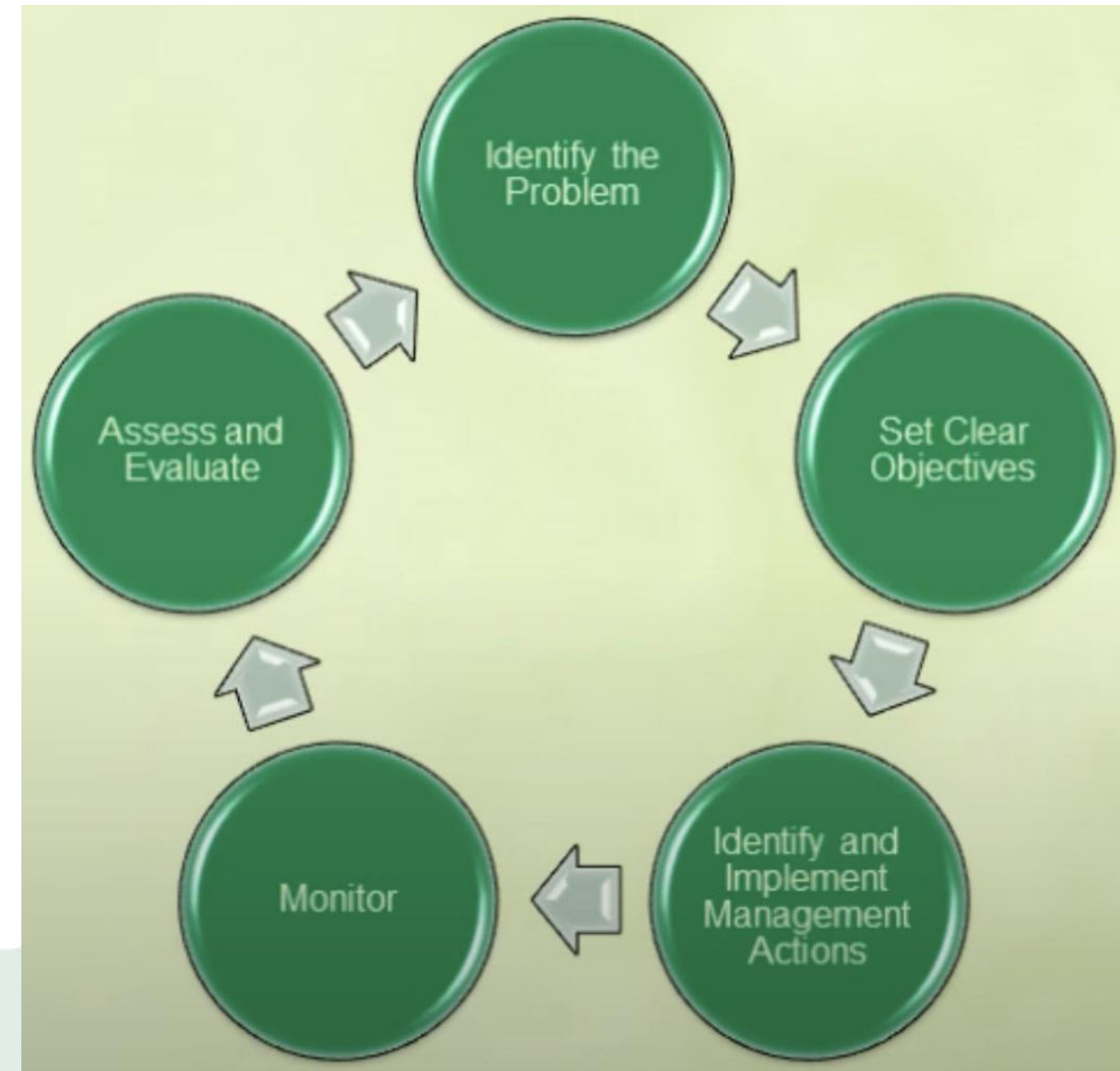
Adaptive Management is a management framework within which there is an uncertainty about the consequences of management actions.



Adaptive management

Adaptive Management is a systematic approach for improving resources management by learning from management outcomes.

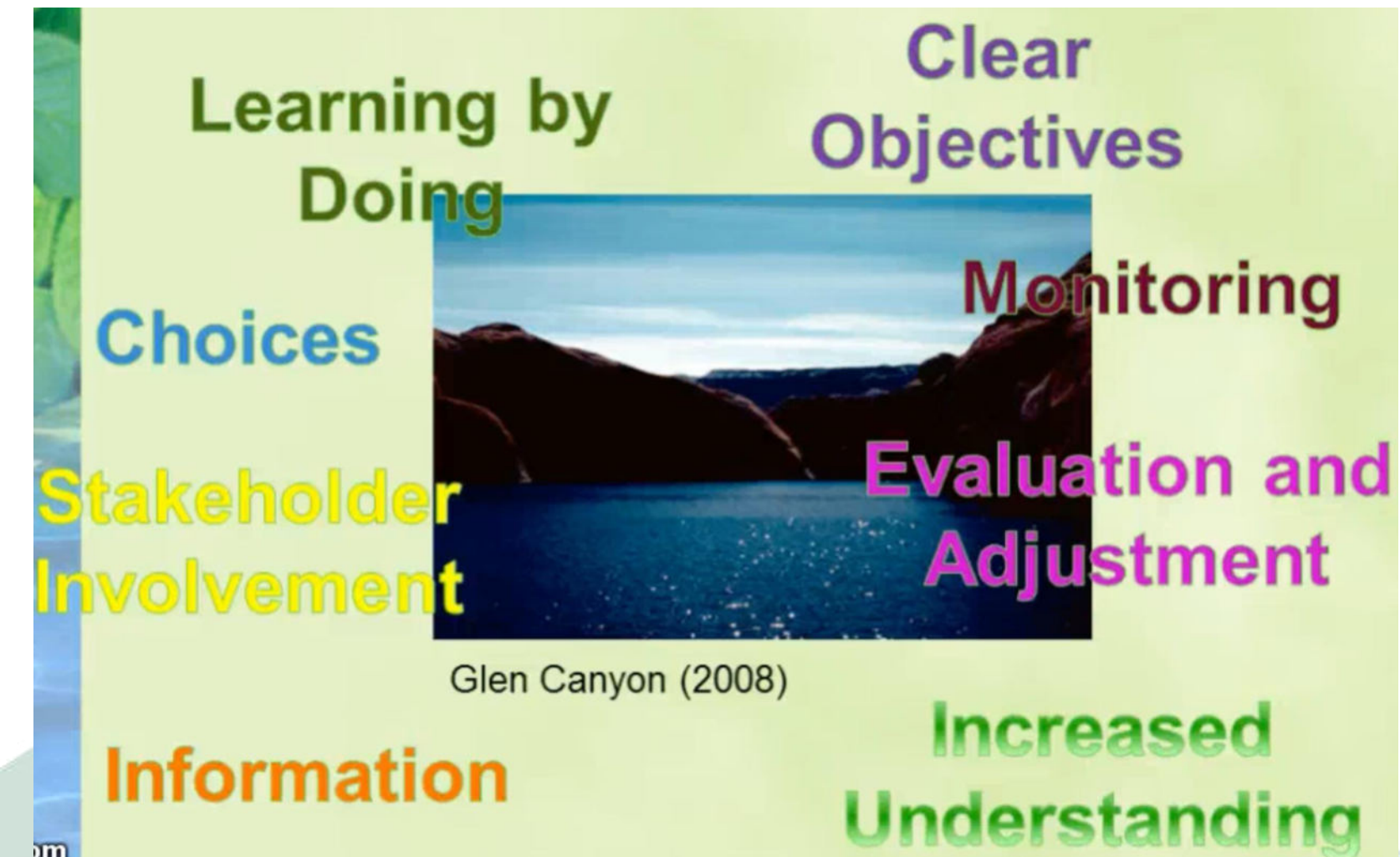
Implementing Adaptive Management is fundamentally about structured learning (by doing). It is about formalizing the process.



Adaptive management

Key elements of adaptive management:

- stakeholder involvement,
- clear management objectives,
- multiple management alternatives,
- predictions of the possible outcomes of potential management actions,
- monitoring protocols and plans,
- strategic planning,



- identifying triggers (clearly identified points), where monitoring will indicate when a new management action is needed.

The VUCA concept



The VUCA concept provides a valuable framework for understanding the challenges of today's rapidly changing world.

How well can you predict the results of your actions?	Complexity The situation has many interconnected parts and variables. Some information is available or can be predicted, but the volume or nature of it can be overwhelming to process.	Volatility The challenge is unexpected or unstable and may be of unknown duration, but it's not necessarily hard to understand, knowledge about it is often available.
	Ambiguity Causal relationships are unclear. No precedents exist, you face unknown unknowns.	Uncertainty Despite a lack of other information, the event's basic cause and effect are known. Change is possible but not a given.
How much you know about the situation?		

the concept of sustainable development

In 1987, the United Nations (UN) Brundtland Commission prepared the report “[Our Common Future](#)” and defined **sustainable development (SD)** as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Sustainable development is a holistic concept that seeks to achieve a harmonious coexistence between the goals of improving living standards, eradicating poverty, and safeguarding the planet's natural resources for future generations.

Environmental Challenges

- ❖ **Ecosystem degradation**
- ❖ **Biodiversity and habitat loss**
- ❖ **Climate change**
- ❖ **Deforestation**
- ❖ **Pollution**
- ❖ **Waste**

the concept of sustainable development

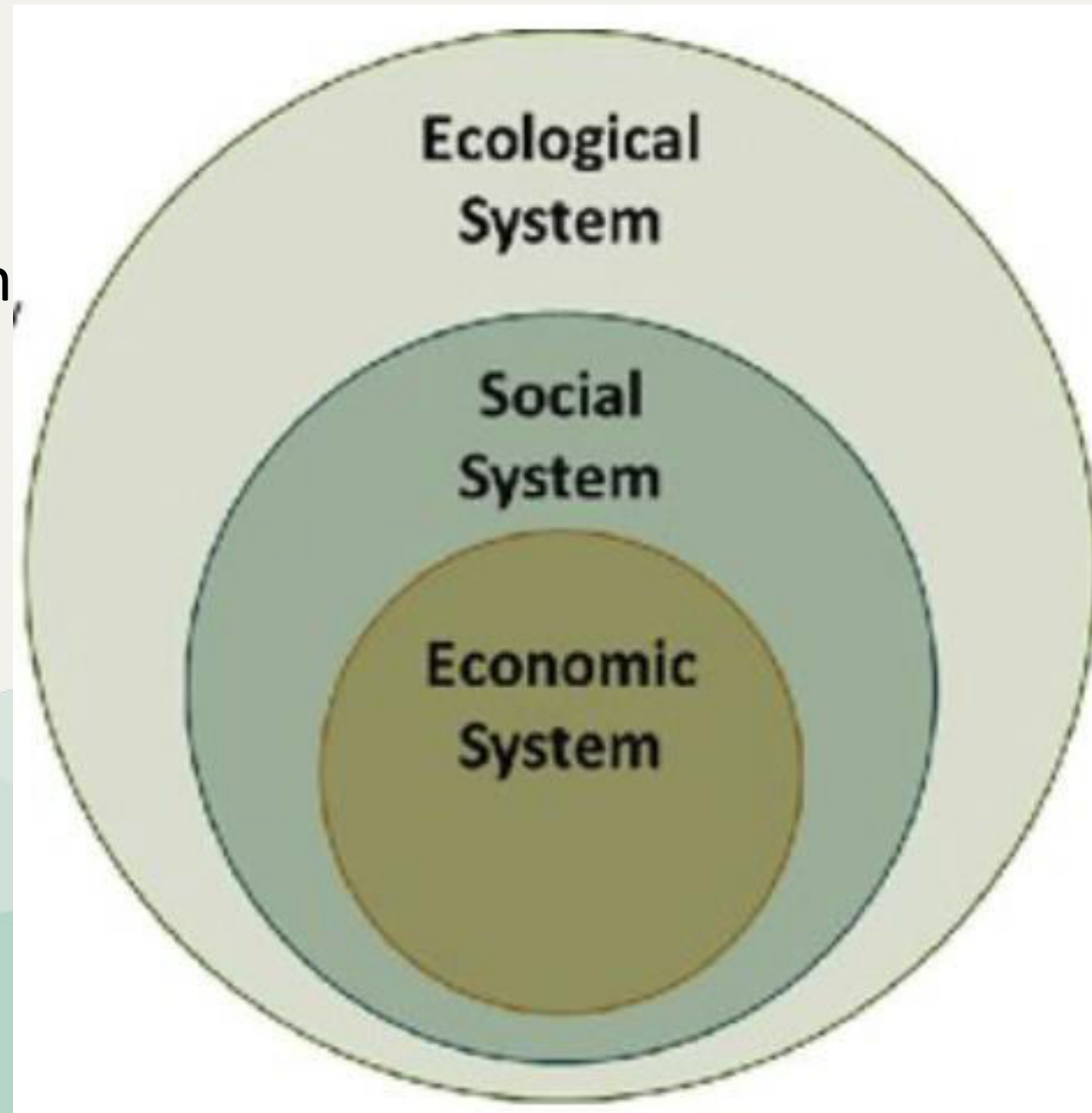
What is [sustainability](#)?

The concept of sustainable development has emerged as a guiding principle, attempting to balance the imperatives of **economic** growth with **environmental** protection and social **equity**.



the concept of sustainable development

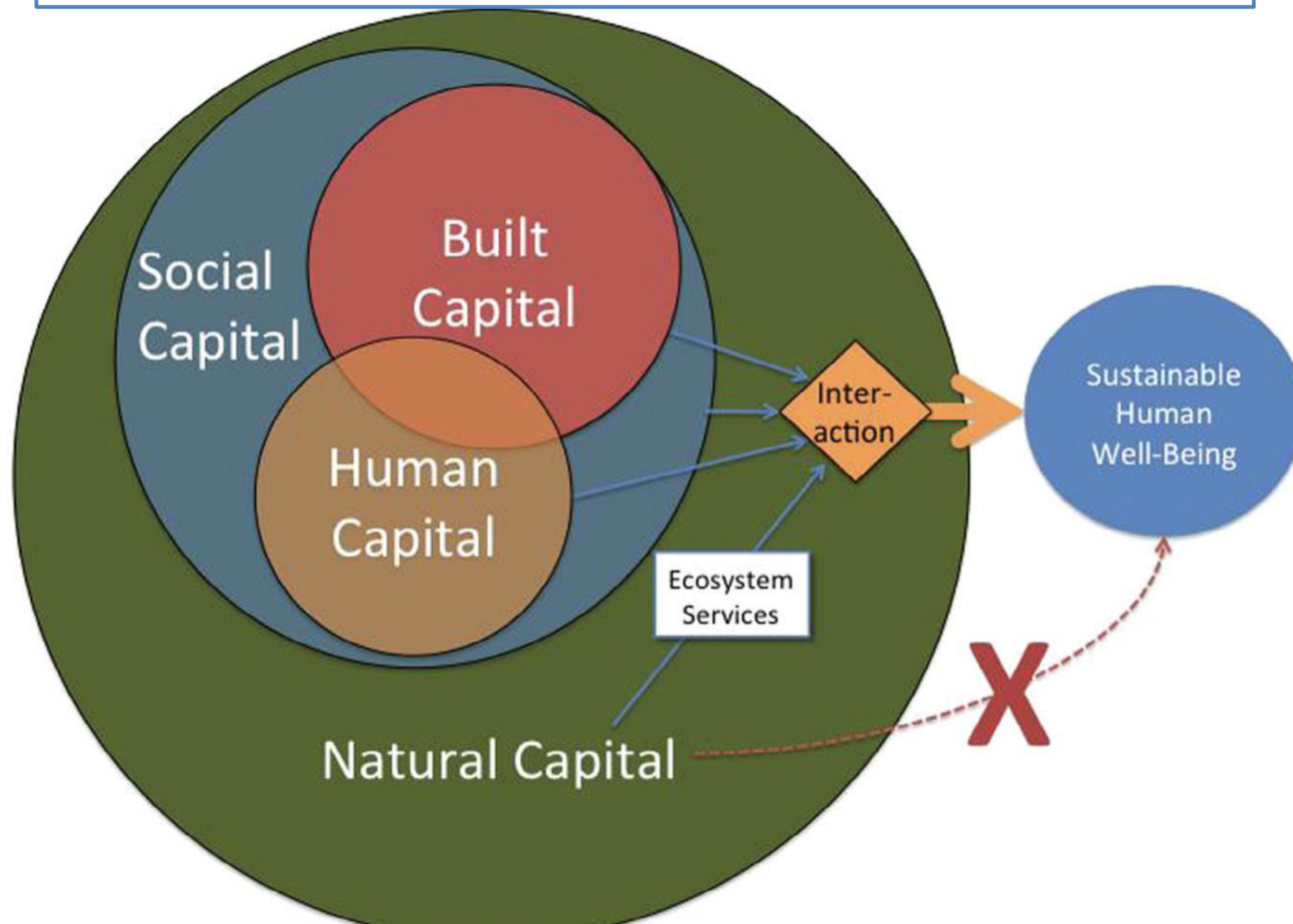
- Assimilation capacity
- Purification capacity
- Food product capacity
- Climate regulation capacity



- Trust
- Capacity for learning
- Diversity
- Capacity for self-organization
- Common meaning

The concept of Sustainable development

Earth's Capital = Natural Capital + Social Capital + Human Capital + Built Capital

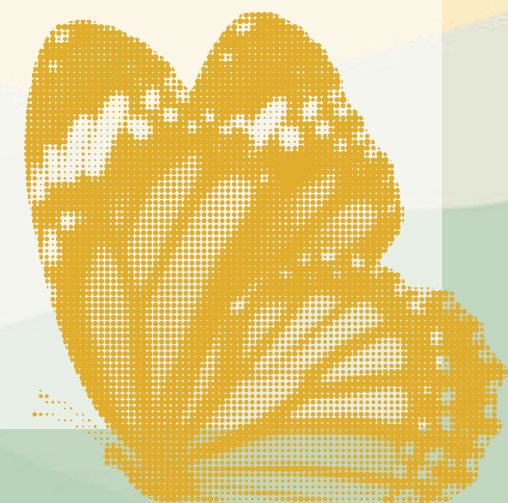


The criterion of **weak sustainability** allows for the possibility of replacing natural capital with human-made capital without reducing the total amount of capital over time.

The criterion of **strong sustainability** does not allow for a decrease in the reserves of natural capital, on which the life support system on the planet depends.

The Role of Sustainable Development

- A. Policy Formulation**
- B. Economic Diversification**
- C. International cooperation**
- D. Stakeholder Engagement**
- E. Education and Awareness**



17 Sustainable development goals

The **17 SDGs** are a set of global objectives adopted by all UN Member States in 2015 as part of the 2030 Agenda for SD.

They were adopted by 193 countries.



17 Sustainable development goals

1. No Poverty

2. Zero Hunger

3. Good Health and Well-being

4. Quality Education

5. Gender Equality

6. Clean Water and Sanitation

7. Affordable and Clean Energy

8. Decent Work and Economic

Growth

9. Industry, Innovation, and Infrastructure

10. Reduced Inequality

11. Sustainable Cities and Communities

12. Responsible Consumption and Production

13. Climate Action

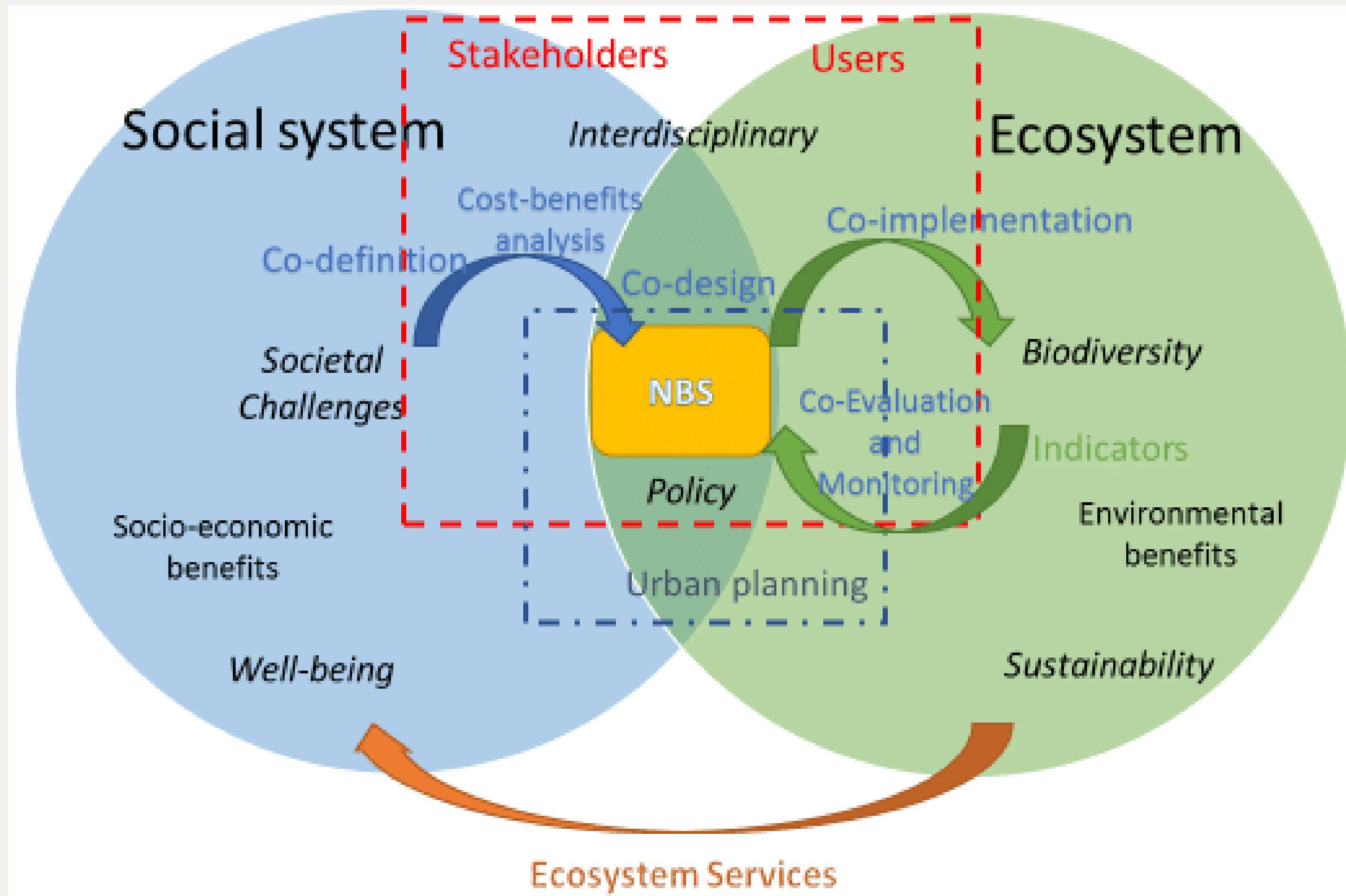
14. Life Below Water

15. Life on Land

16. Peace, Justice, and Strong Institutions

17. Partnerships for the Goals

The nature-based solutions concept



Nature-Based Solutions (NBS) is an innovative and holistic approach that encompasses a wide range of strategies that utilize natural ecosystems and processes to provide sustainable, cost-effective, and multi-beneficial solutions.

The nature-based solutions concept

Components of NBS

Ecosystem Restoration Projects

Natural Features

Green Infrastructure

Sustainable Practices

NBS' Applications

Climate Change Mitigation and Adaptation

Biodiversity Conservation

Urban Planning and Livability

Water Resources Management



The Ecosystem approach

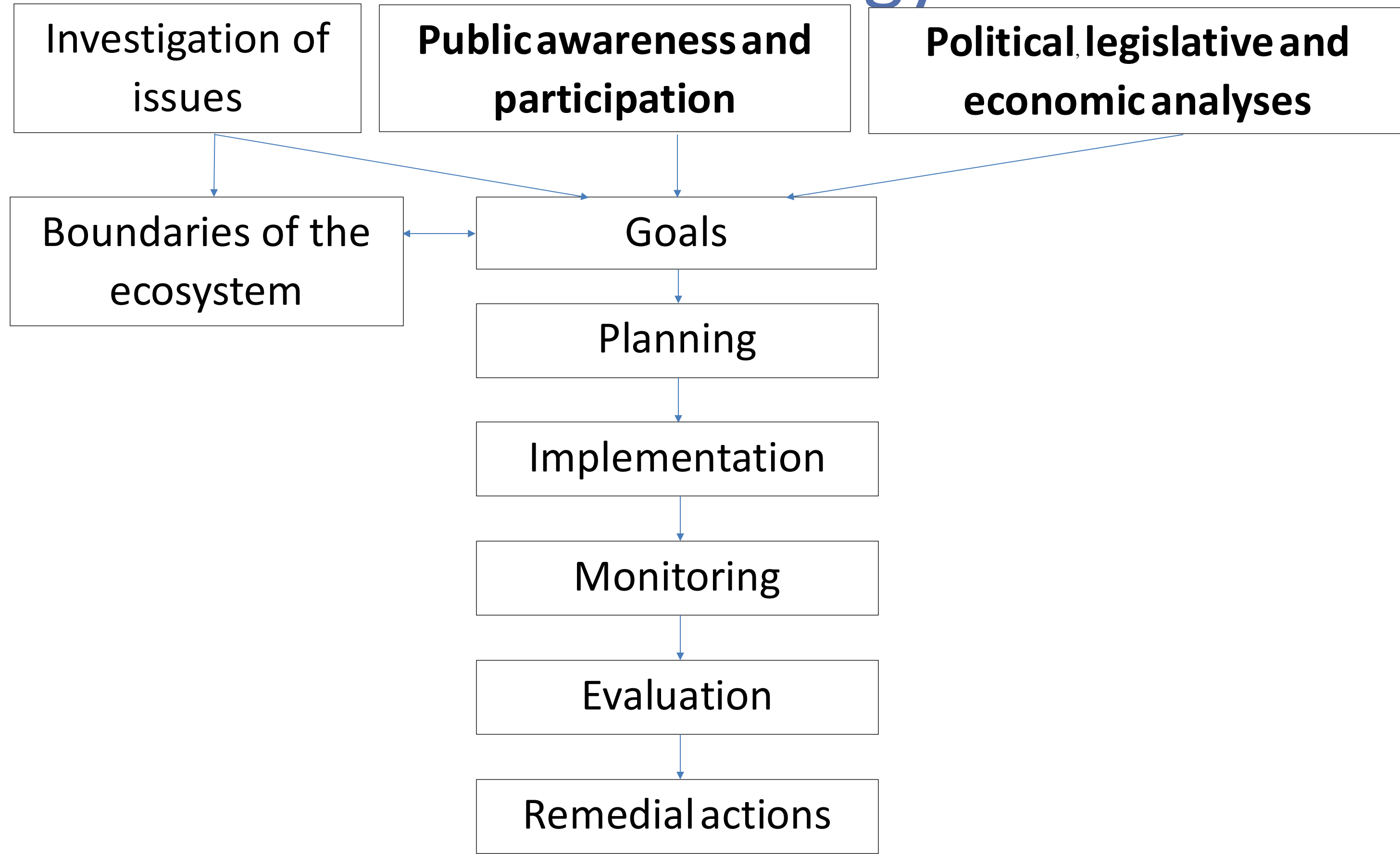
The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

Application of the ecosystem approach will help to reach a balance of the three objectives of the [Convention on Biological Diversity](#).

It is based on the application of appropriate scientific methodologies focused on levels of biological organization which encompass the essential processes, functions and interactions among organisms and their environment. It recognizes that humans, with their cultural diversity, are an integral component of ecosystems.



Ecosystem management methodology

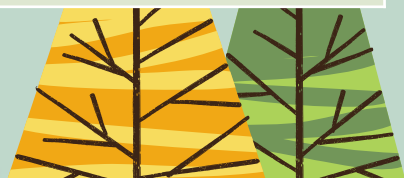


The Ecosystem Approach

This new approach of managing natural resources aiming at the long-term sustainability, has a multi-species framework, integrating human activities and conservation of nature, includes political, economic and social values, and proposes solutions which are socially accepted.

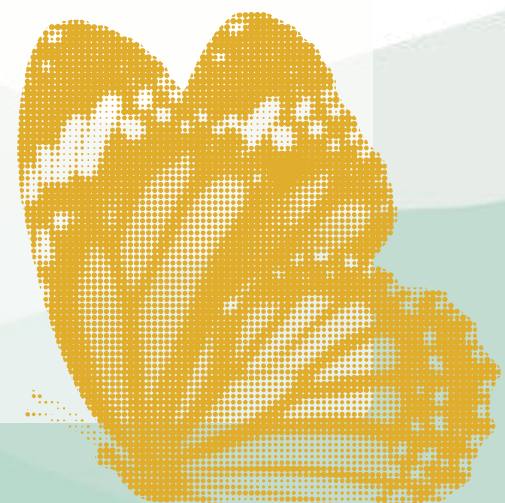
Ecosystem management is a comprehensive approach to conserving and restoring ecosystems while simultaneously promoting sustainable resource use and human well-being.

- ❖ Biodiversity conservation
- ❖ Sustainable Resource Utilization
- ❖ Ecosystem Resilience



The Ecosystem services classification

Common International Classification of Ecosystem Services (CICES) is an evolving framework that has gained prominence as a standardized system for categorizing and assessing these services.



The Ecosystem services classification

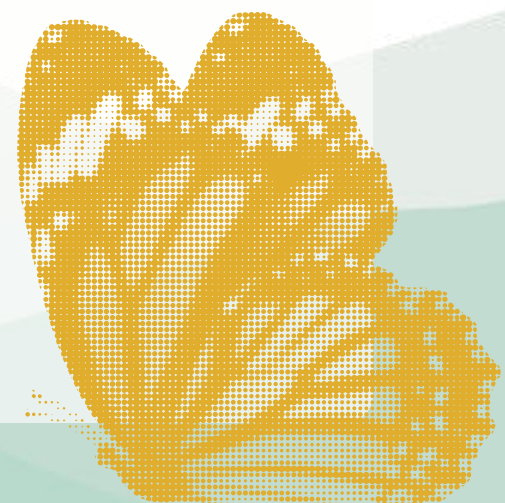
CICES retains the three categories of ecosystem services

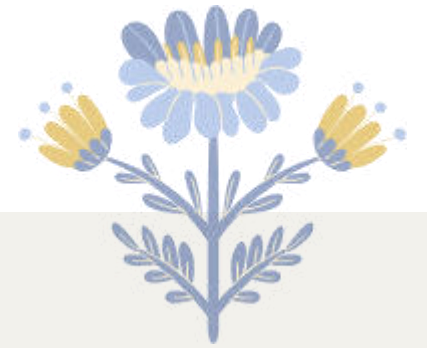
1. Provisioning	2. Regulating	3. Cultural
<p>encompass the tangible benefits directly obtained from ecosystems, such as food, water, and raw materials.</p> <ul style="list-style-type: none">➤ crop production,➤ livestock production,➤ fisheries.	<p>involve the regulation of essential ecological processes</p> <ul style="list-style-type: none">➤ climate regulation,➤ air quality,➤ water flow regulation, purification.	<p>relate to the non-material benefits that people gain from ecosystems</p> <ul style="list-style-type: none">➤ aesthetic,➤ spiritual,➤ recreational,➤ tourism,➤ educational,➤ scientific values.

The Ecosystem services classification

The classification of ecosystem services is a fundamental aspect of understanding, quantifying, and managing the benefits that nature provides to humans.

The classification of ecosystem services will be used in the Open Standards for the Practice of Conservation methodology.





THINK GLOBAL, ACT LOCAL



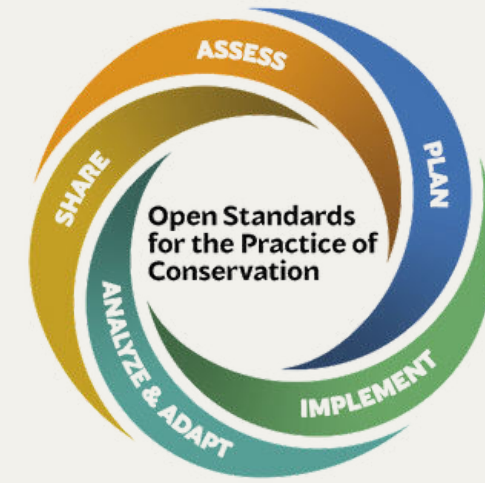
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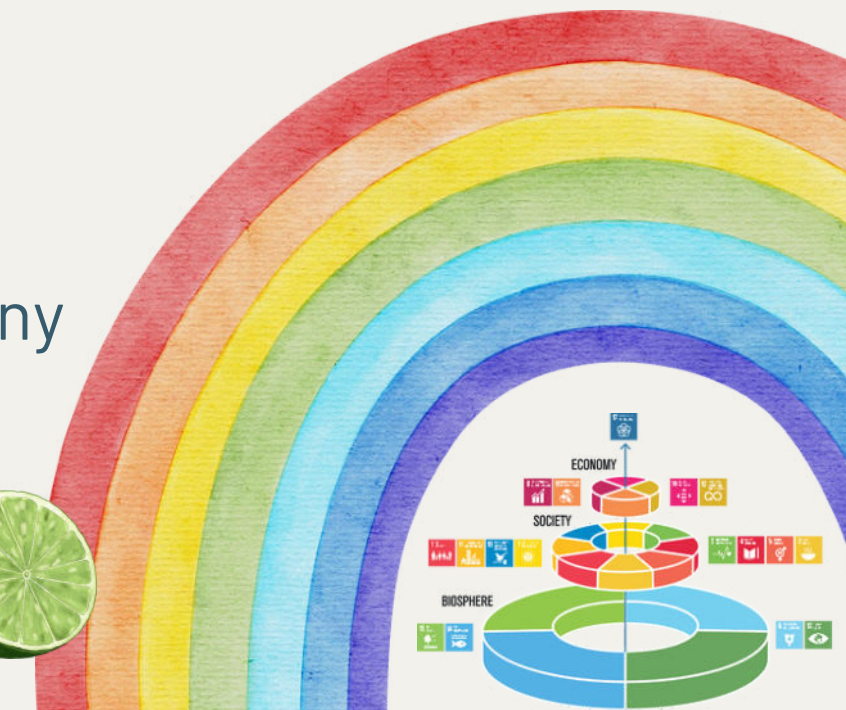
<https://translearnn.ztu.edu.ua>



OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION: INTRODUCTION

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1. THE CONSERVATION STANDARDS IN A NUTSHELL

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020



The Open Standards for the Practice of Conservation are a practical, step-by-step framework that provide a set of best practices for the successful implementation of conservation projects, oriented around a five-step management cycle.

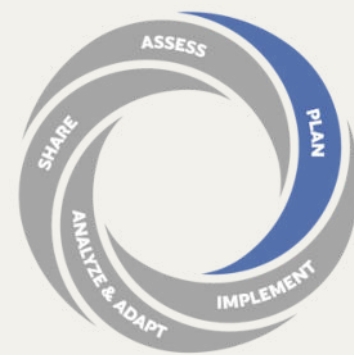
OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020

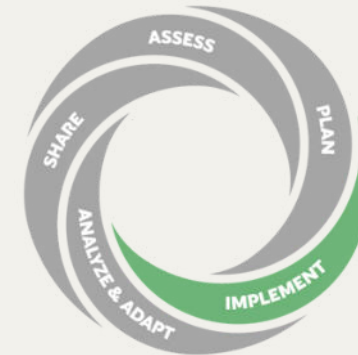
THE CONSERVATION STANDARDS CYCLES



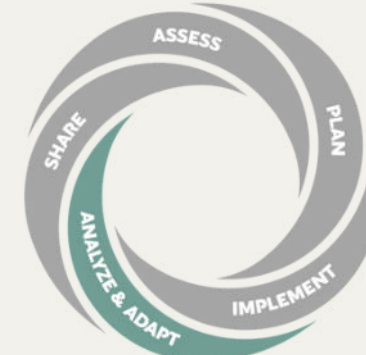
1. ASSESS



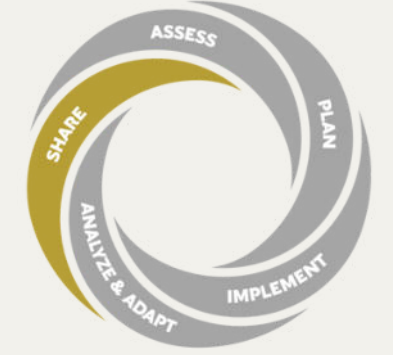
2. PLAN



3. IMPLEMENT

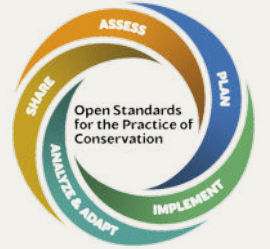


**4. ANALYZE
& ADAPT**



5. SHARE

WHAT MAKES THE CS USEFUL?



- ✓ A simple, repeatable cycle for better planning, action, and learning
- 🔧 Each step includes tools, outputs, and guiding questions to support teams at every stage
- 🔄 Flexible structure—teams can start at any step based on their needs
- 📅 Encourages regular review and adaptation to stay relevant and effective
- 🌍 Works for any size or type of project—local or global, short or long-term



2. ORIGIN AND EVOLUTION OF THE CONSERVATION STANDARDS

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

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GLOBAL PARTNERSHIP BEHIND THE STANDARDS



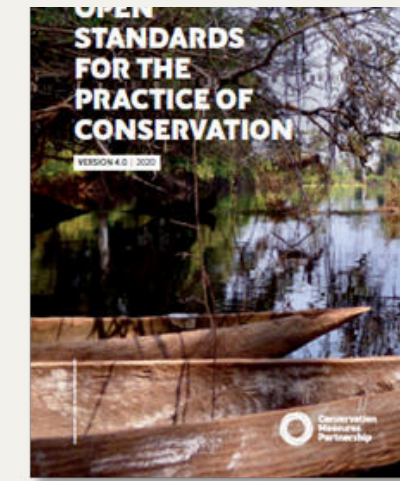
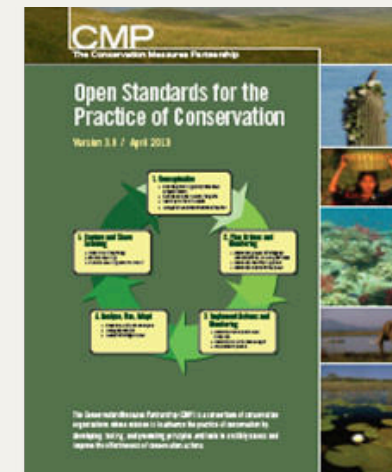
**Conservation
Measures
Partnership**



**Conservation
Coaches Network**
Strengthening conservation strategies and practice through coaching

The Conservation Measures Partnership (CMP) is a global community of NGOs, government agencies, and private businesses working together to design, manage, and measure conservation action. CMP members collaborate to share knowledge, adopt best practices, and avoid ineffective approaches—enhancing conservation efficiency and innovation worldwide.

THE ORIGINS AND EVOLUTION OF THE CS



Conservation Measures Partnership (CMP) established

Open Standards formalized

Open Standards 2.0

Open Standards 3.0

Conservation Standards 4.0

Conservation Standards 5.0



A Coaches Network formed in TNC

Conservation Coaches Network (CCNet) chartered

GLOBAL REACH AND IMPACT





3. THE 5-STEP ADAPTIVE FRAMEWORK

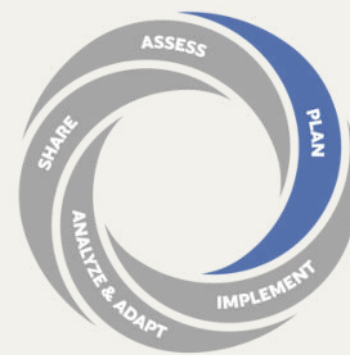
OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

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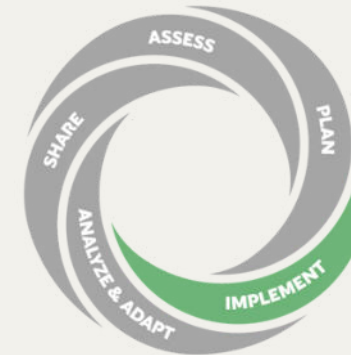
CONSERVATION STANDARDS V4.0



1. ASSESS



2. PLAN



3. IMPLEMENT



**4. ANALYZE
& ADAPT**



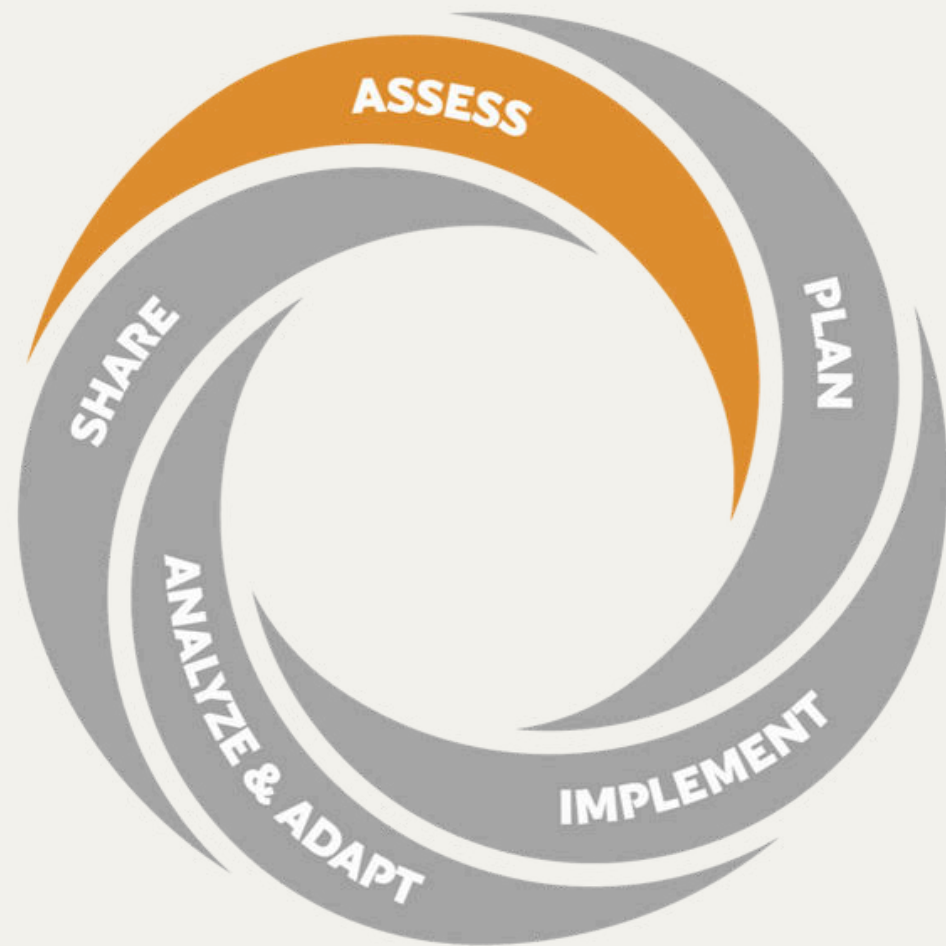
5. SHARE

CONSERVATION STANDARDS V4.0



STEP 1. ASSESS

- Purpose & team
- Scope & vision
- Targets & Viability
- Threats
- Conservation situation



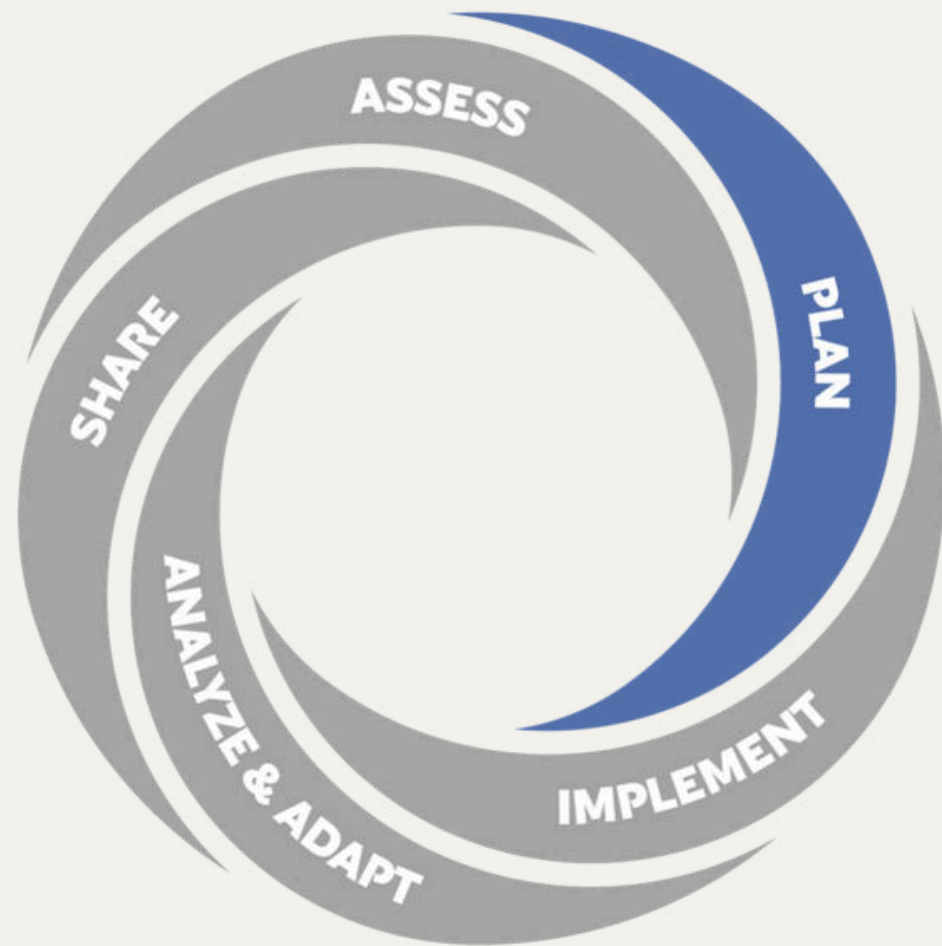
The main task of this step is to clearly define what your project is about – including its purpose, focus, boundaries, team, and context – so you have a solid foundation for planning and action.

CONSERVATION STANDARDS V4.0



STEP 2. PLAN

- Goals
- Strategies
- Theory of Change
- Monitoring
- Operational Plan



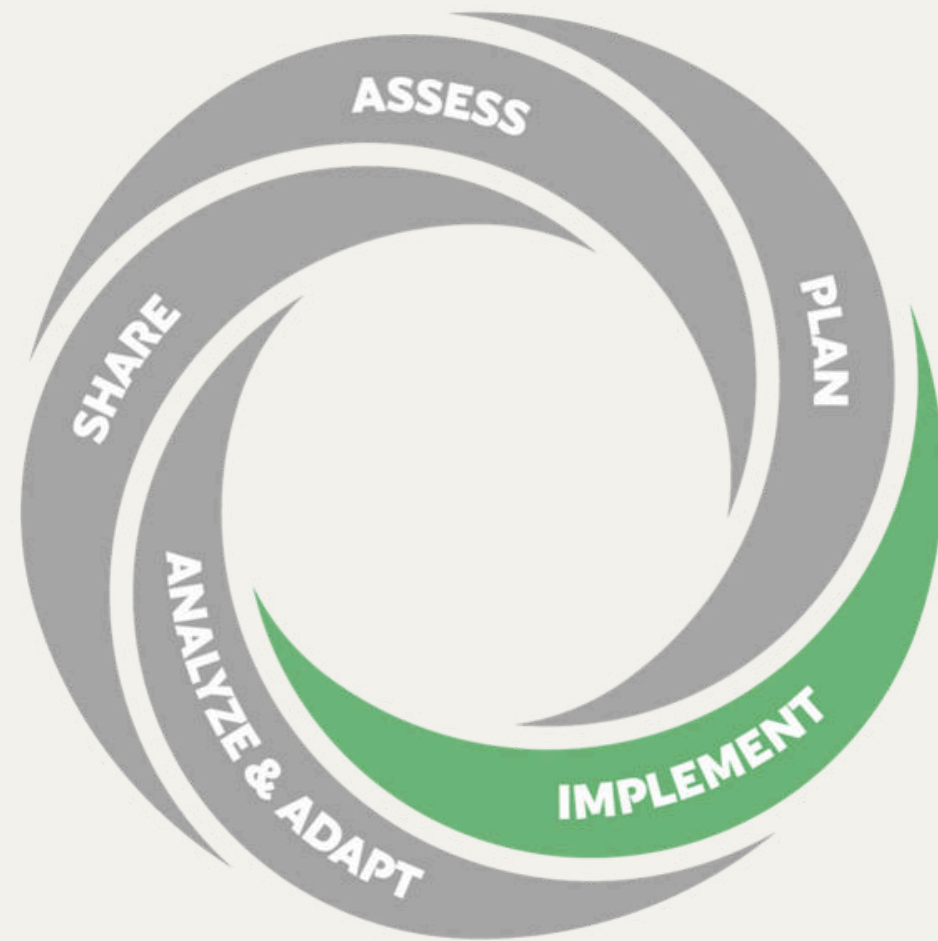
The main task of this step is to create a clear action plan – by setting goals, choosing strategies, and deciding how to measure success – so your team knows what to do, why, and how to track progress.

CONSERVATION STANDARDS V4.0



STEP 3. IMPLEMENT

- Work plan, budget
- Implement
- Monitor
- Report



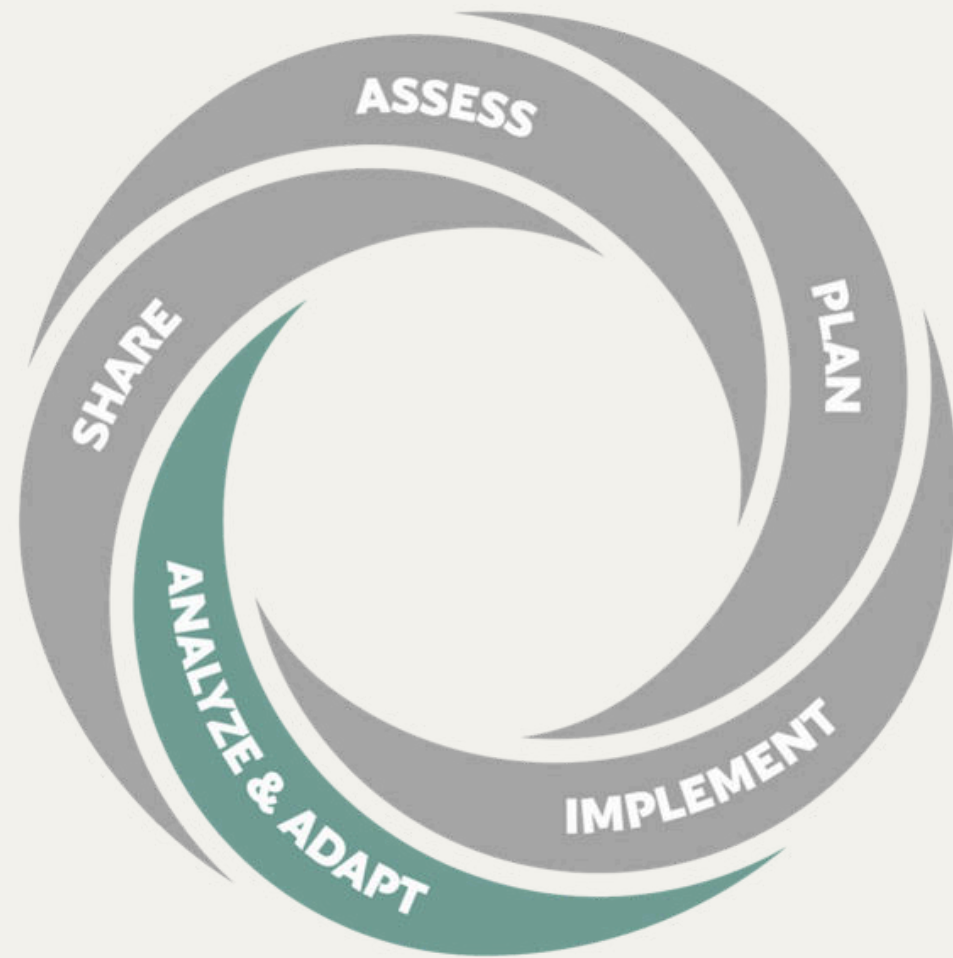
The main task of this step is to turn your plans into action by carrying out work plans with the right people, resources, and partners – following your organization’s rules and procedures.

CONSERVATION STANDARDS V4.0



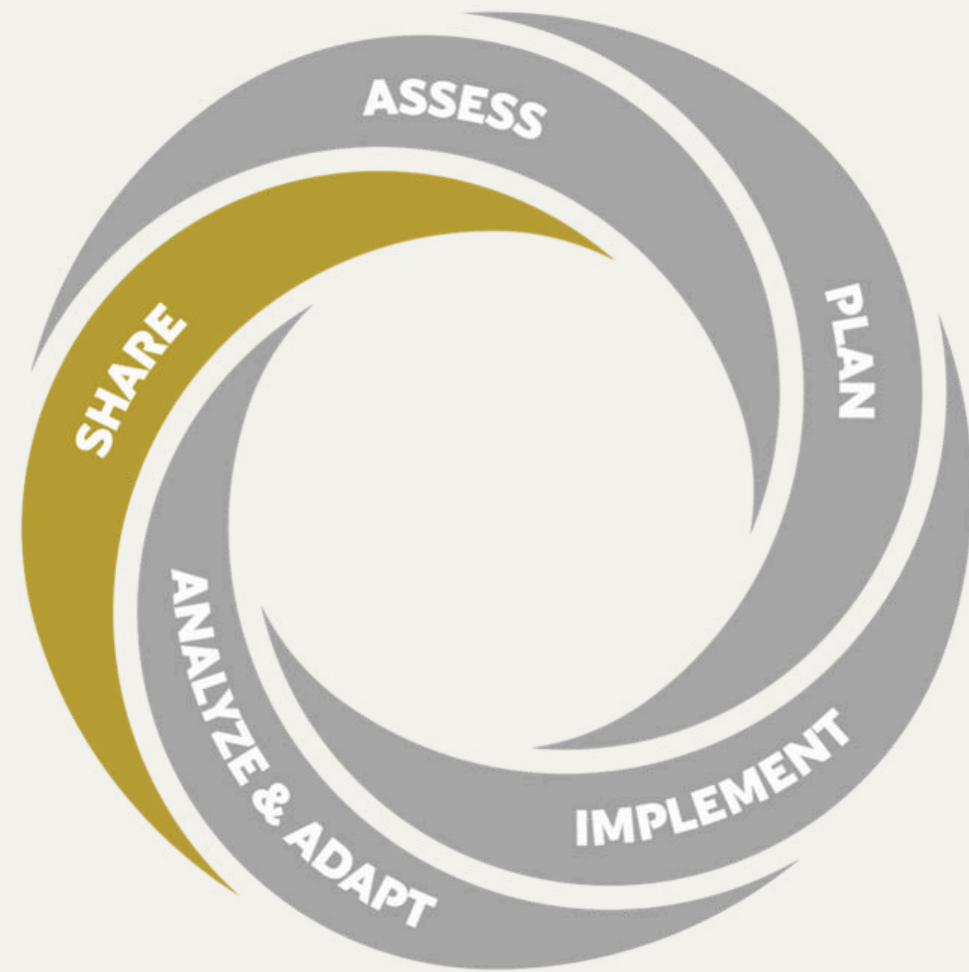
STEP 4. ANALYZE & ADAPT

- Prepare data
- Analyze data
- Adapt plan



The main task of this step is to regularly analyze your data, learn from it, and adjust your work plan as needed to improve your project.

CONSERVATION STANDARDS V4.0

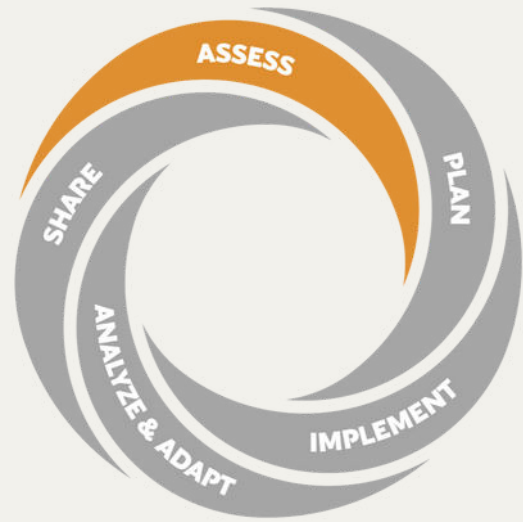


5. SHARE

- Document
- Share
- Foster learning

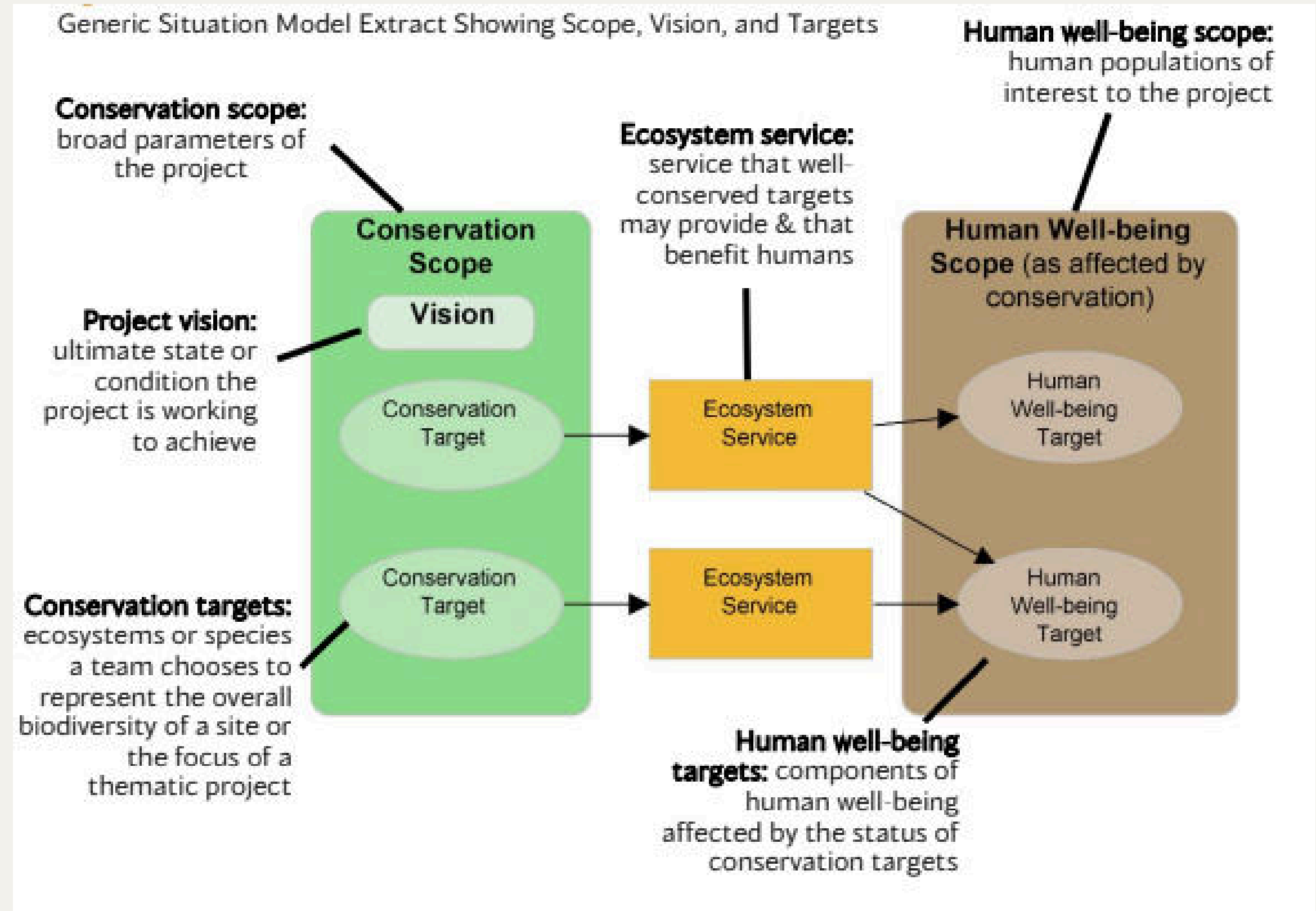
The main task of this step is to share lessons learned, get feedback, and support a learning culture within the team, organization, and the wider conservation community.

CONSERVATION STANDARDS V4.0



1. ASSESS

- Project Scope and Vision
- Biodiversity Targets
- Ecosystem Services and Human Well-Being Targets



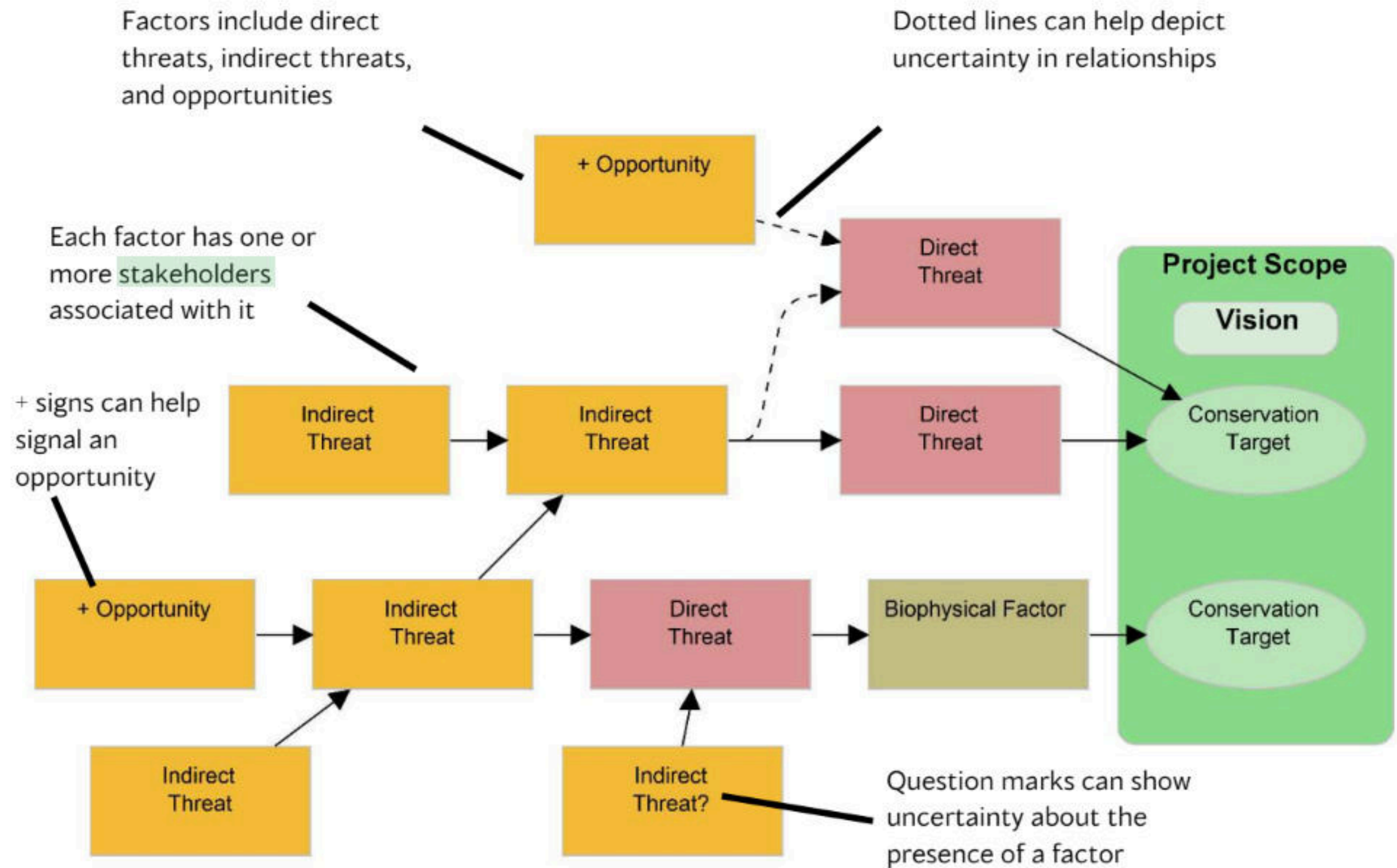
CONSERVATION STANDARDS V4.0



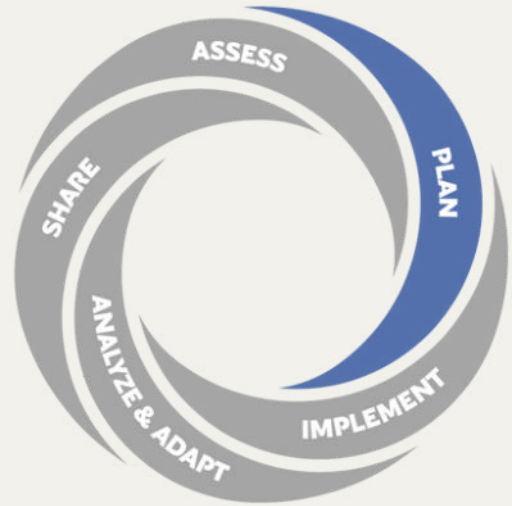
1. ASSESS

- Direct threats
- Stresses
- Contributing factors
- Stakeholder assessment

Generic Situation Model Showing Project Context



CONSERVATION STANDARDS V4.0

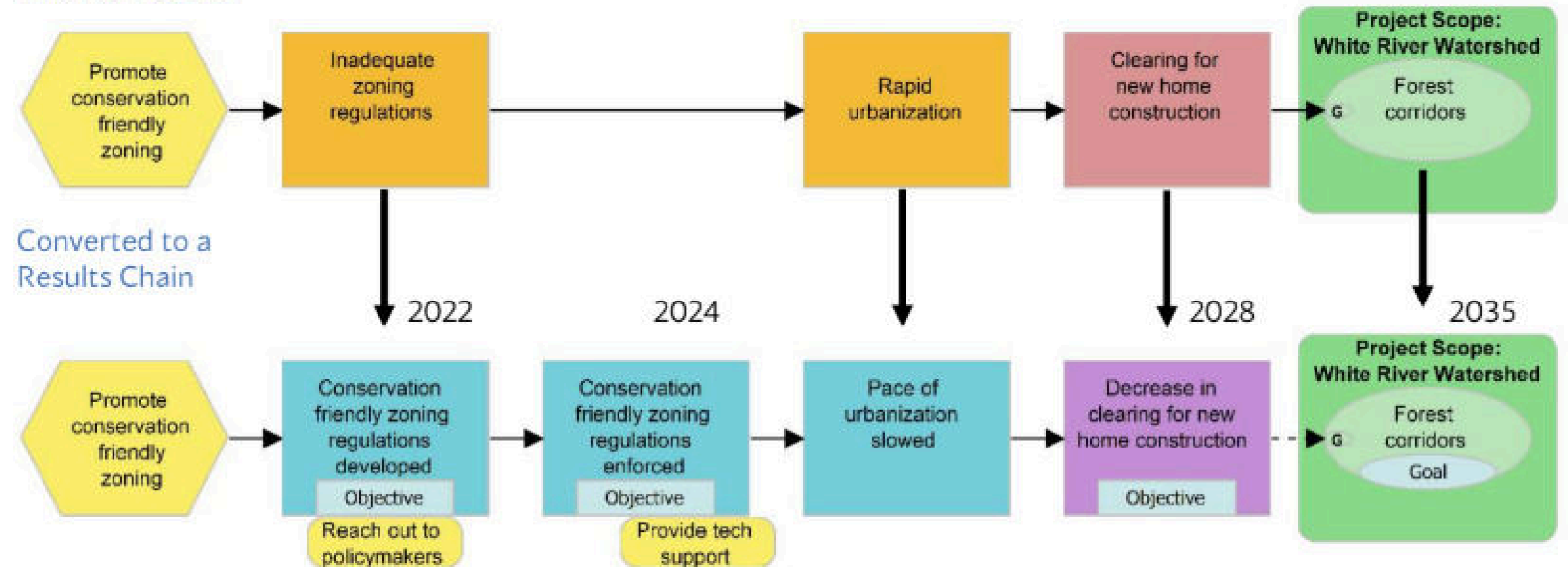


2. PLAN

- Strategies and activities
- Theory of Change – Results Chains
- Objectives and indicators

Example Results Chain for Promoting Conservation-Friendly Zoning in Watershed Site

Chain of Factors



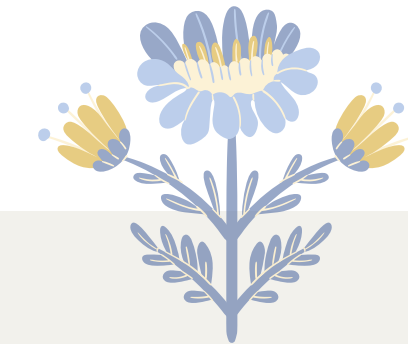
Sample objectives & goal

By the end of 2022, City Council approves zoning regulations that include a moratorium on new building permits in state-listed unique areas

By mid 2024, all new building permits avoid development in state-listed unique areas

By 2028, there is no new home construction being carried out, permitted, or planned in identified state-listed unique areas

By 2035, the width of the forest corridor linking the White River Watershed to Los Grillos is at least 5 km wide and remains unfragmented



No matter the size of your project—from local communities to global programs—the Conservation Standards aren't about rules—they're a flexible guide to help teams focus, act with clarity, and stay effective in a changing world.

This material was developed in the course of the joint Erasmus+ project

"Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine" (2023-2025)

funded by the EU

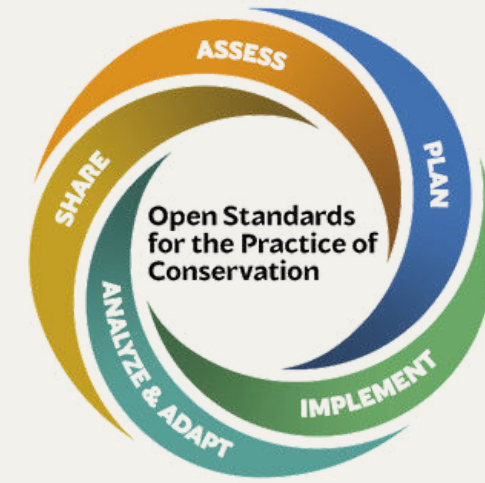


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<https://translearnn.ztu.edu.ua>





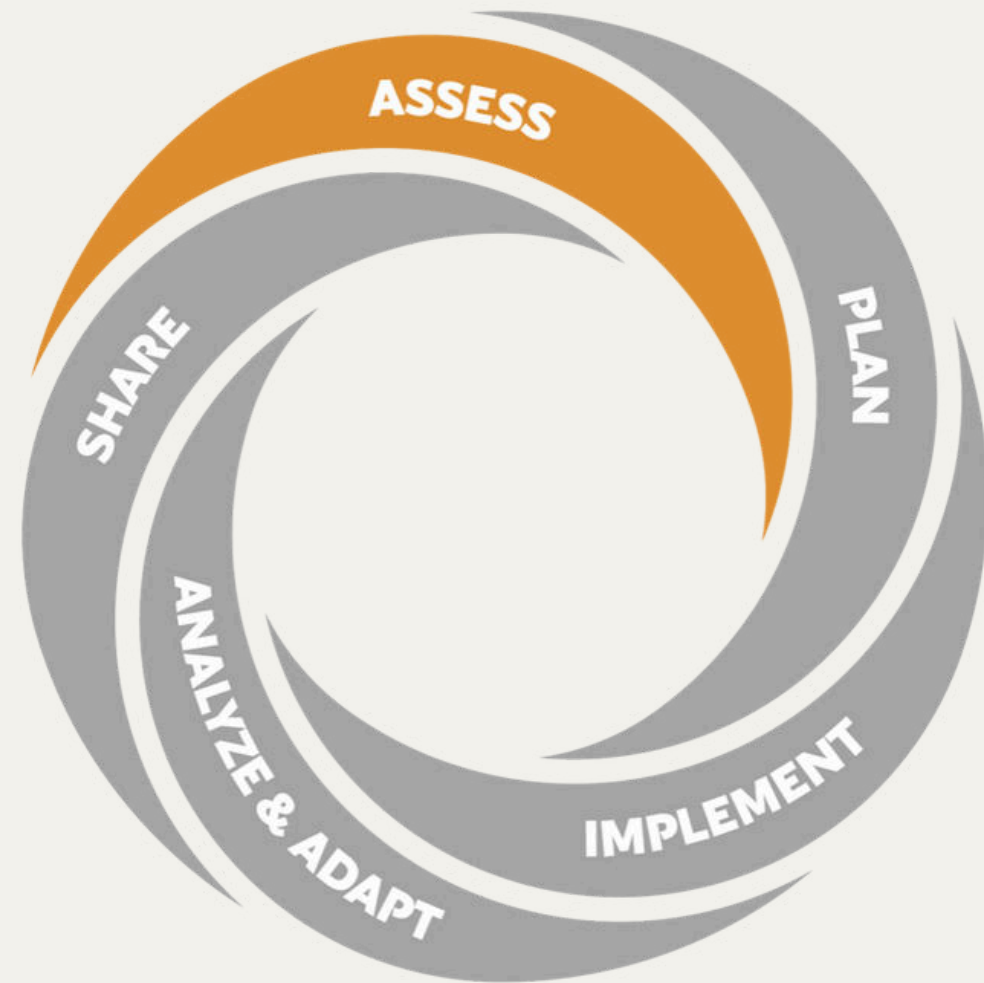
Scope, Vision & Biodiversity Targets

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany based on the Open Standards for the Practice of Conservation methodology



STEP 1: ASSESS



STEP 1. ASSESS

- Purpose & team
- **Scope & vision**
- **Conservation targets & viability**
- Threats
- Conservation situation



1. SCOPE DEFINITION

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SCOPE

The broad geographic or thematic focus of a project.



STEP 1: ASSESS



PROJECT'S SCOPE describes what the project aims to conserve, restore, or improve. However, this doesn't mean that all actions must occur only within that area—some activities may take place elsewhere if they support the main goal.

STEP 1: ASSESS



CORAL REEFS



BERING LAND BRIDGE IN NATIONAL PRESERVE



CLIMATE AND ENERGY POLICY



PLACE-BASED SCOPE

Focuses on conserving specific geographic areas, like ecosystems or protected zones.

TARGET-BASED SCOPE

Focuses on specific species or ecosystems, often across multiple regions.

THEMATIC-BASED SCOPE

Target specific threats or opportunities, like reducing illegal logging or cutting CO2 emissions from key sectors.

STEP 1: ASSESS



PLACE-BASED SCOPE

Restoring wetlands in the Danube Delta to improve biodiversity and water quality.

Focused on a specific geographic area in Eastern Europe.



TARGET-BASED SCOPE

Protecting the Iberian lynx in Spain and Portugal by expanding habitat and reducing road mortality.

Focused on a specific species across multiple regions.

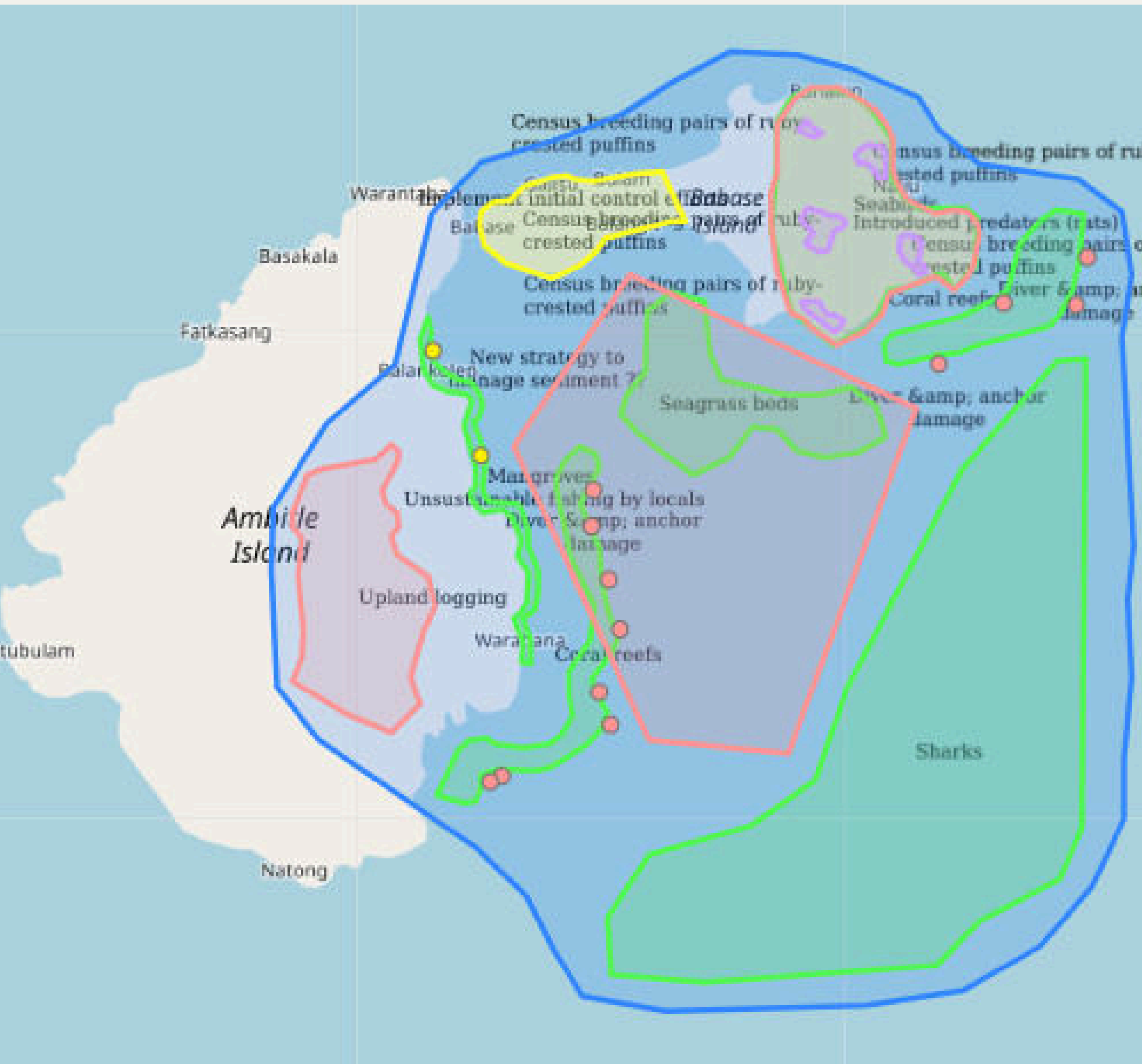


THEMATIC-BASED SCOPE

Reducing CO₂ emissions from agriculture across the EU by promoting climate-smart farming practices.

Focused on a broad environmental issue across sectors and countries.

STEP 1: ASSESS



KEY CONSIDERATIONS

- Define the scope of your project (what you aim to impact).
- Choose an appropriate scale to match your goals.
- Recognize the temporal dimension.



STEP 1: ASSESS



SCOPE = What and where

Example: *Protecting old-growth beech forests in the Carpathian Mountains.*

SCALE = How big and how much

- Example: *Working across all Carpathian beech forest sites in multiple countries vs. focusing on just one protected area in one country.*

TIMEFRAMES = When & how long

- Short-term project: 1–5 years (e.g., *awareness campaigns, small restoration efforts*).
- Medium-term project: 5–15 years (e.g., *forest management changes, habitat connectivity*).
- Long-term project: 15+ years (e.g., *full ecosystem recovery and long-term monitoring*).



STEP 1: ASSESS



SPATIAL MAPPING

- Spatial maps help visualize the geographic focus of a project.
- Show key management units, ecological zones, and/or political boundaries.
- Useful for identifying new partners, additional conservation targets, overlooked threats.



2. VISION DEFINITION

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STEP 1: ASSESS



VISION is a description of the desired state or ultimate condition that you are working to achieve.

Photography Notes:
Andrew Bridges; Yellowstone National Park, Montana, USA



STEP 1: ASSESS



VISION should be:

- RELATIVELY GENERAL
- INSPIRATIONAL / VISIONARY
- BRIEF

Photography Notes:

Andrew Bridges; Yellowstone National Park, Montana, USA



STEP 1: ASSESS



Vision Statement

We envision the long-term conservation and restoration of the Polissya forests in northern Ukraine—protecting their rich biodiversity, preserving peatlands and wetlands that regulate water and climate, and supporting sustainable livelihoods for local communities, so these unique landscapes continue to thrive for generations to come.

Photography Notes:
Serhiy Kantsyrenko, Polissia Nature Reserve, Ukraine



3. CONSERVATION TARGETS

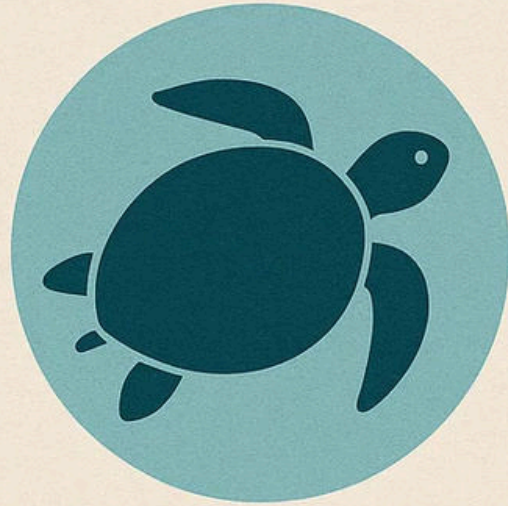
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CONSERVATION TARGETS



PROTECT



SAVE



RESTORE



SUSTAIN

STEP 1: ASSESS



Biodiversity targets are elements of biodiversity (species, habitat, or ecological system) at a project site on which a project has chosen to focus. All targets should collectively represent the biodiversity of concern at the site.

STEP 1: ASSESS



PLACE-BASED SCOPE

Example of targets for restoring wetlands in the Danube Delta



Dalmatian pelicans



Reed bed habitats



Wetland bird communities

STEP 1: ASSESS



TARGET-BASED SCOPE

Example of targets for the project on protecting the Iberian lynx in Spain and Portugal.



Iberian lynx



Wild rabbit



Spanish imperial eagle

STEP 1: ASSESS



THEMATIC-BASED SCOPE

Example of targets for the project on reducing CO₂ emissions from agriculture across the EU.



Improving soil health



Increasing carbon storage through agroforestry systems



Promoting climate-smart farming practices



STEP 1: ASSESS



TARGETS SELECTIONS

- Choose a limited number (ideally 8 or fewer for place-based projects).
- Consider iconic or representative species/ecosystems.
- Use expert input and available data.
- Targets should represent the full range of biodiversity or values in scope.

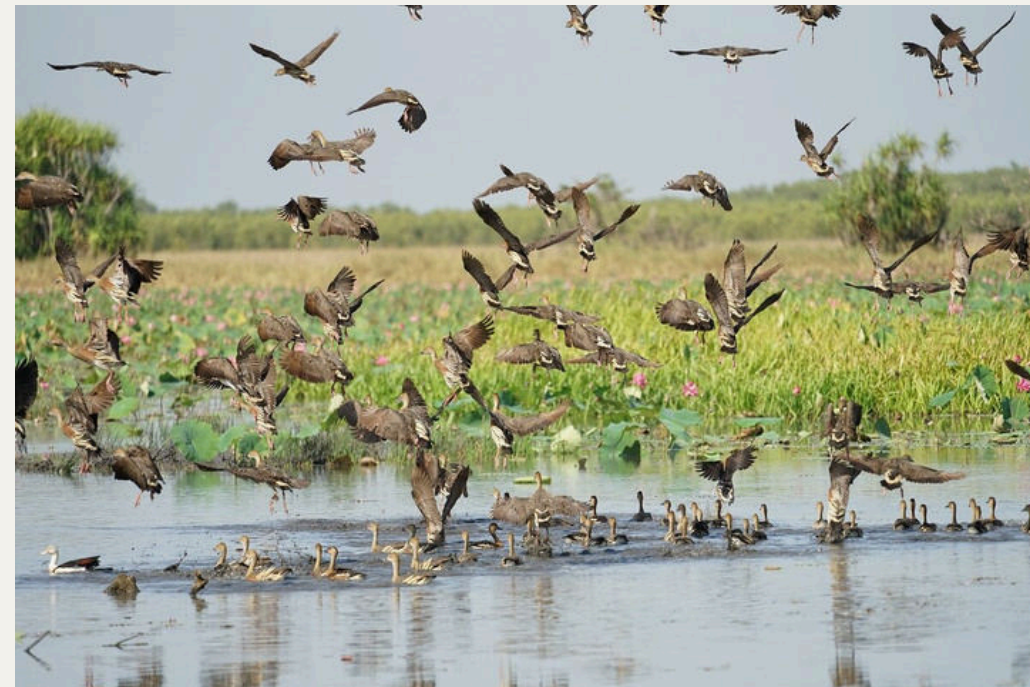
CONSIDERATIONS: unique threats or needs, cultural value, ecological processes, umbrella or keystone species, endemic / rare.

STEP 1: ASSESS



SPLITTING OF TARGETS

Broad targets may need to be split into more specific ones to fully reflect the biodiversity in your project scope.



TARGET: wetland birds



Hérons



Ducks

STEP 1: ASSESS



LUMPING OF TARGETS

Targets with shared habitat, threats, and management needs can be combined into a single, broader target.



**Great Bustard
(*Otis tarda*)**



**Greater Short-toed Lark
(*Calandrella
brachydactyla*)**



**TARGET: steppe birds
assemblage**

STEP 1: ASSESS



NESTED TARGETS

Nested targets are a way to group many individual elements into one logical unit, making project planning simpler and more manageable.



Nested within this target could be:

- Oak-hornbeam woodlands (important for structural diversity).
- Meadow-steppe grasslands (key for steppe flora and pollinators).
- Species like the European souslik (*Spermophilus citellus*).
- Eastern imperial eagle (*Aquila heliaca*).
- Rare orchids or endemic plants.

NESTED TARGET: forest-steppe mosaic ecosystems



4. GROUP WORK INSTRUCTIONS

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GROUP WORK 1.1



Group Work Instructions¹ (GWI) – 1.1 Define Scope, Vision & Biodiversity Targets

1. Purpose of Exercise

The purpose of this exercise is to define the scope, vision, and biodiversity targets of your conservation project, providing a clear foundation for planning and action.

2. Conservation Standards Definitions

Scope is the focus of a project and what it intends to affect. We distinguish three different categories of scope:

- Place-based scope.
- Target-based scope.
- Thematic-based scope.

Vision is a general summary of the desired condition that you are trying to achieve through the work of the project. A good vision meets the following criteria:

- Relatively general.
- Visionary.
- Brief.

Biodiversity target – is a specific species, habitat, or ecological system at a project site that the project focuses on. Together, all targets should represent the key biodiversity values of the site.

3. Procedure

In your team, work through the steps as outlined below.

You can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

Step 1: Define the scope.

1. **Explore different boundary options** for your project area using a map (e.g., Google Maps or Google Earth).
 - In your discussion, consider:
 - a. The principles of the [CBD Ecosystem Approach](#).
 - b. A project area size between 50,000 and 500,000 hectares.
2. **Mark the selected boundary** of your project directly on the map using the drawing tools in Google Maps or Google Earth.
3. **Provide a brief explanation** justifying your chosen **project boundary**—why it makes ecological and practical sense.

Step 2: Develop a vision for your conservation project

1. **Create a draft vision statement** that describes the long-term desired future for your project area. Use the criteria for a strong vision: make it inspiring, clear, general (not too detailed), and focused on the positive impact over time.
2. **Review and revise your draft** based on feedback and the criteria until you reach a final version.
3. **Write your finalized vision** clearly on flipchart paper to share and discuss with the group.

Step 3: Select your Biodiversity Targets

To define the biodiversity targets for your conservation project you can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

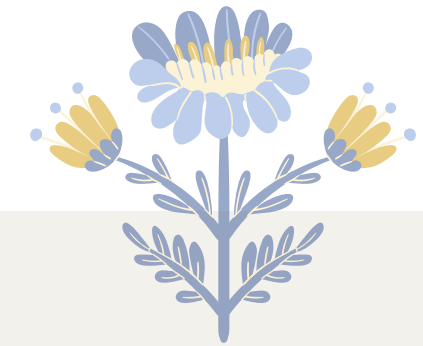
1. **Brainstorm biodiversity targets** using **dark green cards**—these are the species, habitats, or ecosystems your project aims to conserve.
2. **Select up to eight key targets (fewer is better)** that together represent the biodiversity within your project scope. These should reflect your project's conservation priorities—though they may evolve during the module.
3. If applicable, **add 1–3 nested targets** for at least one of your main biodiversity targets to capture important species or systems within broader targets.
4. **Review the biodiversity targets and lump or split** them as appropriate.
 - *Lump targets together if they:*
 - Co-occur in the same area.
 - Share key ecological processes.
 - Require similar management.
 - Face the same threats and respond to similar strategies.
 - *Split targets if their needs, threats, or responses differ significantly.*

4. Checklist of the recording of your group work

1. A digital image (.jpg) of your scope including the delineations.
2. A paragraph with the justification of this delineation and a list of the sources revised.
3. The vision for your conservation project.
4. Write a paragraph with an explanation of why you chose these biodiversity targets.

5. Recommended guiding documents

[Conservation Standards Website: About CS](#)
[Conservation Standards v4.0 \(p.17-19\)](#)



Defining the project's scope, vision, and targets is the foundation for everything that follows.

- SCOPE defines where and what we're working on.
- VISION gives us a shared long-term goal.
- TARGETS keep us focused on what matters most for conservation success.

This material was developed in the course of the joint Erasmus+ project
"Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine" (2023-2025)

funded by the EU

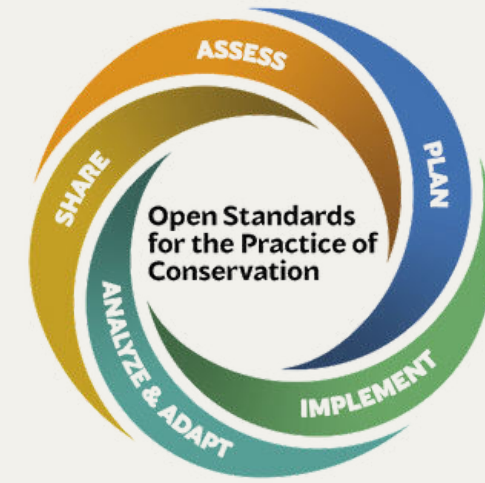


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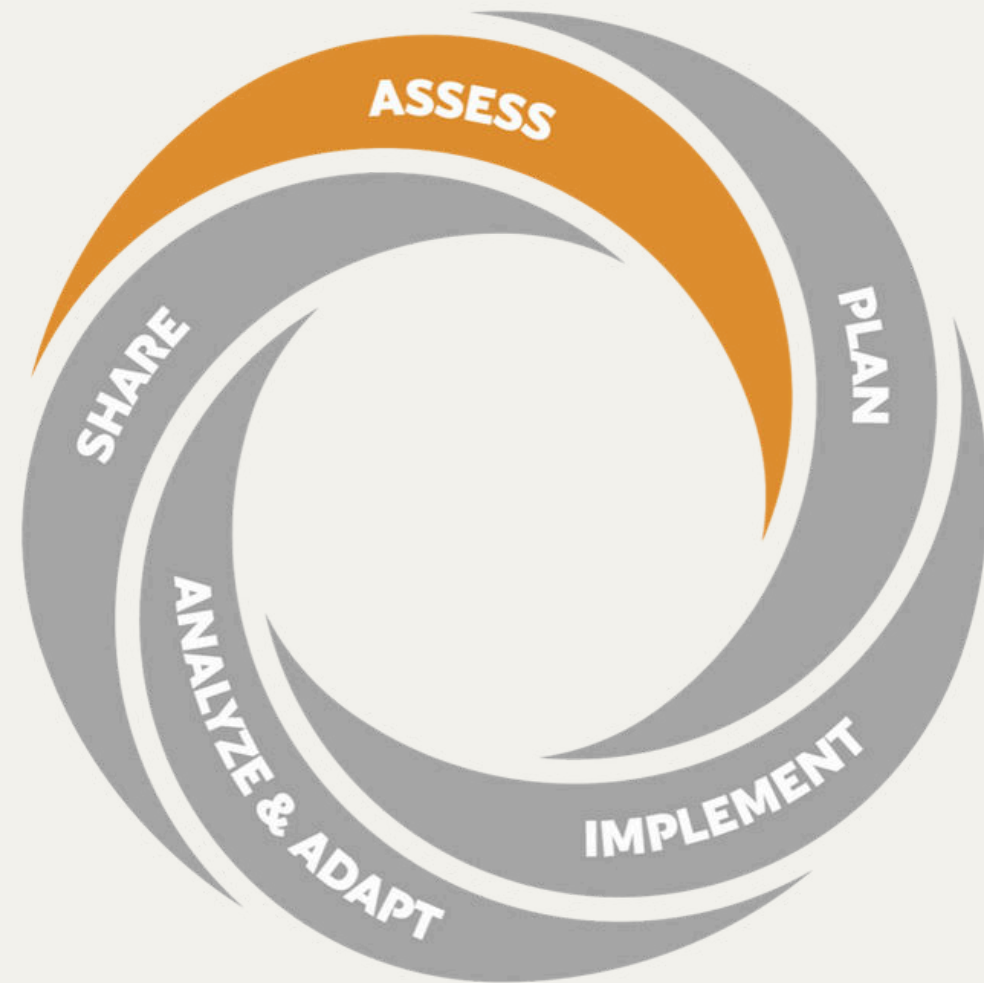
Ecosystem Services and Human Wellbeing Targets

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
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STEP 1: ASSESS



STEP 1. ASSESS

- Purpose & team
- **Scope & vision**
- **Conservation targets & viability**
- Threats
- Conservation situation



1. HUMAN WELL-BEING TARGETS

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STEP 1: ASSESS



Human well-being targets are aspects of societal well-being that benefit from the ecosystem services provided by healthy conservation targets.

CATEGORIES OF HUMAN WELL-BEING TARGETS

- Basic material for a good life.
- Health.
- Good social relations.
- Security.
- Freedom & choice (not directly related to ecosystem services).



CATEGORIES OF HUMAN WELL-BEING TARGETS

- **BASIC MATERIAL FOR A GOOD LIFE**

Access to essential resources and sustainable livelihoods:

- Increased access to clean water through wetland restoration.
- Sustainable fishing or grazing practices that support local income.
- Improved soil fertility from reforestation or agroecological practices.

- **HEALTH**

Physical and mental well-being influenced by environmental quality:

- Reduced respiratory illness due to improved air quality from forest cover.
- Lower incidence of waterborne disease through improved watershed protection.
- Increased access to medicinal plants through habitat conservation.

STEP 1: ASSESS



CATEGORIES OF HUMAN WELL-BEING TARGETS

- **GOOD SOCIAL RELATIONS**

Trust, respect, and social cohesion:

- Strengthened cooperation between communities through shared management of natural resources.
- Enhanced intergenerational knowledge-sharing through community-based conservation programs.
- Reduced conflict over land use by involving stakeholders in planning.

- **SECURITY**

Protection from environmental risks and natural disasters:

- Reduced flood risk through wetland and riverbank restoration.
- Increased food security from resilient agroecosystems.
- Lower exposure to wildfires due to better land and forest management.

STEP 1: ASSESS



CATEGORIES OF HUMAN WELL-BEING TARGETS

- **FREEDOM & CHOICE (NOT DIRECTLY RELATED TO ECOSYSTEM SERVICES)**

Autonomy, participation, and access to opportunity:

- Increased participation of women and youth in conservation decision-making.
- Empowerment of Indigenous communities to manage traditional lands.
- Access to education and training through conservation-related programs.



2. ECOSYSTEM SERVICES

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STEP 1: ASSESS



Ecosystem services are the essential goods and functions that nature provides to people—such as clean water, food, air, flood protection, pollination, and climate regulation.

CATEGORIES OF ECOSYSTEM SERVICES

- Provisioning.
- Regulating.
- Cultural.
- Supporting.

CATEGORIES OF ECOSYSTEM SERVICES

STEP 1: ASSESS



- **PROVISIONING**

These are the products we obtain directly from ecosystems: freshwater from rivers, wetlands, and aquifers; food such as wild berries, fish, or game; timber and fuelwood from forests; medicinal plants used in traditional and modern medicine, etc.

- **CULTURAL SERVICES**

These are the non-material benefits people gain from ecosystems: recreation and ecotourism in national parks or nature reserves; spiritual or religious value of sacred natural sites; aesthetic enjoyment of scenic landscapes; cultural identity tied to traditional land use and biodiversity; education and inspiration through nature-based learning, etc.

- **REGULATING SERVICES**

These are benefits from the regulation of ecosystem processes: climate regulation through carbon storage in forests and peatlands; water purification by wetlands and riparian vegetation; flood control provided by natural floodplains and wetlands; pollination by bees and insects essential for crops, etc.

- **SUPPORTING SERVICES**

These are services that maintain the conditions for life and underpin all other services: soil formation and nutrient cycling in grasslands and forests; photosynthesis, the basis of energy for all ecosystems; habitat provision for diverse plant and animal species; seed dispersal by birds and mammals; primary production that supports food chains, etc.



3. HWB TARGETS & ECOSYSTEM SERVICES IN SITUATION MODEL

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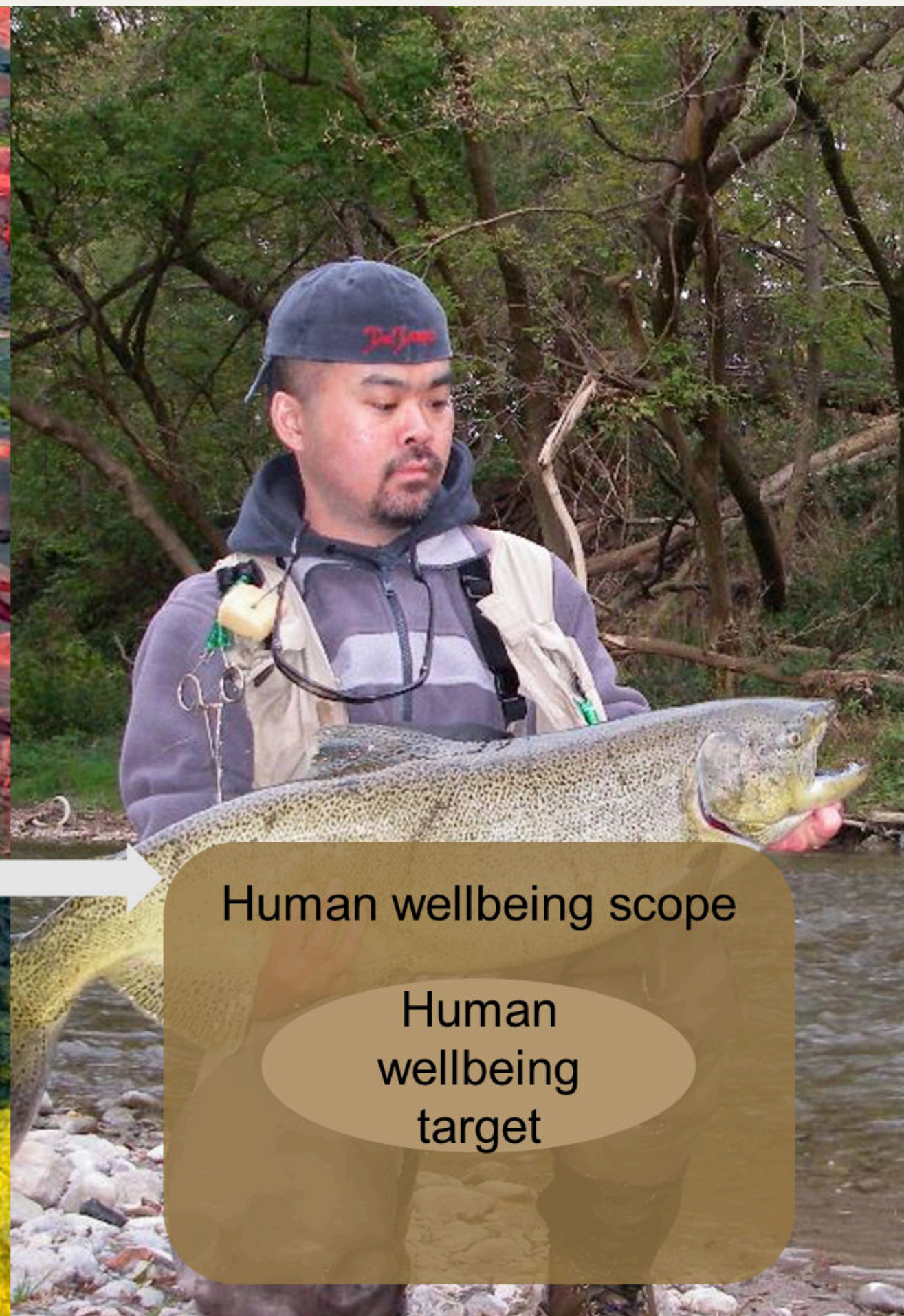
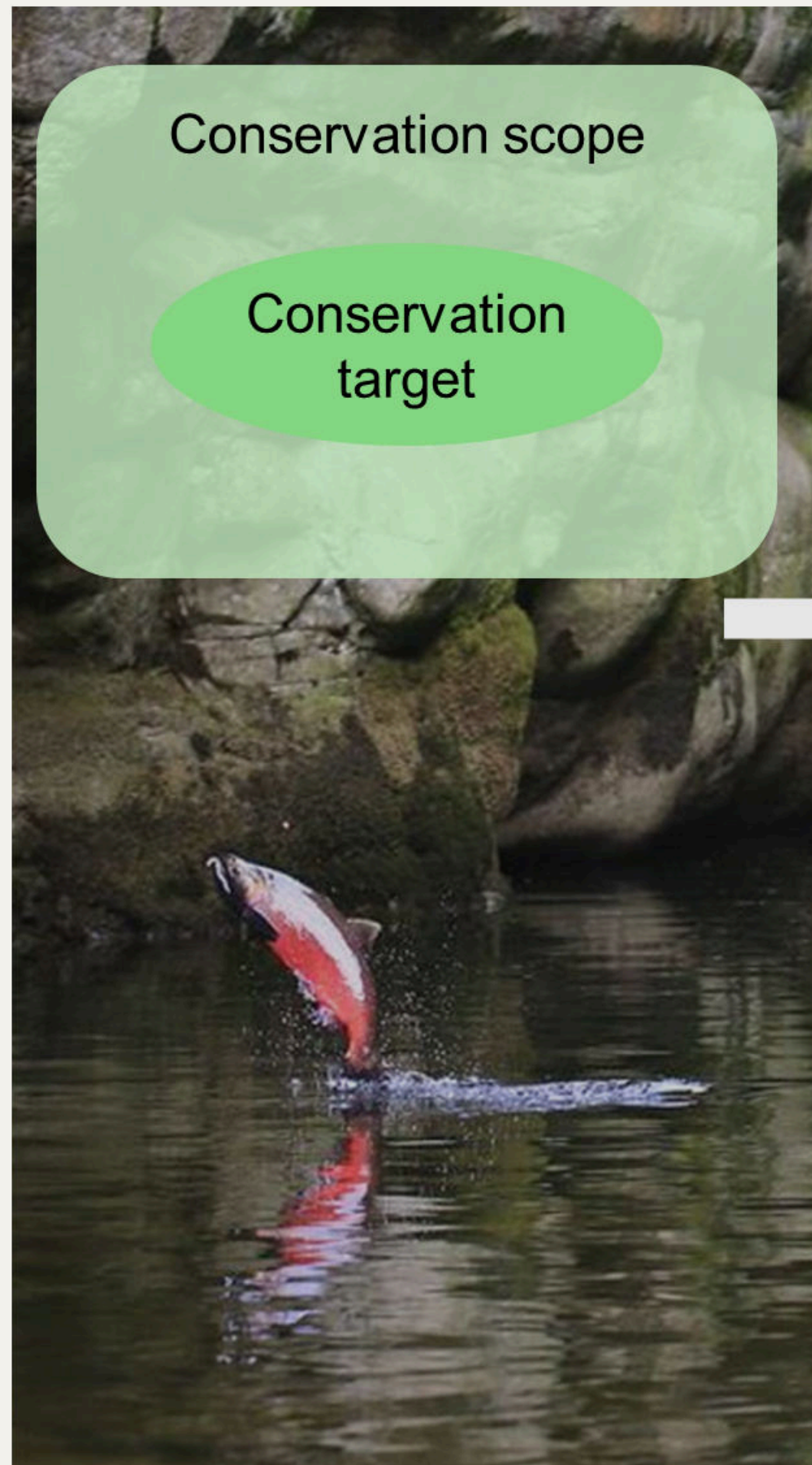
Conservation scope

Conservation target

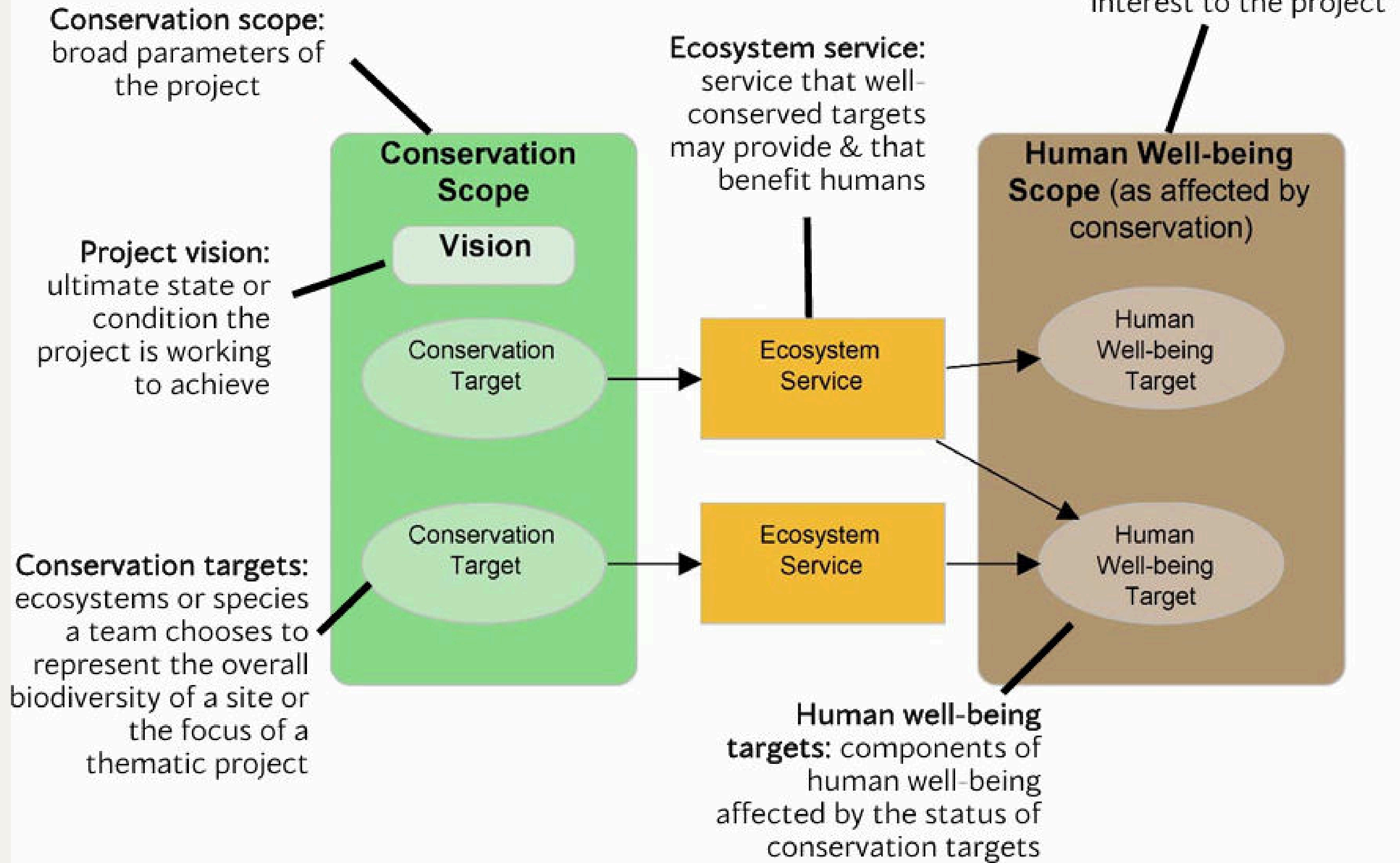
Ecosystem Service

Human wellbeing scope

Human wellbeing target



Generic Situation Model Extract Showing Scope, Vision, and Targets





When to Include Human Wellbeing & Ecosystem Services?

Ask this key question:

👉 Will it add value to our planning and understanding?

Include HWB or ES when:

- Local communities depend on natural resources (e.g., farmers, herders).
- Stakeholders need this context to engage with the project.
- Funders require social or community benefits.
- Strategies must show both conservation and human impact.
- Cultural norms view people and nature as interconnected (e.g., Indigenous-led projects).

Do not include HWB or ES when:

- The project is tightly focused on a species or ecosystem.
- It's a high-level policy or global biodiversity project.
- Including HWB or ES adds complexity without improving understanding.



4. GROUP WORK INSTRUCTIONS

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

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GROUP WORK 1.2

Group Work Instructions¹ (GWI) – 1.2 Identify Ecosystem Services & Human Well-being Targets

1. Purpose of Exercise

The purpose of this exercise is to define the relation between biodiversity targets and human wellbeing targets via ecosystem services.

2. Conservation Standards Definitions

Biodiversity Target – an element of biodiversity (species, habitat, or ecological system) at a project site on which a project has chosen to focus.

All targets should collectively represent the biodiversity of concern at the site.

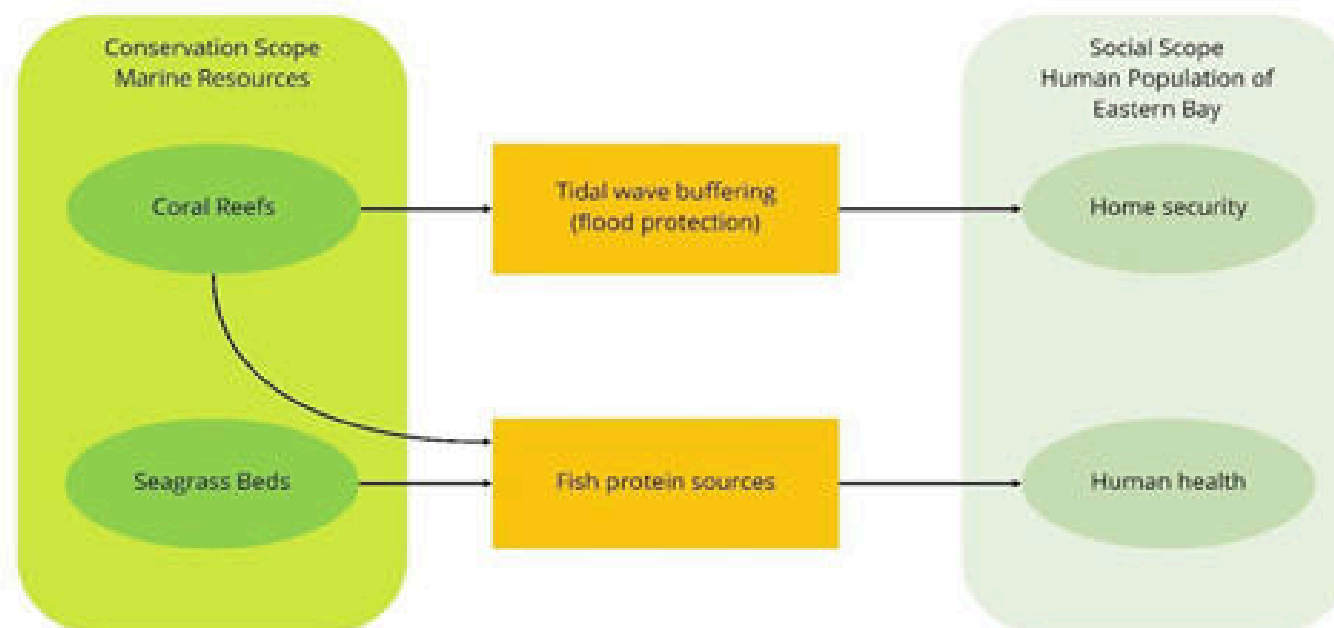
Human Wellbeing Target – aspects of human wellbeing that the project chooses to focus on. In the context of a conservation project, human wellbeing targets focus on those components of human wellbeing affected by the status of biodiversity targets.

*Millennium Ecosystem Assessment defines these categories: 1) necessary material for a good life, 2) health, 3) good social relations, 4) security, and 5) freedom and choice.

Ecosystem Services – The benefits people obtain from intact and functioning ecosystems. These include provisioning, regulating, and cultural services that directly affect people and supporting services needed to maintain the other services.

3. Example

- Biodiversity Targets, Human Wellbeing Targets and Ecosystem Services.



4. Procedure

In your team, work through the steps as outlined below.

You can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

Step 1: Identify Ecosystem Services

1. Use **orange cards** and **brainstorm on the ecosystem services** that your biodiversity targets provide.
2. **Identify the key ecosystem services** provided by your biodiversity targets.
3. **Check if the ecosystem services** that you identified cover especially processes that are needed for climate change adaptation (e.g. cooling, water retention, ...)

Step 2: Identify Human Wellbeing Targets

1. Use **light green cards** and **brainstorm on the human wellbeing targets** that are benefiting from the ecosystem services provided in the project area.
2. **Identify human wellbeing targets and link the ecosystem services** to the relevant human wellbeing target.

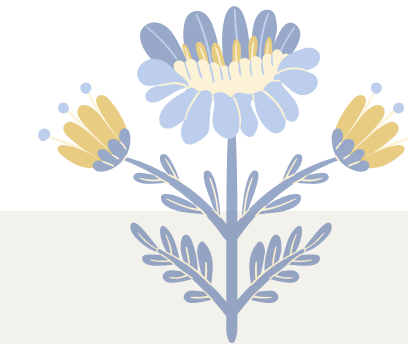
5. Checklist of the recording of your group work

1. Write a paragraph highlighting the most important benefits that the biodiversity targets provide to human wellbeing.

§. Recommended guiding documents

[Conservation Standards Website: About CS](#)

[Conservation Standards v4.0 \(p.20-21\)](#)



Human well-being targets and ecosystem services help show why nature matters – for both people and the planet.

This material was developed in the course of the joint Erasmus+ project
“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

funded by the EU



Co-funded by
the European Union

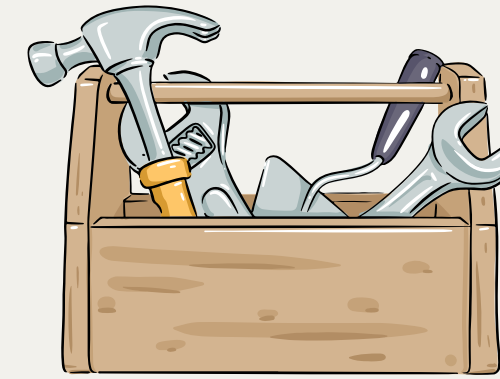


<https://translearnn.ztu.edu.ua>





Tools



Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology



OUTLOOK

- Miradi Share
- Miro work space
- Group work



MIRADI



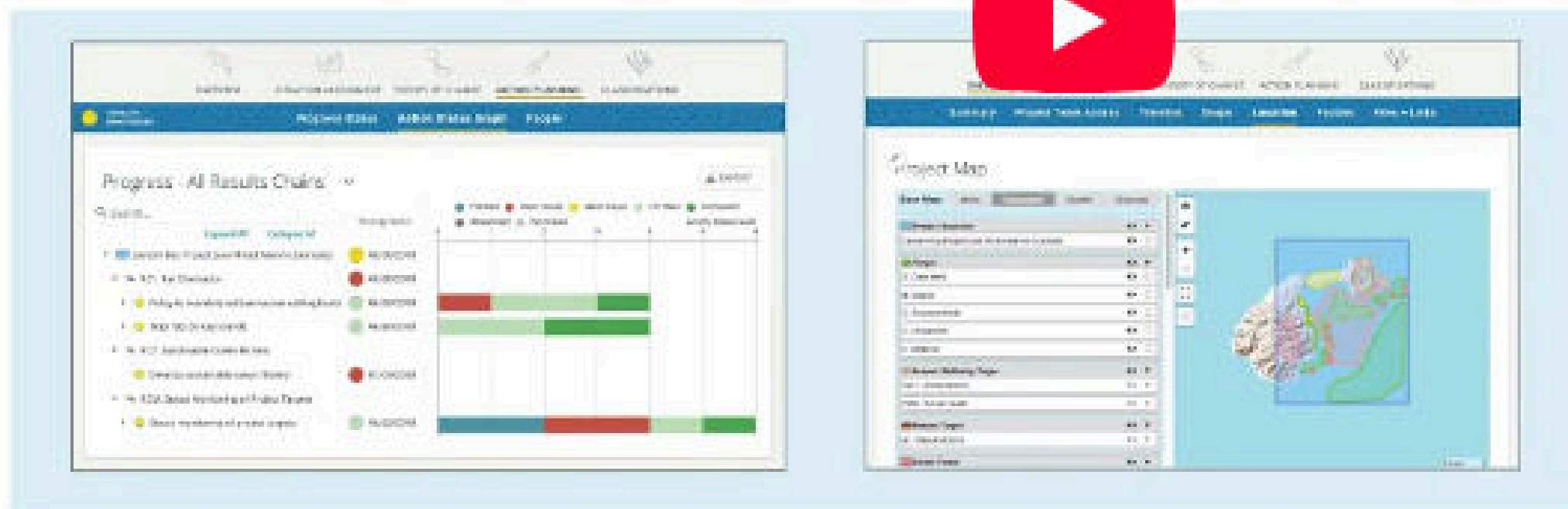
MIRADI SHARE 2.0 - TRAILER



Share



Let me show you how Miradi works in under 3 mins



Watch on  YouTube

MIRADI

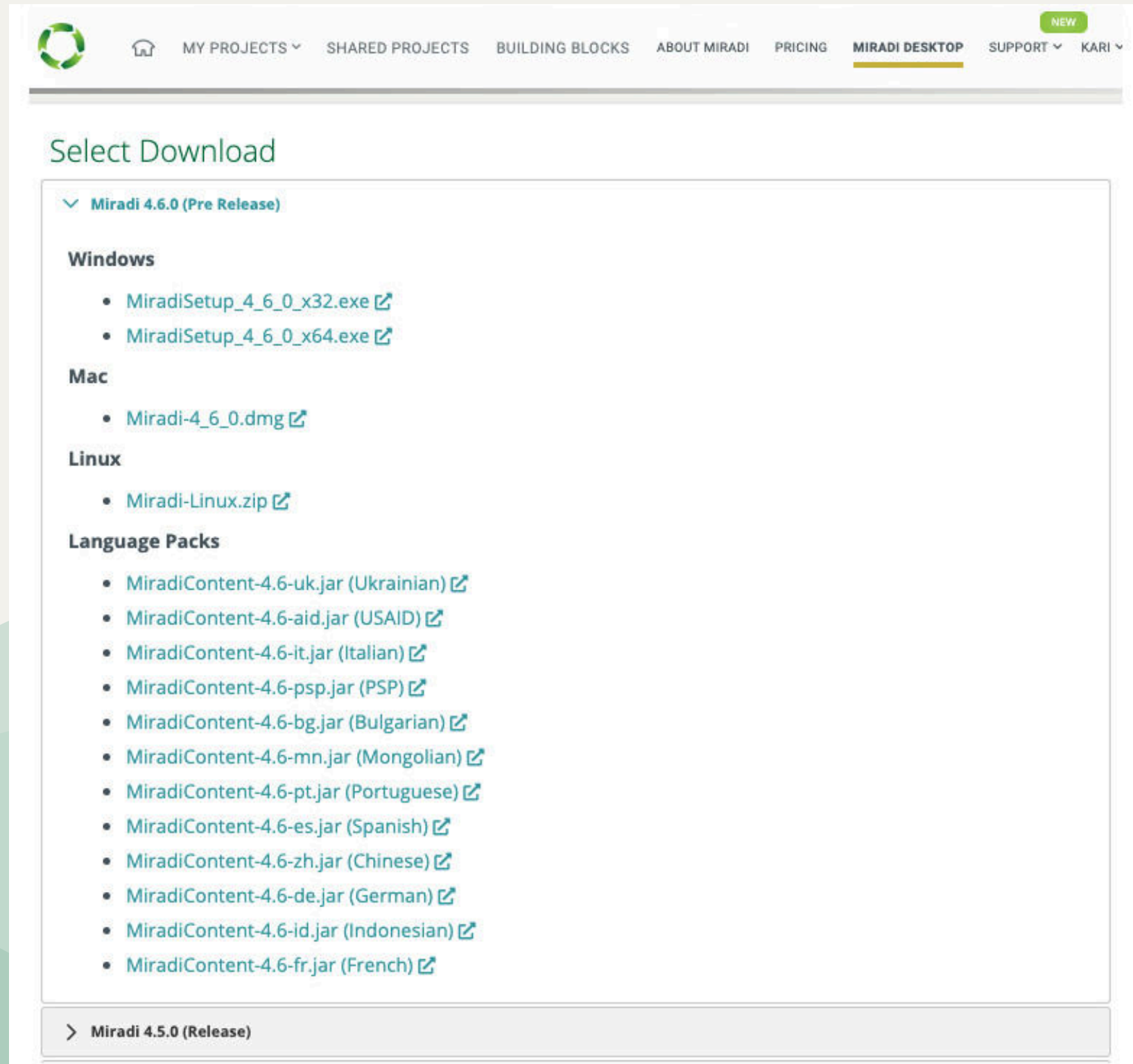


Desktop Version



Web-based

MIRADI



The screenshot shows the 'Select Download' page for Miradi 4.6.0 (Pre Release). The page has a navigation bar with links for 'MY PROJECTS', 'SHARED PROJECTS', 'BUILDING BLOCKS', 'ABOUT MIRADI', 'PRICING', 'MIRADI DESKTOP' (highlighted), 'SUPPORT', and 'KARI'. A 'NEW' badge is next to 'MIRADI DESKTOP'. The main content area is titled 'Select Download' and lists download options for Windows, Mac, Linux, and Language Packs. At the bottom, there is a link for 'Miradi 4.5.0 (Release)'.

Select Download

▼ **Miradi 4.6.0 (Pre Release)**

Windows

- [MiradiSetup_4_6_0_x32.exe](#)
- [MiradiSetup_4_6_0_x64.exe](#)

Mac

- [Miradi-4_6_0.dmg](#)

Linux

- [Miradi-Linux.zip](#)

Language Packs

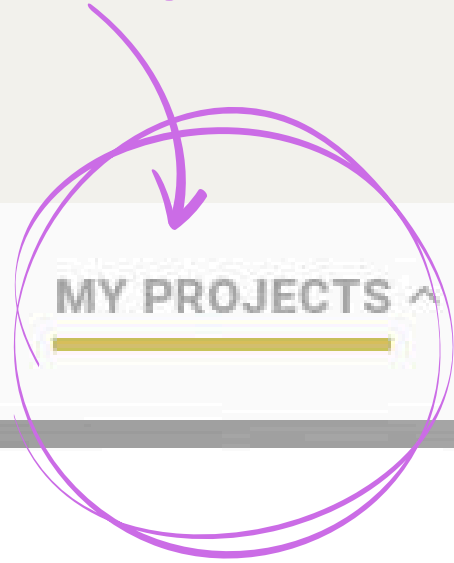
- [MiradiContent-4.6-uk.jar \(Ukrainian\)](#)
- [MiradiContent-4.6-aid.jar \(USAID\)](#)
- [MiradiContent-4.6-it.jar \(Italian\)](#)
- [MiradiContent-4.6-psz.jar \(PSP\)](#)
- [MiradiContent-4.6-bg.jar \(Bulgarian\)](#)
- [MiradiContent-4.6-mn.jar \(Mongolian\)](#)
- [MiradiContent-4.6-pt.jar \(Portuguese\)](#)
- [MiradiContent-4.6-es.jar \(Spanish\)](#)
- [MiradiContent-4.6-zh.jar \(Chinese\)](#)
- [MiradiContent-4.6-de.jar \(German\)](#)
- [MiradiContent-4.6-id.jar \(Indonesian\)](#)
- [MiradiContent-4.6-fr.jar \(French\)](#)

> **Miradi 4.5.0 (Release)**



MIRADI

Most relevant for you!



MY PROJECTS ^

SHARED PROJECTS

BUILDING BLOCKS

MY PROGRAMS

Standalone Projects

Adaptive Ecosystem Management (HNEE)

STANDALONE PROJECTS

+ ADD PROJECT

You are a member in or have favorited 11 standalone projects:

- ★ BDSM: The Danube Project
- ★ SAM Group 1 - Carpathians
- ★ SAM Group 2 - Steppe
- ★ SAM Group 3 - Forest Steppe
- ★ SAM Group 4 - Polissya

MIRADI



MY PROJECTS ▾

SHARED PROJECTS

BUILDING BLOCKS



ABOUT MIRADI

Shared Projects

🔍 Search...

This table includes all projects available to explore. Click the ? to the right for guidance on how to filter and group the table's projects. [\(Show more\)](#)

Name	Description	Access ⓘ 1 ↑	Last Activity Date 2 ↓	Program	Countries
proyecto de conservacion - miradi		Public	3. Mai 2025 16:15	Standalone Projects	
SCC mirror committee on biodiversity	This project is to support the work of the to the Standards Council of Canada (SCC) mirror committee to the International Standard	Public	2. Mai 2025 20:40	Conservation Standards Collective	
Eastern Bay Project (aka Miradi Marine Example)	The Eastern Bay Project (also known as the Miradi Marine Example) is the founding project in the Miradi Islands Seascape Program . This project is	Public	2. Mai 2025 16:55	Miradi Islands Seascape (Example Program)	WLF: Wallis and Futuna Islands
03.1 Outreach & Communications	This action classification includes promoting desired awareness and/or emotions and subsequent behavior change by providing information to	Public	1. Mai 2025 22:14	CAML - The Conservation Actions & Measures Library	
GGI Roseate Terns		Public	30. Apr. 2025 16:55	Standalone Projects	
Leach's Storm Petrel Conservation Plan for Eastern North Amer...	PURPOSE: To develop a collaborative adaptive management conservation plan to save Leach's Storm-Petrel in Eastern North America.	Public	30. Apr. 2025 15:59	Birds Canada Atlantic Conservation Programs	
Miradi Marine Example	(This is the example project used by Miradi Desktop Software . All information in this project is fictitious and resembles to a real world.	Public	29. Apr. 2025 21:54	Standalone Projects	WLF: Wallis and Futuna Islands
CMP Strategic Plan 2023-2033	The Conservation Measures Partnership (CMP) is a joint venture of conservation organizations and collaborators who are committed to	Public	29. Apr. 2025 13:20	Conservation Measures Partnership	
ER 503 Final Assignment - Round Meadow		Public	24. Apr. 2025 06:57	Standalone Projects	
Yourka Reserve	Yourka Reserve, on Jirrbal and Warrungu Country, is located approximately 30km south of Ravenhoe in the upper catchment of	Public	23. Apr. 2025 03:43	Bush Heritage Australia	AUS: Australia
Implementation Strategy - Marine Vegetation	This file includes all Puget Sound Pressure Sources and Stressors.	Public	21. Apr. 2025 18:01	Puget Sound Recovery	

MIRADI

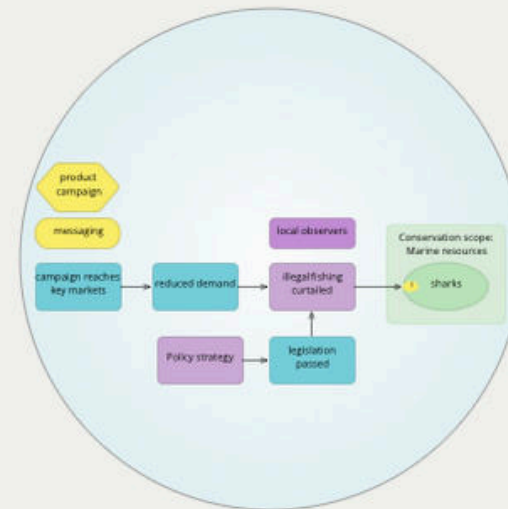
At the moment, Miradi's libraries or Building Blocks are under construction - pun intended! We hope that you will both use these resources, but also contribute to and help them grow over time.

3 TYPES OF BUILDING BLOCKS



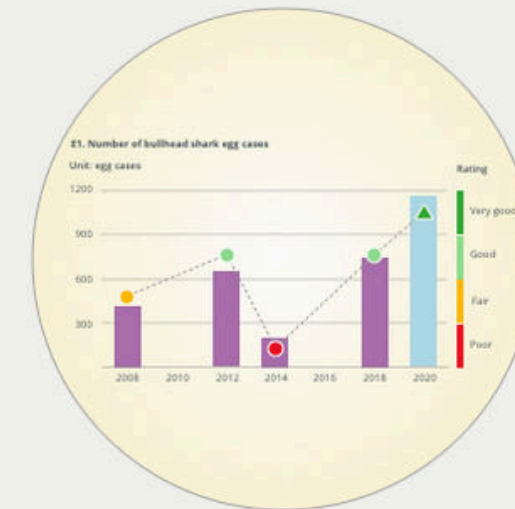
Situation Models

- Review [CMP standard classifications](#) to ensure you have considered all possible threats or actions
- (under construction) Download generic models of key threats and their drivers



Theories of Change

- Browse [Conservation Actions & Measures Library \(CAML\)](#) to find generic results chains for key actions
- Go to [Conservation Evidence](#) or [Environmental Evidence](#) to find assessments of action effectiveness



Performance Indicators

- Search [Conservation Actions & Measures Library \(CAML\)](#) to find objectives and indicators for key factors
- Review FOS's library of standard [Key Ecological Attributes & Indicators](#)

MIRADI



MY PROJECTS

SHARED PROJECTS

BUILDING BLOCKS



ABOUT MIRADI

PRICING

MIRADI DESKTOP

SUPPORT

ANGELA

BDSM
Economics Unleashed

CHECKED-IN

MIRADI 4.5



DATA VIEWS



Most relevant for you!

BDSM: THE DANUBE PROJECT



PROJECT OVERVIEW



SITUATION ASSESSMENT



THEORY OF CHANGE



WORK PLANNING



PROGRESS TRACKING



REPORTS & DATA



PROJECT ADMIN

Summary

Scope

Map

People & Groups

Files & Resources

Miradi Project Versions

Project Summary

Project Details

Title

BDSM: The Danube Project

Description

A project part of the Adaptive Ecosystem Management class at the HNEE (Eberswalde University for Sustainable Development). This project is a **Simulation** for practice.

Miradi Version

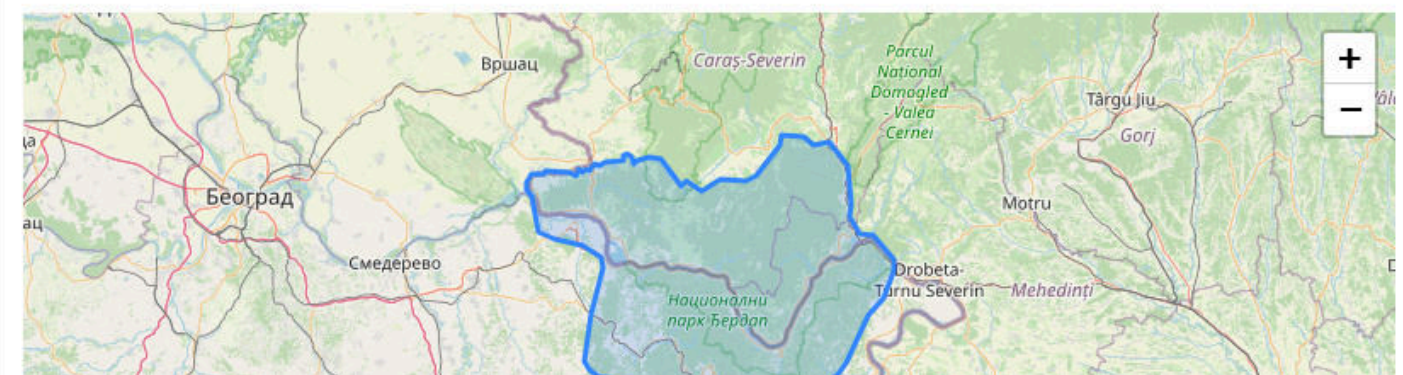
4.5

Project Access

Private

Map Overview

FULL MAP >



MIRO

day 1 - 02.05.205



WHAT MOTIVATED YOU TO JOIN THE COURSE?

International exchange: 9 dots (3x3 grid)

Competences to gain: 10 lightbulb icons

Language practice: 10 speech bubble icons

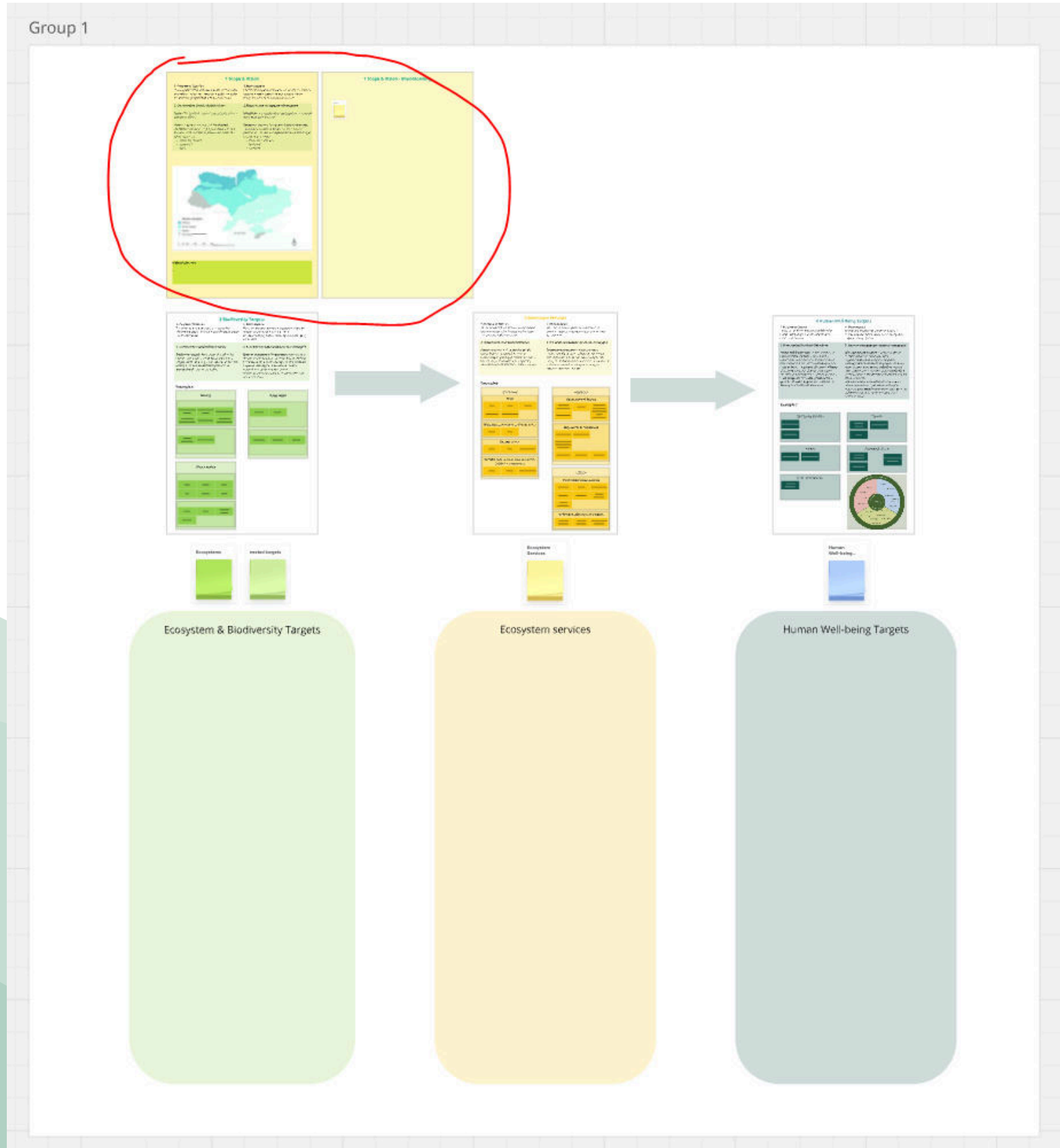
Other: 10 icons representing various activities and interests

Frames

- Present
- 1 day 1 - 02.05.205
- 2 Group 1
- 3 Group 2
- 4 Group 3
- 5 Group 4

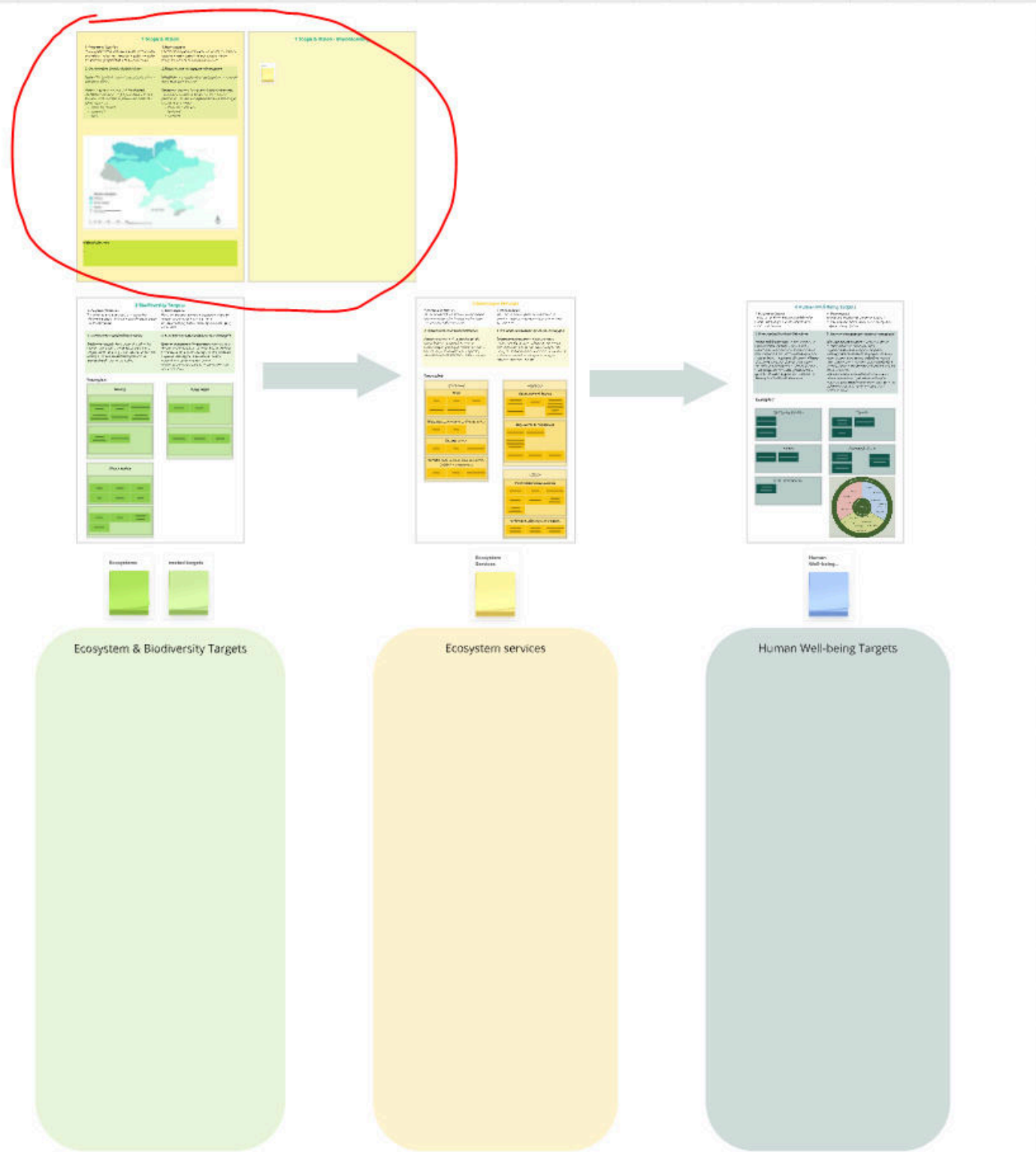


MIRO



MIRO

Group 1



1 Scope & Vision

1. Purpose of Exercise

The purpose of this exercise is to define the scope and vision for your reconstruction project in order to clarify the geographical and thematic focus.

2. Conservation Standards Definitions

Scope – The (spatial) focus of a project and what it intends to affect.

Vision – A general summary of the **desired condition** that you are trying to achieve through the work of the project. A good vision meets the following criteria:

- Relatively general
- Visionary!!
- Brief

1. Мета вправи

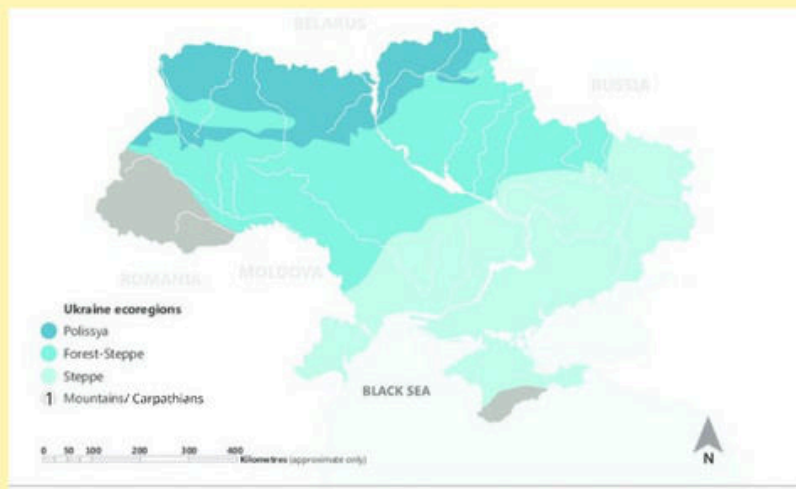
Метою цієї вправи є визначення обсягу та бачення вашого проекту реконструкції для уточнення географічного та тематичного фокусу.

2. Визначення стандартів збереження

Масштаб - (просторовий) фокус проекту і те, на що він має намір вплинути.

Бачення - загальний підсумок бажаного стану, якого ви намагаєтеся досягти за допомогою роботи над проектом. Хороше бачення відповідає наступним критеріям:

- Відносно загальне
- Візійна!!!
- Стильний



Vision Statement

.....

1 Scope & Vision - Brainstorming



GROUPS

- get to know each other
- be respectful and cooperate



GROUPS

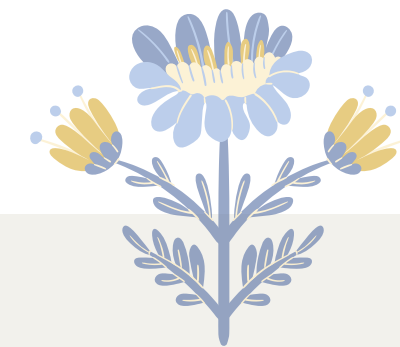
- get to know each other
- be respectful and cooperate
- talk about your needs for a good cooperation



GROUPS

- get to know each other
- be respectful and cooperate
- talk about your needs for a good cooperation
- agree on group roles
 - Coordinator
 - Moderator
 - Miradi wizard
 - Well-being manager





Enjoy the Cooperation!

This material was developed in the course of the joint Erasmus+ project
“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

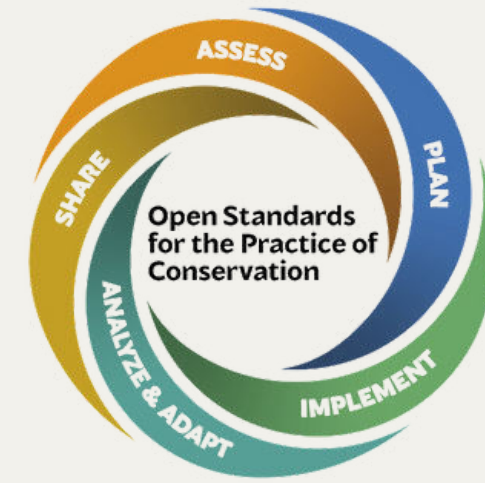
funded by the EU



Co-funded by
the European Union



<https://translearnn.ztu.edu.ua>



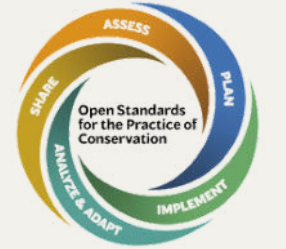
Target Viability Assessment

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology



STEP 1: ASSESS



RECAP



SCOPE defines the **geographic area** and the **general focus of a project**—whether it is conservation, reconstruction, or ecological restoration.

It answers the question:

WHAT SYSTEM ARE WE TRYING TO AFFECT, AND WHERE?



Ecological Restoration

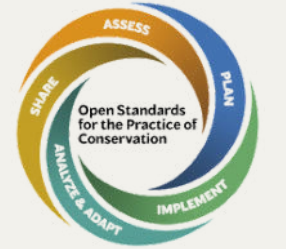
- Restoration of ecosystems (e.g. forests, wetlands, steppes).
- Biodiversity recovery.
- Restoration of ecosystem services (e.g. water retention, soil stability).



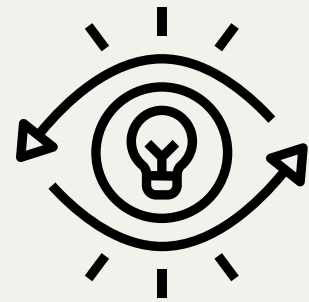
Socioeconomic Rebuilding

- Sustainable land use and agriculture.
- Nature-based livelihoods.
- Community well-being (e.g. flood protection, access to natural resources).
- Post-war land recovery and social-ecological resilience.

STEP 1: ASSESS



RECAP



VISION is a clear and short **statement that describes the future** you want to achieve through your project.

KEY ELEMENTS IN A PROJECT VISION



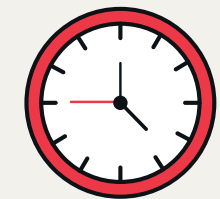
Desired future condition(s) of the system: restored ecosystems, resilient habitats, functioning landscapes.



Geographic or ecological / socio-economic focus: in the forest-steppe zone, in southern Ukraine, across floodplains and agricultural lands.

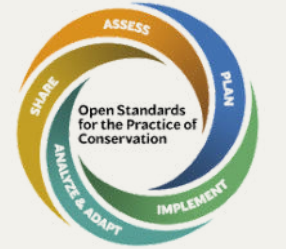


Human well-being or socio-economic outcomes: sustainable livelihoods, safe and healthy communities, post-war recovery and resilience.



Time horizon or long-term impact (optional): for future generations, over the coming decades.

STEP 1: ASSESS



RECAP



Biodiversity target is a specific species, habitat, or ecosystem that the project aims to conserve or restore.



A human well-being target is about the people side of the project, like health, livelihoods, or safety.

KEY RULES FOR FORMULATING TARGETS



Use clear and specific language, don't use verbs.



Make it measurable.

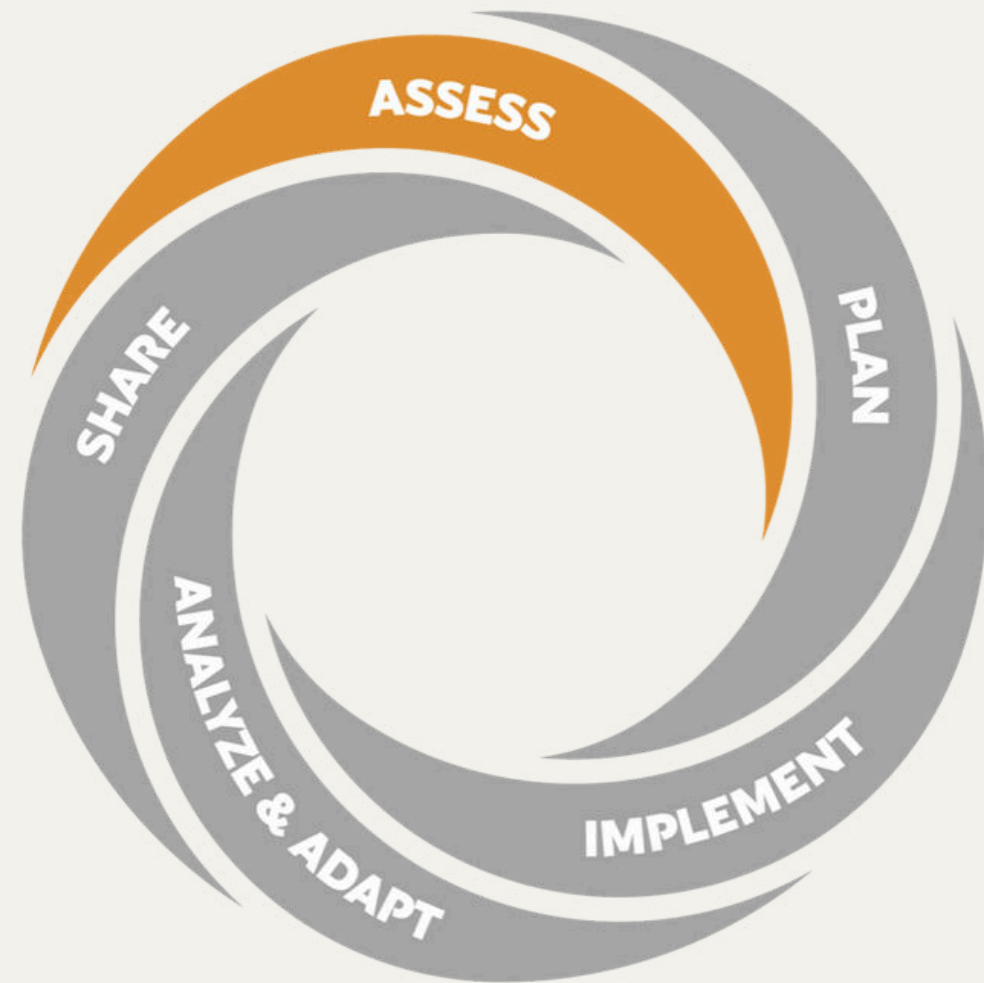


Connect to scope and vision.



Avoid vague or overly broad terms.

STEP 1: ASSESS



STEP 1. ASSESS

- Purpose & team
- Scope & vision
- Conservation targets & **viability assessment**
- Threats
- Conservation situation



STEP 1: ASSESS

1. VIABILITY ASSESSMENT

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STEP 1: ASSESS



VIABILITY refers broadly to the "health" or status of a population, species, or ecosystem. It indicates a target's ability to withstand or recover from natural or human-caused disturbances and survive over long time periods or generations.

What Viability Tells Us?

- How strong or vulnerable the target is.
- Whether the target is improving, stable, or declining.
- Where to focus restoration or protection efforts.

Why It Matters?

- Helps to set clear goals.
- Tracks the progress over time.
- Informs strategic decisions.

STEP 1: ASSESS



HOW TO MEASURE?

1. Select a target and identify a limited number of key ecological attributes (KEAs).
2. For each KEA, identify a limited number of measurable indicators.
3. For each indicator, determine an acceptable range of variation and rating scale.
4. For each indicator, define current and desired future status.
5. Record any assumptions.
6. Repeat for your other targets.
7. Review your viability assessments and adjust as necessary.

STEP 1: ASSESS



HOW TO MEASURE?

1. Select a target and identify a limited number of **key ecological attributes (KEAs)**.
2. For each KEA, identify a limited number of **measurable indicators**.
3. For each indicator, determine an acceptable range of variation and rating scale.
4. For each indicator, define current and desired future status.
5. Record any assumptions.
6. Repeat for your other targets.
7. Review your viability assessments and adjust as necessary.

STEP 1: ASSESS



Key ecological attributes (KEA) are aspects of a target’s biology or ecology that, if present, define a healthy target and, if missing or altered, would lead to the outright loss or extreme degradation of that target over time.

**EACH KEA ANSWERS THE QUESTION:
“WHAT DOES THIS TARGET NEED TO PERSIST OVER TIME?”**

STEP 1: ASSESS



KEA CATEGORIES

- **Size:** measures the area or population size.
- **Condition:** assesses the quality or state of the ecosystem.
- **Landscape context:** evaluates the ecosystem's surroundings and connectivity.

KEA - SIZE

Target	Key Attribute
Sea turtle	Reproduction (size)

KEA - CONDITION

Target	Key Attribute
Coral reef	Community composition (condition)

KEA - LANDSCAPE CONTEXT

Target	Key Attribute
Sage brush habitat	Burn regime (landscape context)

STEP 1: ASSESS



Indicator is a measure for a specific information need such as the status of a target, change in a threat or progress toward an objective.

INDICATOR CRITERIA

- **Measurable** - capable of being recorded and analyzed using quantitative and/or qualitative methods.
- **Precise** - clearly defined so that all individuals interpret it the same way.
- **Consistent** - remains stable over time to ensure it consistently measures the same aspect.
- **Sensitive** - responds proportionally to actual changes in the condition being measured.

STEP 1: ASSESS



Target	Category (size, condition, landscape context)	KEA	Indicator ¹
Coral Reefs	Size	Area of coral reef	▲ A1. % of live coral coverage
	Condition	Healthy populations of key species	▲ A2. Parrotfish density/100sq. m
▲ A3. Abundance of spiny lobster			
Seabirds	Size	Population size of frigatebirds	▲ E1. # Breeding pairs of frigatebirds
Seagrass beds			
Sharks	Size	Population size of sharks	▲ A2. Abundance of hammerhead sharks
			▲ A3. # mature females birthing/year

In some cases, a single indicator is enough to measure a Key Ecological Attribute (KEA).

When one indicator isn't sufficient, using multiple indicators together can give a clearer and more reliable picture of the target's condition.

STEP 1: ASSESS



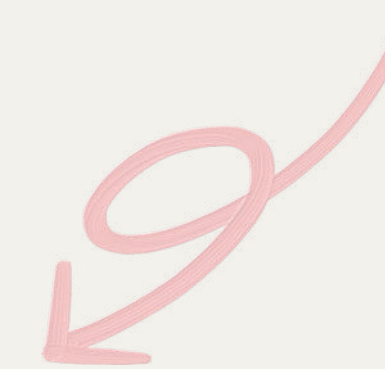
ACCEPTABLE RANGE OF VARIATION AND RATING SCALE

KEA Indicator Categories			
Poor	Fair	Good	Very Good
Restoration increasingly difficult; may result in extirpation of target	Outside acceptable range of variation; requires human intervention	Indicator within acceptable range of variation; some intervention required for maintenance	Ecologically desirable status; requires little intervention for maintenance

STEP 1: ASSESS



ACCEPTABLE RANGE OF VARIATION AND RATING SCALE



Target	Category (size, condition, landscape context)	KEA	Indicator ¹	Indicator Ratings ²				Source
				Poor	Fair	Good	Very Good	
Coral Reefs	Size	Area of coral reef	▲ A1. % of live coral coverage	<5%	5-9%	10-25%*	>25%**	Expert knowledge
	Condition	Healthy populations of key species	▲ A2. Parrotfish density/100sq. m	<5, >15	5-8*	9-11**	11-15	Rough guess
			▲ A3. Abundance of spiny lobster	None	Few*	Some**	Lots	Rough guess
Seabirds	Size	Population size of frigatebirds	▲ E1. # Breeding pairs of frigatebirds	<300	301-500	501-1000*	>1000**	Expert knowledge
Seagrass beds								
Sharks	Size	Population size of sharks	▲ A2. Abundance of hammerhead sharks	<50	50-200*	201-300**	>300	Onsite research
			▲ A3. # mature females birthing/year	<10	11-50*	50-75**	>75	Rough Guess

STEP 1: ASSESS



CURRENT AND DESIRED FUTURE STATUS

			Indicator ratings			
Target	Key Attribute	Indicator	Poor	Fair	Good	Very good
Sea turtle	Reproduction	Hatchlings per year		500-1,000	1,001-1,500	
<u>Current status</u>				700		
Desired future status					1,400	

!!! Think about appropriate time frame for achieving the desired status, keeping in mind that some changes may require long time periods

VIABILITY IN MIRADI



STEP 1: ASSESS



The screenshot displays the MIRADI web application interface. At the top, the navigation bar includes the MIRADI logo, a home icon, and menu items: MY PROJECTS, RELATED PROJECTS, BUILDING BLOCKS, ABOUT MIRADI, PRICING, MIRADI DESKTOP, SUPPORT, and YULIA. Below this is a secondary navigation bar with icons and labels for PROJECT OVERVIEW, SITUATION ASSESSMENT, WORK PLANNING, PROGRESS TRACKING, REPORTS & DATA, and PROJECT ADMIN. A dark teal banner below contains sub-sections: Situation Models, Target Viability (highlighted with a yellow arrow), Threat Analysis, Assumptions, and Strategy Effectiveness (marked with a 'NEW' badge). The main content area is titled 'Target Viability Tree' and features a search bar, a 'Display Targets' dropdown, and a 'FACTOR TYPES' filter. A list of items is shown, including 'SAM Group 2 - Steppe' with expand/collapse arrows, and sub-sections for 'Progress Updates', 'Classifications', and 'Timeframe'. Two yellow arrows point to the 'MY PROJECTS' and 'SITUATION ASSESSMENT' menu items.



2. GROUP WORK INSTRUCTIONS

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020

GROUP WORK 1.3

5 Viability Assessment

1. Purpose of Exercise

Identification of **Key Ecological Attributes (KEAs)** and the elaboration of a **viability assessment** for the biodiversity targets ~ to understand how the biodiversity targets are doing.

2. Conservation Standards Definitions

Viability – Broadly, the status or “health” of a biodiversity target. Viability indicates the ability of a biodiversity target to withstand or recover from most natural or anthropogenic disturbances and to persist for many generations or over long periods.

Key Ecological Attribute (KEA) – An aspect of a biodiversity target’s biology or ecology that, if missing or altered, would lead to the loss of that target over time. Three attribute categories often collectively determine the health of a biodiversity target (note: not all classes apply to all biodiversity targets):

- **Size** – a measure of the *area* of the biodiversity target’s occurrence (for an ecosystem target) or *abundance* of the target’s occurrence (for a species or population target).
- **Condition** – a measure of the biological composition, structure, and biotic interactions that characterize the target.
- **Landscape context** – an assessment of the target’s environment including *a) ecological processes and regimes* that maintain the target occurrence such as flooding, fire regimes, and other kinds of natural disturbance; and *b) connectivity* that allows species targets to access habitats and resources or allows them to respond to environmental change through dispersal or migration.

1. Мета вправи

Визначення **ключових екологічних атрибутів (КЕА)** та розробка **оцінки життєздатності** цільових показників біорізноманіття ~ для розуміння того, як виконуються цільові показники біорізноманіття.

2. Визначення природоохоронних стандартів

Життєздатність - в широкому розумінні, статус або "здоров'я" цільового завдання з біорізноманіття. Життєздатність вказує на здатність об'єкта біорізноманіття протистояти або відновлюватися після більшості природних або антропогенних порушень і зберігатися протягом багатьох поколінь або протягом тривалих періодів часу.

Ключова екологічна атрибутів (КЕА) - аспект біології або екології об'єкта біорізноманіття, відсутність або зміна якого з часом призведе до втрати цього об'єкта. Три категорії ознак часто разом визначають стан здоров'я оселища (примітка: не всі класи застосовуються до всіх оселищ):

- **Розмір** - міра площі, на якій зустрічається оселище біорізноманіття (для екосистеми), або чисельності оселища (для виду чи популяції).
- **Стан** - міра біологічного складу, структури та біотичних взаємодій, що характеризують цільову територію.
- **Ландшафтний контекст** - оцінка середовища існування оселища, включаючи: а) екологічні процеси та режими, що підтримують існування оселища, такі як повені, пожежі та інші види природних порушень; б) зв'язки, що забезпечують доступ видів до оселищ і ресурсів або дозволяють їм реагувати на зміни в навколишньому середовищі шляхом розселення чи міграції.

GROUP WORK 1.3

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Lowland beech forest	condition	deadwood	amount of deadwood	< 7 m ³ /ha	7 - 15 m ³ /ha	15.1 - 30 m ³	> 30 m ³
Current Status					average in this range		
Desired Future Status						average in this range	

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

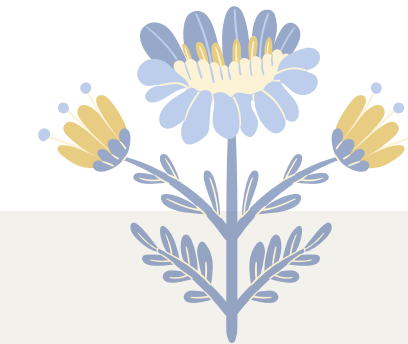
				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							

				Indicator Ratings			
Target	Category	KEA	Indicator	Poor	Fair	Good	Very Good
Current Status							
Desired Future Status							



Viability assessment evaluates the health of conservation targets using key attributes and indicators.

This material was developed in the course of the joint Erasmus+ project

“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

funded by the EU

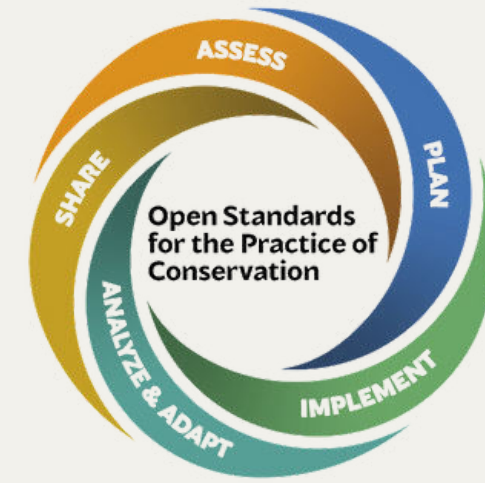


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the European Union



<https://translearnn.ztu.edu.ua>





Stresses, Direct Threats, Threat Rating

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology



ROADMAP THROUGH CONSERVATION STANDARDS

SCOPE - a geographic area and the general focus of a project.

VISION - a statement about the desired future

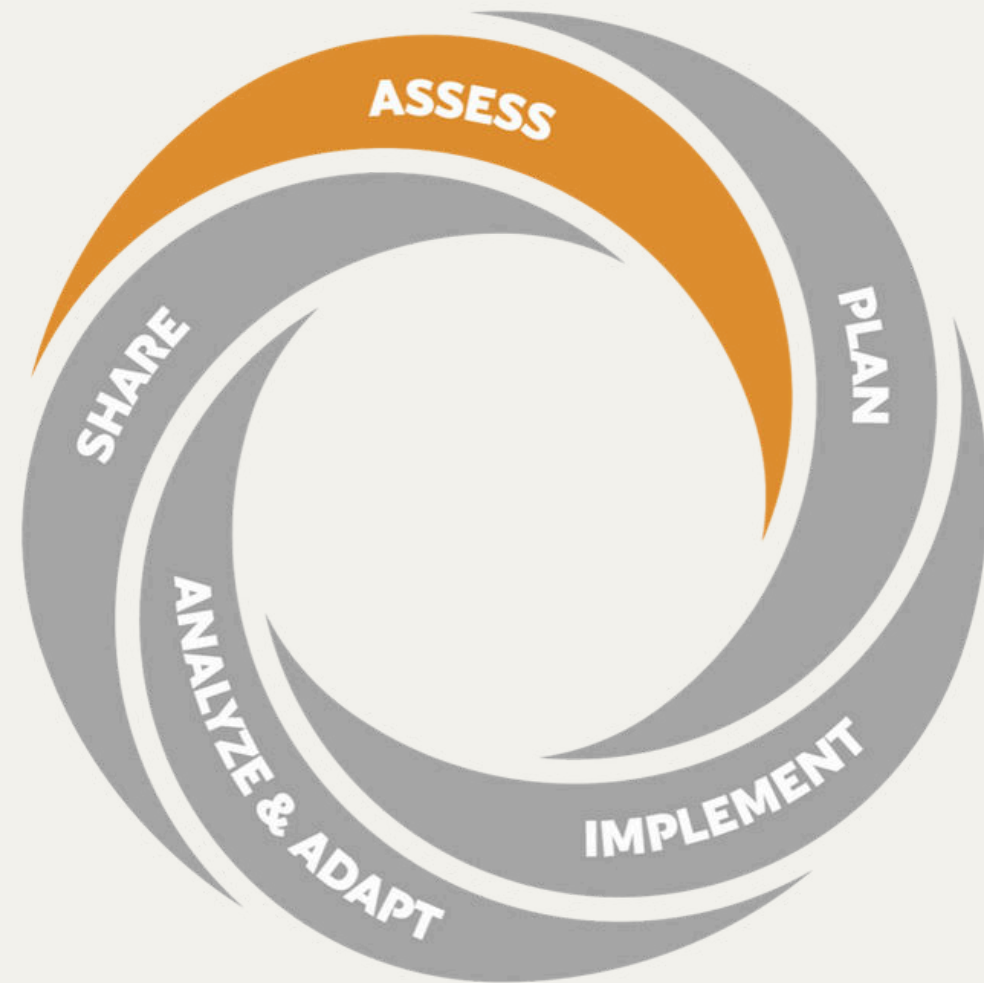
BIODIVERSITY TARGETS, HWB TARGETS - are main objects of a project's efforts

TARGETS VIABILITY - the health status of a conservation target

THREATS & STRESSES



STEP 1: ASSESS



STEP 1. ASSESS

- Purpose & team
- Scope & vision
- Conservation targets & viability assessment
- **Threats. Stresses**
- Conservation situation



1. DIRECT & INDIRECT THREATS

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STEP 1: ASSESS



Direct threats are primarily human activities that immediately degrade a conservation target (e.g., unsustainable fishing, unsustainable hunting, oil drilling, construction of roads, industrial wastewater, introduction of exotic invasive species).

IMPORTANT CONSIDERATIONS

- Can be called pressures
- Focus on present & future
- Define who is contributing to threat
- Represent human activities
- Human-altered natural phenomena

! CMP DIRECT THREATS CLASSIFICATION

STEP 1: ASSESS



Stress is an impaired aspect of a conservation target that results directly or indirectly from human activities (e.g., altered stream flows, reduced reproductive success, sedimentation, forest habitat fragmentation, altered population structure, etc.).

IMPORTANT CONSIDERATIONS

- Altered or degraded key attribute
- Result from direct threat
- Cumulative impact from multiple threats
- May be implicit

! STANDARDIZED IUCN-CMP LIST



STEP 1: ASSESS

THREATS AND TARGETS



Longline fishing
with J-Hooks

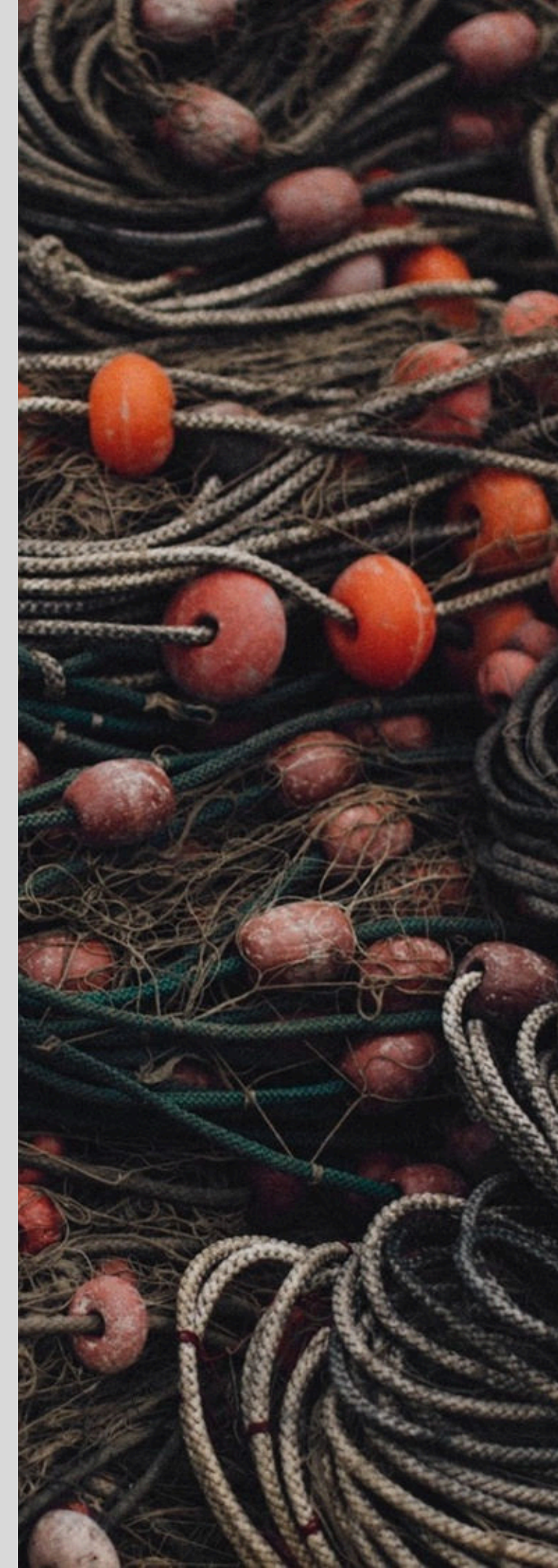


Sea Turtles

Direct Threat



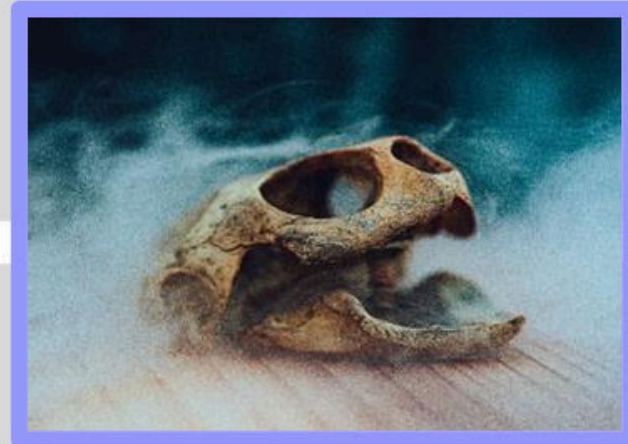
Target





STEP 1: ASSESS

THREATS, STRESSES, AND TARGETS



Longline fishing
with J-Hooks

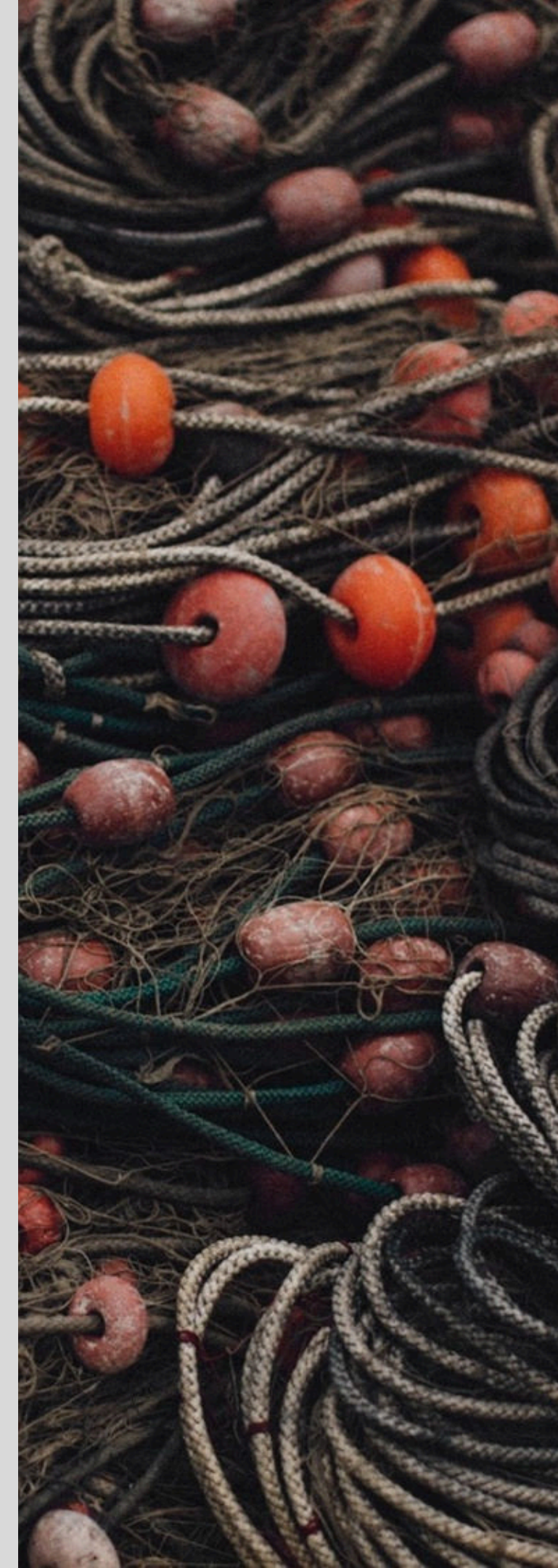
Decreased adult
survival

Sea Turtles

Direct Threat

Stress

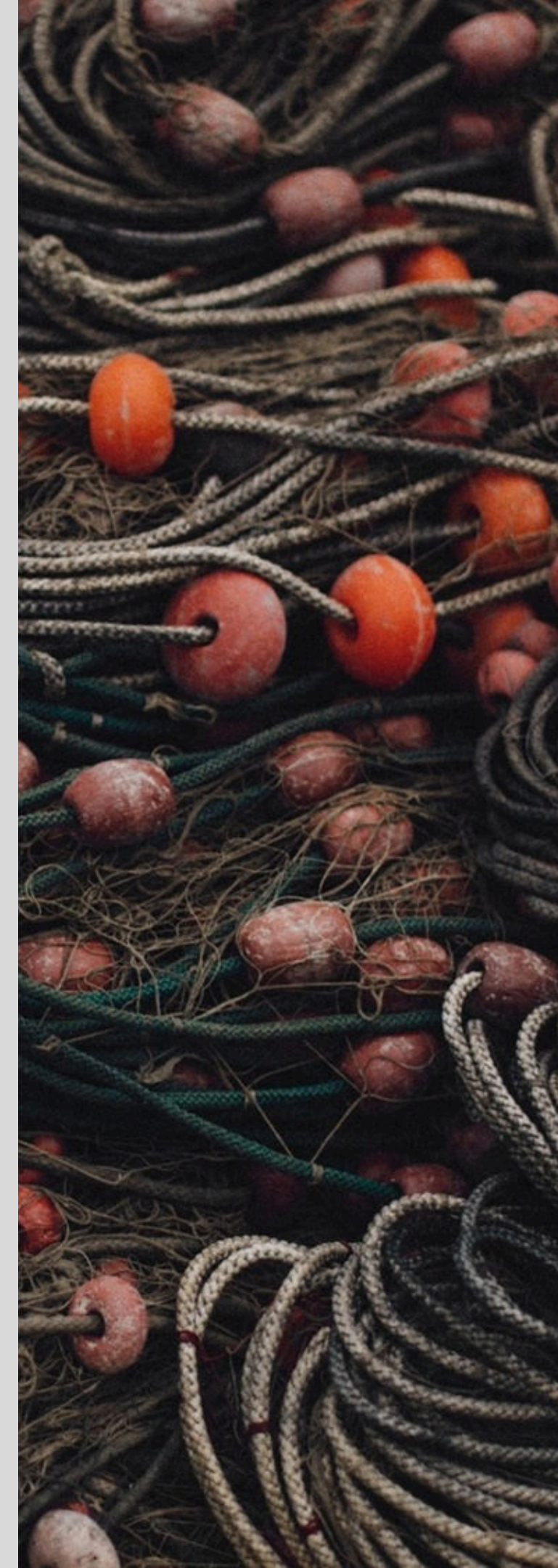
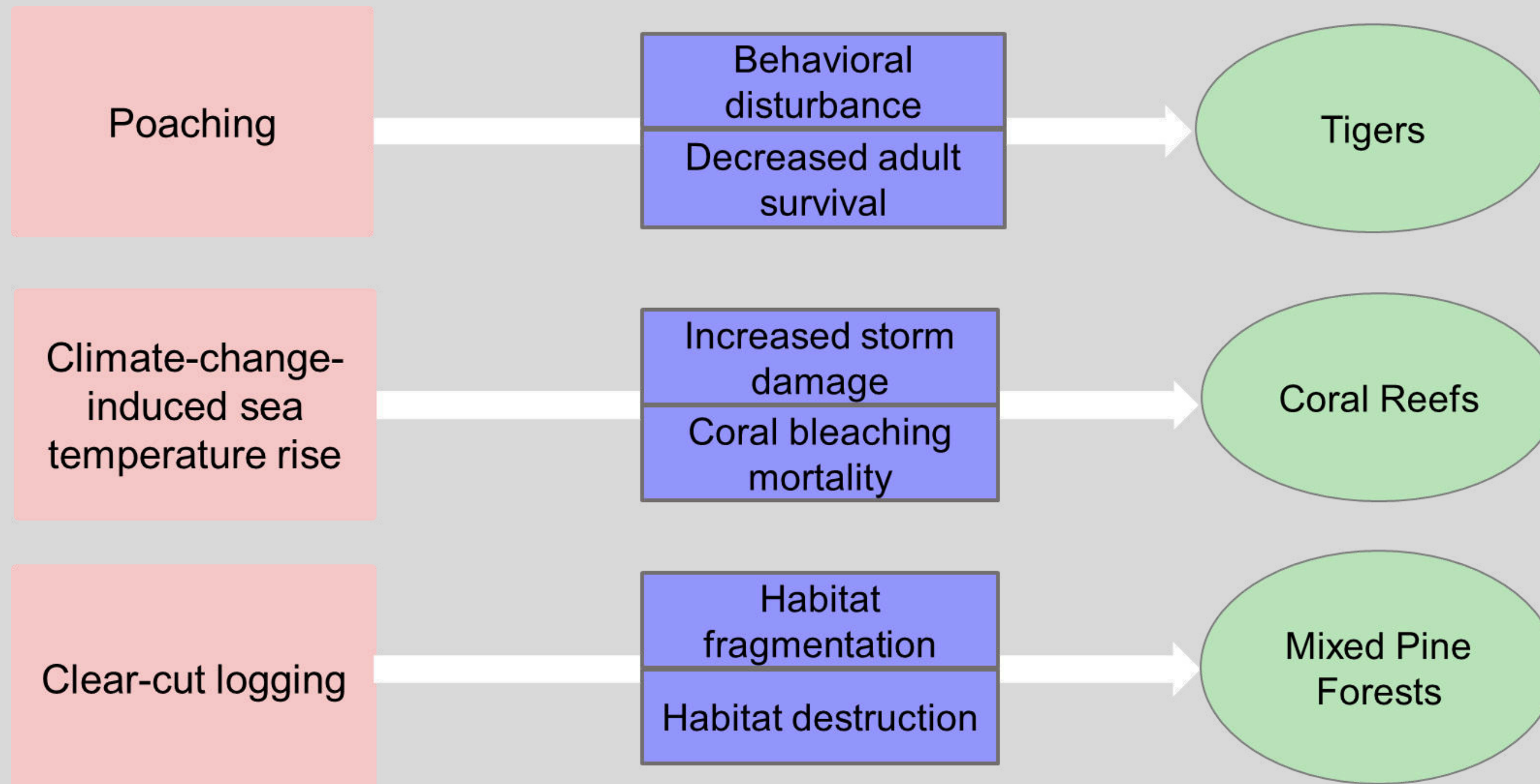
Target





STEP 1: ASSESS

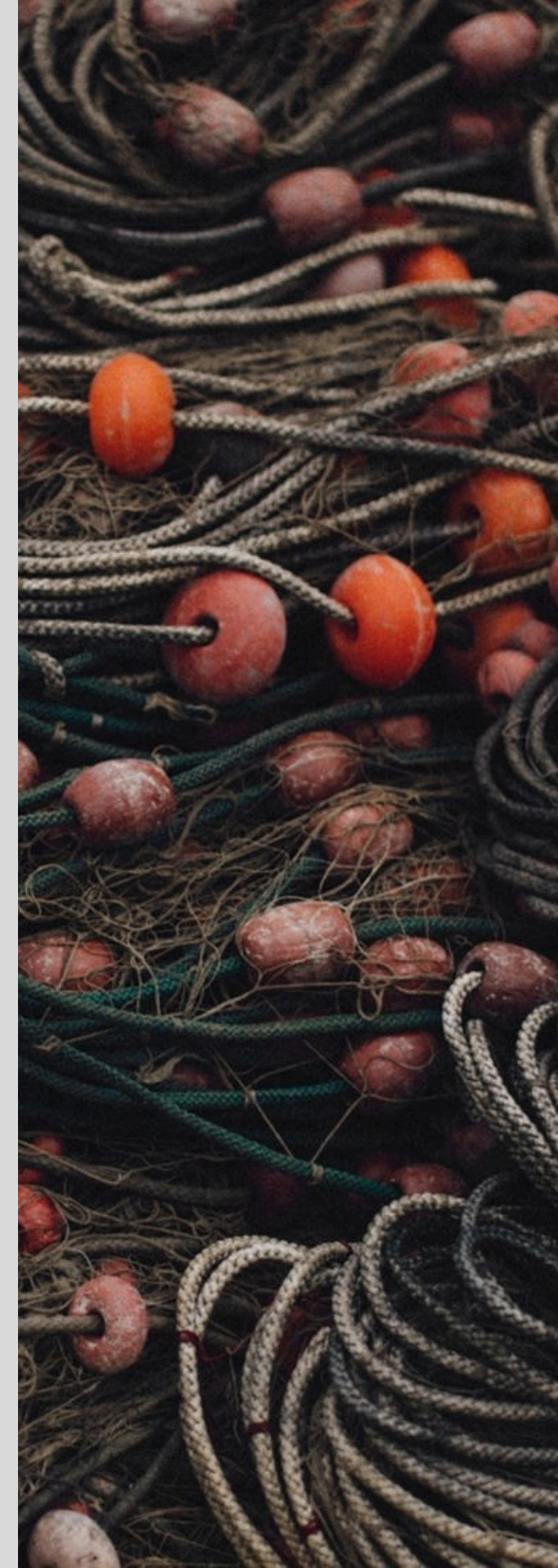
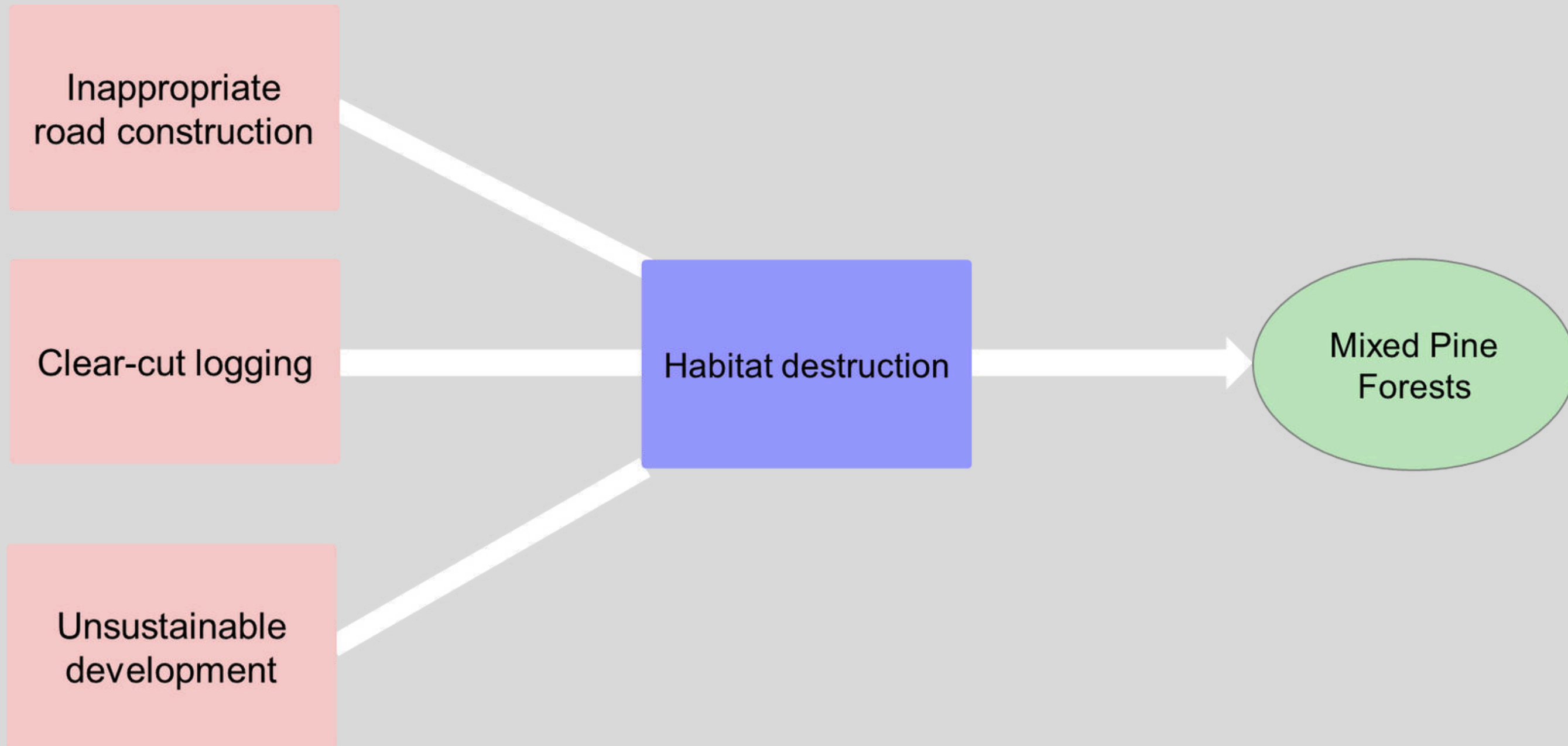
MULTIPLE STRESSES





STEP 1: ASSESS

MULTIPLE STRESSES



STEP 1: ASSESS



SPLITTING & LUMPING THREATS

Splitting:

- Split threats initially
- Different actors
- Requires different strategies
- Dilutes threat ratings

Lumping:

- Same actors
- Can use same strategy
- Magnifies threat ratings

STEP 1: ASSESS



Indirect threats are factors identified in an analysis of the project situation that is “a driver of direct threats.” They are also sometimes called a “root cause” or “underlying cause.”

IMPORTANT CONSIDERATIONS

- Entry point for conservation actions.



STEP 1: ASSESS



INDIRECT THREATS VS DIRECT THREATS

Pet trade



Poaching for pet trade

Logging policies



Unsustainable logging

Demand for fish



Overfishing



2. THREATS RATING

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SIMPLE THREAT RATING

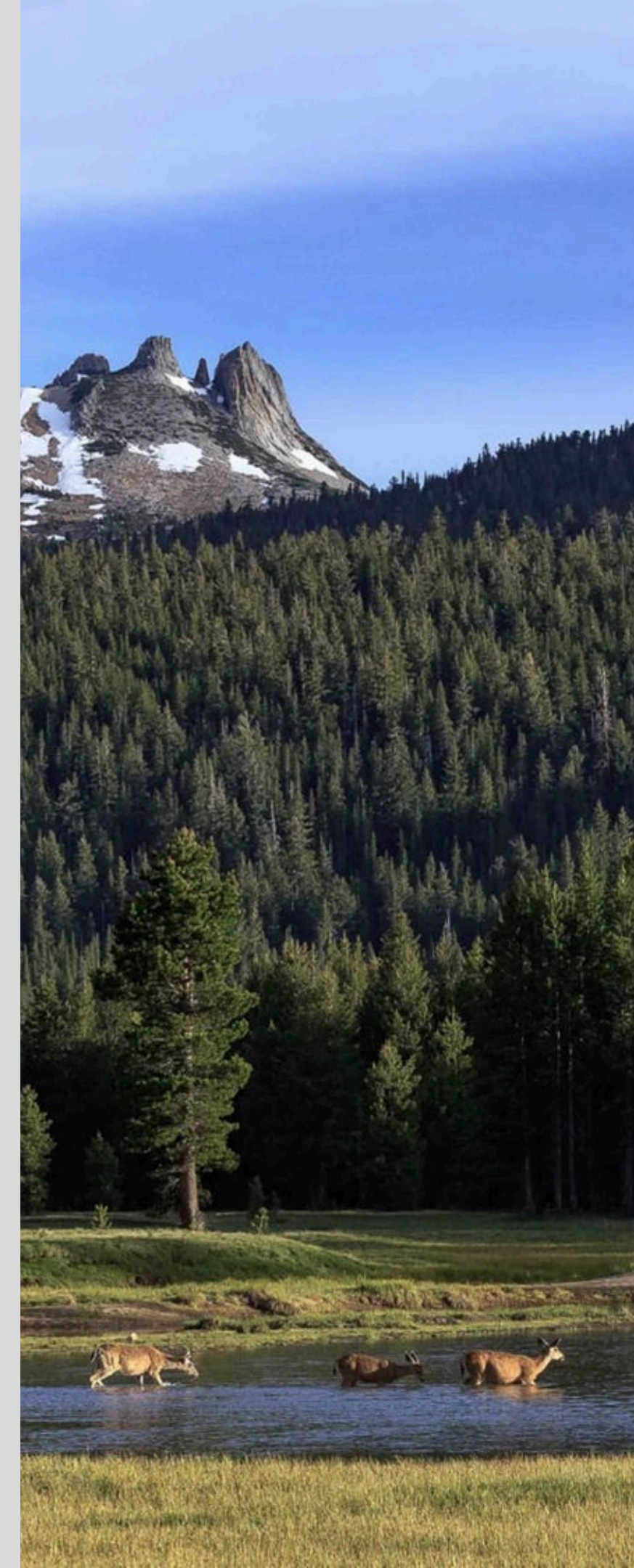
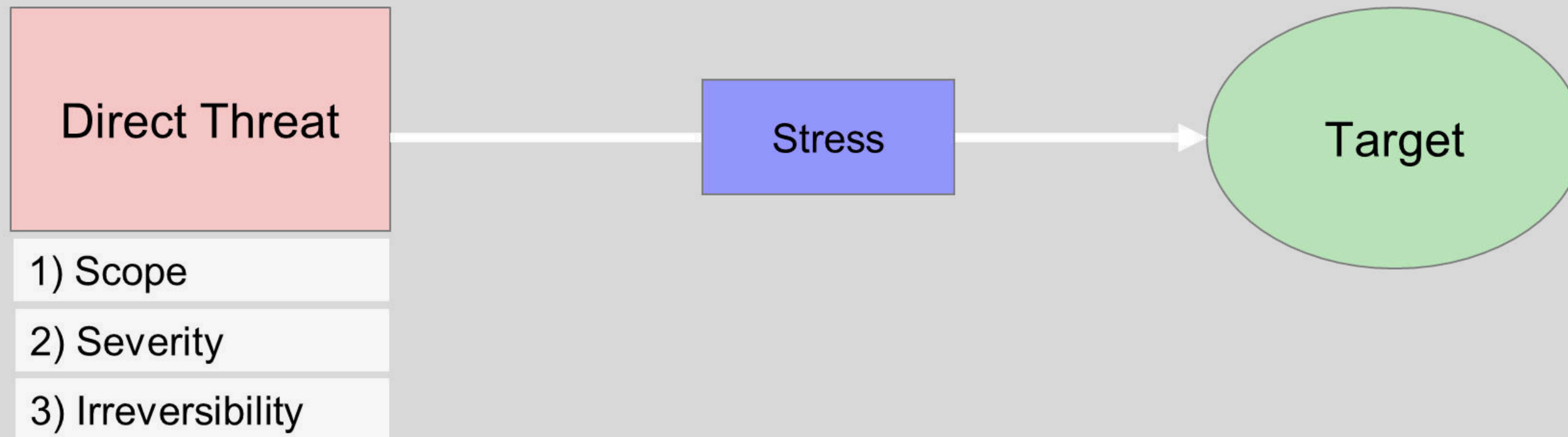
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STEP 1: ASSESS

SIMPLE THREAT RATING – 3 CRITERIA



STEP 1: ASSESS



SCOPE

The proportion of the target that can reasonably be expected to be affected by the threat within ten years given the continuation of current circumstances.

SCOPE RATINGS

- **Very high**
 - Pervasive
 - 71-100% of occurrence or population
- **High**
 - Widespread
 - 31-70% of occurrence or population
- **Medium**
 - Restricted
 - 11-31% of occurrence or population
- **Low**
 - Very narrow
 - 1-10% of occurrence or population

STEP 1: ASSESS



SEVERITY

Within the scope, the level of damage to the target from the threat that can reasonably be expected given the continuation of current circumstances and trends.

SEVERITY RATINGS

- **Very high**
 - Destroy or eliminate target
 - Reduce target population by 71-100%
- **High**
 - Seriously degrade/reduce target
 - Reduce its population by 31-70%
- **Medium**
 - Moderately degrade/reduce target
 - Reduce its population by 11-30%
- **Low**
 - Slightly degrade/reduce target
 - Reduce its population by 1-10%

STEP 1: ASSESS



THREAT IRREVERSIBILITY

The degree to which the effects of a threat can be reversed, and the target affected by the threat restored.

IRREVERSIBILITY RATINGS

- **Very high**
 - Cannot be reversed or restored
 - >100 years to achieve
- **High**
 - Reversal or restoration not affordable
 - 21-100 years to achieve
- **Medium**
 - Reversal or restoration reasonable
 - 6-20 years to achieve
- **Low**
 - Easily reversed and restored
 - 0-5 years



STEP 1: ASSESS



THREAT MAGNITUDE TABLE

- Scope of development is Medium
- Severity is High
- Magnitude is Medium

		Scope			
		Very High	High	Medium	Low
Severity	Very High	Very High	High	Medium	Low
	High	High	High	Medium	Low
	Medium	Medium	Medium	Medium	Low
	Low	Low	Low	Low	Low



STEP 1: ASSESS



THREAT RATING TABLE

- Magnitude of development is Medium
- Irreversibility is Very High
- Threat Rating is High

		Irreversibility			
		Very High	High	Medium	Low
Magnitude	Very High	Very High	Very High	Very High	High
	High	Very High	High	High	Medium
	Medium	High	Medium	Medium	Low
	Low	Medium	Low	Low	Low



STRESS-BASED RATING

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STEP 1: ASSESS



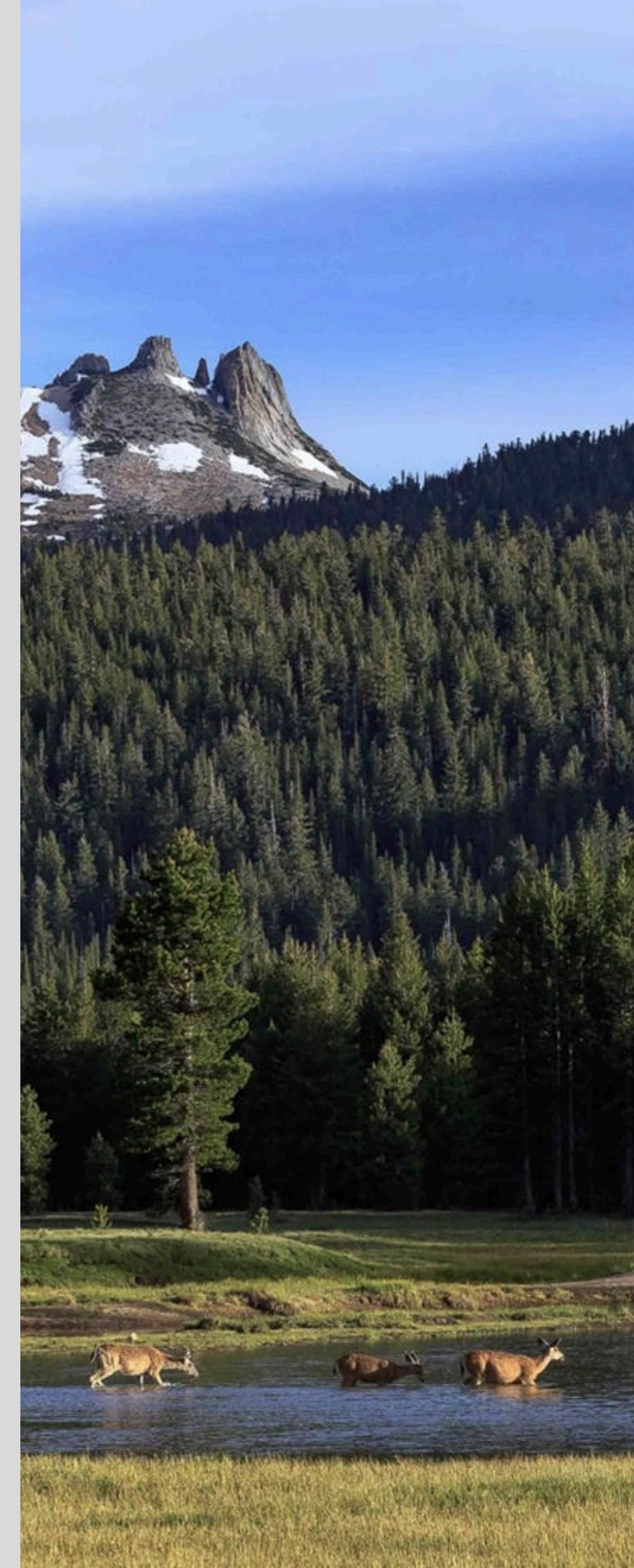
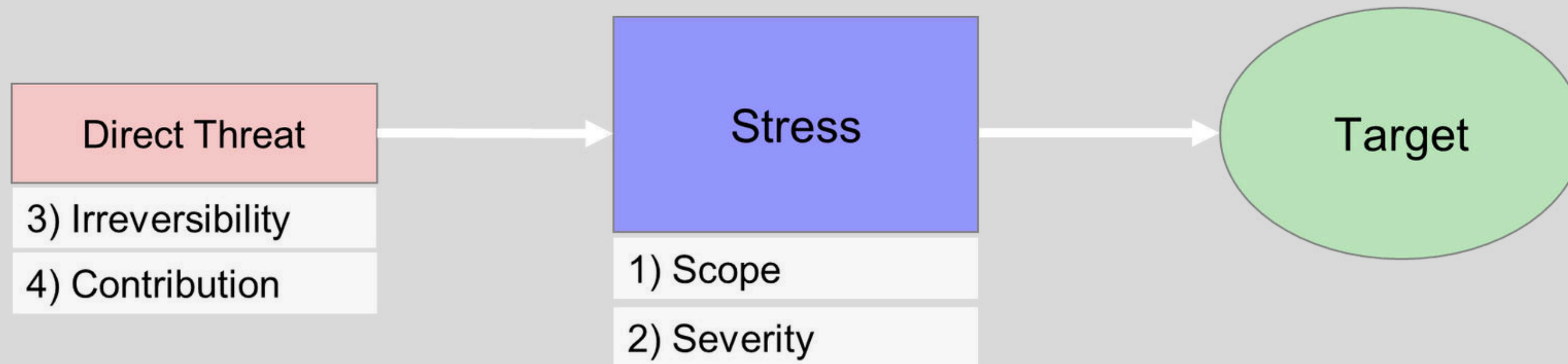
SIMPLE THREAT RATING VS. STRESS-BASED RATING

- Simple threat rating
 - Scope, severity, & irreversibility
 - Threat → Target
- Stress-based rating
 - Irreversibility & contribution
 - Threat → Stress
 - Scope & severity
 - Stress → Target



STEP 1: ASSESS

STRESS-BASED RATING – 4 CRITERIA



STEP 1: ASSESS



IRREVERSIBILITY TO STRESS (STRESS-BASED RATING)

The degree to which the effects of a source of stress can be restored.

RATINGS

- **Very high**
 - Source produces irreversible stress
- **High**
 - Source produces reversible stress
 - Not practically affordable
- **Medium**
 - Source produces reversible stress
 - Affordable
- **Low**
 - Source produces easily reversible stress
 - Low cost

STEP 1: ASSESS



THREAT CONTRIBUTION TO STRESS

The expected contribution of the source, acting alone, to the full expression of a stress, given the continuation of current circumstances.

RATINGS

- **Very high**
 - Very large contributor to stress
- **High**
 - Large contributor to stress
- **Medium**
 - Moderate contributor to stress
- **Low**
 - Low contributor to stress



STEP 1: ASSESS



SOURCE RATING

Irreversibility of source (threat)

Contribution of source (threat) to stress

- Irreversibility of logging is Medium
- Contribution is Very High
- Source rating is High

		Contribution			
		Very High	High	Medium	Low
Irreversibility	Very High	Very High	High	High	Medium
	High	Very High	High	Medium	Medium
	Medium	High	Medium	Medium	Low
	Low	High	Medium	Low	Low



STEP 1: ASSESS



STRESS RATING

Scope of damage

- Scope of habitat fragmentation is Medium
- Severity is High
- Stress rating is Medium

		Scope			
		Very High	High	Medium	Low
Severity	Very High	Very High	High	Medium	Low
	High	High	High	Medium	Low
	Medium	Medium	Medium	Medium	Low
	Low	Low	Low	Low	Low



STEP 1: ASSESS



COMBINED RATING

Stress rating

- Stress rating of clear-cut logging is Medium
- Source rating is High
- Combined rating is Medium

		Source			
		Very High	High	Medium	Low
Stress	Very High	Very High	Very High	High	Medium
	High	High	High	Medium	Low
	Medium	Medium	Medium	Low	Low
	Low	Low	Low	Low	Low



SUMMARY RATING

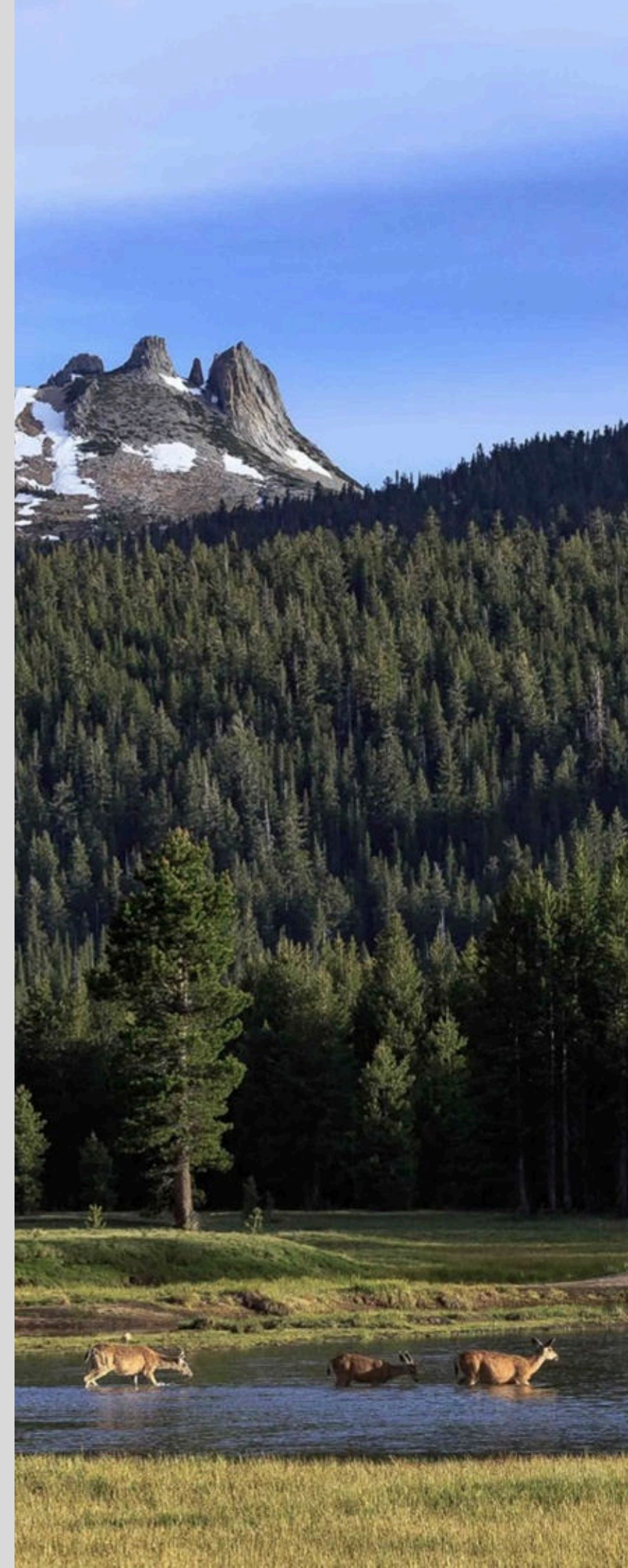
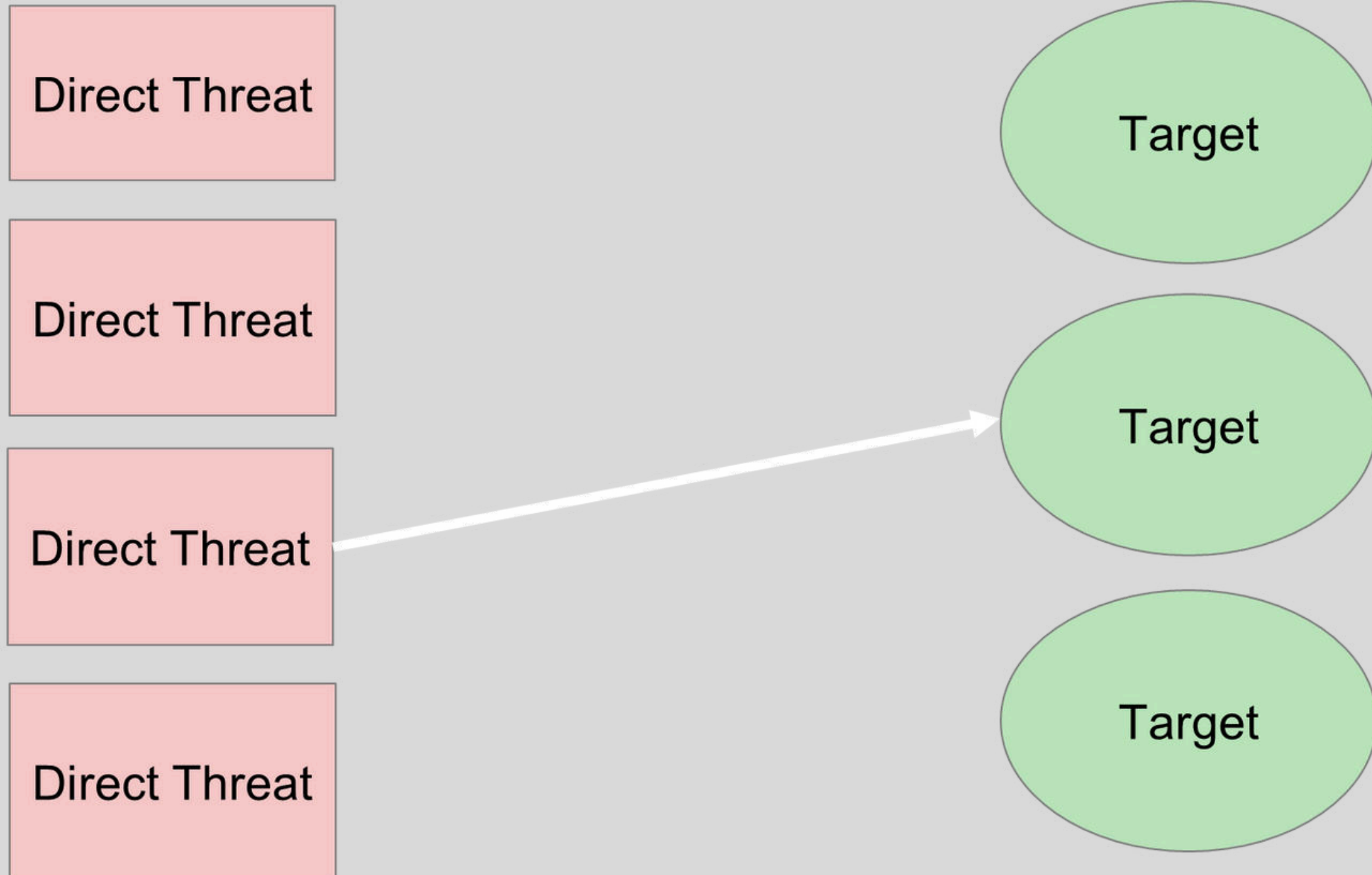
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STEP 1: ASSESS

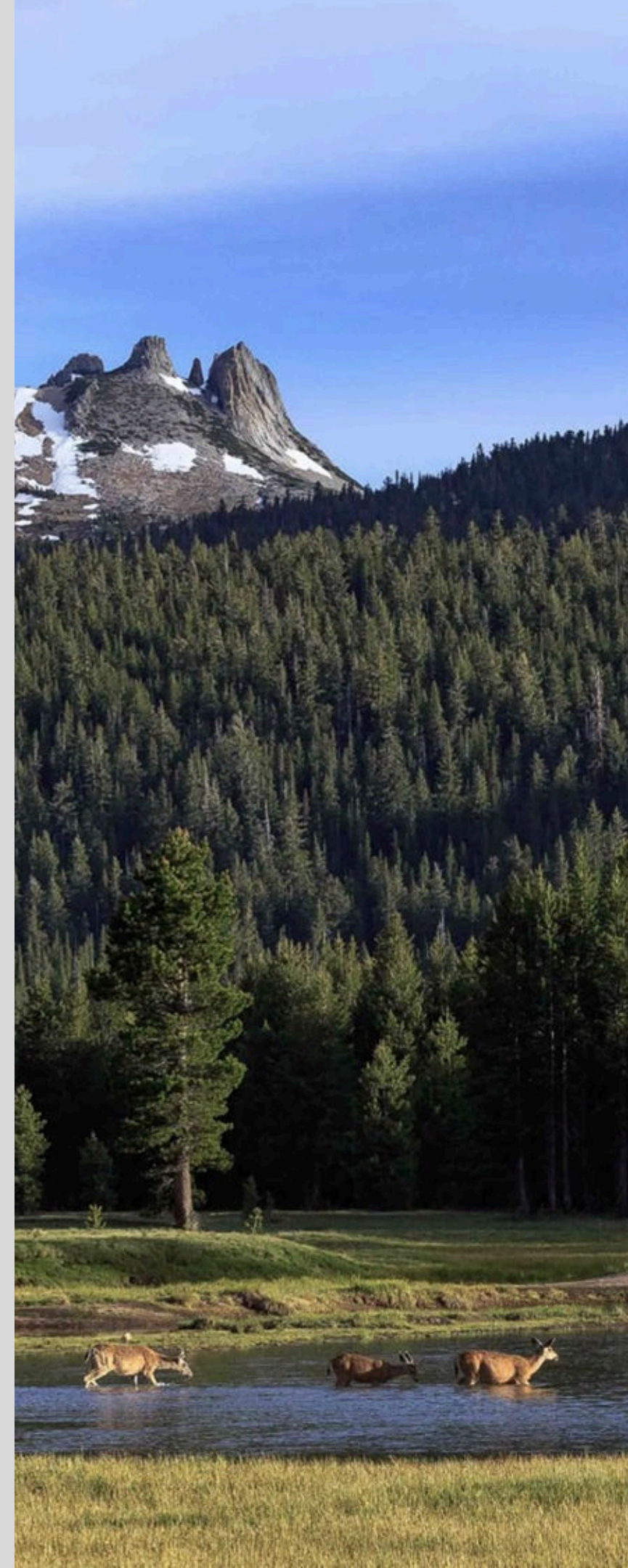
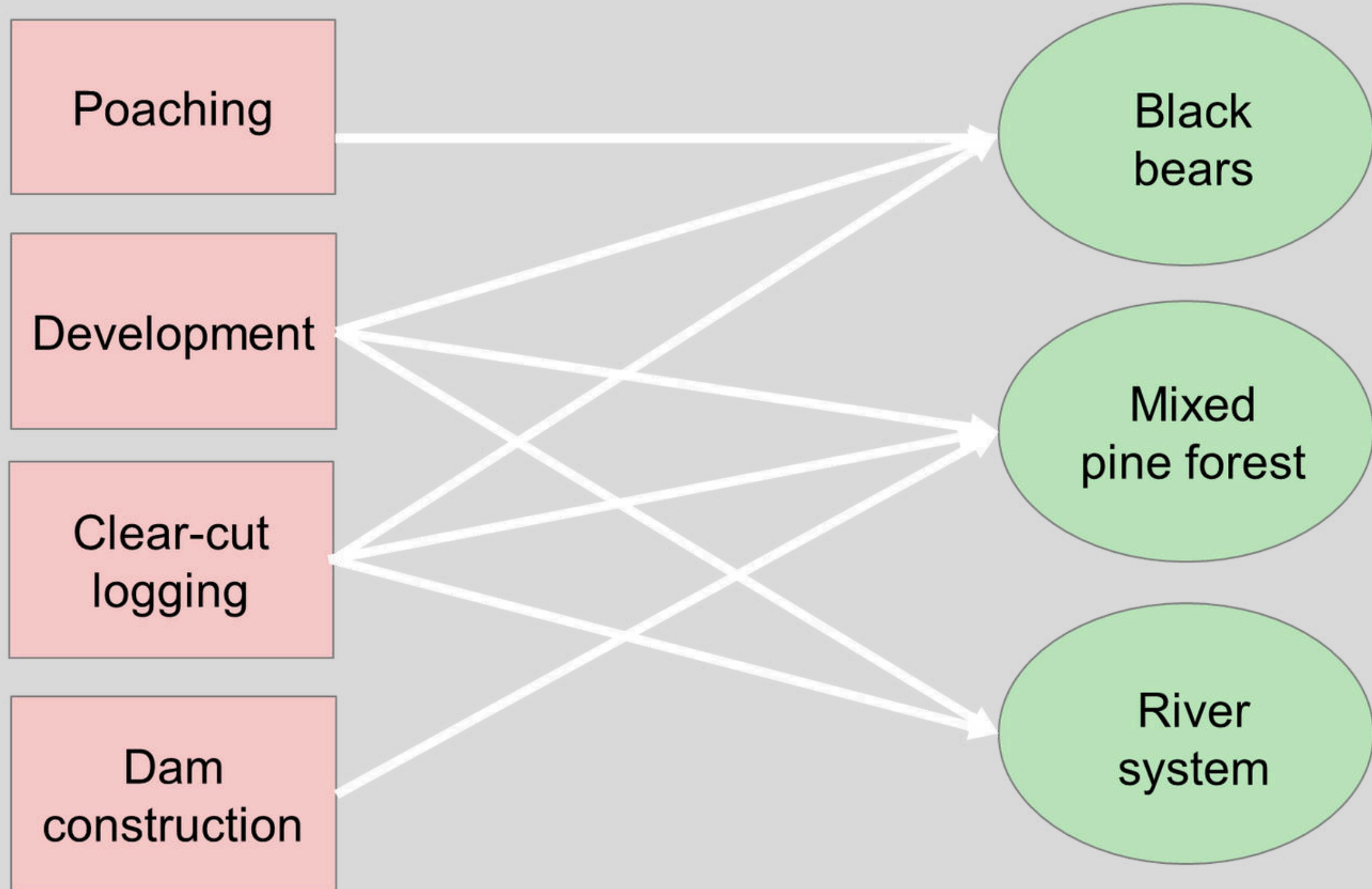
CUMULATIVE EFFECTS

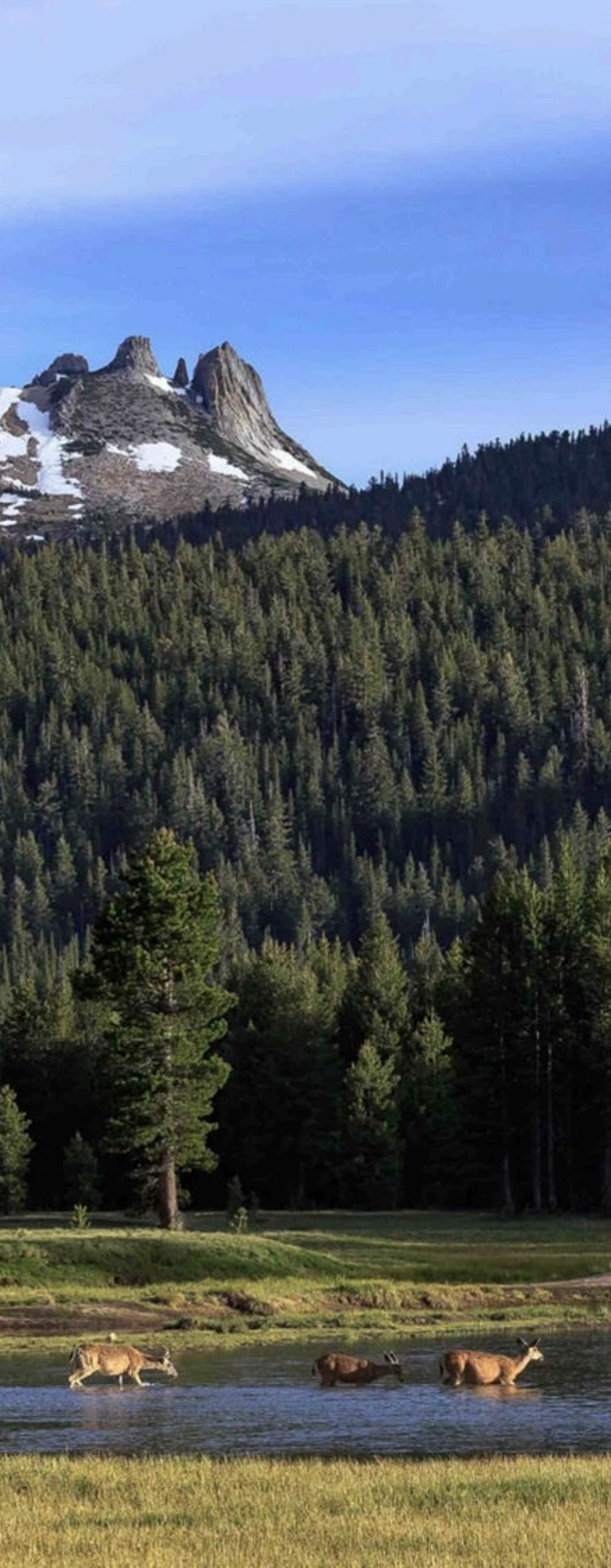




STEP 1: ASSESS

CUMULATIVE EFFECTS





STEP 1: ASSESS



SUMMARY RATINGS

Targets → Threats ↓	River system	Mixed pine forest	Black bears	Summary threat rating
Clear-cut logging	Very High	Very High	Medium	Very High
Dam construction	Very High	Low	--	High
Development	Medium	High	Low	Medium
Poaching	--	--	Medium	Low
Summary target rating	Very High	High	Medium	Very High
				Overall project rating



3. TOOLS AND SUPPORT

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STEP 1: ASSESS



DIRECT THREATS & STRESSES IN MIRADI

The screenshot displays the MIRADI web application interface. At the top, the navigation bar includes the MIRADI logo, a home icon, and menu items for 'MY PROJECTS', 'SHARED PROJECTS', and 'BUILDING BLOCKS'. On the right side of the navigation bar, there is a megaphone icon and links for 'ABOUT MIRADI', 'PRICING', 'MIRADI DESKTOP', 'SUPPORT', and 'YULIA'. Below the navigation bar is a dashboard with seven main functional areas: 'PROJECT OVERVIEW', 'SITUATION ASSESSMENT', 'THEORY OF CHANGE', 'WORK PLANNING', 'PROGRESS TRACKING', 'REPORTS & DATA', and 'PROJECT ADMIN'. Two large yellow arrows point to the 'SITUATION ASSESSMENT' and 'WORK PLANNING' icons. Below this dashboard is a secondary navigation bar with a dark green background and white text, containing 'Situation Models', 'Target Viability', 'Threat Analysis' (which is underlined and highlighted), 'Assumptions', and 'Strategy Effectiveness'. A small green 'NEW' badge is positioned above 'Strategy Effectiveness'. The main content area is titled 'Threat Analysis' with a help icon. Below the title, it shows 'Threat Rating Mode: Simple'. To the right of this mode indicator is a search bar with the text 'Search...', an 'EXPORT' button with a download icon, a dropdown arrow, a calendar icon with a question mark, and a full-screen icon. At the bottom of the interface, there is a legend with a green circle for 'Targets' and a pink square for 'Threats'. Below the legend are several ecosystem categories: 'Carpathian forest ecosystems', 'Polissiya forest ecosystems', 'agricultural ecosystems', 'healthy steppe ecosystems', 'lake ecosystems', and 'river ecosystems'. A 'Summary Threat Rating' button is located on the far right of this row.



4. GROUP WORK

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GROUP WORK 1.4

8 Threat Rating

1. Purpose of Exercise

The purpose of this exercise is to prioritise the direct threats that you identified to allow an informed decision-making on what to focus your actions on.

1. Мета вправи

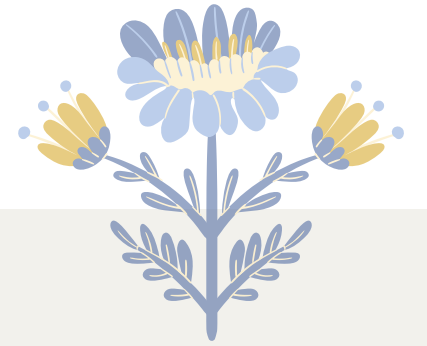
Мета цієї вправи - визначити пріоритетність виявлених вами прямих загроз для прийняття обґрунтованого рішення про те, на чому слід зосередити свої дії.

2. Criteria for Rating Threats:

- **Scope or Extent.** The proportion of the biodiversity target that can reasonably be expected to be affected by the threat within ten years given the continuation of current circumstances and trends.
- **Severity.** The level of damage to the biodiversity target that can reasonably be expected within *ten* years under current circumstances and trends (i.e., given the continuation of the existing situation).
- **Irreversibility.** The degree to which the effects of a threat can be reversed and the target restored if the threat no longer exists.
- **Management Challenge (for climate threats instead of irreversibility).** The challenge ecosystems and species face in adapting to the effects of a climate threat.

2. Критерії для оцінки загроз:

- **Масштаб або ступінь.** частка цільового об'єкта біорізноманіття, яка, як можна обґрунтовано очікувати, зазнає впливу загрози протягом десяти років за умови збереження поточних обставин і тенденцій.
- **Тяжкість.** Рівень шкоди для цільового об'єкта біорізноманіття, який можна обґрунтовано очікувати протягом десяти років за існуючих обставин і тенденцій (тобто за умови збереження існуючої ситуації).
- **Незворотність.** Ступінь, до якого наслідки загрози можуть бути скасовані, а ціль відновлена, якщо загроза більше не існує.
- **Виклик для управління (для кліматичних загроз замість незворотності).** Виклик, з яким стикаються екосистеми та види при адаптації до впливу кліматичної загрози.



Threats and stresses shape actions.

This material was developed in the course of the joint Erasmus+ project
“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)
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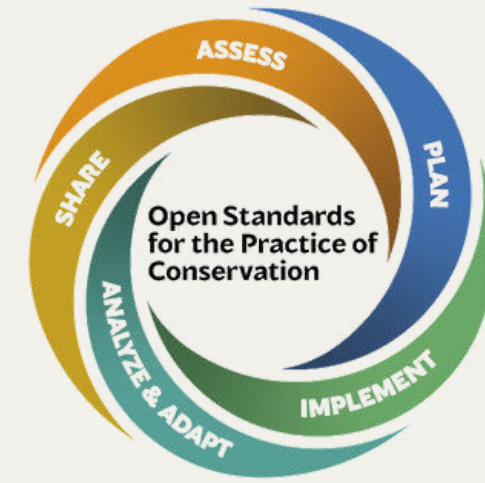


Co-funded by
the European Union



<https://translearnn.ztu.edu.ua>





Contributing factors. Stakeholder assessment

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany based on the Open Standards for the Practice of Conservation methodology



ROADMAP THROUGH CONSERVATION STANDARDS

SCOPE - a geographic area and the general focus of a project.

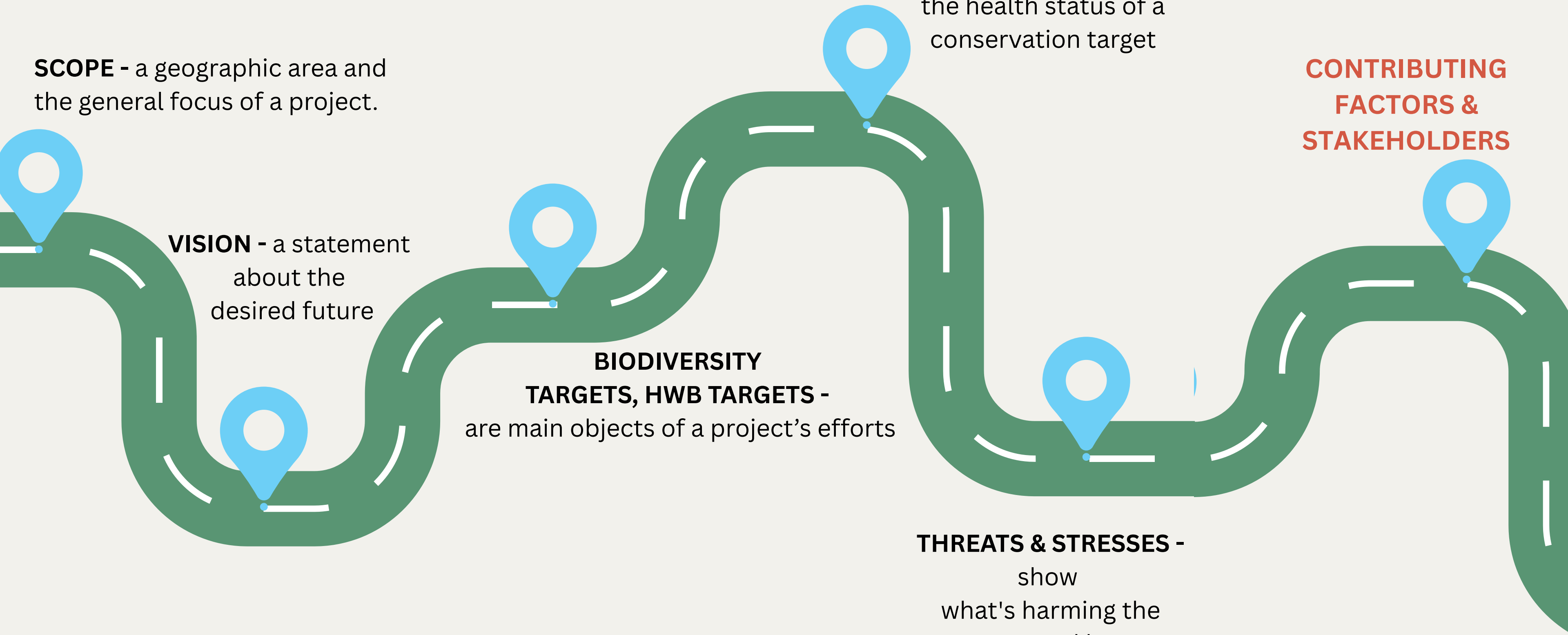
VISION - a statement about the desired future

BIODIVERSITY TARGETS, HWB TARGETS - are main objects of a project's efforts

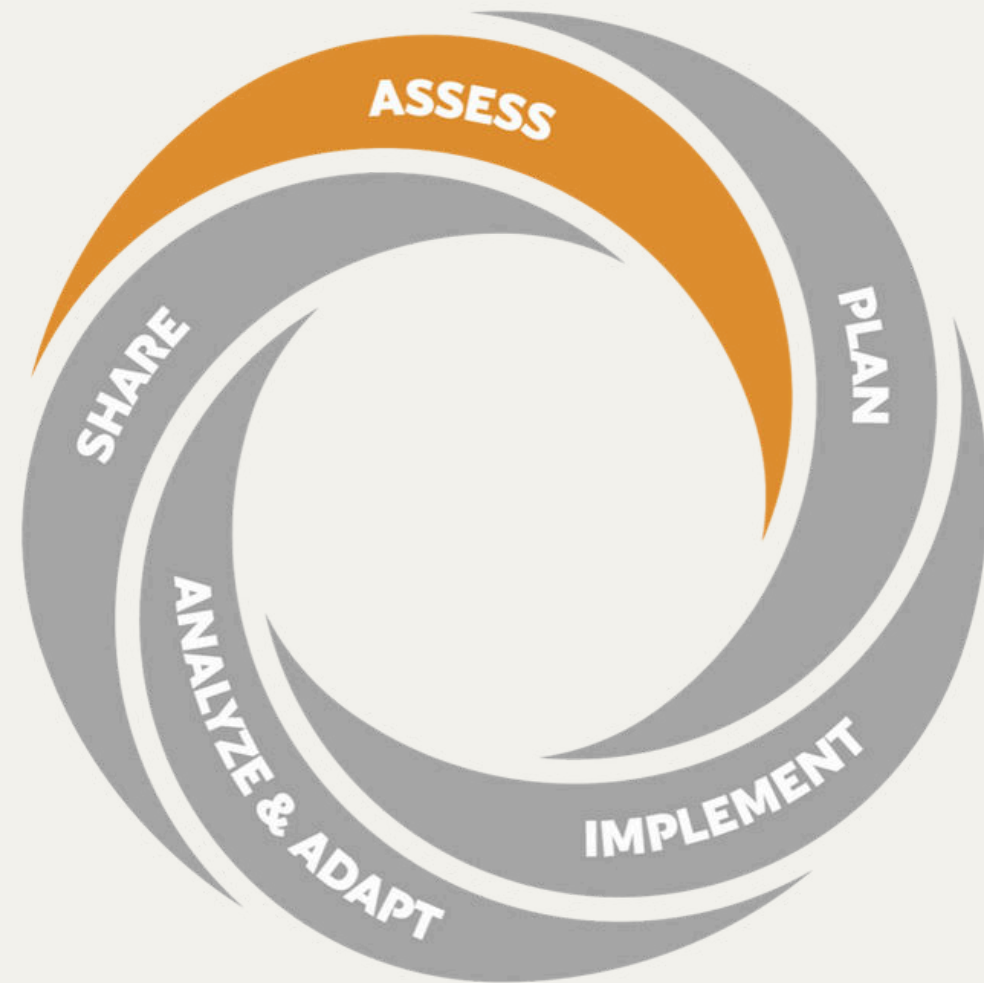
TARGETS VIABILITY - the health status of a conservation target

THREATS & STRESSES - show what's harming the target and how.

CONTRIBUTING FACTORS & STAKEHOLDERS



STEP 1: ASSESS



STEP 1. ASSESS

- Purpose & team
- Scope & vision
- Conservation targets & viability assessment
- Threats. Stresses
- **Conservation situation**



1. CONTRIBUTING FACTORS

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SITUATION ANALYSIS AND MODEL

STEP 1: ASSESS



SITUATION ANALYSIS is a process that helps project team to create a common understanding of a project's context, including describing the relationships among the social, economic, political, and institutional systems and associated stakeholders that affect the conservation targets you want to conserve.



SITUATION ANALYSIS HELPS UNDERSTAND THE PROJECT CONTEXT



IT'S ESSENTIAL FOR DESIGNING EFFECTIVE CONSERVATION ACTIONS



INFORMS HOW TO ACHIEVE GOALS AND OBJECTIVES THROUGH THE PROJECT

STEP 1: ASSESS



SITUATION MODEL is a visual representation of a project’s context (“how we think the world currently works”).

BENEFITS OF A SITUATION MODEL

1. Evaluate the factors that are driving problems.
2. Identify key interest groups and partners.
3. Identify knowledge gaps.
4. Articulate a team’s understanding of the project context and to document that understanding and evidence.
5. Highlight points of intervention (“where to act”).
6. Develop well-informed strategies.

STEP 1: ASSESS



BUILD A SITUATION MODEL TO VISUALLY PORTRAY THE SITUATION ANALYSIS

SITUATION MODELS ARE BUILT FROM RIGHT TO LEFT:

1. Define project scope .	5. Add indirect threats, opportunities and enabling conditions . For each threat, consider what is causing the threat, who is involved and why.
2. Identify and rate targets .	6. Add arrows to illustrate the relationship between factors.
3. Define and rate direct threats .	7. Discuss and document discussions and evidence.
4. If necessary, add stresses .	8. Use and revise situation model .

STEP 1: ASSESS



KEY ELEMENTS OF A SITUATION MODEL

**CONTRIBUTING
FACTORS**

**DIRECT
THREAT**

STRESS

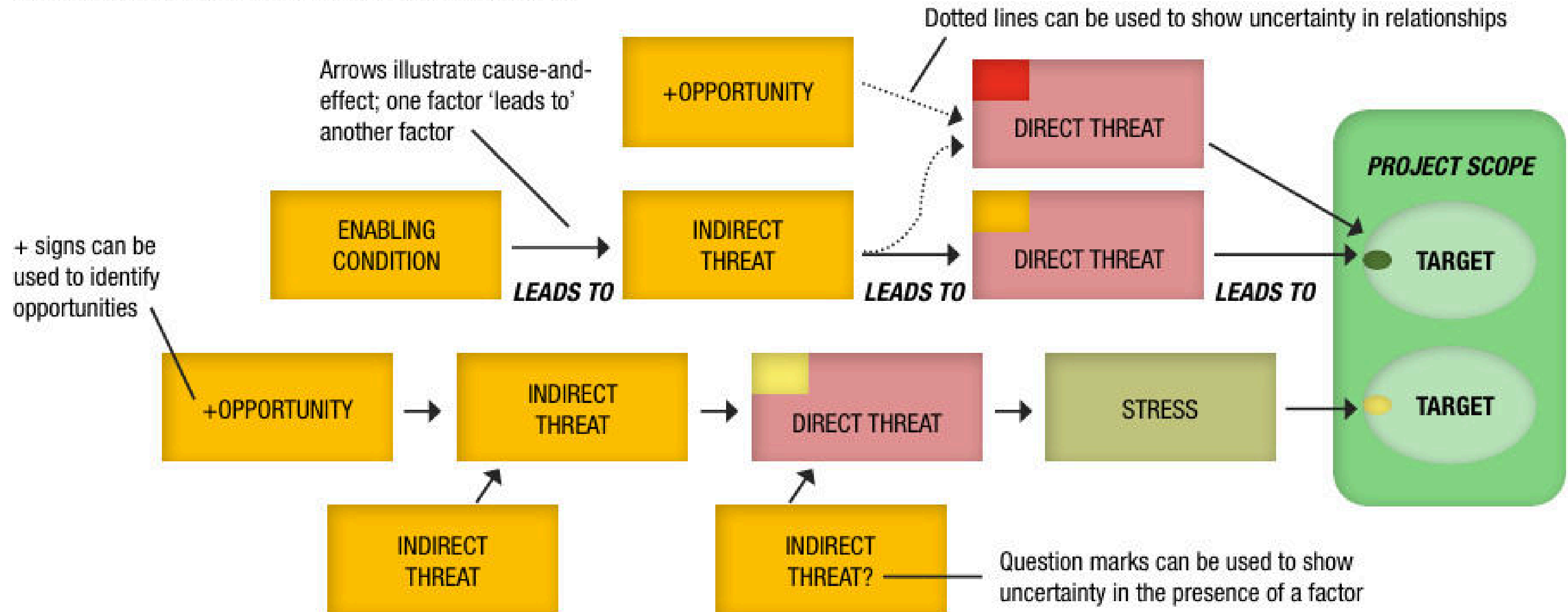
SCOPE

TARGET

STEP 1: ASSESS



ELEMENTS OF A SITUATION MODEL:



STEP 1: ASSESS



CONTRIBUTING FACTORS are indirect threats, opportunities, and other important variables that positively or negatively influence direct threats.

Why Do They Matter?

- Help you understand the "why" behind a threat.
- Are often the most strategic points for intervention (e.g., changing policies, improving market incentives).
- Make your situation model more complete and accurate.

STEP 1: ASSESS



CONTRIBUTING FACTORS



INDIRECT THREAT

A contributing factor that drives direct threats. It often serves as a starting point for conservation actions. Sometimes called a root or underlying cause.



+ OPPORTUNITY

A contributing factor that can help reduce threats—either directly or indirectly. It can also be a starting point for action.

STEP 1: ASSESS



Examples of Contributing Factors

- Social: cultural norms, education levels.
- Economic: market demand, poverty, employment options.
- Political: governance, enforcement, policy gaps.
- Institutional: capacity of local organizations, land tenure systems.
- Environmental: climate, natural disturbances (if human-influenced).

DON'T OVERLOAD THE MODEL – FOCUS ON THE MOST RELEVANT FACTORS.



2. STAKEHOLDER ASSESSMENT

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020

STEP 1: ASSESS



STAKEHOLDERS are individuals, groups, or institutions that have a vested interest in - or can influence - the natural resources within the project scope.



Stakeholders are all the people or groups whose participation and support are critical to a project's success

STEP 1: ASSESS



WHY IS IT IMPORTANT TO KNOW THE STAKEHOLDERS?

- Supports better decision-making, strategy development, and conflict prevention.
- Helps ensure equity, local support, and sustainability.

REVIEW STAKEHOLDERS

- Questions to ask:
 - Who is doing it?
 - What are their motivations?
 - Level of engagement?
 - How can we engage them?

STEP 1: ASSESS



STAKEHOLDER ASSESSMENT STEPS

1. Identify stakeholders:

Who affects or is affected by the conservation targets, threats, or strategies?

- Local communities, land/resource users, authorities, NGOs, businesses, donors, etc.

2. Map stakeholder relationships to:

- Direct threats
- Contributing factors
- Enabling conditions

3. Analyze stakeholder interests and influence:

- Who can support or block your strategies?
- Who holds traditional or legal rights over resources?

4. Engage stakeholders appropriately based on their role in the system.



3. TOOLS AND SUPPORT

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020

STEP 1: ASSESS



RECOMMENDED TOOLS

- **Situation model** → shows how stakeholders are linked to threats or enabling factors.
- **Power–Interest matrix** → guides stakeholder engagement strategies.
- **SWOT or Influence mapping** → helps understand dynamics.
- **Contribution analysis** → explores stakeholder roles in driving or reducing threats.



STEP 1: ASSESS



MY PROJECTS

SHARED PROJECTS

BUILDING BLOCKS



ABOUT MIRADI

PRICING

MIRADI DESKTOP

SUPPORT

YULIYA



PROJECT OVERVIEW



SITUATION ASSESSMENT



THEORY CHANGE



WORK PLANNING



PROGRESS TRACKING



REPORTS & DATA



PROJECT ADMIN

Summary

Scope

Map

People & Groups

Files & Resources

Miradi Project Versions



People & Groups

Miradi Access

MANAGE MIRADI ACCESS

Search...

EXPORT



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Name	Organization	Role
Daryna Bezusenko		Project Editor

Team & Partners

MANAGE TEAM & PARTNERS

Search...

EXPORT



These people and groups may be assigned to project actions for purposes of work planning. They are unrelated to Miradi Share accounts.

Type	ID	Name	Organization
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4. GROUP WORK

OPEN STANDARDS FOR THE PRACTICE OF CONSERVATION

VERSION 4.0 | 2020

GROUP WORK 1.5

9 Contributing Factors

1. Purpose of Exercise

The purpose of this exercise is to complete an initial situation model for your project.

1. Мета вправи

Метою цієї вправи є створення початкової моделі ситуації для вашого проекту.

2. Conservation Standards Definitions

Contributing factors: Factors that include indirect threats and opportunities. Economic, political, institutional, social, or cultural factors that influence positively or negatively direct threats.

2. Визначення природоохоронних стандартів

Фактори, що сприяють: Фактори, які включають непрямі загрози та можливості. Економічні, політичні, інституційні, соціальні або культурні фактори, які позитивно або негативно впливають на прямі загрози.

Indirect Threat: A contributing factor identified in a situation analysis that is a driver of one or more direct threats and is often an entry point for conservation actions (eg. weak legislation, and enforcement, strong market demand, limited environmental awareness). It is also called a "root cause" or "underlying cause."

Непряма загроза: Фактор, виявлений під час аналізу ситуації, який є рушійною силою однієї або кількох прямих загроз і часто є відправною точкою для природоохоронних дій (наприклад, слабе законодавство та правозастосування, високий ринковий попит, обмежена екологічна свідомість). Її також називають "першопричиною" або "основною причиною".

Opportunity: A contributing factor identified in a situation analysis that potentially has a positive effect on reducing threats to one or more targets, either directly or indirectly. It is often an entry point for conservation actions (eg. demand for sustainably harvested timber, markets for certified products, strong political will, a high level of awareness of conservation issues, and cultural values that support conservation and sustainable resource management).

Можливість: Фактор, виявлений під час аналізу ситуації, який потенційно може позитивно вплинути на зменшення загроз для однієї чи кількох цілей, прямо чи опосередковано. Часто є відправною точкою для природоохоронних заходів (наприклад, попит на екологічно чисту деревину, ринки для сертифікованої продукції, сильна політична воля, високий рівень обізнаності з питань збереження та культурні цінності, які підтримують збереження та стале управління ресурсами).

GROUP WORK 1.5

10 Stakeholders

1. Purpose of Exercise

The purpose of this exercise is to identify key stakeholders related to your reconstruction project. For the success of the later project, it is important to be aware of the interests, attitudes, importance, influence, and alliances of stakeholders.

1. Мета вправи

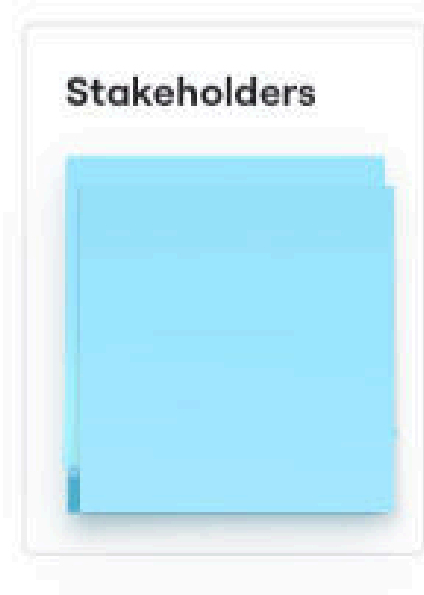
Мета цієї вправи - визначити ключові зацікавлені сторони, пов'язані з вашим проектом реконструкції. Для успіху подальшого проекту важливо знати про інтереси, ставлення, важливість, вплив та альянси зацікавлених сторін.

2. Conservation Standards Definitions

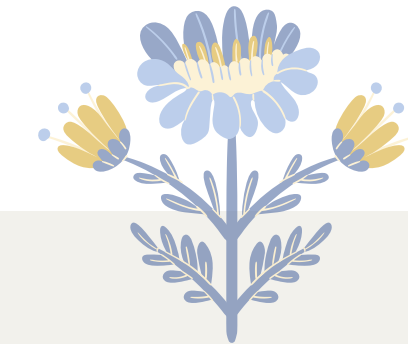
Stakeholders: individuals, groups, or institutions who have different interests in or can influence the natural resources within the project scope and/or who may be affected by project activities and have something to gain or lose.

2. Визначення стандартів збереження

Зацікавлені сторони: окремі особи, групи або організації, які мають різні інтереси щодо природних ресурсів у межах проекту або можуть впливати на них, та/або на яких може вплинути діяльність у рамках проекту і які можуть щось отримати або втратити.



Agriculture & aquaculture



Stakeholders shape threats, solutions, and impact.

This material was developed in the course of the joint Erasmus+ project

“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

funded by the EU

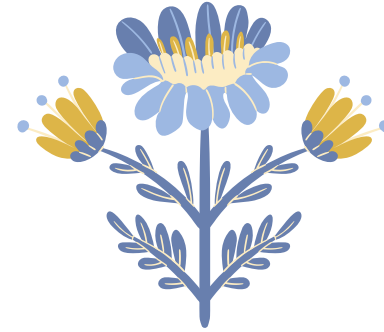


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CURRENT STATE OF FORESTRY IN UKRAINE

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology





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Department of Management
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AGENDA

1. The current challenges of forestry in Ukraine
2. The impact of climate change on the forestry of Ukraine
3. Forest burning, fires and other damage for forestry during the war period in Ukraine
4. State enterprise “Forests of Ukraine” – a national-level company
5. Forestry practice in Ukraine



1.The current challenges of forestry in Ukraine

One of the decisive trends of the last decades is the ***loss of ecosystem quality and their degradation.*** Climate change and strengthening pressure of human activity increases a role of the reforestation process and, at the same time, generate new challenges for it.

1. The current challenges of forestry in Ukraine

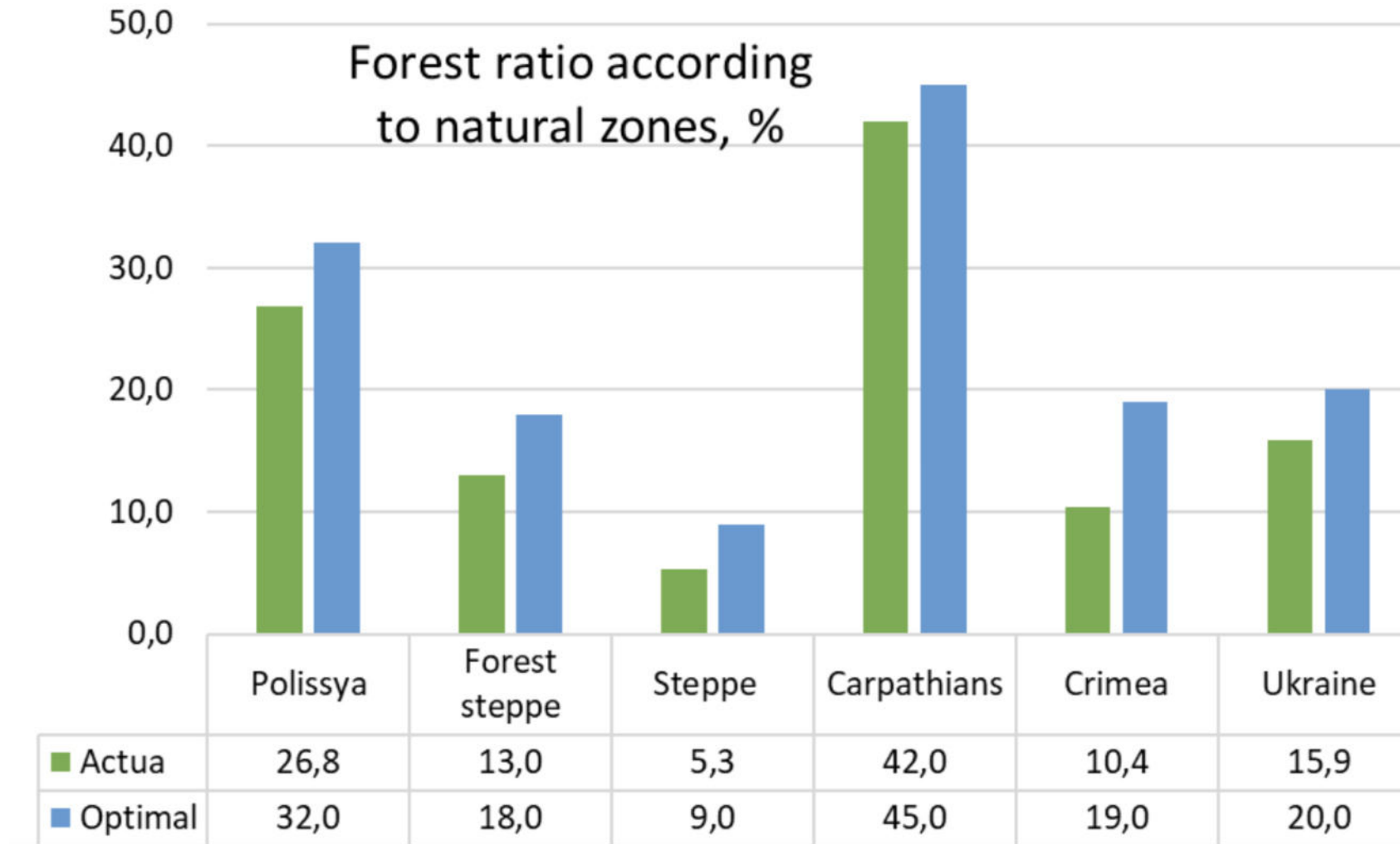
- ▶ inconsistency of the forest age structure;
- ▶ small areas of natural or semi-natural indigenous forest stands;
- ▶ decreasing of productivity and forest ecological stability;
- ▶ biodiversity impoverishment;
- ▶ deterioration of the quality of forest ecosystem services.

The ***synergy of these eco-destructive processes is strengthened by the climate change process***, which has a significant effect on reforestation.

1. The current challenges of forestry in Ukraine

- low forestation level in territory;
- deterioration of the sanitary state of forests. Annually more than 600 thousand hectares of forest plantations are damaged by entomo pests and phyto diseases;
- the presence of large areas of derivatives and artificially created mono aged stands, caused by excessive application of clear cuttings;
- drying in large quantities of both the derivatives and the aborigen fir forests in the Ukrainian Carpathians, and recently also common pine in the plain conditions of Ukraine;
- large area of radioactive contaminated forests;
- low density of road network in forests;
- insufficient reliability of information on forest inventory and imperfection of the state forest policy.

1.The current challenges of forestry in Ukraine



Forest cover of Ukraine and its natural zones, %

2. The impact of climate change on the forestry of Ukraine

Forecast for 2050

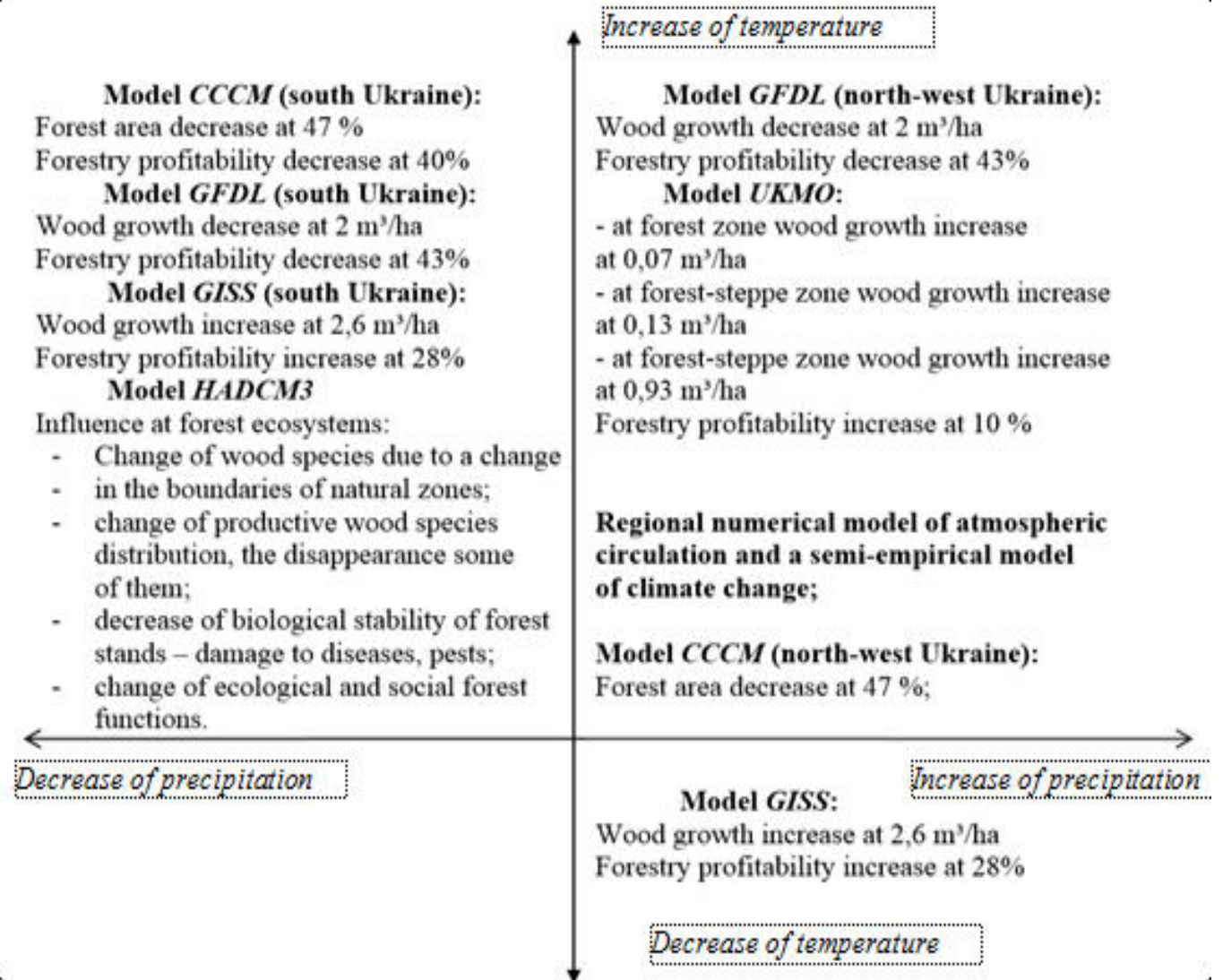
CCCM – Model of the Canadian Climatic Centre;

GFDL – Model of the Laboratory of Geophysical Dynamics of the USA;

GISS – Model of the Goddar Space Research Institute;

UKMO – Model of the United Kingdom Meteorological Office;

HADCM3 – A2A Scenario of the International Panel on Climate Change.



3. Forest burning, fires and other damage for forestry during the war period in Ukraine

The following losses for forestry were calculated of spring 2023:

- damage to the ecosystem amounts to 19.7 billion UAH,
- equipment worth 420 million UAH has been destroyed,
- real estate objects have been destroyed for 1.2 billion UAH,
- approximately 175 thousand hectares of forest have been mined,
- over 10 million animals have perished.



4. State Enterprise “Forests of Ukraine” – a national-level company



6.6 million hectares
of forest land under management

**Forest lands of SFE
"Forests of Ukraine"**

5,9 million hectares of total area covered
by forests
1,5 million hectares of protective forests
1,05 million hectares of Nature Reserve
Fund

**SFE "Forests of Ukraine" is a
national level company**

**12 branches
97 forestry management unit
1 343 forestry**

23,7 thousand employees

**Protection of forests
from fires**

190+ forest fire stations
2 300+ units of firefighting equipment
460+ observation towers

1 100 recreation centers

+ UAH 10 billion of taxes paid per year

We cultivate 200+ million trees annually
1 435 forest nurseries
10 modern seed and breeding centers

**1,5 billion m3 of tree
stock**

+ 12 million m3 of timber sales per year

UAH 1.3 billion
in assistance provided to the Armed Forces of Ukraine

2 000+ employees defend the country in
the Armed Forces of Ukraine

protection,
conservation,
tending and
reproduction of
state-owned
forest lands

4. State Enterprise “Forests of Ukraine” – a national-level company

**State Enterprise
«Forests of Ukraine»:**

**10.4 million
hectares**

*** 5.9 million hectares of total
area covered by forests,**

*** 6.6 million hectares of forest
land under management,**

*** 1.5 million hectares of
protective forests,**

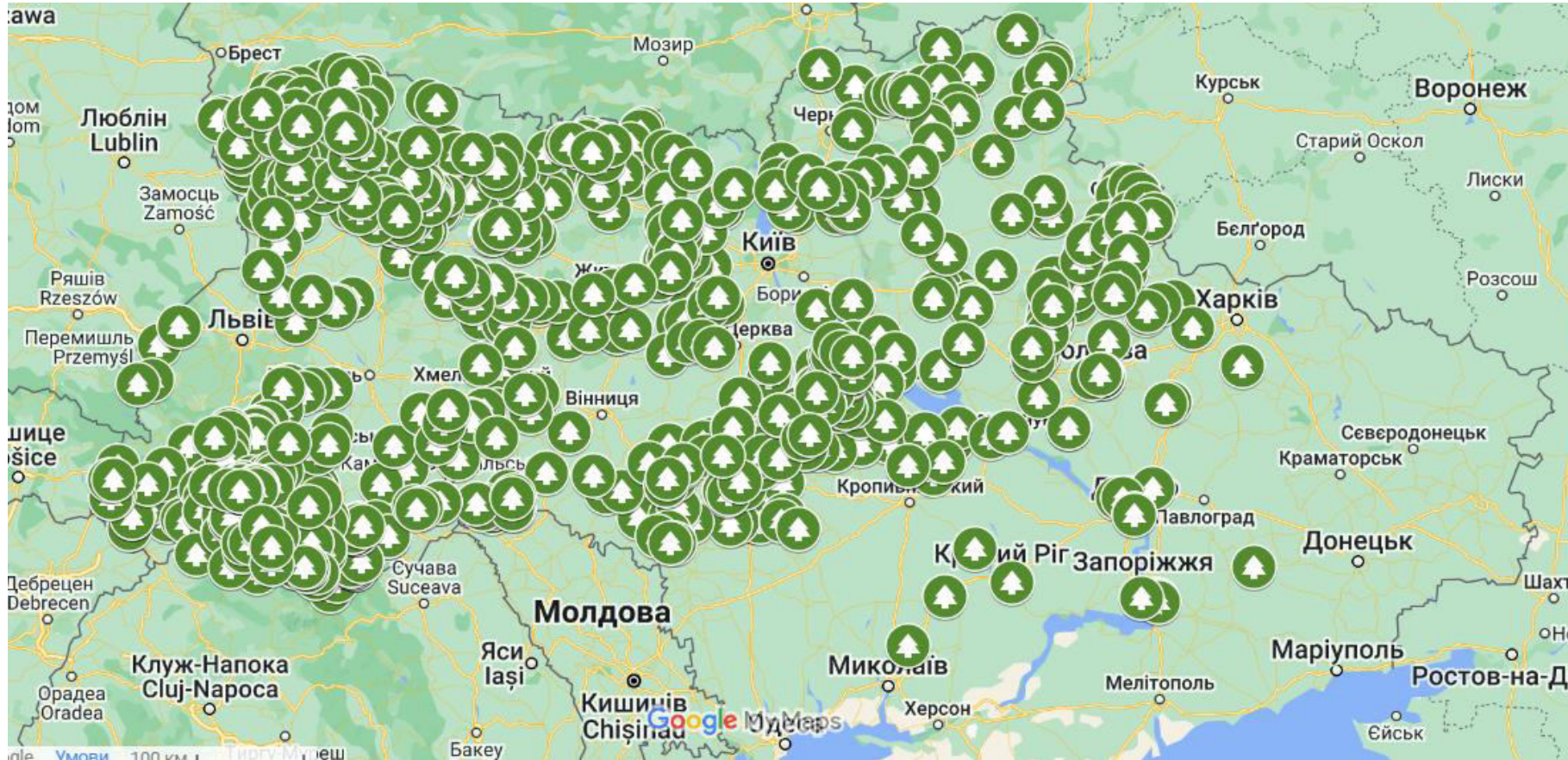
*** 1.05 million hectares of
Nature Reserve Fund.**

From this impressive territory, it is possible to harvest 1.5 billion cubic meters of timber. Additionally, more than 200 million trees are planted annually. This is managed by 1435 forest nurseries and 10 modern seed breeding centers.

Forest ratio by administrative regions, %



4. State Enterprise “Forests of Ukraine” – a national-level company



1100 recreational sites

12 branches

97 forest management units

1343 forestry offices

4. State Enterprise “Forests of Ukraine” – a national-level company

The State Specialized Forest Enterprise “Forests of Ukraine” ranks as one of the most prominent forest users in Europe and holds the distinction of being the largest in Ukraine. It operates under the auspices of the State Forest Resources Agency of Ukraine.

This enterprise is responsible for managing approximately 6.6 million hectares of state-owned forest land.

SFE “Forests of Ukraine” is not financed from the state budget, but instead provides for its own economic activities. Land plots for forestry purposes are state-owned and are transferred to SFE “Forests of Ukraine” for permanent use. SFE “Forests of Ukraine” consists of a central office, 12 branches, including 97 forest management units and 1343 forestry.

4. State Enterprise “Forests of Ukraine” – a national-level company

The specialization of the State Enterprise “Forests of Ukraine” includes:

- * Forestry management, protection, conservation, rational use, and regeneration of forests**
- * Wildlife management**



- * Conservation, regeneration, and rational use of the state hunting fund within the hunting grounds provided for the enterprise’s use**

Protection of forests from fires:

More than 190 fire stations and over 460 observation towers have been established. There are over 2300 units of firefighting equipment.



5. Forestry practice in Ukraine

SWOT-analysis of forestry in Ukraine

Strengths	Weaknesses
<ul style="list-style-type: none">✓ Good geographical location, state property for forests✓ Increase of the forest fund area, availability of all forests categories, diversity of forest stands species composition✓ Highly skilled employees✓ Available competitive advantages, significant market experience, knowledge of consumer needs✓ Existing resource potential for efficient recreational resources use	<ul style="list-style-type: none">✓ Decreasing of forest stands environmental sustainability caused by climate change✓ Deterioration of the forests sanitary condition, drying out, damage by diseases and pests✓ Insufficient financing of forestry measures, low availability to environment-friendly technologies, outdated equipment✓ No marketing department at the forestry enterprise✓ Significant recreational pressure on forests

5. Forestry practice in Ukraine

SWOT-analysis of forestry in Ukraine

Opportunities	Threats
<ul style="list-style-type: none">✓ Involvement of additional resources, investments to finance forestry activities✓ Implementation of effective mechanisms for timber sales, the possibility of increasing the consumer's number, access to international markets✓ Implementation of the advanced technologies, experience exchange with foreign partners✓ High level development of the service sector and related industries✓ A well-coordinated system of social support for employees✓ Involvement of different groups of stakeholders in management decision-making, expansion of cooperation✓ Relevance, accuracy and objectivity of information about forests	<ul style="list-style-type: none">✓ Economic and political instability in the country✓ Low competitiveness of forestry enterprises and purchasing capacity of the population✓ Negative demographic trends (population decline, high migration abroad)✓ Outdated information about forests✓ Natural disasters and unpredictable cataclysms (storms, windstorms, floods)✓ Low level of citizens environmental culture and awareness, people' negligent attitude to the forest✓ Violation of legislation on the rules of timber harvesting

5. Forestry practice in Ukraine

The main priorities of forestry in Ukraine are:

- increase of forestation on the territory of Ukraine up to 20 %;
- increase of productivity and improvement of quality composition of forest stands;
- preservation of biodiversity in forest ecosystems;
- increase of biotic resistance of forests to negative environmental factors – climate change, increasing anthropogenic loading, forest fires;
- elaboration of methods and technologies of rational use of forest resources on the principles of environmental economics, which ensures the sustainable development;
- strengthening the socio-economic role of forests on the principles of multifunctional forest management;
- construction of forest roads – preconditions for the wide introduction of environmentally safe technologies and sustainable forest management;
- the introduction of close-to-nature forestry, first of all in the Carpathian region of Ukraine.



LIVING IN HARMONY WITH NATURE

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Transformational Learning Network for Resilience

Enabling Ukrainian higher education to ensure a sustainable
and robust reconstruction of (post-war) Ukraine

Navigating Challenges: Conditions Shaping Sustainable Agriculture in Ukraine



- 1. Introduction**
- 2. Ukrainian Agriculture Before the War**
- 3. Main Challenges in Ukrainian Agriculture (Pre-War)**
- 4. Impact of the War on Agriculture**
- 5. Systemic Challenges During the War**
- 6. Transformation Pathways**
- 7. Monitoring and Indicators**

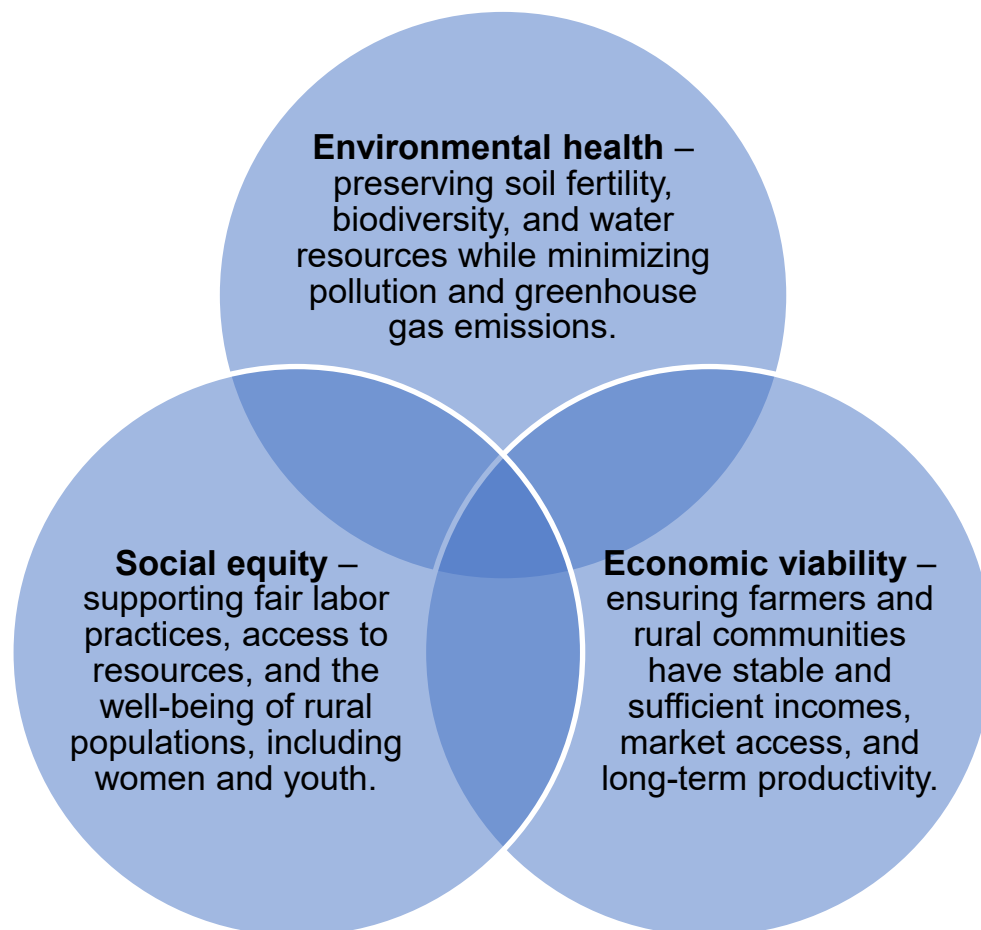




What is a sustainable agriculture?

**Sustainability in agriculture is not a goal,
but a dynamic process of adaptation and
innovation.**

Sustainable agriculture integrates three main objectives:



Key Principles:

- Efficient use of natural resources
- Agroecological resilience to climate change and crises
- Reduced reliance on external synthetic inputs
- Strengthening of local food systems and value chains

Why This Topic Matters Now

Ukraine's agriculture is under unprecedented pressure

Russia's full-scale invasion has disrupted production, logistics, and land access, threatening both national and global food security.

Food affordability and access have sharply declined

The Food Affordability Index dropped by over 40%, with vulnerable populations most affected by rising prices and reduced incomes.

Environmental degradation is accelerating

War-related damage to soils, water, and biodiversity overlaps with existing challenges: climate change, overuse of inputs, and land degradation.

Post-war recovery requires sustainable solutions

Agricultural reconstruction must avoid a return to pre-war vulnerabilities and instead foster resilient, climate-smart systems.

Ukraine remains critical to global food systems

Prior to the war, Ukraine supplied up to 10% of global wheat exports and nearly half of sunflower oil exports. The stability of these supply chains affects millions worldwide.

« Now is the time to reimagine agriculture — not only to rebuild, but to build better.»



Ukrainian agriculture before the War



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Agricultural Significance:

Agriculture was a cornerstone of Ukraine's economy, contributing approximately **10% to the GDP** and employing around **14% of the workforce**.

Fertile Land: Ukraine possessed about **30% of the world's black soil (chernozem)**, renowned for its high fertility, making it ideal for crop production.

Export Revenue: In 2021, agricultural exports amounted to **\$27.8 billion**, representing **41%** of Ukraine's total exports.



Ukrainian agriculture before the War

Global Exporter: Ukraine was among the top global exporters of key agricultural commodities:

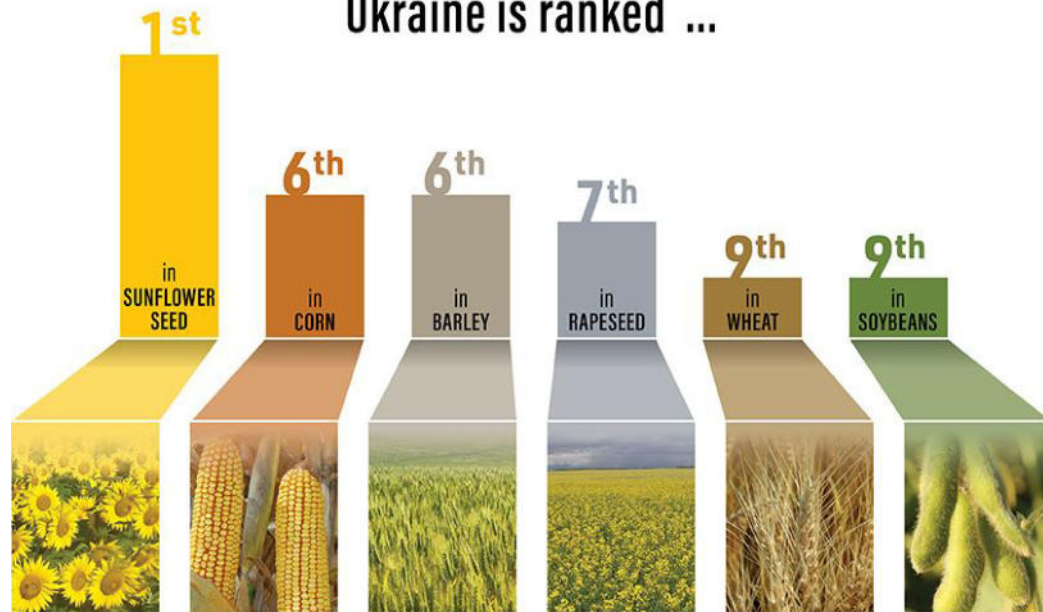
Sunflower Oil: Accounted for over **50%** of global exports. **Corn:** Contributed approximately **15%** to global exports.

Wheat: Supplied about **10%** of global exports.

Barley: Provided around **15–20%** of global exports.

GLOBAL PRODUCTION

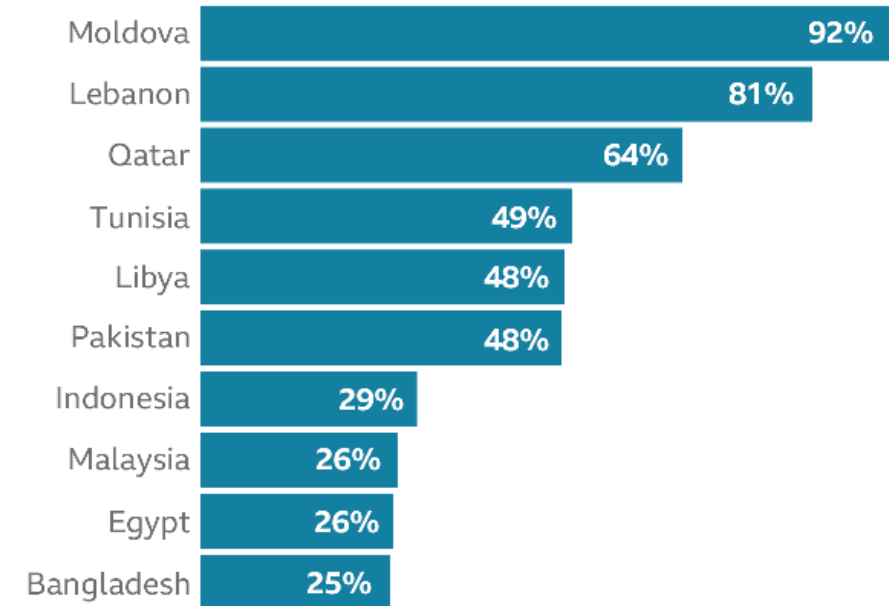
Ukraine is ranked ...



SOURCE: USDA

Ukraine plays crucial role in the global food supply

% of wheat imports sourced from Ukraine



Source: UN Food and Agriculture Organization, data for 2020



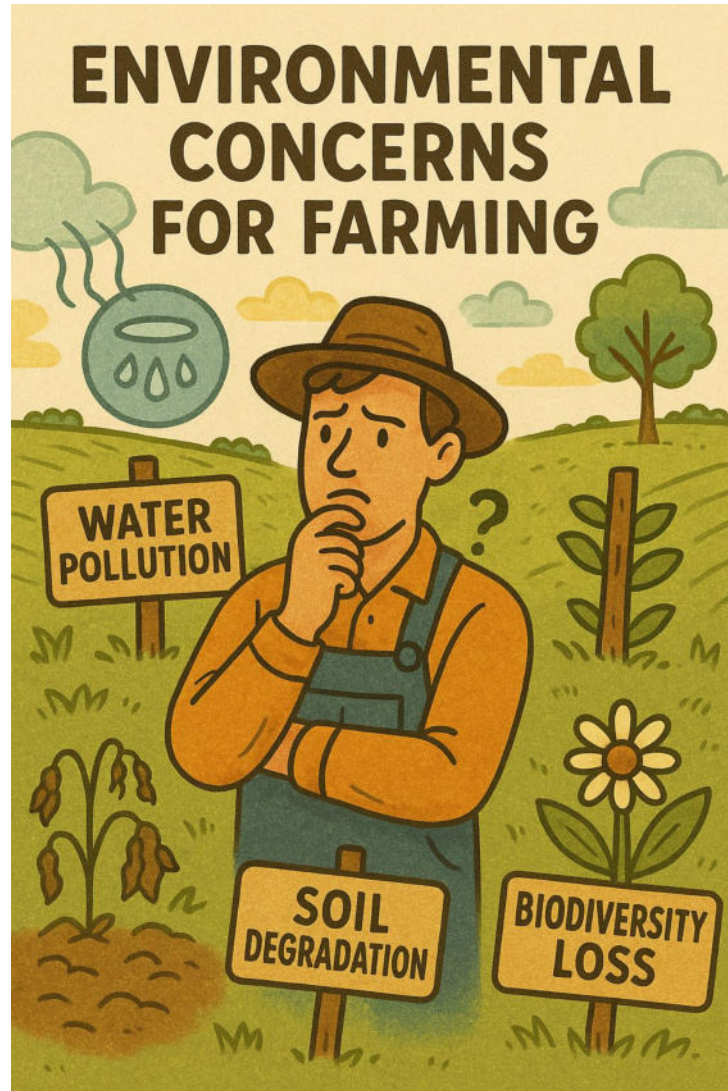
Infrastructure Deficiencies

- Many rural areas suffered from inadequate infrastructure, including poor road networks and limited storage facilities, hindering efficient transportation and storage of agricultural produce.
- These deficiencies increased post-harvest losses and reduced competitiveness in international markets.

Land Ownership and Market Constraints

- Prior to July 2021, Ukraine had a moratorium on the sale of agricultural land, limiting land transactions to leases and hindering investment in the sector.
- This restriction prevented farmers from using land as collateral for loans, thereby limiting access to credit and investment in modern technologies.





Climate Vulnerabilities

- The sector was increasingly exposed to climate-related risks, such as droughts and extreme weather events, affecting crop yields and productivity.
- Southern regions, in particular, suffered from low rainfall, impacting agricultural output.

Environmental Concerns

- Issues like soil degradation, overuse of fertilizers, and water pollution were emerging concerns, necessitating the adoption of sustainable farming practices.
- Approximately 30% of Ukraine's land area is covered by highly fertile black soil (chernozem), but improper agricultural practices threatened its sustainability.

Limited Access to Finance

• Small and medium-sized farmers often faced challenges in accessing affordable credit, limiting their ability to invest in modern equipment and technologies.

High Interest Rates

• In 2020, the National Bank of Ukraine's key policy rate was reduced to **6.0%**, aiming to stimulate economic activity. However, commercial lending rates for agricultural loans remained significantly higher. [Trading](#)

[Economics+1FocusEconomics+1](#)

• Reports indicate that small farmers often encountered interest rates **exceeding 20% per annum**, rendering formal credit options financially unviable for many. [Enlargement and Eastern Neighbourhood](#)

Reliance on Non-Bank Financing

• A 2019 analysis revealed that Ukrainian agriculture attracted over **\$35 billion annually**, with **95%** stemming from private financing sources.

• The breakdown of working capital financing sources was as follows:

- **Retained earnings and profits:** 40%
- **Input suppliers:** 30%
- **Bank loans:** 20%
- **State financing:** 5%
- **Other sources:** 5%

Barriers to Credit Access

Collateral Challenges: Prior to the land market reform in July 2021, agricultural land could not be sold, limiting its use as collateral for loans.

Administrative Hurdles: Small farmers often lacked the necessary documentation, such as formal land titles or business plans, required by banks.

Financial Literacy: Many small-scale farmers were not well-versed in financial management or banking procedures, further hindering their ability to secure loans.

Impact on Agricultural Development

- The limited access to affordable credit constrained small and medium-sized farmers' ability to invest in modern equipment, technologies, and inputs, affecting productivity and competitiveness.
- The disparity in financing access contributed to the consolidation of agricultural production among larger enterprises, widening the gap between large agribusinesses and smaller farms.



Immediate Impact Post-Invasion (2022)

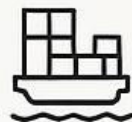


Exports plummeted by over 90% in March–May 2022 due to the blockade of Black Sea ports



By mid-2022, approximately **20 million tons** of grain were stranded in Ukrainian ports, exacerbating global food insecurity

Recovery Efforts and Initiatives



Black Sea Grain Initiative: Launched in July 2022 facilitating the export of nearly **33 million tons** of grain and food products to 45 countries by mid-2023



Grain from Ukraine Program: Introduced in November 2022 to support humanitarian shipments to countries in need and bolster Ukrainian grain producers



Financial War impact

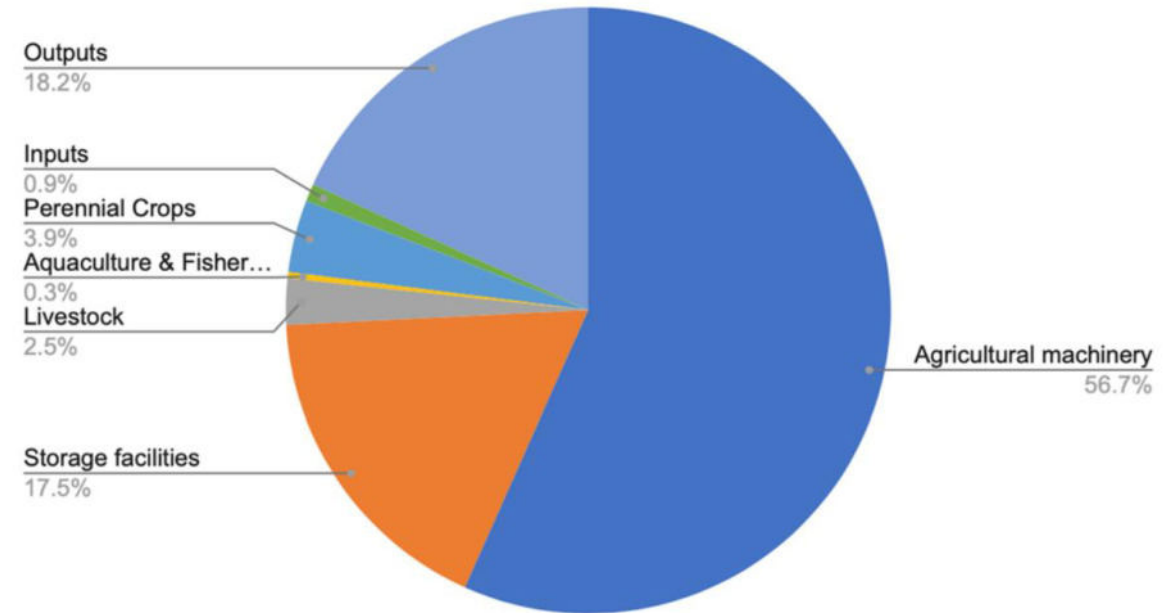


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Total damages: \$10.3 billion

- **Damaged agricultural machinery:** \$5.8 billion
 - ~181,000 units affected, including 18,200 tractors and 4,663 combine harvesters
 - **Damaged/stolen inputs & outputs:** \$1.97 billion
 - Includes 2.8 million tons of grain and 1.2 million tons of oilseeds
 - **Storage facilities:** \$1.8 billion
 - 11.3 million tons of capacity fully destroyed
 - **Perennial plantations:** \$398 million
 - Loss of 16,300 hectares
 - **Livestock sector:** \$254 million
 - ~13 million poultry, 238,000 cattle, and more lost
 - **Aquaculture and fishery:** \$35 million
 - Severely impacted by Kakhovka dam destruction
- 📌 *Top affected regions:* Kherson, Zaporizhzhia, Luhansk (65% of all damages)



Agricultural machinery: \$5.8 billion in damages





Total Losses in Agricultural Output and Profitability

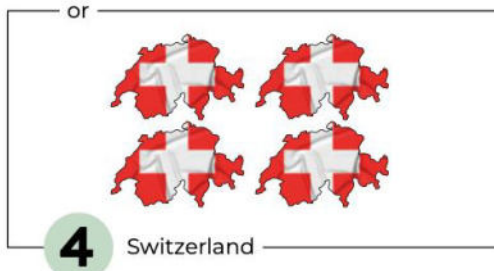
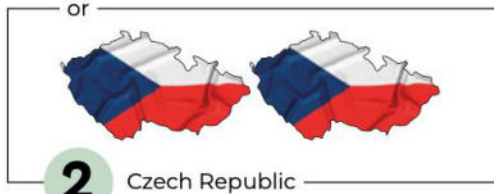


Landmines thread



30%
of Ukraine's territory
is mined

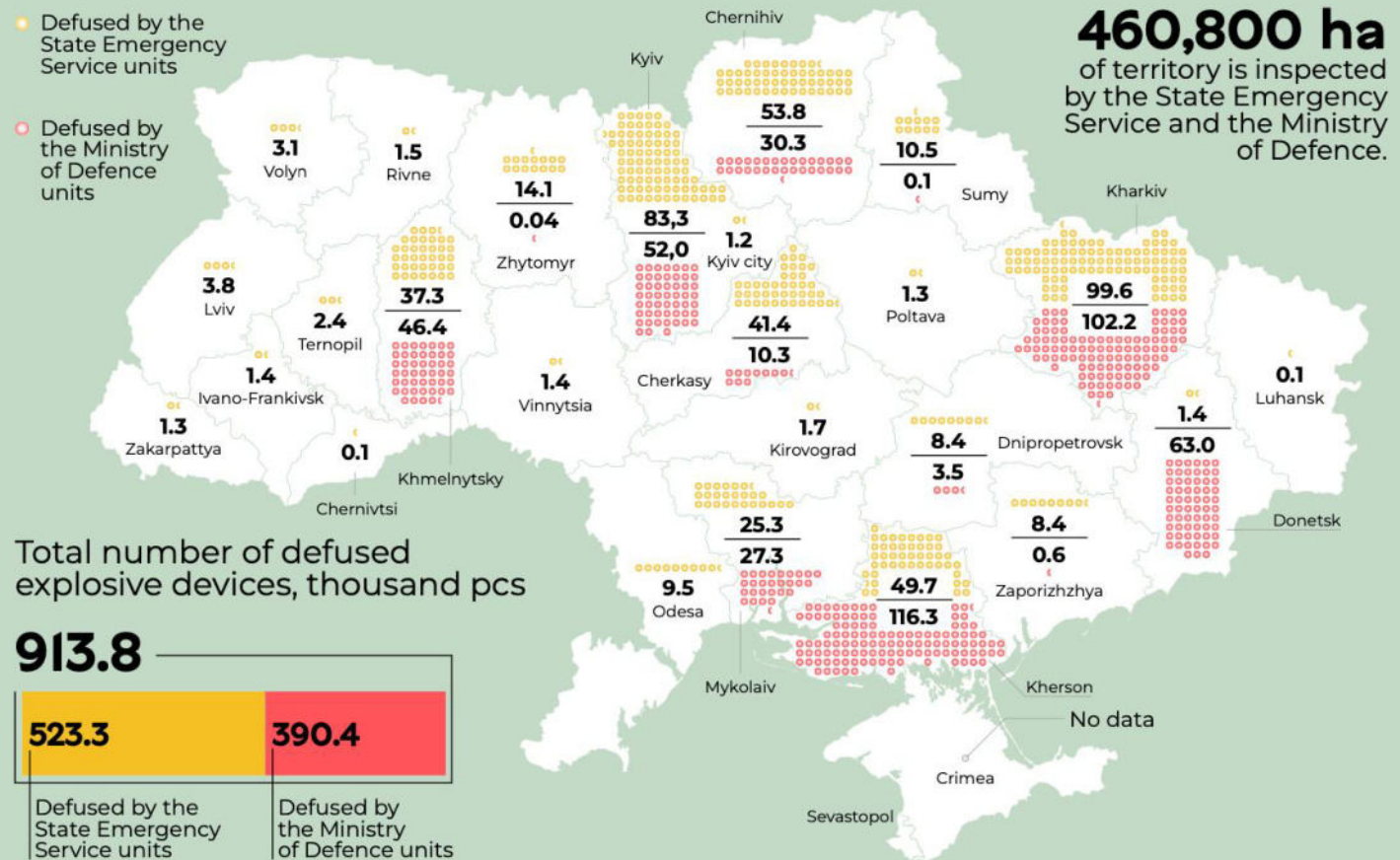
The area of mined
territory in Ukraine
is as large as



Demining takes place daily

Explosive devices defused by the State Emergency Service
and the Ministry of Defence, 24.02.2022–26.08.2024, thousand pcs

- Defused by the State Emergency Service units
- Defused by the Ministry of Defence units



Impact of landmines thread to Ukrainian agriculture



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Extent of Contamination

- **174,000 km²** of Ukrainian territory is contaminated with landmines and unexploded ordnance
- **25%** of Ukraine's land is affected by landmines
- Approximately **10 million** hectares of arable land are currently unusable



Economic Impact

- **\$11.2 billion** annual loss in GDP attributed to landmine contamination
- **\$8.9 billion** reduction in export values
- **\$1.1 billion** decrease in regional tax revenues



Humanitarian Consequences

- Over **1,300** casualties from landmines and unexploded ordnance since 2022
- **170** farmers killed, nearly 20% of civilian deaths



Demining Efforts and Challenges

- **\$34.6 billion** estimated cost for demining operations
- **100** demining vehicles in operation, fleet to double
- Estimated duration of demining: up to **10 years**



Systemic Challenges Facing Agriculture



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the European Union



WAR

But, not only...





Systemic Challenges Facing Agriculture

Logistics and Transportation

- Damage to **infrastructure** (roads, railways, bridges) → delays and losses in input and output movement
- Increased costs of delivery: +35–50% in 2023 compared to 2021
- Export bottlenecks due to attacks on Black Sea ports and reliance on land corridors

Input Supply Chains

- Fertilizer imports fell by ~45% in 2022; price of nitrogen fertilizers doubled
- Shortages of certified seeds, crop protection chemicals
- Limited access to fuel for fieldwork during peak seasons

Financial and Insurance Services

- Credit availability is limited, especially for small farms
- High interest rates (~18–25%) despite government compensation programs
- Agricultural insurance coverage dropped below 5% of arable land in 2023

Extension and Advisory Support

- Disruption of field-based advisory services
- Limited reach of digital tools in rural areas with damaged infrastructure
- Loss of human capacity due to displacement or mobilization



Systemic Challenges Farming is Facing



Uncertainty in Land Use and Tenure

- Insecure land ownership records and mined territories reduce investment
- Delays in land market development and cadastral data updates

Weak Integration of Digital Tools

- Limited adoption of **digital platforms for extension** and remote diagnostics
- Lack of unified systems for farm data, weather forecasting, or crop disease alerts

Gaps in Human Capital and Education

- Lack of trained agronomists, veterinary technicians, and advisors in frontline or de-occupied regions
- Ageing service workforce and underfunded vocational education

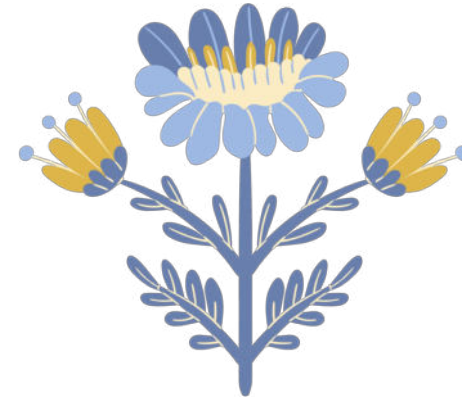
Inequity of Service Access

- Large agribusinesses have better access to private services (labs, logistics)
- Small and medium-sized farms face **fragmented** and **inconsistent** support





Strategic adaptive management for sustainable reconstruction and recovery



Sustainable Development of Energy Systems in Post-War Ukraine: main challenges

a jointly developed training course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology

Prof.

Mykhailo VERESKUN



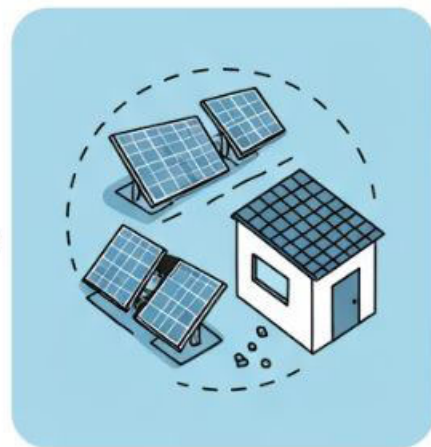
Issues to be considered:

1. Main challenges for the energy sector of Ukraine.
2. Environmental risks and challenges for biodiversity in the context of post-war reconstruction of Ukraine's energy systems.
3. Post-war reconstruction strategy.

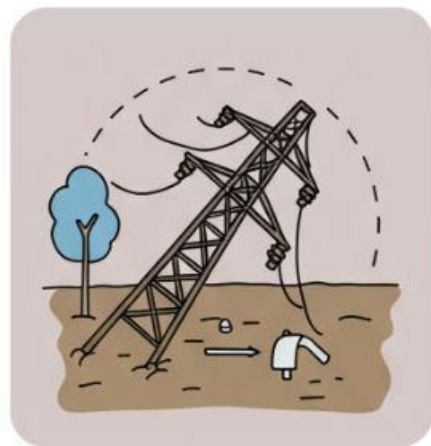




Destroyed Infrastructure



Renewable Energy Integration



Deficient Infrastructure



Efficient Infrastructure



Key Challenges Overview



Infrastructure Destruction

Massive damage to power plants, transmission lines, and pipelines.



Renewable Integration

Need to incorporate clean energy sources during rebuilding.



Energy Efficiency

Opportunity to modernize outdated systems and reduce losses.

Infrastructure Destruction Scale

30%

Thermal Power Plants
Destroyed or severely damaged
across Ukraine

50,000

Power Line Kilometers
Damaged transmission
infrastructure

500

Gas Pipeline Kilometers
Destroyed, complicating supply
nationwide



Human Impact of Energy Crisis

Power Outages

Over 10 million citizens left without electricity in November 2022 due to attacks on critical infrastructure.

Industrial Losses

Major enterprises shut down from unstable energy supply, causing economic ripple effects.

Social Consequences

Mass migration as basic living conditions became impossible in heavily affected areas.

Consequences of Lost Infrastructure

Energy Shortages

Up to 40% reduction in electricity production during peak crisis periods. Repair crews unable to access damaged facilities in conflict zones.

Environmental Hazards

Potential accidents at nuclear and hydroelectric facilities under occupation. Increased CO2 emissions from emergency generators.

Security Concerns

Critical national infrastructure under foreign military control, including the Zaporizhzhia nuclear power plant.





Growing Demand for Clean Energy



International Commitments

Ukraine joined Paris Agreement, pledging 25% renewable energy by 2030.



Public Awareness

Growing preference for green energy among Ukrainian citizens.



Consumption Growth

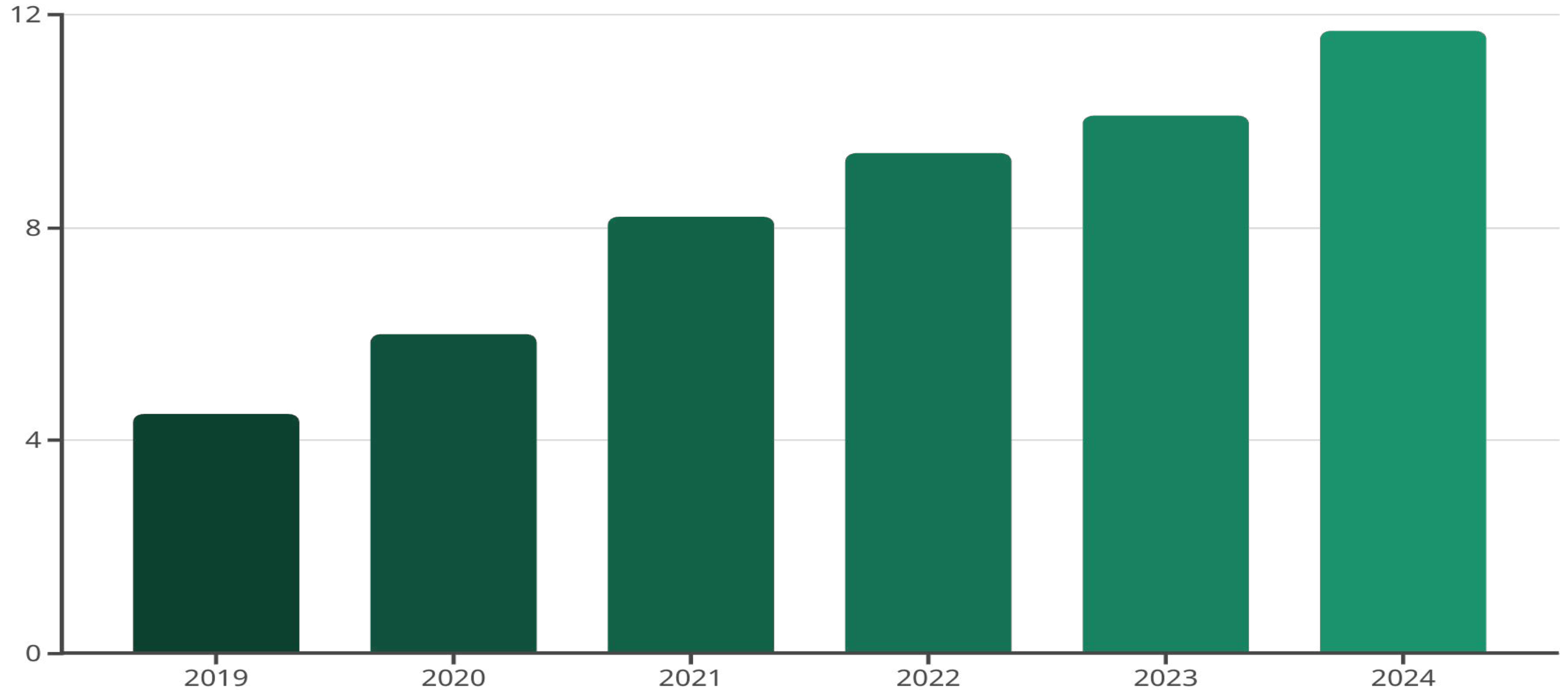
14% increase in renewable electricity demand in 2024 versus 2023.



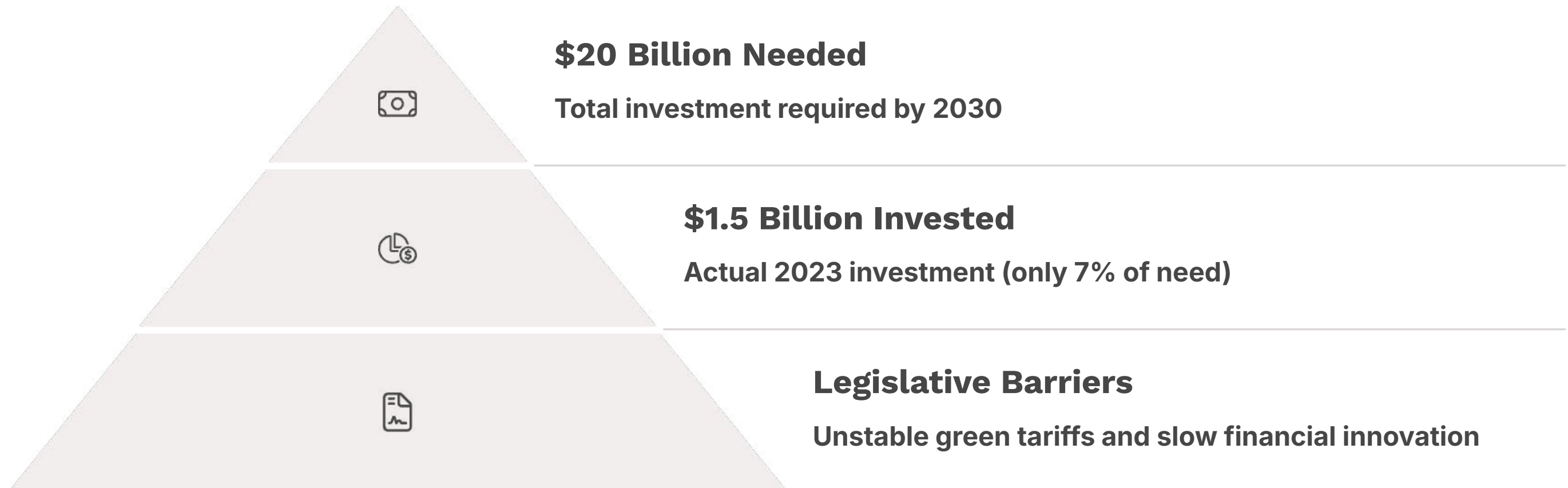
Natural Potential

1,800+ sunshine hours yearly in southern regions; strong coastal winds.

Renewable Energy Demand Growth



Investment Challenges for Renewables



International Best Practices



German Smart Grid

Advanced monitoring systems reduce transmission losses and improve grid stability.



Danish National Fund

Dedicated funding mechanism supports renewable energy projects nationwide.



Tax Incentives

Financial benefits create favorable investment climate for clean energy.

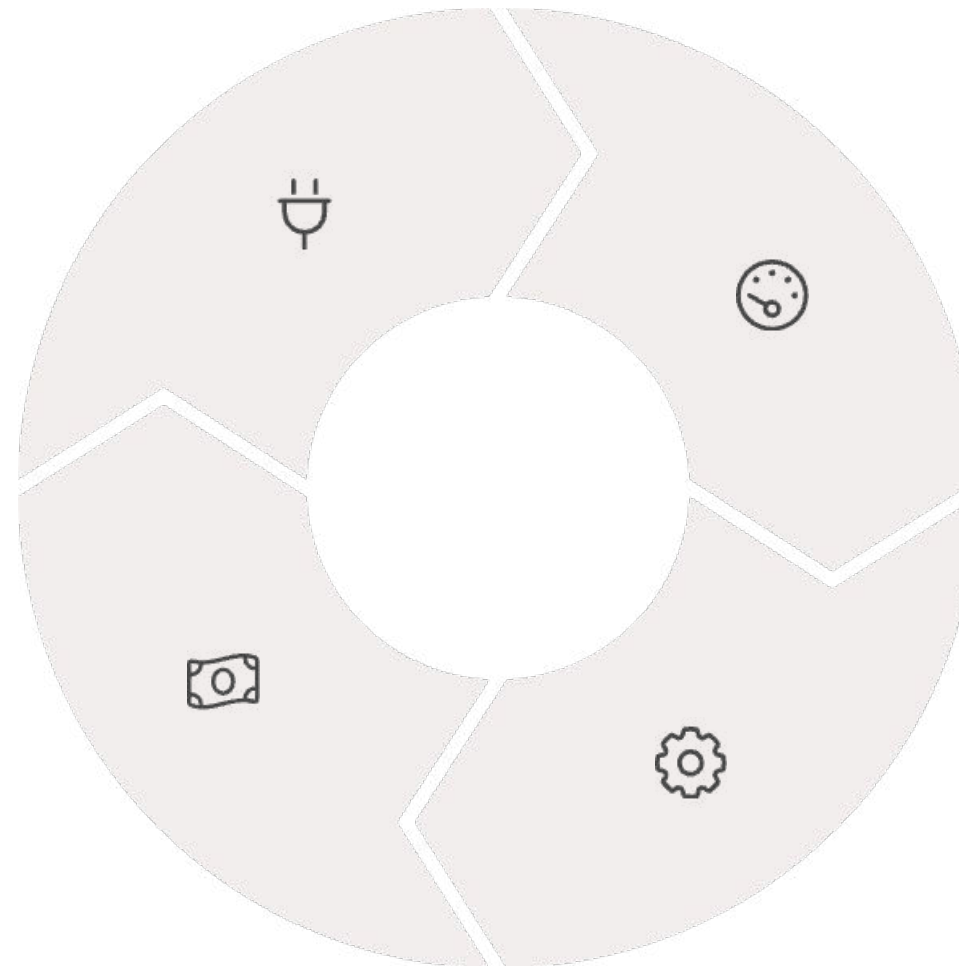
Energy Network Inefficiencies

Aging Infrastructure

60% wear level in electricity grid

Investment Shortfall

Insufficient funding for critical upgrades



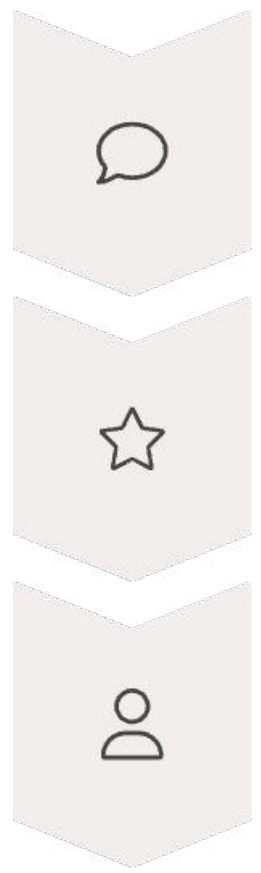
Transmission Losses

12% energy lost vs. 6% European average

Modernization Needs

50% of equipment requires immediate upgrade

Energy Loss Comparison



Ukraine

12% transmission losses

Poland

8% transmission losses

Germany

4-6% transmission losses



Building Energy Efficiency Challenges



Aging Housing Stock

75% of buildings constructed before 1990



Industrial Inefficiency

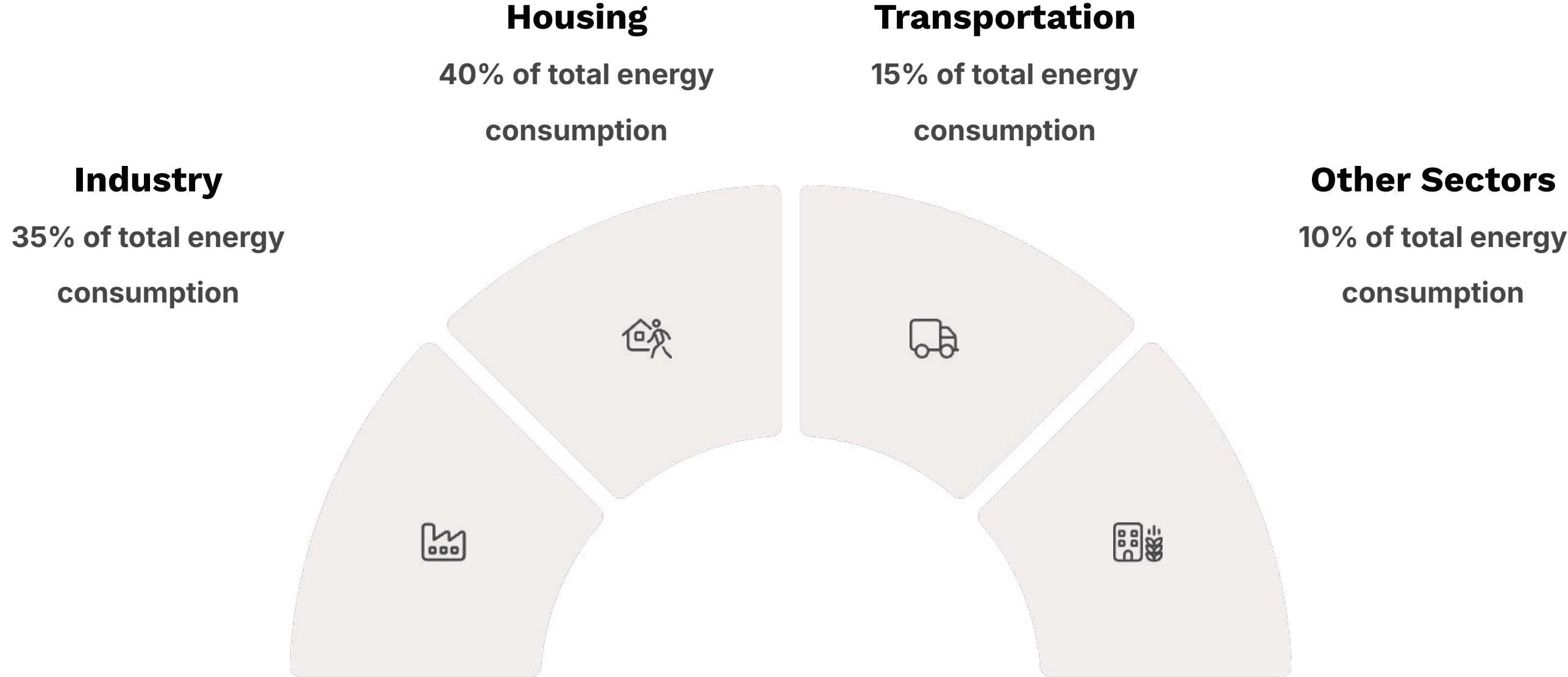
Soviet-era equipment still in widespread use



Improvement Potential

50% energy savings possible through insulation alone

Energy Consumption Distribution



Environmental Risks of Reconstruction



Air Pollution

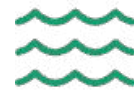
Emergency

generators increase emissions during reconstruction phase.



Industrial Accidents

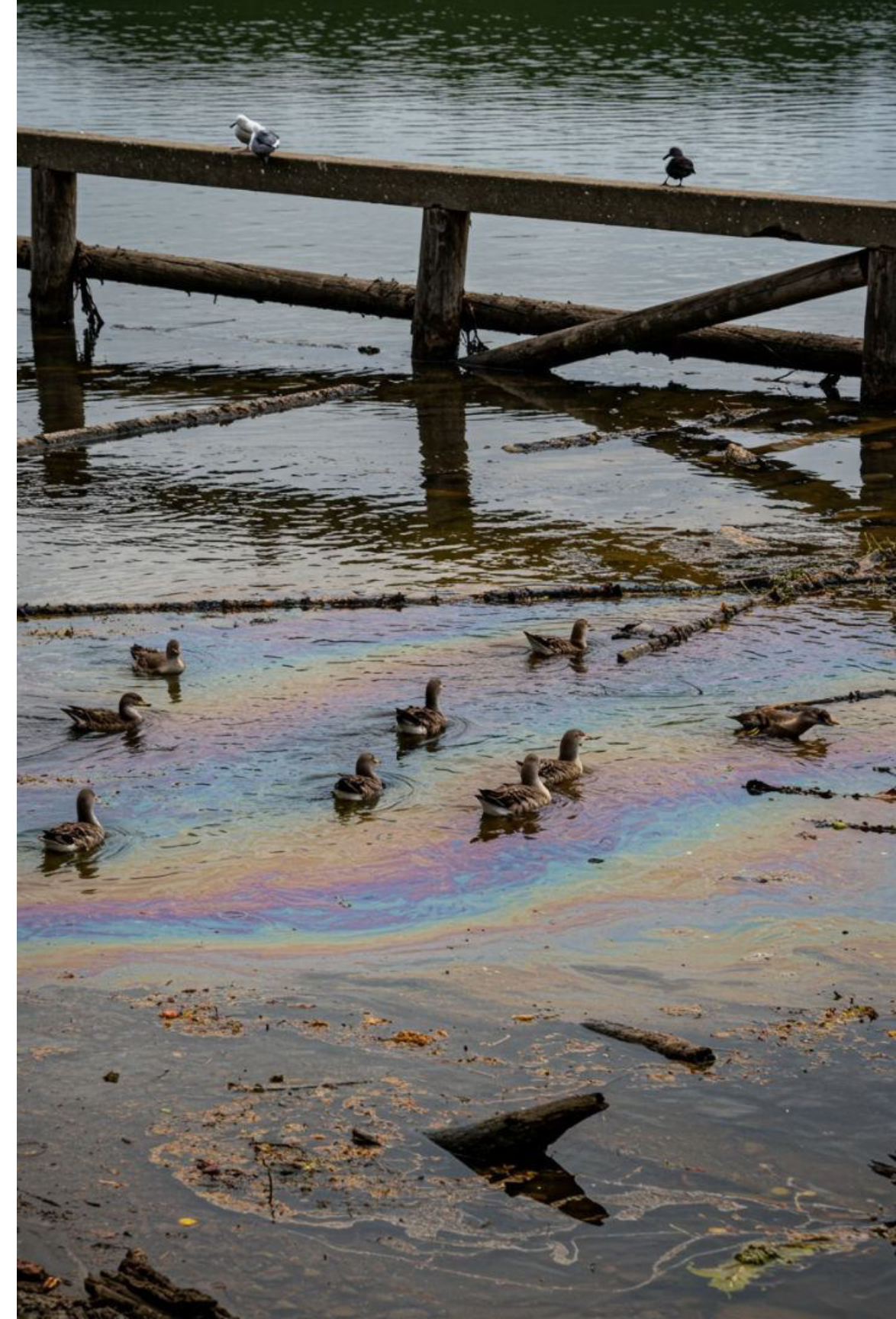
Damaged infrastructure creates risk of environmental disasters.



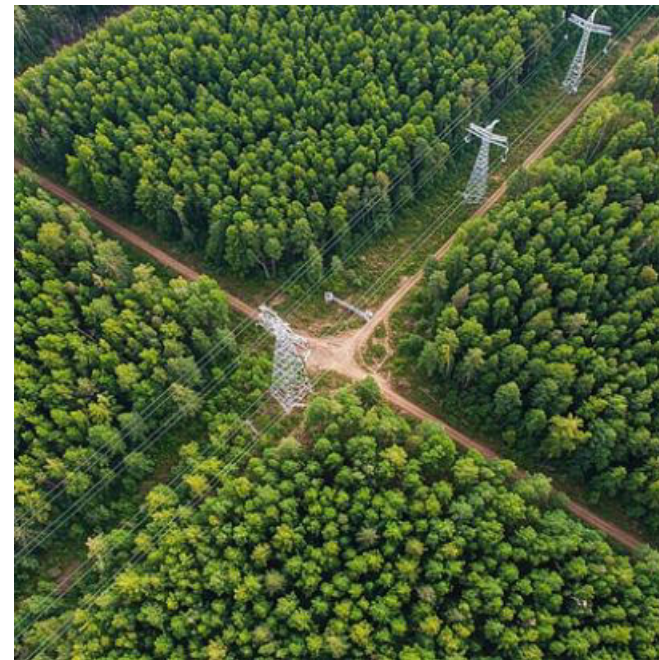
Water

Contamination

Pipeline damage causes oil leaks and unauthorized discharges.



Biodiversity Challenges



Reconstruction threatens biodiversity through habitat loss, ecosystem fragmentation, and invasive species introduction during increased international logistics flows.



Climate Impact Concerns

Continued fossil fuel use

Increased greenhouse gas emissions

Uneven regional development

Disparities in sustainable practice implementation

Resource depletion

High demand for reconstruction materials

Delayed renewable transition

Extended carbon footprint during rebuilding



Reconstruction Action Plan

Damage Assessment

Comprehensive audit using GIS, drones, and international expertise to analyze infrastructure damage.

Priority Setting

Focus on critical consumers first: hospitals, water supply, and essential industry.

Staged Implementation

Short-term urgent repairs, medium-term modernization, long-term innovation.



Financing Reconstruction



International Grants

Non-repayable aid from global partners and organizations.



Soft Loans

Low-interest financing with favorable repayment terms.



Recovery Funds

Public-private partnerships for sustainable rebuilding.



Green Bonds

Debt securities specifically for environmental projects.



Vision for Ukraine's Energy Future



Decen tralize d Grid

Resilient local energy production reduces vulnerability to attacks.



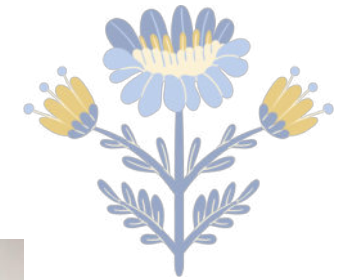
Smart Infrastr uctur

Intelligent systems optimize energy flow and reduce waste.



Innova tion Hub

Ukraine becomes Eastern European leader in energy technology.



**Thank you for your
attention!**



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This material was developed in the course of the joint Erasmus+ project

“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

funded by the EU



**Co-funded by
the European Union**



<https://translearnn.ztu.edu.ua>



ADMIRAL MAKAROV NATIONAL UNIVERSITY OF SHIPBUILDING
MYKOLAIV, UKRAINE

THE IMPACT OF WAR ON WATER RESOURCES AND INFRASTRUCTURE

Lecture 1



Prof. Ganna Trokhymenko, PhD Nataliia Magas

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

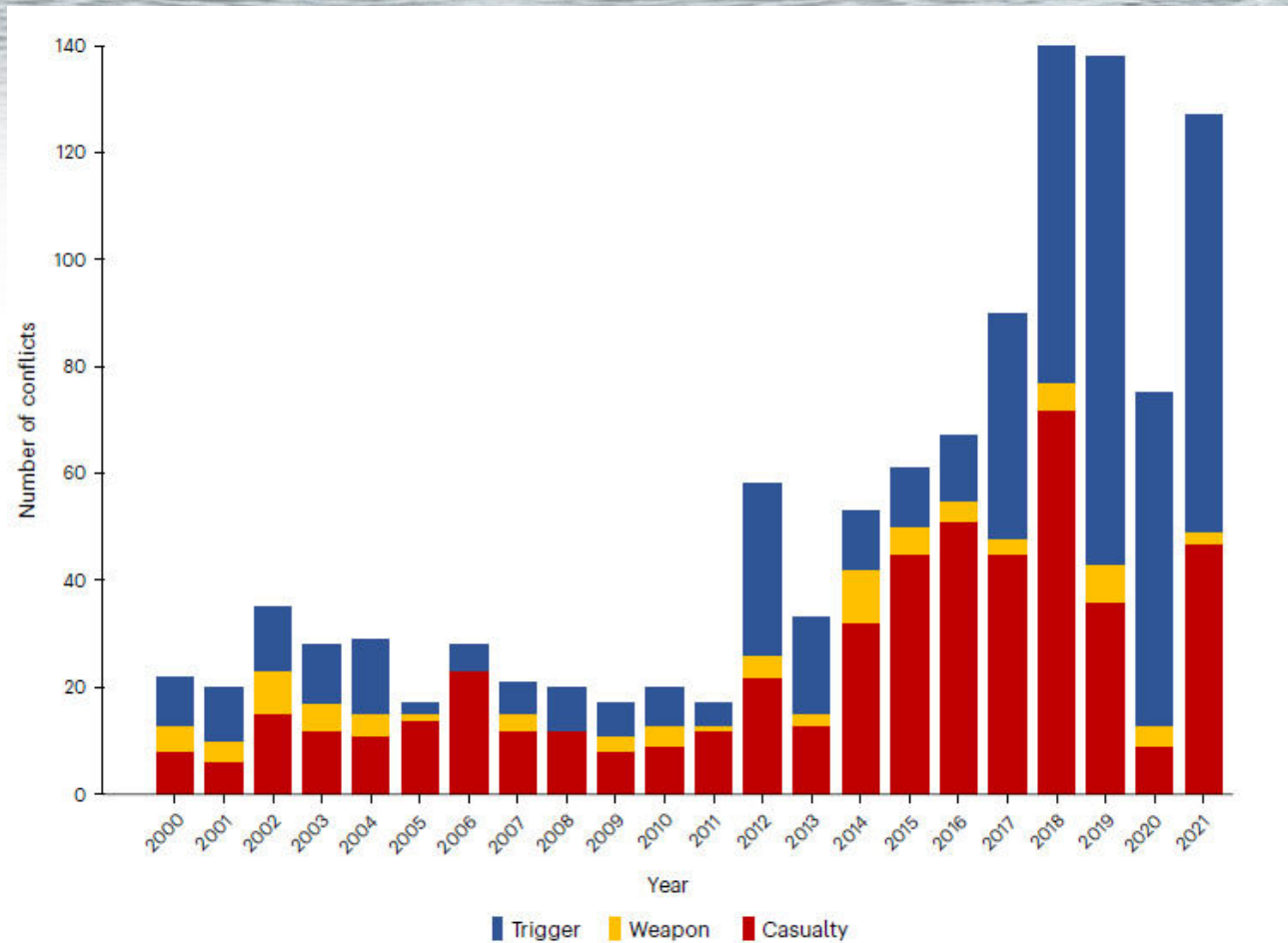
a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology



CONTENTS

1. Water conflicts by year and type.
2. The effects of conflict on the water resources and infrastructure in Ukraine.
3. Impact on water resources and water infrastructure on the example of Mykolaiv region.
4. Impacts on aquatic ecosystems and the possibility of achieving sustainable development goals.

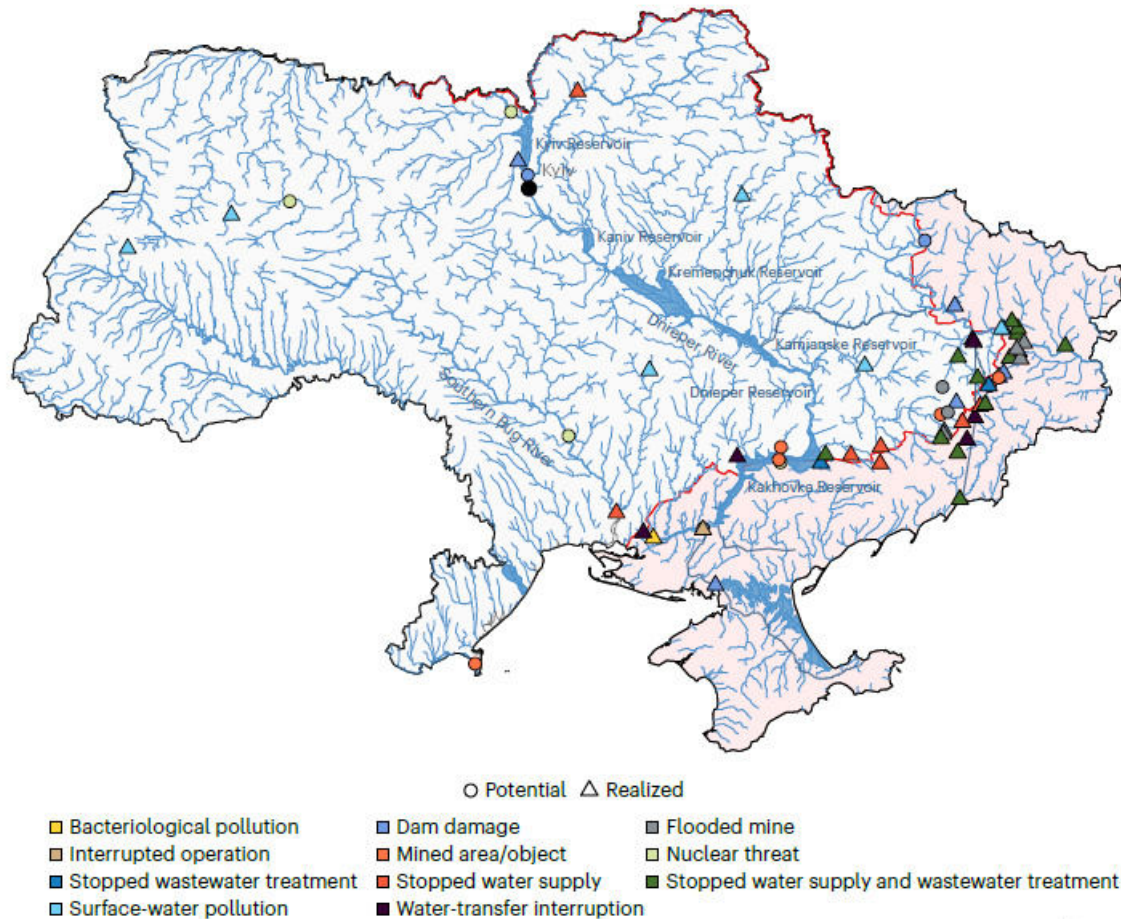
WATER CONFLICTS BY YEAR AND TYPE



Data from <https://www.worldwater.org>.

THE EFFECTS OF CONFLICT ON THE WATER RESOURCES AND INFRASTRUCTURE IN UKRAINE

b



Identified impacts on water resources and infrastructure in Ukraine (24 February 2022–18 May 2022). Red line corresponds to a front-line location after three months of the armed conflict; red area shows parts of Ukraine that are not under control of the Ukrainian government.

DESTRUCTION IN THE ZONE OF INFLUENCE ON SURFACE WATER RESOURCES FROM FEBRUARY 24, 2022 TO OCTOBER 24, 2023 (S. VEYCHKO ET AL.)



EXAMPLES OF IMPACTS ON WATER RESOURCES AND INFRASTRUCTURE IN UKRAINE DURING ARMED CONFLICTS



a) The dam on the Dnieper River near the city of Zaporizhzhia after reportedly being blown up by Soviet special forces in 1941 in an attempt to delay the offense of German troops.

b) Demolition of the dam on the Irpin River on 26 February 2022 caused flooding near the village of Demidov in the Vyshhorod district of Kyiv region.

c) Craters formed by shells on the floodplain of the Irpin River.

d) Water in the Kamyshevakha River polluted by mine waters (picture taken in 2021).

e) Damaged pipe near Kiselevka village in the Kherson region (picture taken in April 2022).

f) People in a line for drinking water in Mykolayiv (picture taken in April 2022)

IMPACT OF MILITARY OPERATIONS ON DAMS

Data	Consequences
<p data-bbox="54 211 243 244">March 2022</p> 	<p data-bbox="929 211 1870 511">This artificial flood was created by Ukrainians by the destruction of the dam in the mouth of the Irpin River. The resulting flooding became a serious obstacle to advancing Russian troops from the north and the northwest. In some places the width of the flooding on the Irpin River exceeded 1 km. These actions were helpful in successfully slowing and ultimately stopping the threat to Kyiv.</p>
 <p data-bbox="556 534 904 566">February - March 2022</p>	<p data-bbox="942 534 1856 619">The hydraulic structure of the Oskil reservoir, the largest on the Left Bank of Ukraine, was damaged.</p>
<p data-bbox="54 748 446 781">14-16th September 2022</p> 	<p data-bbox="929 748 1870 933">Russian troops launched missile attacks on the Karachunivske water storage facility in Kryvyi Rih. The water level in the Ingulets River rose by 1-2 metres, resulting in the flooding of 112 houses.</p>
 <p data-bbox="523 968 904 1001">20-21th September 2022</p>	<p data-bbox="962 968 1850 1043">8 missile strikes on the hydroelectric power station of the Pechenizka reservoir on the Siverskyi Donetsk River.</p>
<p data-bbox="54 1162 417 1300">5-th October and 15-th December 2022, 25th May 2023)</p> 	<p data-bbox="929 1162 1870 1329">Russian troops shelled the dam of the Karlivka water reservoir, which is a backup source of water supply for several communities in Donetsk region, with Grad multiple rocket launchers. In May, it was destroyed.</p>

THE IMPACT OF HOSTILITIES ON WATER SUPPLY AND SEWERAGE SYSTEMS

Date	Consequences
11th March 2022	The Chernihiv water utility's systems and pumping stations were damaged, water tanks were damaged by air strikes and wells were mined, resulting in only a third of the city's residents having water supply for a long time. In addition, sewage treatment plants were damaged.
2nd - 3rd July 2023	Russian missiles destroyed the building of the Kharkiv water utilities. In total, about 150 water supply infrastructure facilities were damaged as a result of the constant shelling of Kharkiv.
March 2022	The sewage treatment plant in Vasylivka, Zaporizhzhia region, has been destroyed and the wastewater is flowing by gravity into the Dnipro River. Repairs and environmental damage assessment will be possible only after de-occupation.
April 2022	The destruction of the Dnipro-Mykolaiv water pipeline near the village of Kyselivka, Kherson region. As a result, Mykolaiv, which had a population of about 450,000 before the full-scale war, was brought to the brink of a humanitarian catastrophe.
Spring 2022	As a result of the hostilities, water supply to almost the entire Luhansk region and many communities in Donetsk region has been cut off. The municipal infrastructure of such large cities under temporary occupation as Severodonetsk, Lysychansk and Mariupol has been completely destroyed. There is no water supply in the fortress cities that have been holding the frontline for many months - Bakhmut, Avdiivka, Vuhledar, and the bombing of the water intake and pumping stations in Belogorovka.
Autumn 2022	The disruption of critical water and wastewater infrastructure also threatens people's access to drinking water and the environment, as pumping stations and treatment facilities are no longer functioning properly. For example, in many cities, water supply was interrupted due to shelling of energy infrastructure. After another wave of rocket attacks on 23 November, emergency shutdowns occurred at the Voznesensk treatment plant in Mykolaiv region, which threatened to kill activated sludge bacteria due to the suspension of aeration

MYKOLAIV IS A CITY OF HALF A MILLION PEOPLE WITHOUT DRINKING WATER

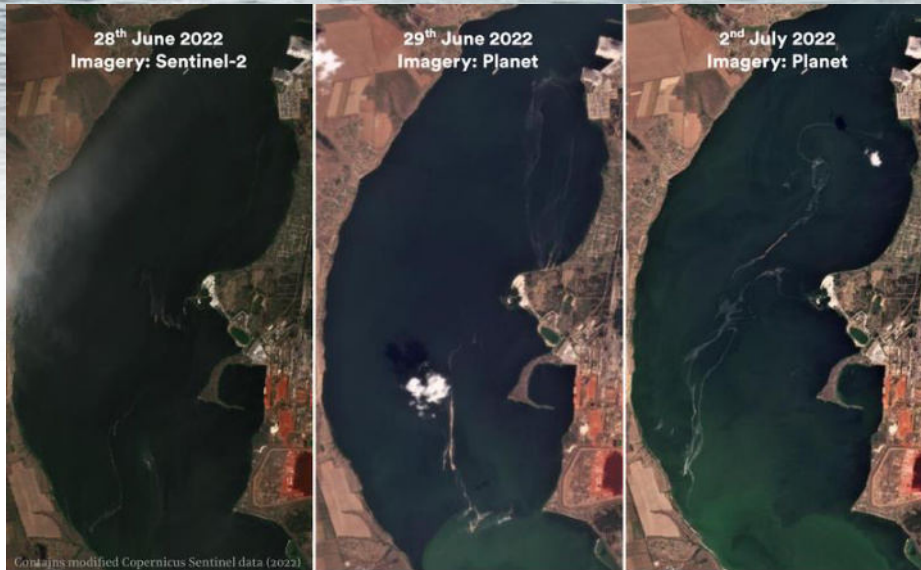


POLLUTION OF THE BUG ESTUARY FOLLOWING DAMAGE TO MYKOLAIV'S MAIN WASTEWATER TREATMENT FACILITY



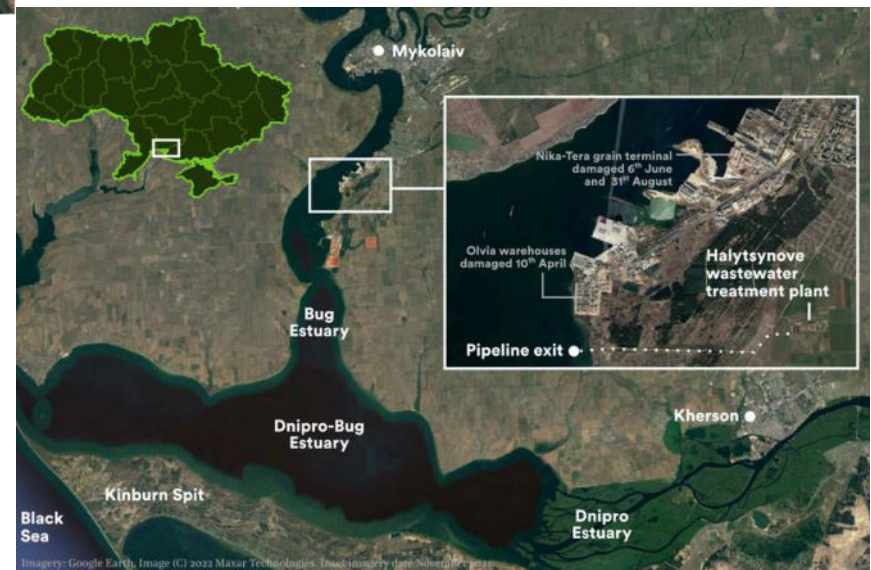
we show what appears to be an unreported discharge into the Bug estuary, south of Mykolaiv, between 28 June and 15 July. The pipeline from which the discharge emanates is connected to the Halytsynove wastewater treatment facility 3.5 km inland, which treats 83% of Mykolaiv's sewage.

POLLUTION OF THE BUG ESTUARY FOLLOWING DAMAGE TO MYKOLAIV'S MAIN WASTEWATER TREATMENT FACILITY



The discharge is first visible in satellite imagery on 28 June, and extends approximately 15 km along the Bug estuary on 29 June. It is brown in color, indicating sediment or sewage, and spreads along the Bug estuary in long filaments. The volume of the discharge reduces after 3 July and becomes less brown in color, but remains visible until 15 July. It can clearly be seen to be emanating from a pipeline exit at 46.8194°N , 31.9439°E .

The facilities were attacked on 7 March, but, despite damage to electrical systems and reserve equipment, it was reported that the plant could continue to operate. We could find no further reports of damage, although there was a grass fire adjacent to the wastewater treatment plant on 4 June³, which is indicative of shelling. The nearby Nika-Tera and Olvia port storage facilities have suffered large fires because of the war, and these burns and the firefighting of them may have released hazardous into the estuarine environment.



Oil spill into the Bug estuary after shelling of Mykolaiv



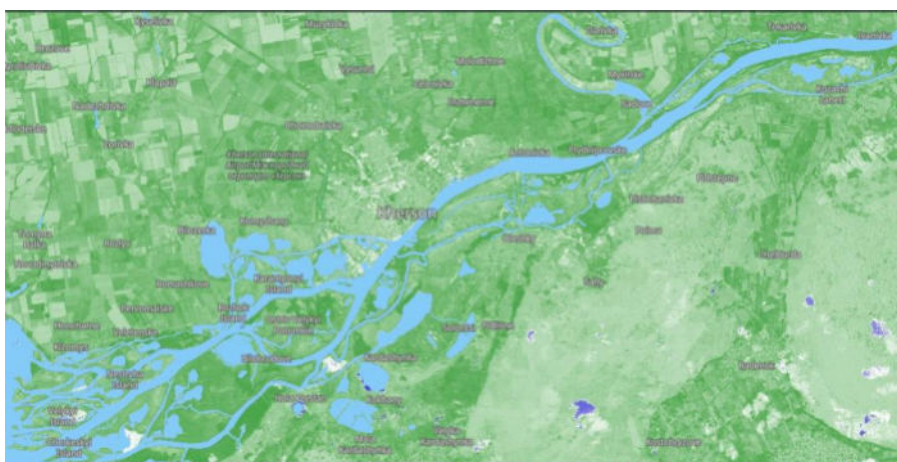
Several times, the Bug estuary and land resources were polluted with sunflower oil as a result of hostile drone attacks on the terminal of sunflower oil exporters in Mykolaiv



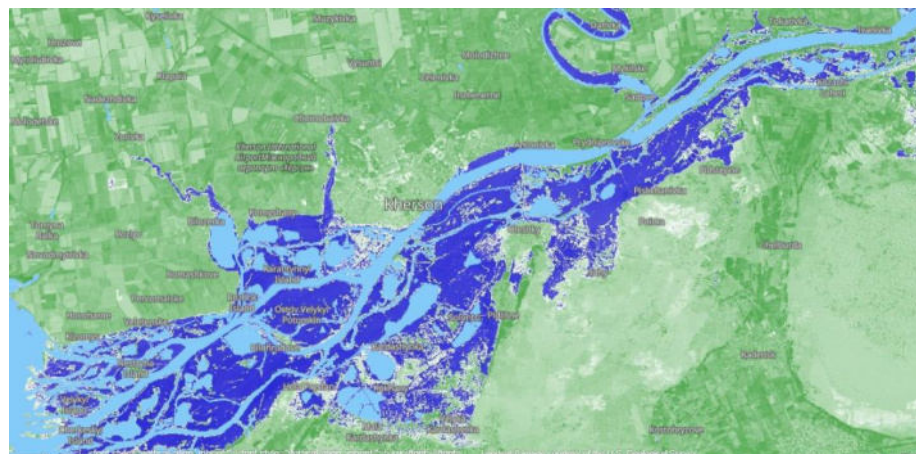
The territory of Ukraine affected by current and potential effects of Kakhovka dam destruction military accidents



Water surface area according to the NDWI index before and after the destruction of the Kakhovka HPP



01.06.2023



09.06.2023

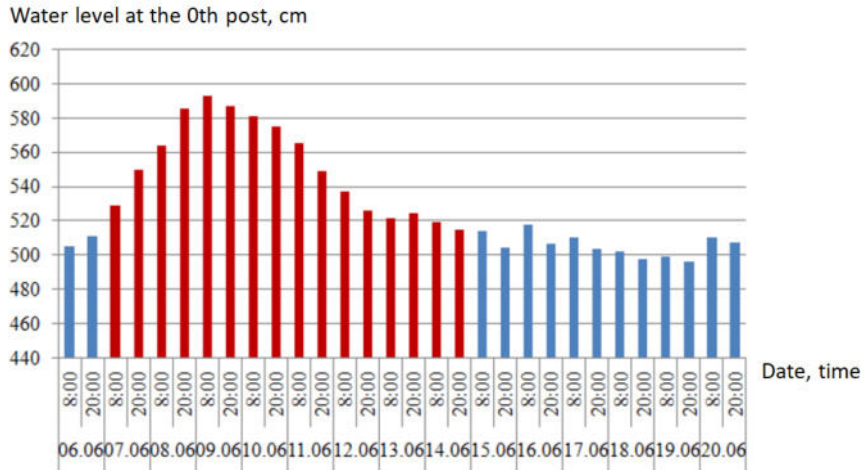
Analysis of destroyed ground vegetation



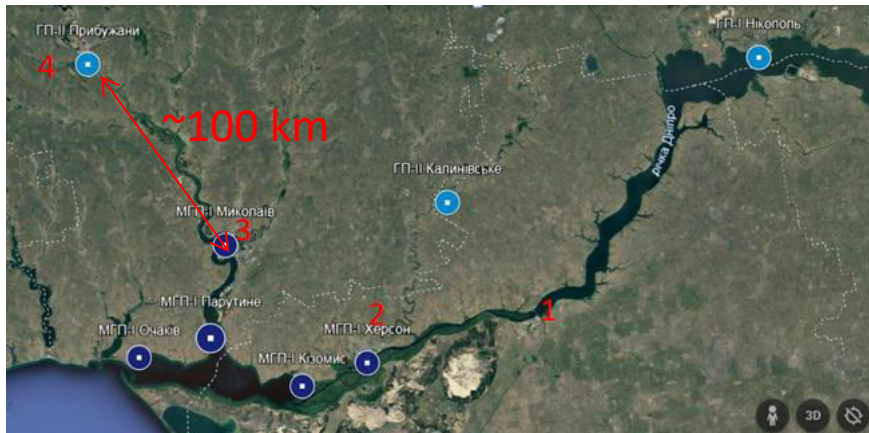
It was preliminarily determined that the area of land with terrestrial vegetation downstream of the dam at the time of peak flooding on 09.06.2023 was 379,073 km². As of 16.09.2023, about 3% of these areas remain inundated with shallow water

HYDROLOGICAL SITUATION IN THE DNIPRO-BUG ESTUARY REGION

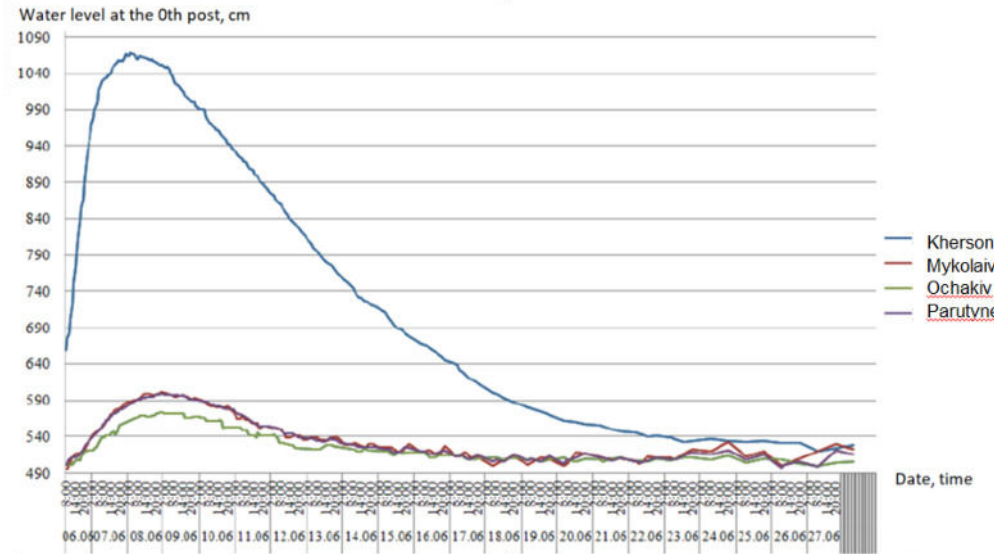
Dynamics of water level changes in the Southern Bug River (post – Prybuzhany)



(red colour indicates the period of exceeding the retaining level)
Hydrological post is in Prybuzhany village, 35 km to Oleksandrivska HPP

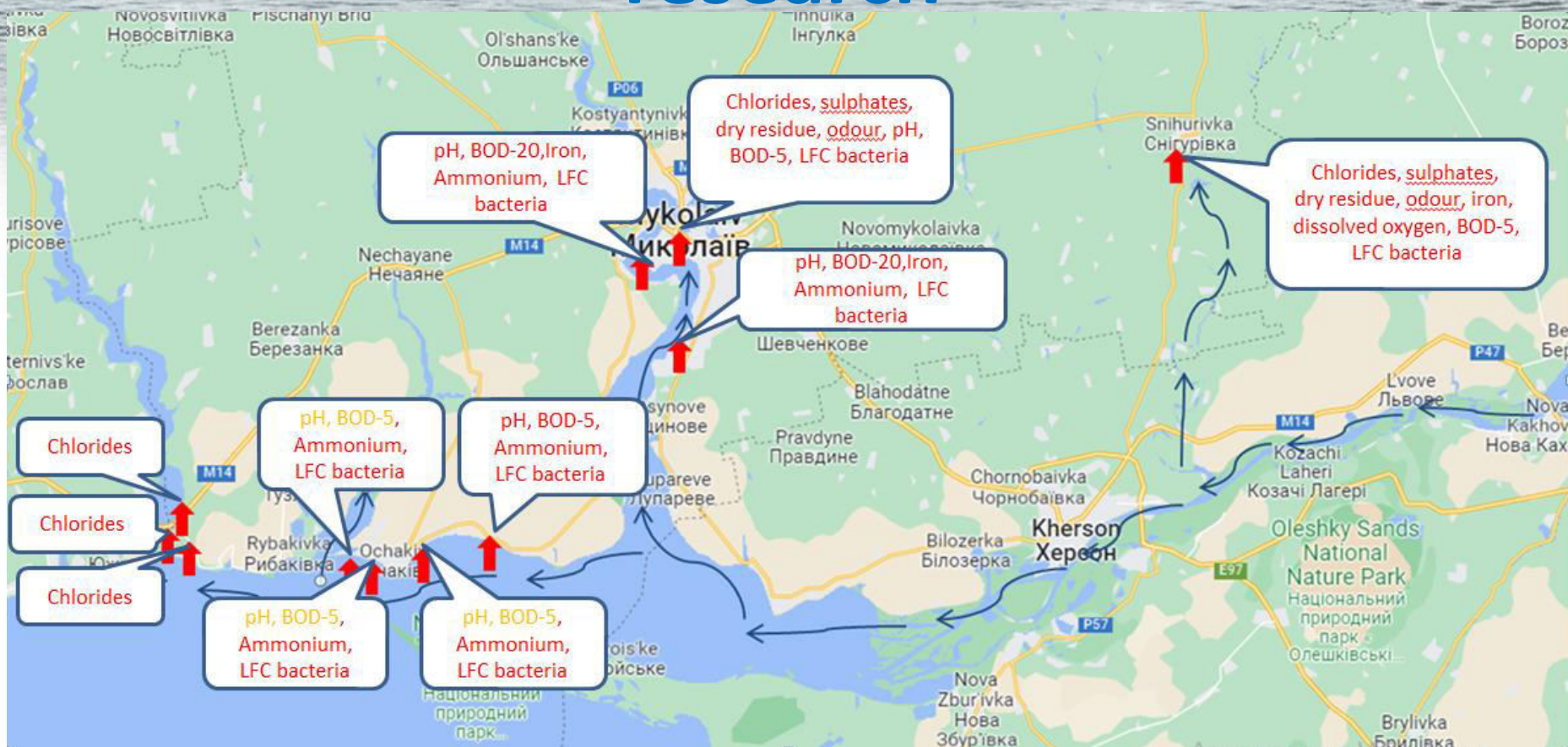


Changes in water levels in the Dnipro, Southern Bug and Dnipro-Bug Estuary according to the Mykolaiv Regional Centre for Hydrometeorology and observation posts located below the Kakhovka HPP



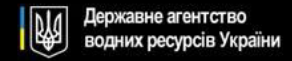
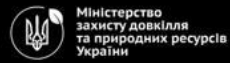
- 1 - Kakhovka HPP
- 2 - Kherson
- 3 - Mykolaiv
- 4 - Prybuzhany

General results after 3 months of research



Indicators that exceeded the normative values throughout the study period are shown in red
Indicators that exceeded the normative values on certain days of the study period are shown in yellow

... no comment





CONCLUSIONS

Direct impact of hostilities on water bodies as sources of water supply:

1. Contamination by ammunition remnants cannot be quantified today due to the need to conduct monitoring in the combat zone
2. The destruction of regulatory structures (dams, dikes, spillways) on water bodies, as well as damage to water intake and transport facilities and electricity supply, leads to the impossibility or significant restrictions on their use for water supply purposes.

Indirect impact of military aggression on water supply sources:

1. Lack of professional staff, shortage of reagents, direct hits to the treatment facilities of domestic and industrial wastewater lead to contamination of surface water, which, together with the destruction of supply chains, leads to the inability to ensure the required quality of drinking water.
2. The destruction of storage tanks for waste, oil products and mineral additives leads to pollution of surface waters.
3. Failure to control the discharge of industrial wastewater leads to abuse by enterprises.
4. The formation of spontaneous dumps of household waste is an additional pollution of water bodies.
5. Accidental discharges of highly concentrated pollutants destroy aquatic biocenoses and reduce the ability of water bodies to clean themselves.
6. Mines and ammunition in the coastal zone will not allow for the removal of accumulated pollution for a long time, and thus surface water pollution will continue.
7. Stopping environmental projects to restore rivers effectively destroys all the achievements of the pre-war period.
8. Fires in catchment areas cause soil degradation, increase water runoff and increase the amount of pollution washed into rivers.



THANK YOU FOR YOUR ATTENTION!

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Transformational Learning Network for Resilience

Enabling Ukrainian higher education to ensure a sustainable
and robust reconstruction of (post-war) Ukraine

Challenges in the waste management system of Ukraine

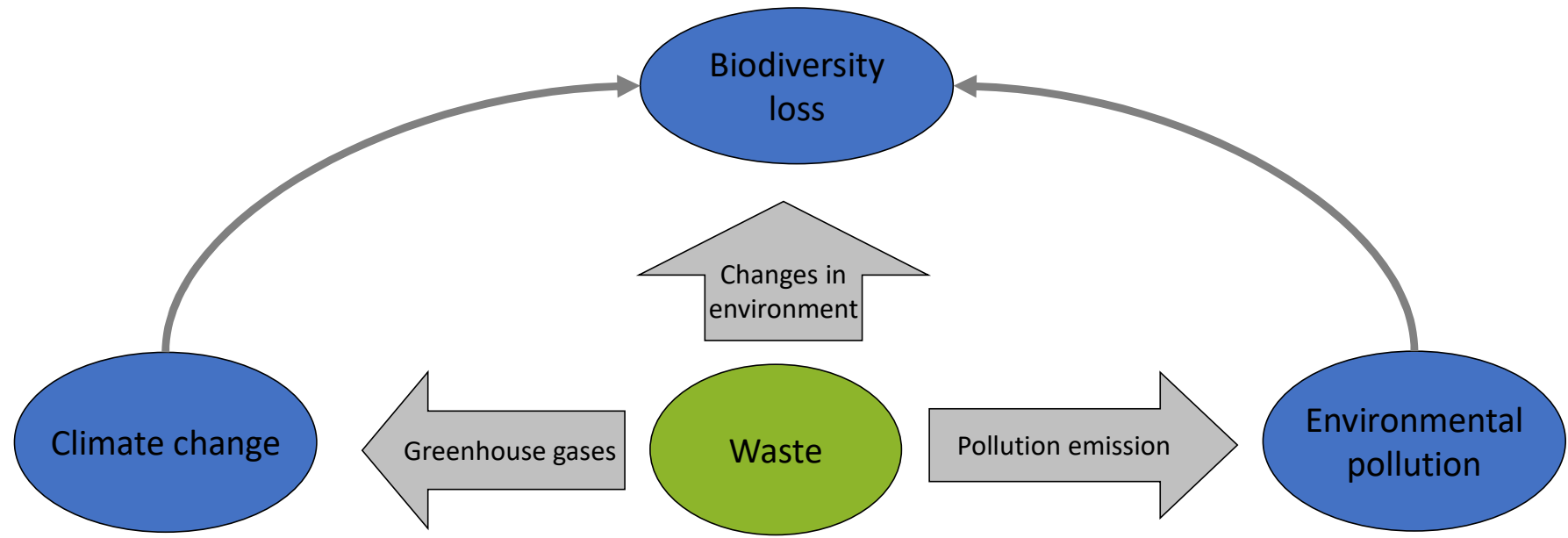
Presented by
Assoc. Prof., PhD Veronika PRYKHODKO

Content:

- 1. The waste problem among the key environmental issues and SDG goals.**
- 2. What is the waste management?**
- 3. The state of industrial waste management in Ukraine.**
- 4. The state of municipal solid waste management in Ukraine:**
 - Recycling and recovery + plastic example
 - Landfilling
- 5. New category of waste - waste from destruction:**
 - definition and volume;
 - composition;
 - disposing
- 5. Changes in the regulatory and legislative framework on waste issues.**
- 6. Conclusions**



The waste problem among the key environmental issues



The waste problem among the SDG

SUSTAINABLE DEVELOPMENT GOALS



Co-funded by the European Union TransLearn



8.4 Improve progressively global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation (connected with 12.2).



12.2 Achieve the sustainable management and efficient use of natural resources .

12.3 Halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses .

12.4. Achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, 12.5 Substantially reduce waste generation through prevention, reduction, recycling and reuse



11.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management



14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution



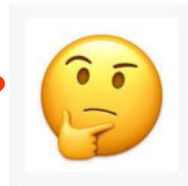
What is the waste management?

Waste management - a set of measures for the collection, transportation, treatment (recovery, including sorting, and disposal) of waste, including supervision of such operations and further care of waste disposal facilities

The objectives of the [Ukrainian state policy](#) include:

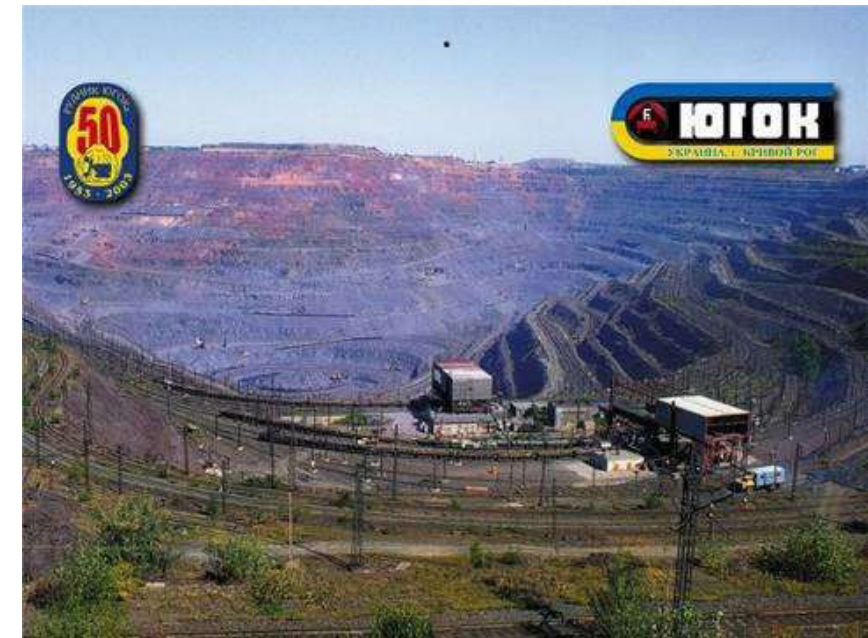
- 🌍 compliance with the waste management hierarchy
- 🌍 extended producer responsibility
- 🌍 circular economy

But do they all really work?



The state of industrial waste management in Ukraine

- 98% of waste is industrial waste, 2% is municipal solid waste;
- more than 85% is waste from the mining industry: overburden and products of mineral processing - sludge, tailings, etc;
- as of 01.01.2021, more than 15.6 billion tones of waste was accumulated, which is almost 1.0% more than in the previous year;
- the volume of industrial waste **recovery does not exceed 30%**.

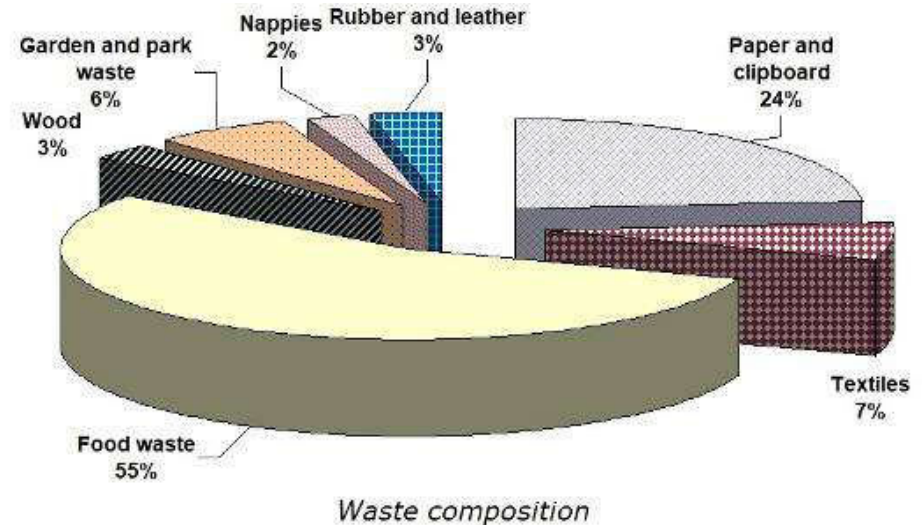


The state of municipal solid waste management in Ukraine

	2020	2022	2023
Volume, mln. m ³	54	39	44
Landfilled, %	93,7	90	89,65
Area, 10 ³ ha	8,8	8	12
Quantity	≈6K	5.7K	5,6K
Population coverage, %	78	80	80

In 2023, about 10.35% of MSW was recovered, of which: 1.6% was incinerated, and **8.75% of them was sent to recycling centers and waste processing lines** (including 1.25% of waste was composted).

The main fraction of MSW is biodegradable waste (60%)
↓



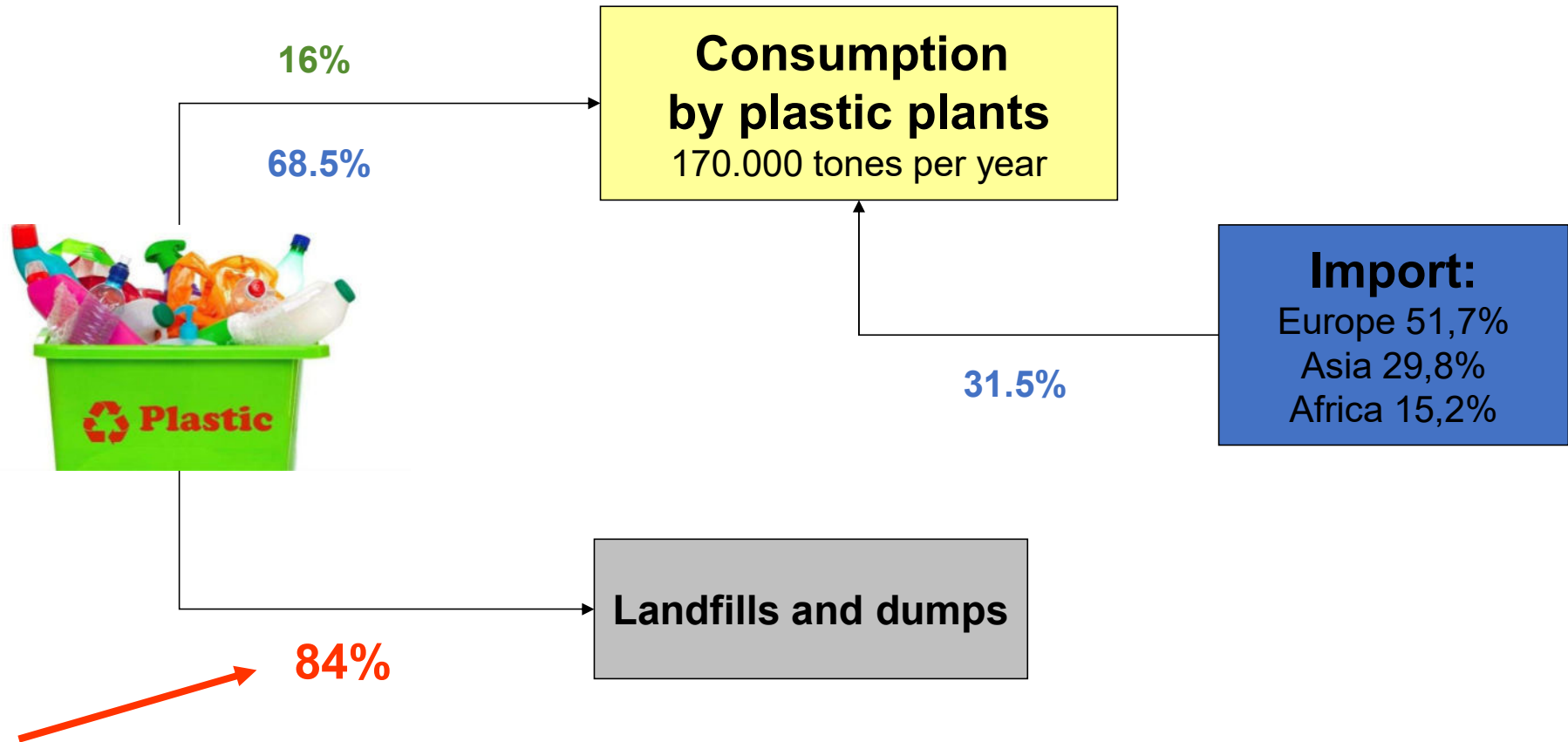
↑ From the Report by 2023 pik <https://mtu.gov.ua/content/upravlinnya-pobutovimi-vidhodami.html?PrintVersion>

Using MSW as a secondary raw material

- As of 2023, only 8.75% of MSW was recycled!
- Recycling companies are experiencing a shortage of raw materials and are forced to import 5-30% of recyclables.
- Instead plastic, glass, paper and other secondary resources end up in overcrowded landfills and dumps!
- The largest fractions of food and green waste are not used!



Special issue: plastic waste

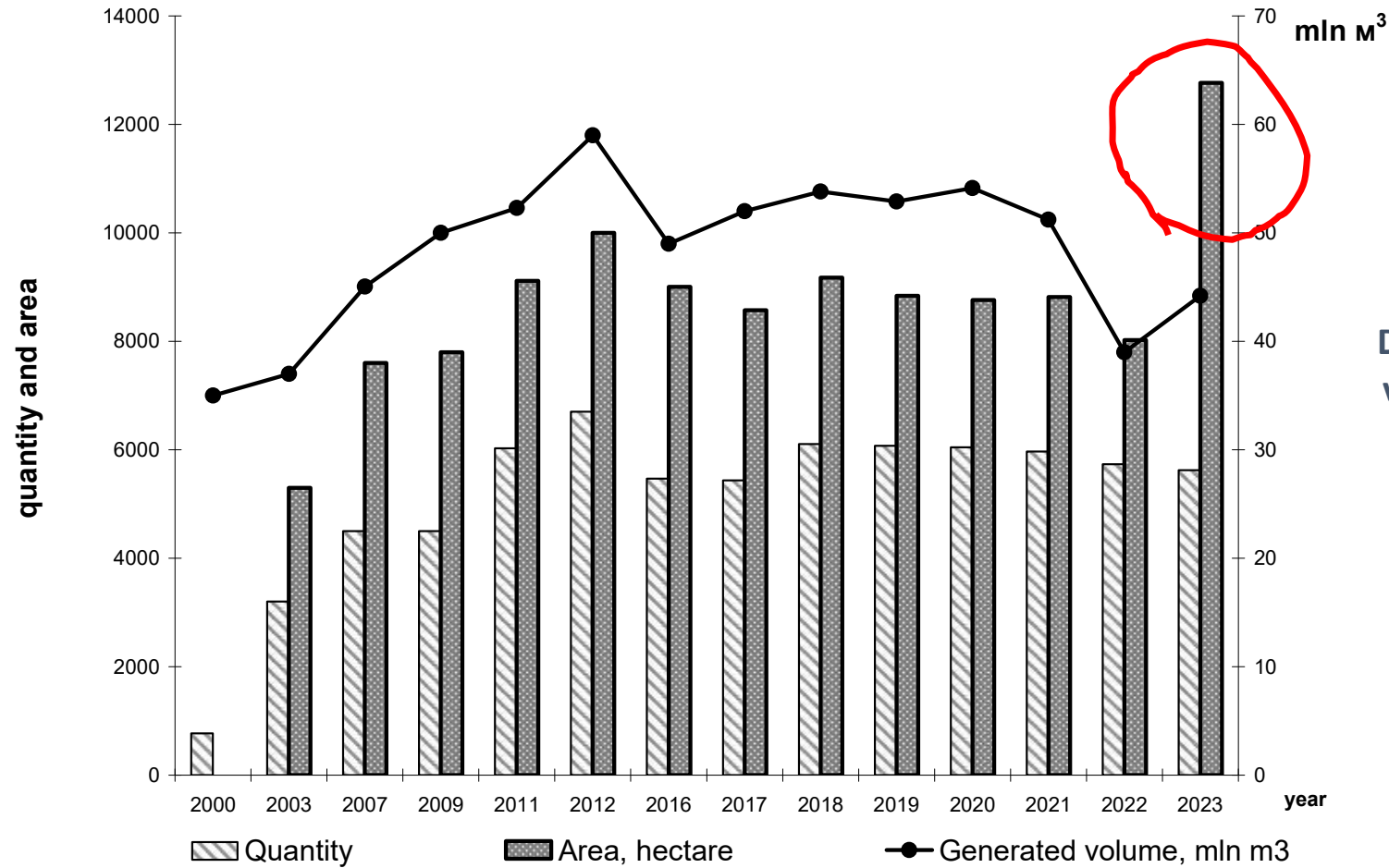


Landfilling as the main way of MSW management

- **5623** officially registered landfills and dumps of MSW with a total area of 12764 hectares + 13,000 illegal dumps with an area of 470 hectares
- Only **57** landfills have leachate collection systems, 40 of them have their own leachate treatment systems
- landfill gas collection systems are taking place at **26** landfills, which operate power generation units with a capacity of 39 MWt – as a result it was 12% reducing of GHG emission from landfills



Landfilling as the main way of MSW management



Dynamics of waste generation volumes, number and area of landfills



New category of waste - waste from destruction

Waste from destruction - is parts (fragments) of damaged (destroyed) objects, as well as materials and items that were inside or near such objects at the time of damage (destruction) and/or during demolition work, which have fully or partially lost their functional properties and cannot be reused at the site of their generation or discovery.

The amount of waste generated by the destruction during the war is **10-12 million tones per year**, which is comparable to the **annual production of MSW** in Ukraine.



Resolution 'Procedure for management of waste generated in connection with damage (destruction) of buildings and structures as a result of hostilities, terrorist acts, sabotage or works to eliminate their consequences' (September, 2022)



Co-funded by
the European Union



New category of waste - waste from destruction

Waste from destruction

Main components:
parts of building structures, door and window block fillings, engineering networks, sanitary appliances, etc.

- 1) concrete, brick, facing tiles and ceramics;
- 2) wood, glass and plastics;
- 3) bituminous mixtures, coal tar and tarred products;
- 4) metals and their alloys;
- 5) soils, including soils from contaminated areas;
- 6) insulation materials and asbestos-containing building materials;
- 7) gypsum-based building materials and products

Related components:
equipment, personal belongings, furniture, household appliances, organic matter, i.e., what was inside or near the object at the time of 'arrival'.

Hazardous waste:
Asbestos-containing materials, medical and hazardous chemical materials



<https://rubryka.com/article/vidhody-vid-rujnuvan-u-gromadah/>

New category of waste - waste from destruction

Preliminary work at the site of the destruction

Waste collection



Sorting by components



Dismantling of
of destroyed facilities



Foto from <https://rubryka.com/article/vidhody-vid-rujnuvan-u-gromadah/>



New category of waste - waste from destruction

Operations at temporary waste storage facilities

- store during the period of martial law and one year from the date of termination or cancellation of martial law.
- treat (process) only the main components of demolition waste that do not contain and/or are not contaminated with hazardous waste.



The area for temporary storage of waste should be located at a distance:

- 2 km** from water fund objects
- 0,5 km** from residential and public buildings
- 0,2 km** from agricultural land, roads and railways
- 0,05 km** from forests

Фото з пєсцпц <https://rubryka.com/article/vidhody-vid-rujnuvan-u-gromadah/>

Changes in the regulatory and legislative framework on waste issues

The Law of Ukraine 'On Waste'

the prohibition of landfilling of unprocessed MSW from 1 January 2018

'National Waste Management Strategy in Ukraine until 2030' (2017) +
National Waste Management Plan until 2030 (2019)

The Law of Ukraine 'On Waste Management' (20.06.2022)

Draft projects: 'On Batteries and Accumulators' and
'On Electronic and Electrical Waste', 'On Packaging and Packaging Waste'
are still in work!!!!



Main conclusions:

- The problem of waste is urgent and has negative consequences for the environment.
- Industrial waste in Ukraine is mainly mineral waste from the mining industry.
- The main way to manage MSW is to dispose of it in landfills and dumps, which causes secondary environmental pollution.
- **All of waste has resource potential, but it is not used!!!**
- New challenges include significant volumes of waste from destruction.
- Reforms in the regulatory and legislative sphere are ongoing.



Waste in photo



small battery dump in Kyiv

Closed Kyiv landfill



Odesa landfill





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This material was developed in the course of the joint Erasmus+ project

"Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine" (2023-2025)

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Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine





Thank you for attention!

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Trans
Learn

Current state of transport systems in Ukraine

Strategic Adaptive Management

for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany based on the Open Standards for the Practice of Conservation methodology



Lecture plan

1. Transport: basic concepts
2. General characteristics of environmental impact of transport
3. Problems of the transport industry



1. Transport: basic concepts

The transport sector of Ukraine is quite developed. It has a rather complex and branching structure. Its share in the gross domestic product is about 10%.



But the transport system of Ukraine does not meet world standards as well as the requirements adopted in the European Union. Moreover, its infrastructure and equipment significantly lag behind European ones.

Transport: basic concepts



The **Unified Transport System** is a set of kinds of transport that effectively interact regardless of the form of ownership and departmental subordination, that is the ways of connecting vehicles.

Transport is one of the most important branches of social production and is designed to meet the needs of the population and social production in transportation.



Transport: basic concepts

Transport activities are controlled by the state through the implementation of economic and social policies, including the provision of subsidies for passenger transportation.

State control should ensure:

1. satisfaction of the needs of population and social production in transportation;

2. the protection of citizens' rights;

3. safe operation of transport;

4. the compliance with the necessary pace and proportions of the national transport system development;

5. the protection of Ukraine's economic interests;

6. the creation of equal conditions for developing economic activities of transport companies;

7. the restriction of monopolization and development of competition;

8. the coordination of various kinds of transport;

9. licensing of certain types of activities in the field of transport;

10. environmental protection.

Transport: basic concepts

All kinds of transport are components of the transport system of Ukraine.
The unified transport system of Ukraine consists of:

public transport



industrial railway
transport



departmental transport



pipeline transport



public transport routes



Transport: basic concepts

Along with this, the functioning of the transport system should be oriented towards achieving sustainable development goals.

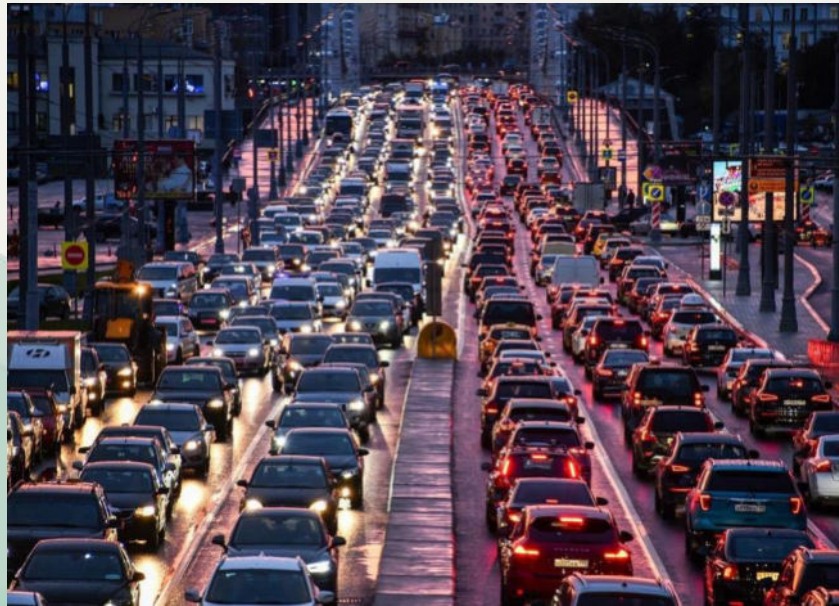


Priority areas in implementing the goals of sustainable development of the transport component can be as follows:

- ✓ improving transport accessibility and connections,
- ✓ transport decarbonization,
- ✓ transport innovative technologies and digitalization,
- ✓ transport system security,
- ✓ supply chain optimization,
- ✓ employment in the transport sector,
- ✓ multilateral partnerships.

2. General characteristics of environmental impact of transport

The problems of **environmental pollution from transport infrastructure** are quite acute in Ukraine. It includes the direct impact of road, rail, air and water transport, as well as anthropogenic impact on the environment from the design, construction and operation of linear transport facilities.



Among all means of transport, **motor transport** is the main source of atmospheric air pollution and ecological imbalance.

General characteristics of environmental impact of transport



Motor vehicles also cause negative impact through acoustic (noise) pollution on central highways.



At the same time, the source of significant noise is the open areas of the metro and city trams. Vibration along the metro lines has a harmful effect not only on the population, but also on buildings.

Acoustic pollution levels in the city can have a negative impact on the health and well-being of the population, increasing number of cardiovascular diseases, in particular.

General characteristics of environmental impact of transport

Despite full compliance with the principles of landscaping, one of the problems of greenery planting in small cities is the destruction of green spaces by motor vehicles in places of unauthorized parking, mainly near shopping areas. The problem of highway construction is also complicated because a large number of trees are cut down.



As a result of long-term construction and intensive anthropogenic impact, ecosystems near the designed road lose energy connections between living components within the system. Wildlife corridors, in particular, become impossible on the territories disturbed during construction.



General characteristics of environmental impact of transport



The leading place in the transport complex is occupied by railway transport. This significantly increases emissions into the environment when transporting passengers and cargo. In addition, it is a source of noise pollution.

With its extensive river network Ukraine is subject to significant anthropogenic impact from water transport.



Concerning the operation and development of air transport in Ukraine, the main problems include an outdated fleet of aircraft, the absence of domestic transportation, the inconsistency of technical and environmental capabilities of Ukrainian airports with current international requirements.

3. Problems of the transport industry



The current state of the transport sector does not fully meet the requirements of the effective implementation of Ukraine's European integration course and the integration of the national transport network into the Trans-European Transport Network. Therefore, to comprehensively address the existing problems, the National Transport Strategy of Ukraine for the period to 2030 has been developed.

<https://zakon.rada.gov.ua/laws/show/430-2018-r#Text>

Problems of the transport industry



The Strategy identifies general problems that need to be addressed:

- lack of an effective system for collecting and processing administrative data in the transport sector;
- lack of a systems approach to coordinating the development and long-term planning of all kinds of transport operation;
- incompleteness of administrative reform;
- lack of effective systems for monitoring the effectiveness of management decisions;
- lack of an effective system of communication and feedback between transport management bodies, transport companies, and users of transport services;
- lack of a system of criteria and indicators for assessing the quality of transport services;
- low level of intermodal, multimodal transportation, transport logistics development;
- tendency to decrease the capacity efficiency.

Problems of the transport industry

However, the current problems of the transport industry are accentuated by Russia's war against Ukraine. Ukraine suffered significant destructive impact at the beginning of the full-scale invasion due to a brutal attack and active military operations.

Nowadays, due to constant shelling and active attacks by the enemy, the destruction of the road and transport system is faster than its restoration. Underfunding due to the outflow of funds for the country's defense complicates the industry problem-solving.





Thank you for your attention

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Strategic adaptive management for
sustainable reconstruction and recovery

Current state and challenges in road construction

a jointly developed training course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology

PhD, Associate Professor of the Department of Ecology, **Barun Maryna**





Table of contents:

1. State of the road infrastructure
2. Recent reforms and improvements in road infrastructure
3. Environmental impact
4. New realities during a full-scale invasion
5. Reconstruction

State of road infrastructure

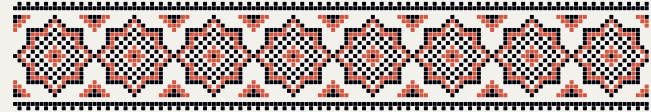
Road infrastructure is a key factor in economic development and international relations. Due to its favorable geographical location, Ukraine has a strong transit potential, providing connections between Western and Central Europe and Asian countries.



The development of a high-quality road network is a prerequisite for the integration of the Ukrainian economy into the European space. However, there are a number of serious problems that need to be addressed comprehensively to fully realize the country's potential.

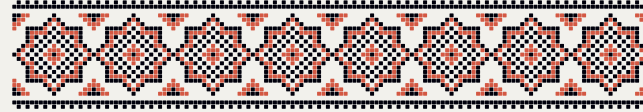
The importance of road infrastructure

Economic development



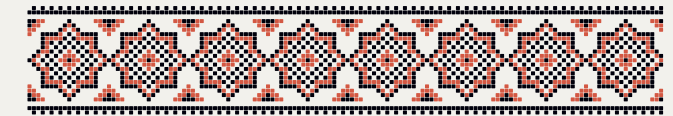
A developed road network is the foundation for achieving sustainable economic growth. Any restriction of transportation links can cause a slowdown in domestic development.

International relations



The road sector is becoming particularly important for the development of international relations, contributing to the integration of the national economy into the EU economic space.

Regional development



Road infrastructure is a key element of the regional transportation system, enabling the movement of people and goods within and between regions.

Specifics of the road industry

Operating activities

It includes repeatable processes with a standardized result, such as the production of materials for road construction. These activities provide the basis for project implementation.

Project activities

It covers the implementation of individual packages of work that enterprises receive from the state. This includes government orders for the construction, maintenance, repair and reconstruction of roads.

Financial challenges

Implementation of projects requires significant financial resources. With limited budget funding, it is difficult to provide the necessary amount of work for public roads.



Problems of road infrastructure



Growing motorization

There is an imbalance between the growing level of motorization of the population and the pace of expansion and renewal of the road network.



Excessive load

Most roads are operated under conditions of excessive load, which accelerates the wear of the road surface.



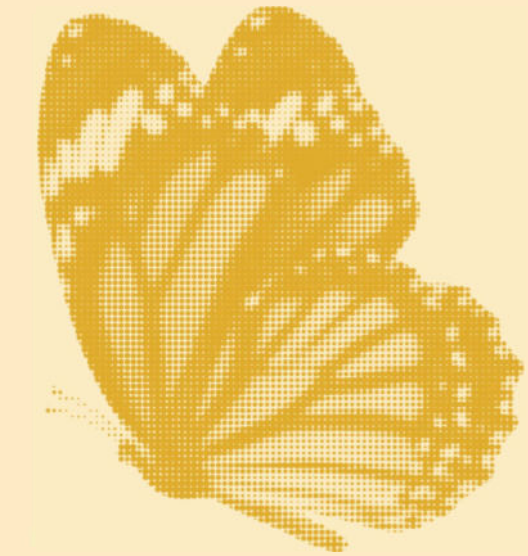
Insufficient funding

Budget funding is provided on a residual basis, especially for public roads that are state-owned.



Management structure

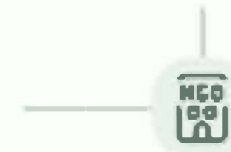
The problems are largely due to the peculiarities of the management structure in the road sector.



Road management system in Ukraine

Ministry of Infrastructure of Ukraine

carries out the implementation of state policy in the field of road economy and implementation of reforms in the road sector.



“State Joint Stock Company” Automobile Roads of Ukraine ”

100% of the shares are owned by Ukravtodor, which indicates full subordination and lack of independence of this joint-stock company’s decisions.



State Agency of Motor Roads of Ukraine (Ukravtodor)

The main entity in the management of the road sector, which is authorized to implement state policy.



Subsidiaries

32 state-owned subsidiaries with more than 630 branches in the regions are subordinated to state JSC Automobile Roads of Ukraine (Automobile Roads of Ukraine) JSC.



Environmental impact of highways

Fragmentation of the environment

Roads are artificial barriers in the natural environment, fragmenting it and isolating some areas.

Violation of migration

Roads create artificial barriers to animal migration and increase the potential threat to the existence of their populations.



Impact on animal populations

Fragmentation leads to a decline in the number of wildlife populations and disruption of ecosystem stability in general.

Wildlife mortality

The problem is related to the increase in the number of vehicles and traffic intensity.



Road eco-zones

Road ecozones are defined as complex entities that include various micro-areas of influence. In terms of spatial scale, road ecozones are much larger than road landscapes. This disrupts the state of the natural environment, which ensures self-regulation and restoration of biosphere components.



Microzone of landscape pollution

It is formed by a combination of all other microzones



Microzones of contamination

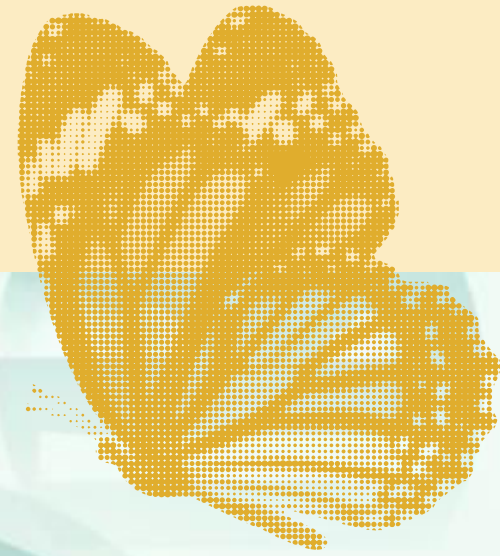
Chemical, atmospheric, water, soil



Microzones of influence

Technological, energy, light, aesthetic

Factors of impact on ecosystems



Barrier factors

Ditches, excavations, fences, screens, roadbeds that impede the natural migration of species



Disturbing factors

Noise, vibration, light that scares animals away and changes their habitat



Chemical contamination

Factors causing chemical contamination of animal habitats



Collisions with vehicles

Factors that cause the death of living organisms on the roads

Negative effects on biota



Disruption of migration routes

Roads complicate the natural adaptation of animals, preventing their seasonal movements and access to resources.



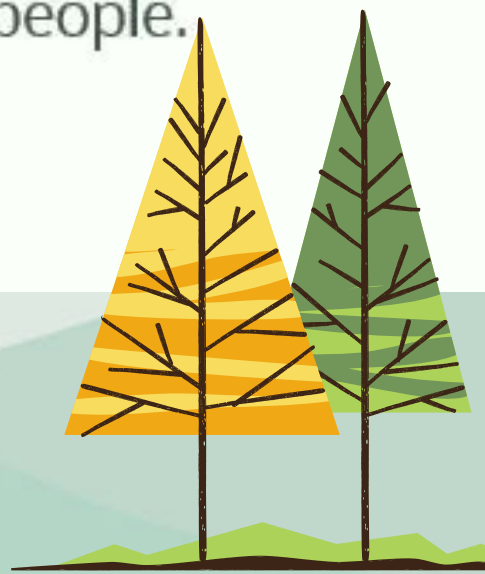
Spread of invasive species

Transportation corridors facilitate the spread of alien species that displace local ecosystems.

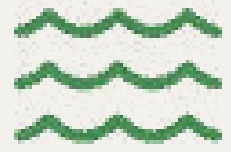


Road accidents with animals

The growing number of road accidents involving animals leads to their deaths and poses a danger to people.

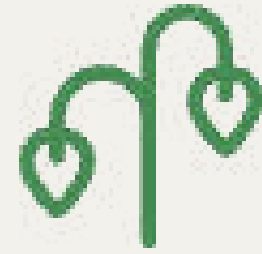


Negative effects of changes in the hydrological regime



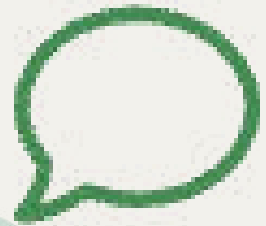
Disruption of water balance

Changes in the landscape lead to changes in the hydrological regime, which can contribute to erosion processes.



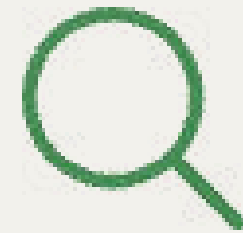
Changing the water regime

More arid or wet conditions, especially in wetlands and coastal areas.



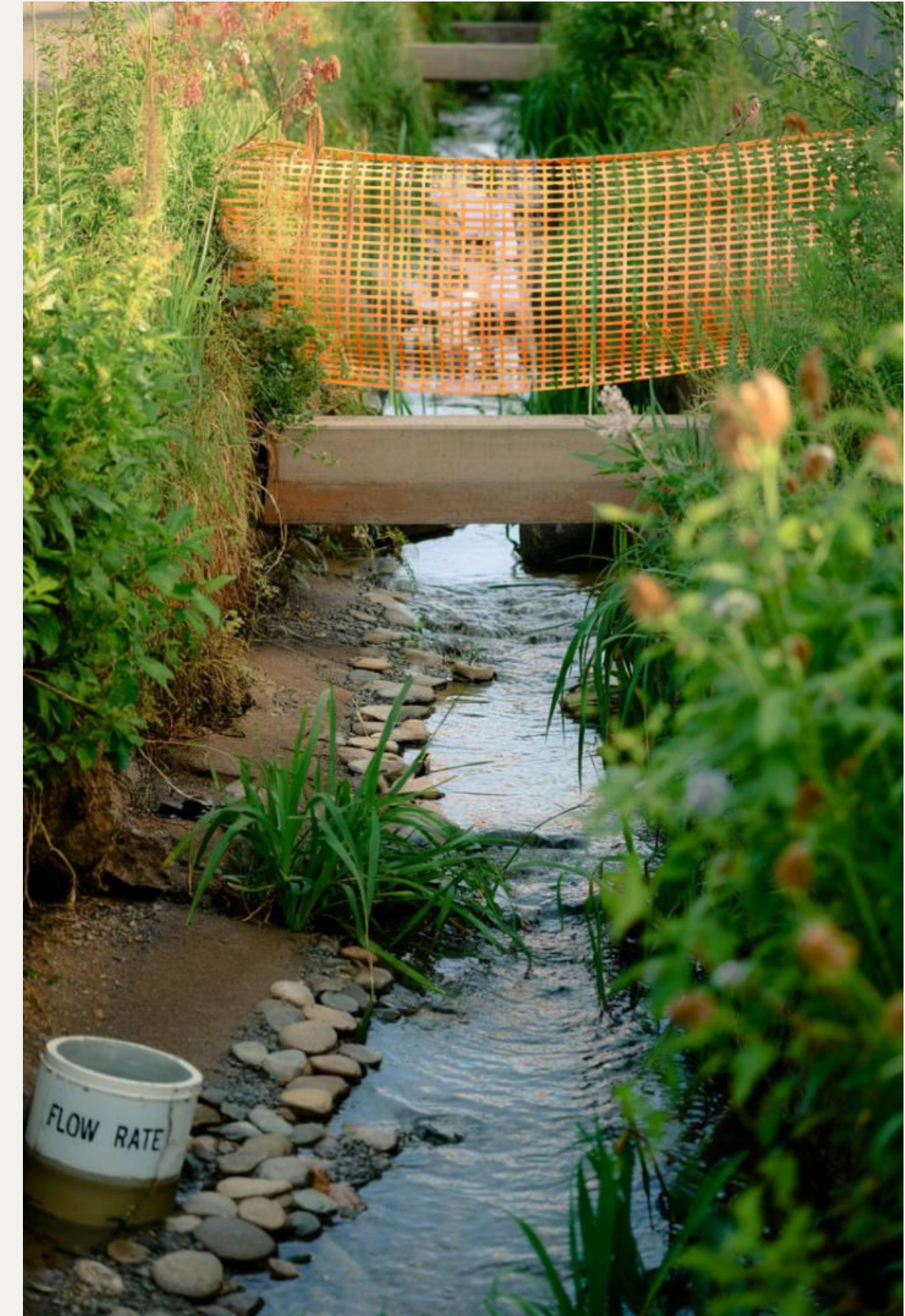
Erosion processes

The disruption of natural water flow leads to increased soil erosion and changes in the terrain.



Impact on ecosystems

Changes in the water regime negatively affect the functioning of aquatic and coastal ecosystems.



Negative consequences of hostilities



Destruction of infrastructure during the war

\$38.5 billion

Total losses

Direct losses of Ukraine's transportation infrastructure as of November 2024

26,000 km

Damaged roads

Length of damaged and destroyed roads

\$28.3 billion

Cost of restoration

Estimated cost of restoring damaged roads

Strategic functions of transport infrastructure



Military logistics

Ensuring the delivery of necessary resources to the front line

Economic stability

Supporting the functioning of critical enterprises



Humanitarian aid

Transportation of humanitarian goods for the civilian population

Evacuation

Evacuation of civilians and the wounded from the areas of active hostilities



Operational strategies for recovery



Temporary detour routes

Creating alternative routes to ensure continuous transportation in the face of damaged infrastructure.

Pontoon bridges

Setting up temporary crossings over water obstacles to restore transportation in places where bridges have been destroyed.

Operational repairs

Rapid patching of critical road sections, especially those that provide supplies to the frontline and evacuate the population.

Object prioritization

Prioritize the restoration of facilities that ensure communication between regional centers and the operation of enterprises of strategic importance.





Modern technologies in restoration

Digital maps of damage

Using geographic information systems to accurately map and assess infrastructure damage. This allows for effective resource planning and prioritization of recovery efforts.

Unmanned aerial vehicles

The use of drones to monitor the condition of roads and bridges, especially in hard-to-reach or dangerous areas. UAVs provide prompt data on damage and the progress of restoration work.

BIM technologies

Using Building Information Modeling for effective planning of infrastructure projects. This technology allows you to create detailed digital models of objects, optimize construction processes, and ensure transparency.

Environmental aspects of restoration



Environmentally friendly materials

Using environmentally friendly materials, recycling construction waste, reducing noise and dust pollution during reconstruction.



Conservation of biodiversity

Construction of new roads, taking into account animal migration routes, wetlands and other environmentally sensitive areas.



Environmental monitoring

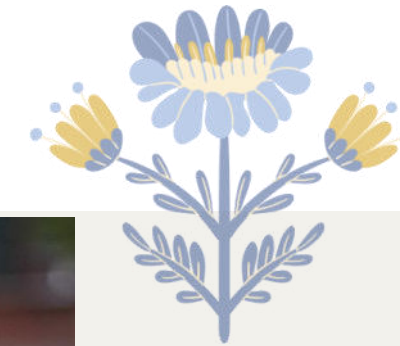
Implementation of environmental monitoring at all stages of construction to control the condition of air, soil, water bodies and promptly respond to possible violations.

Infrastructure for sustainable transportation

Type of infrastructure	Environmental benefits	Social benefits
Bicycle paths	Reduced CO2 emissions, no noise pollution	Improving public health, accessibility
Hiking routes	Zero pollution, preservation of green areas	Social interaction, accessibility for all segments of the population
Electric transport	Reduced emissions, less noise pollution	Comfort of movement, accessibility for people with limited mobility
“Green” stops	CO2 absorption, air cooling	Aesthetic environment, protection from rain and sun

The development of sustainable transportation infrastructure not only reduces the environmental burden but also improves the quality of life of the population. Such projects can be financed through environmental leasing mechanisms, green bonds, and international environmental programs.





Thank you for your attention



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Strategic adaptive management for
sustainable reconstruction and recovery

RECOVERY
OF UKRAINE

NATIONAL RECOVERY PLAN of UKRAINE

a jointly developed training course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology

Doctor of Technical Sciences, Professor, Head of the Department of
Ecology and Environmental Protection Technologies of the National
Transport University, **Viktoriia Khrutba**



NATIONAL RECOVERY PLAN of UKRAINE

Table of contents:

1. GREEN DEAL or EUROPEAN GREEN DEAL (also known as Green New Deal)
2. THE IMPACT OF WAR ON ENVIRONMENTAL
3. NATIONAL RECOVERY PLAN of UKRAINE
4. LIFE CALL FOR PROPOSALS 2025



GREEN DEAL. EUROPEAN GREEN DEAL (also known as Green New Deal)

What is the European Green Deal?

The European Green Deal is the EU's growth strategy. Launched in 2019, it consists of a package of policy initiatives, which set the EU on the path to a green transition, with the ultimate goal of reaching climate neutrality by 2050.

The goal is to transform the EU into a low-emission region by 2030 and achieve climate neutrality by 2050 (December 11, 2019).

Reduce greenhouse gas emissions by at least 50% by 2030 compared to 1990 levels and achieve climate neutrality by 2050

Mobilize industry for **a clean and circular economy**

Significantly increase the **use of renewable energy** to have clean, affordable and secure energy sources.



GREEN DEAL or EUROPEAN GREEN DEAL (also known as Green New Deal)



Accelerate the transition to **sustainable mobility** and intelligence

Increase **farm-to-fork business models** in agriculture

Build and renovate buildings with **energy-efficient resources**.

Preserve and **restore ecosystems** and **biodiversity**

The 2030 EU Biodiversity Strategy

https://www.youtube.com/watch?v=AkOaRmWi0Cg&ab_channel=EuropeanCommission

The European Commission adopted a comprehensive new Biodiversity Strategy and the Farm to Fork Strategy for a fair, healthy and environmentally friendly food. In line with the European Green Deal, they propose ambitious EU actions and commitments to halt biodiversity loss worldwide and bring our food system into balance with the environment by reducing the use of unhealthy substances, increasing the protection of land and sea and restoring degraded ecosystems.

THE IMPACT OF WAR ON ENVIRONMENTAL

Center for Environmental Initiatives “Ecodia”.

<https://ecoaction.org.ua/iak-vijna-vplyvaie-na-pryrodu.html>



Forest fires on the Kinburn Spit in September 2022. Photo – RBC-Ukraine.

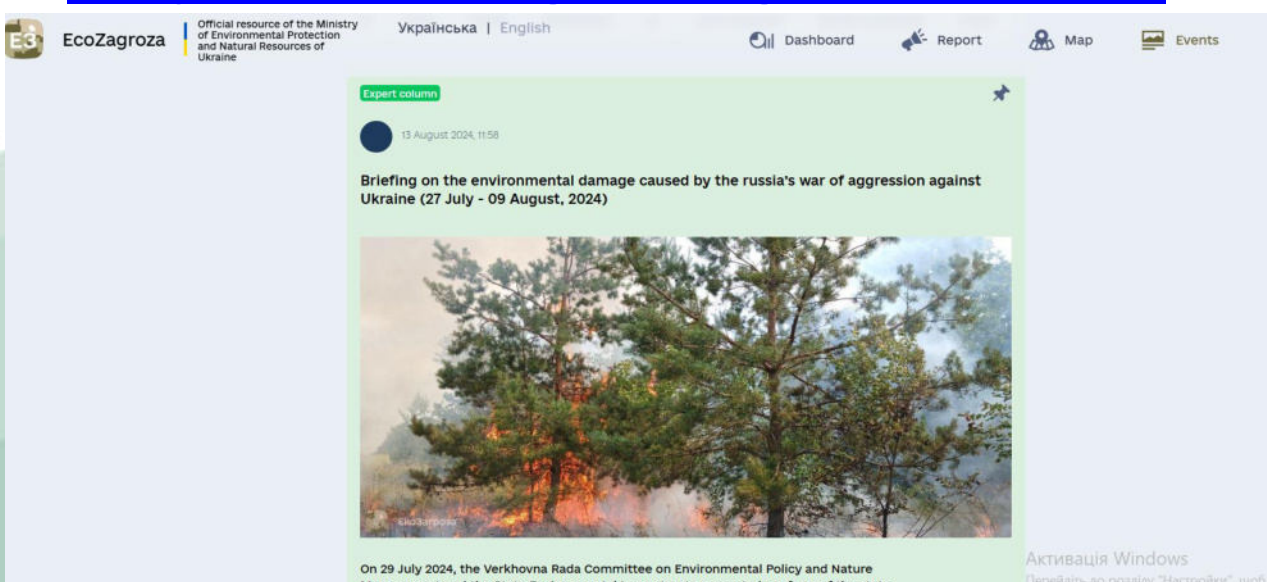
An example of **complex military impact** caused by ammunition explosions and contamination by vehicle debris, fuel, and explosives.

Photo – Ukrinform.

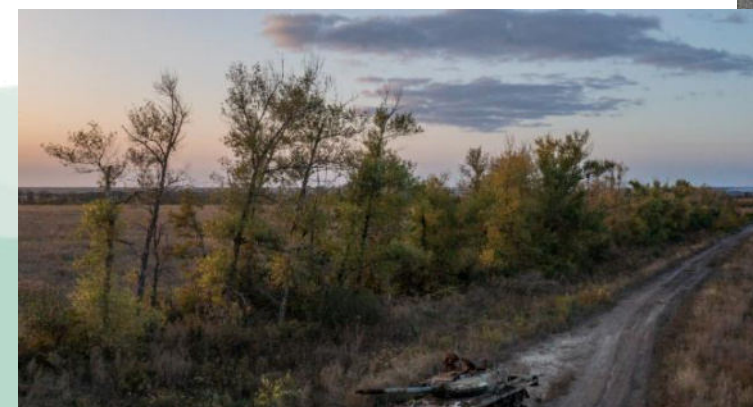


The director of **National Park Kamyanska Sich** in the middle of **the destroyed park administration building**. Photo – Ukrainian Nature Conservation Group.

<https://ecozagroza.gov.ua/feed>



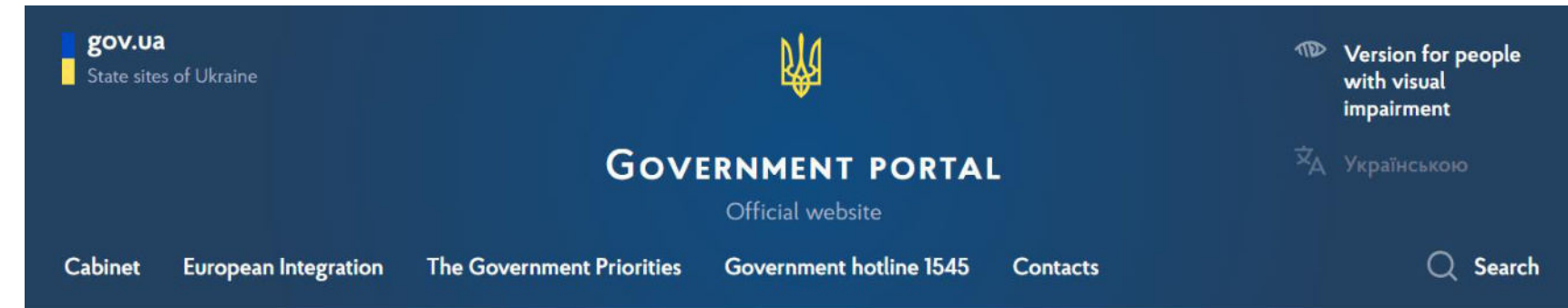
Official resource of the Ministry of Environmental Protection and Natural Resources of Ukraine



NATIONAL COUNCIL for the RECONSTRUCTION of UKRAINE from the CONSEQUENCES of WAR

<https://www.kmu.gov.ua/diyalnist/konsultatyvno-doradchi-orhany/nacionalna-rada-z-vidnovlennya-ukrayini-vid-naslidkiv-vijni>

The National Council for the Restoration of Ukraine from the Consequences of War is a structure under the President of Ukraine, established on 21 April 2022, to overcome the consequences of the Russian-Ukrainian war of 2022.



Home / National Council for the Recovery of Ukraine from the War / About the National Council for the Recovery of Ukraine from the War

About the National Council for the Recovery of Ukraine from the War

Main tasks of the Council:

Developing an action plan for the post-war recovery and development of Ukraine

It is based on 5 main principles **NATIONAL RECOVERY PLAN of UKRAINE**

- **Immediate start** and gradual development
- Building up **equitable welfare**
- **Integration into the EU**
- **Rebuilding better** than before on a national and regional scale
- **Stimulating** private investment.



NATIONAL RECOVERY PLAN of UKRAINE

International discussion of Ukraine's post-war reconstruction

<https://www.urc-international.com/past-conferences/old-home>

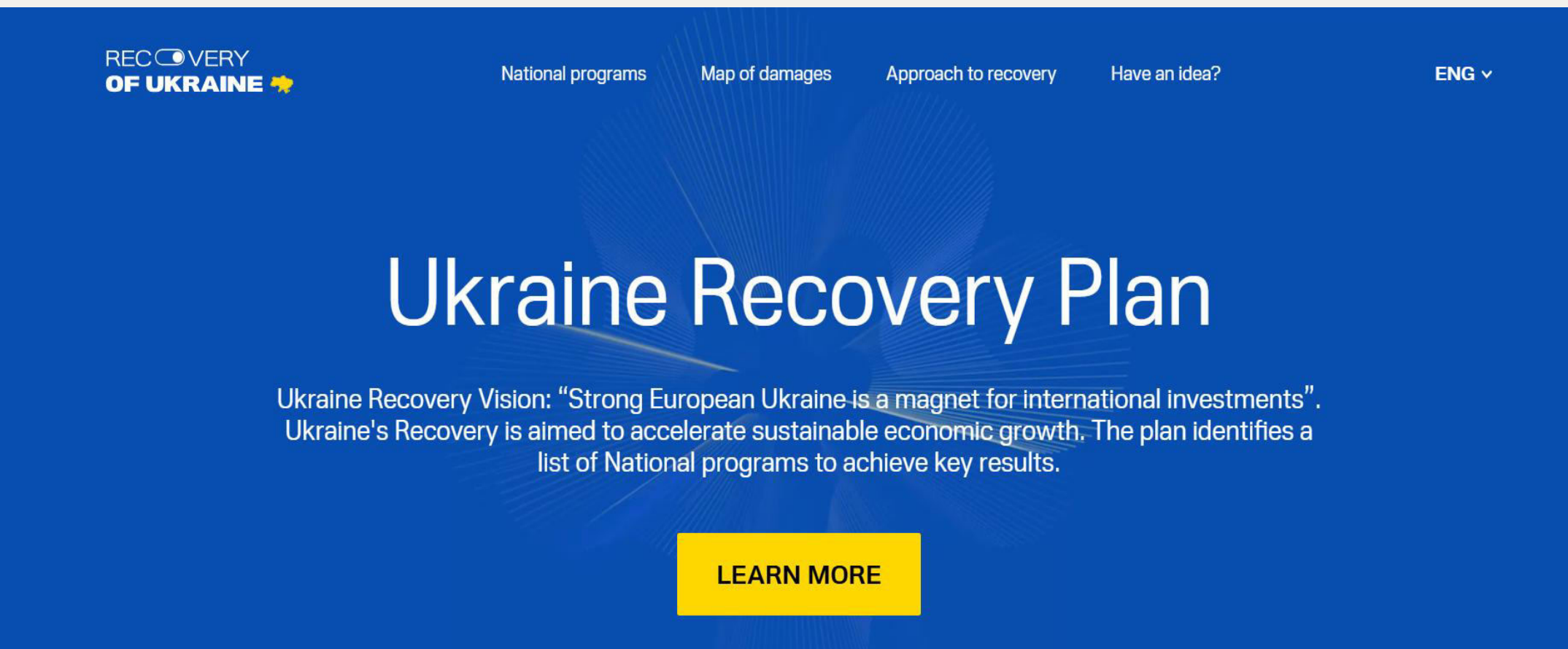
- Lugano Conference (URC 2022)  4-5 July 2022;
- Berlin Conference (International Expert Conference on the Recovery, Reconstruction and Modernisation of Ukraine) 25 October 2022. 
- Conference on the Recovery of Ukraine in Rome, 26 April 2023. 
- London Conference (URC 2023) 21-22 June 2023. 
- Berlin Conference (URC 2024) 11-12 June 2024. 
- URC2025 will take place in Rome on 10 and 11 July 2025 



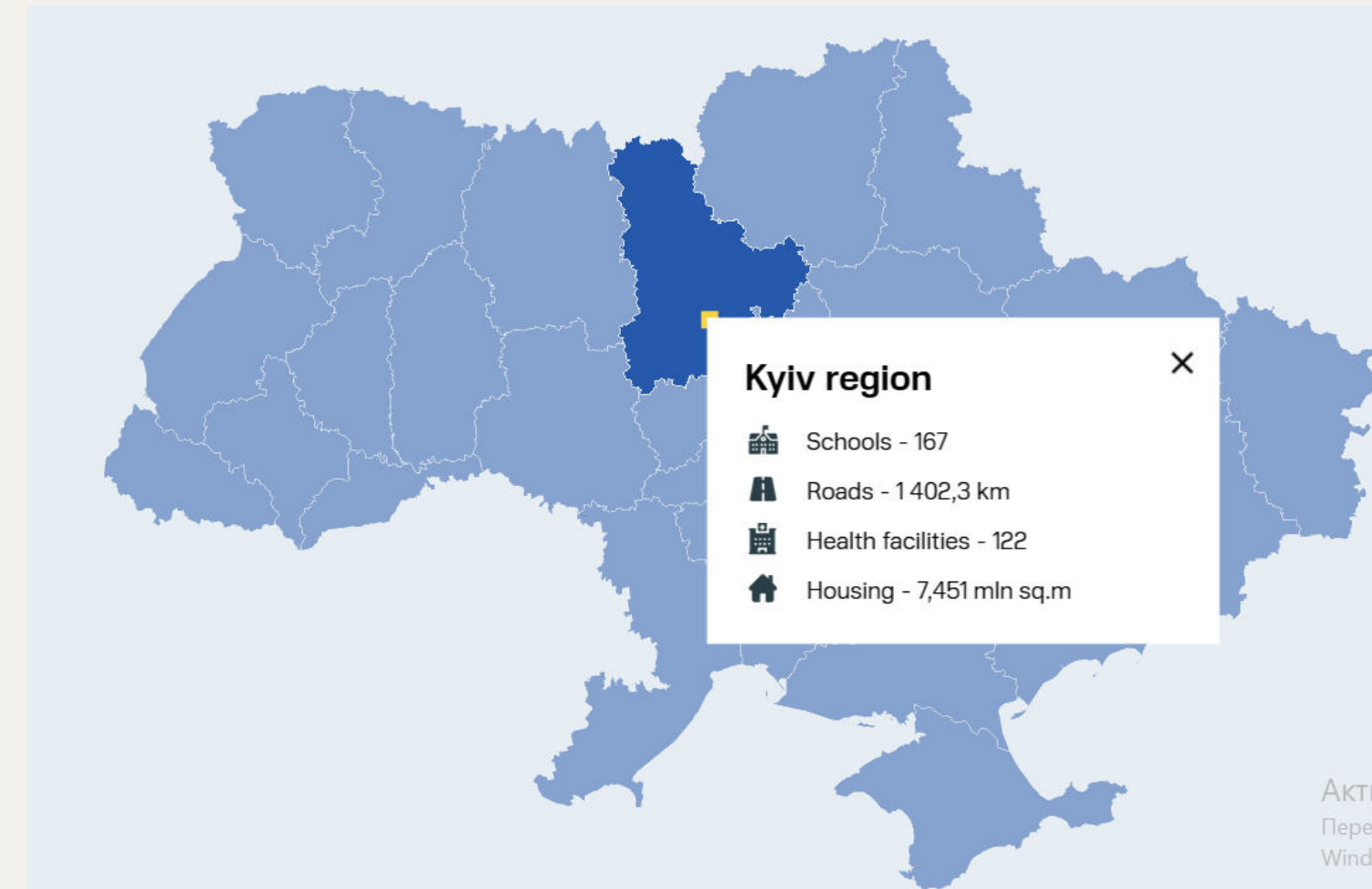
NATIONAL RECOVERY PLAN of UKRAINE

<https://recovery.gov.ua/>

MAP OF DAMAGES



The screenshot shows the homepage of the Ukraine Recovery Plan website. The header includes the logo 'RECOVERY OF UKRAINE' and navigation links for 'National programs', 'Map of damages', 'Approach to recovery', 'Have an idea?', and 'ENG'. The main heading is 'Ukraine Recovery Plan'. Below it, the text reads: 'Ukraine Recovery Vision: "Strong European Ukraine is a magnet for international investments". Ukraine's Recovery is aimed to accelerate sustainable economic growth. The plan identifies a list of National programs to achieve key results.' A yellow 'LEARN MORE' button is positioned at the bottom center.








At a conference on July 4, 2022 in Lugano, Switzerland, representatives of Ukraine presented a post-war recovery plan worth over **\$750 billion, which will contain 850 projects for the reconstruction of the country**

Ukraine Recovery Vision: "Strong European Ukraine is a magnet for international investments". Ukraine's Recovery is aimed to accelerate sustainable economic growth. The plan identifies a list of National programs to achieve key results.

EXPECTED RESULTS

<https://recovery.gov.ua/>

ALL 10 YEARS

 Number of projects	850
 GDP impact	>7%
 Funding	>750 bn USD
 Economic Complexity Index	TOP-25 countries
 Human Capital Index	TOP-25 countries

2023-2025

 Number of projects	580
 Funding	>350 bn USD
 Economic Complexity Index	TOP-40 countries
 Human Capital Index	TOP-40 countries

2026-2032

 Number of projects	270
 Funding	>400 bn USD
 Economic Complexity Index	TOP-25 countries
 Human Capital Index	TOP-25 countries

Активация Windows

Перейдіть до розділу "Настройки", щоб активувати Windows.

<https://recovery.gov.ua/>

NATIONAL PROGRAMS

Recovery pre-requisites: Strengthening institutional capacity

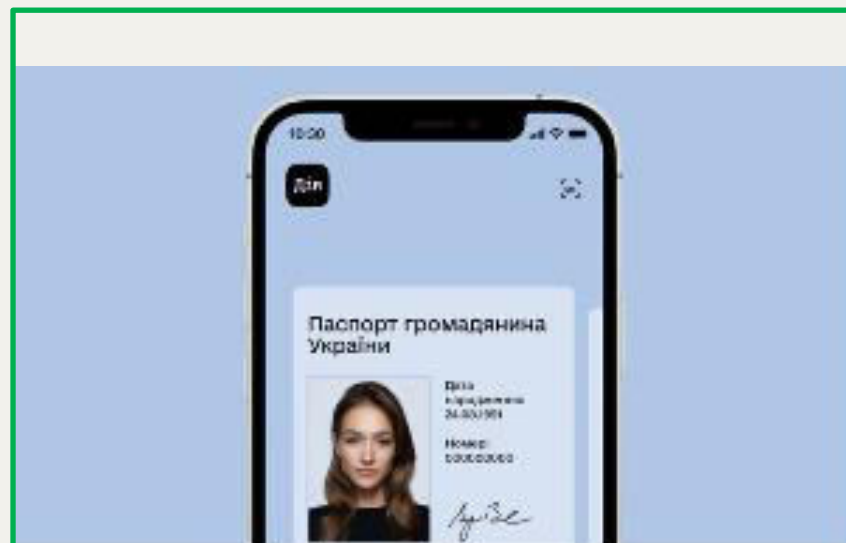


<0,1 bn USD

Project examples

- Informatisation and digitalisation project to support policy development
- Increasing the efficiency of the management of state strategic assets

Recovery pre-requisites: Digital government



<0,1 bn USD

Project examples

- e-Services for veterans
- Complex system of monitoring of the post-war recovery based on open data
- e-Reconstruction* (top priority)

Strengthen defense and security



50 bn USD

Project examples

- Defence accelerator/incubator program (Diia Tech & Defence)
- State target scientific-technical programme for development of aviation industry for 2021-2030

Strive for EU integration



<0,1 bn USD

Project examples

- Opening of G7 and EU markets
- Support for civil society involved in the process of monitoring and supporting the process of European integration of Ukraine

NATIONAL PROGRAMS

<https://recovery.gov.ua/>

Re-build clean and safe environment



20 bn USD

Project examples

- Fire safety measures taken in the exclusion zone
- Restoration of wildlife in Ukraine
- Creating a network of ecoduks in Ukraine

Boost business environment



5 bn USD

Project examples

- Economic stimulation of Ukrainian citizens who went abroad to return and seek employment in Ukraine
- Educational and webinar projects for businesses

Energy independence and Green Deal



130 bn USD

Project examples

- Increase gas production from existing fields
- Re-build damaged energy objects, including Kremenchuk, Chernihiv, Okhtyrka CHPs)

Ensure competitive access to funding



75 bn USD

Project examples

- Introduce war insurance for investment projects in priority sectors
- Introduction of new and development of existing financial instruments

<https://recovery.gov.ua/>

NATIONAL PROGRAMS

Secure macro-financial stability



60 – 80 bn USD

Project examples

- Secure sources of financing for the state budget until Ukraine regains market access
- Establishment of the Budget Office at the Verkhovna Rada of Ukraine

Logistics de-bottleneck and integration with EU



120 – 160 bn USD

Project examples

- Electrification of rail tracks
- Tourist infrastructure development programme for national nature parks of Ukraine.
- System of green energy charging stations

Grow value adding sectors of economy



50 bn USD

Project examples

- IT: Develop start-up ecosystem (innovation hubs, accelerators, incubators, platform)
- Increasing the innovative activity of enterprises (mechanical engineering)

Recovery and upgrade of housing and regions infrastructure



150 – 250 bn USD

Project examples

- Build new housing infrastructure in line with the urban planning best practices
- Development of the macro-region of the Ukrainian Carpathians

NATIONAL PROGRAMS

Recovery and modernization of social infrastructure

Improve Education system



Project examples

- Industrial parks network development
- Build spaces for youth development

35 bn USD



Project examples

- Restoration and modernisation of the scientific infrastructure of Ukraine
- Performance based grants system for researchers

5 bn USD

Upgrade HealthCare system Develop Culture and Sport systems Secure targeted and effective social policy



Project examples

- National Centre for Veteran Mental Health and Rehabilitation

5 bn USD

- Development of the national healthcare infrastructure



20 bn USD

Project examples

- Social project "Active parks - locations of healthy Ukraine"
- The support for cross-sectoral project in creative industries



7 bn USD

Project examples

- Project "Development of the system for the protection of children's rights".
- All-Ukrainian research on the needs of veterans

LIFE CALL FOR PROPOSALS 2025



https://cinea.ec.europa.eu/life-calls-proposals-2025_en

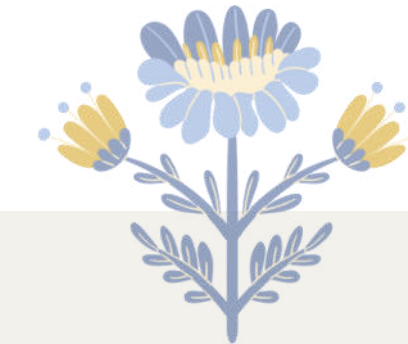
The LIFE Calls for proposals 2025 were published on 24 April. You can find the complete information on the [Funding & tender opportunities portal](#).

LIFE Programme

The LIFE programme is the EU's funding instrument for the environment and climate action. Created in 1992, it has co-financed thousands of projects. The [LIFE programme 2021-2027](#) is managed by the European Climate, Infrastructure and Environment Executive Agency ([CINEA](#)) and has a budget of €5.4 billion. It is divided into four sub-programmes:

- Nature and biodiversity
- Circular economy and quality of life
- Climate change mitigation and adaptation
- Clean energy transition





Thank you for your attention



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Department page on the social network facebook
<https://www.facebook.com/ecokafedrntu>

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funded by the EU

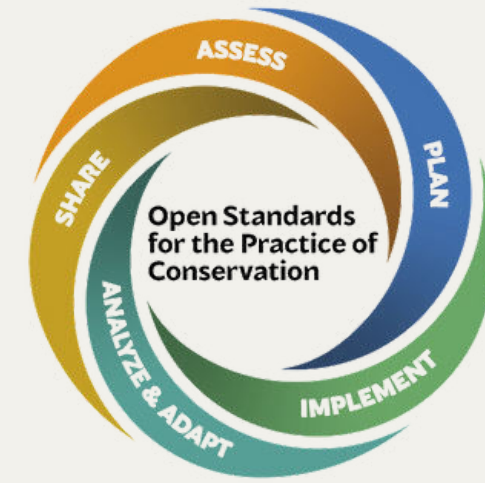


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<https://translearnn.ztu.edu.ua>



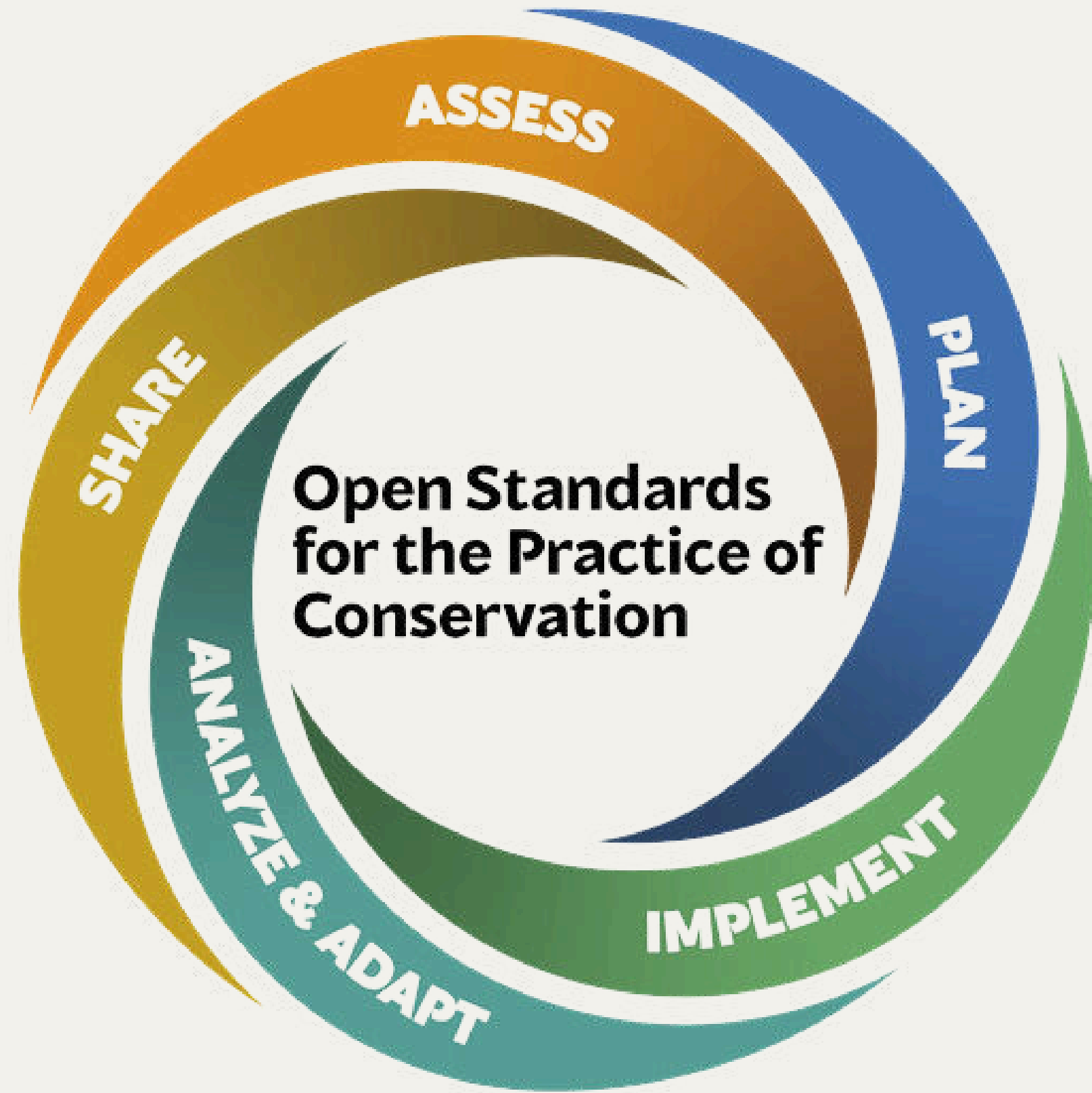


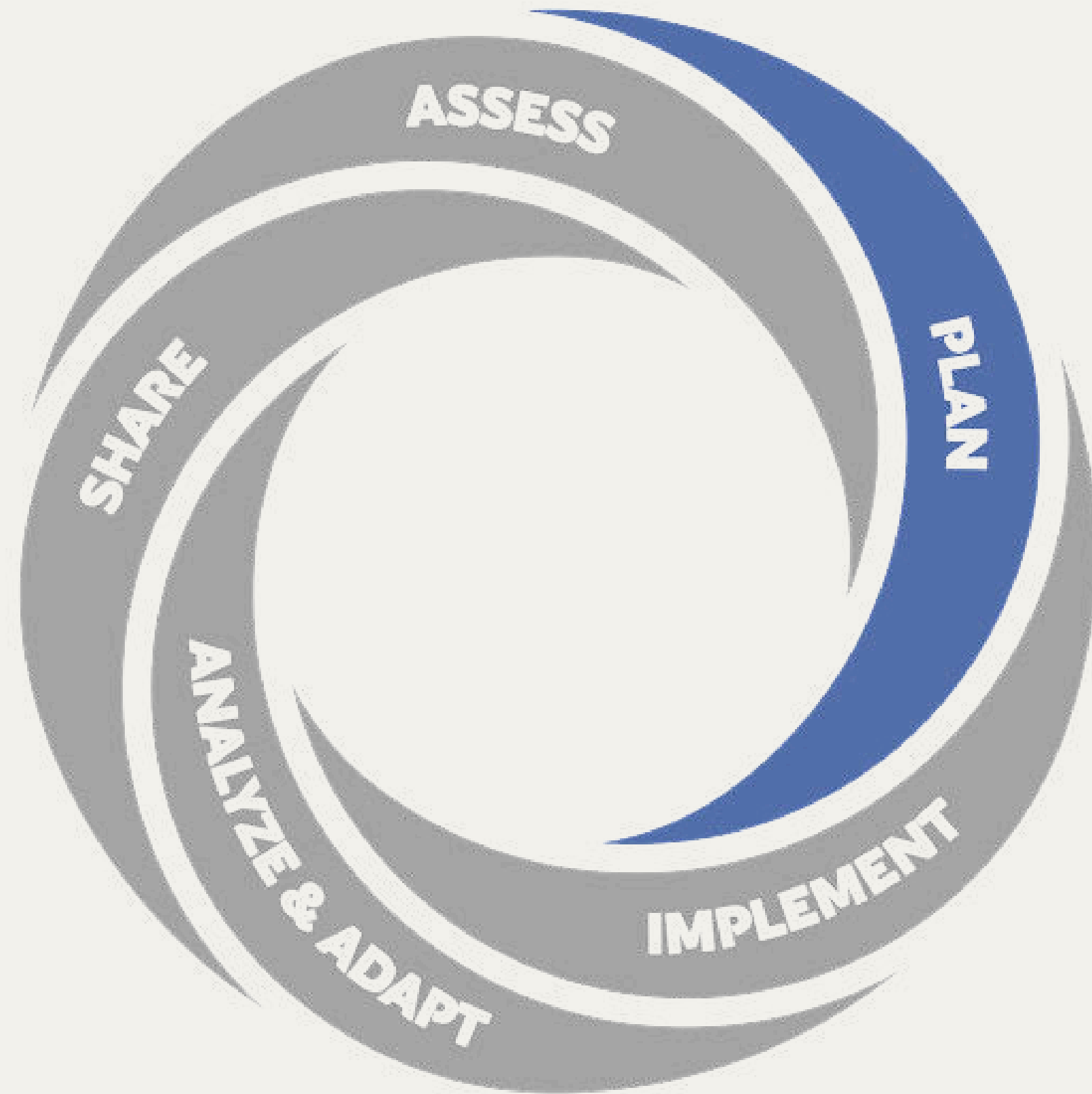
Strategies

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
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2. PLAN

- Goals
- **Strategies**
- Theory of Change
- Objectives
- Monitoring Plan
- Operational Plan



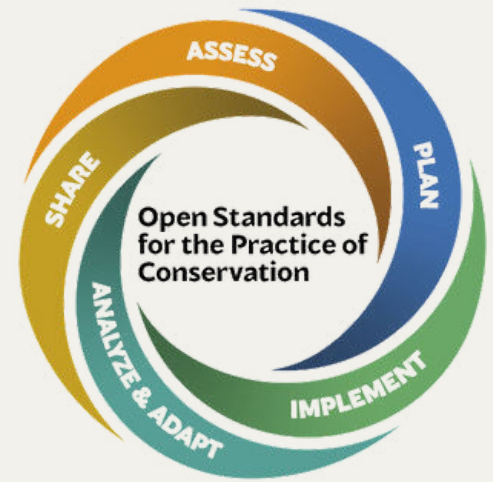
OUTLOOK



- What are strategies?
- Types of strategies
- Criteria for a good strategy
- How to develop strategies
- Strategy rating
- How to in Miradi
- GWI

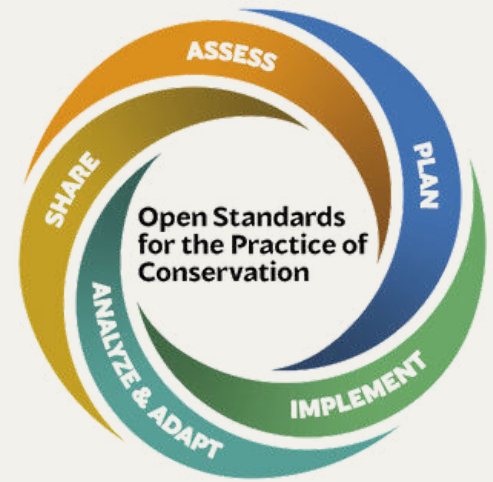


STRATEGY



A **set of activities with a common focus** that work together to achieve specific goals and objectives by targeting key intervention points, optimizing opportunities, and limiting constraints.

WHAT ARE STRATEGIES?



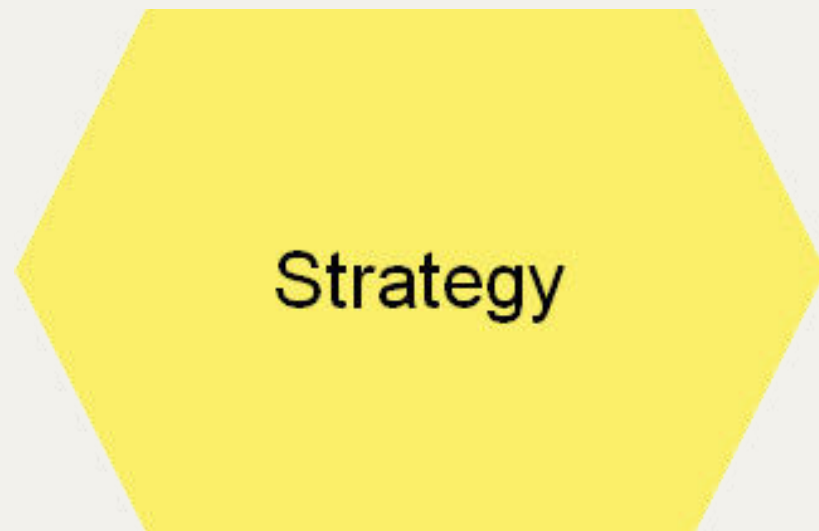
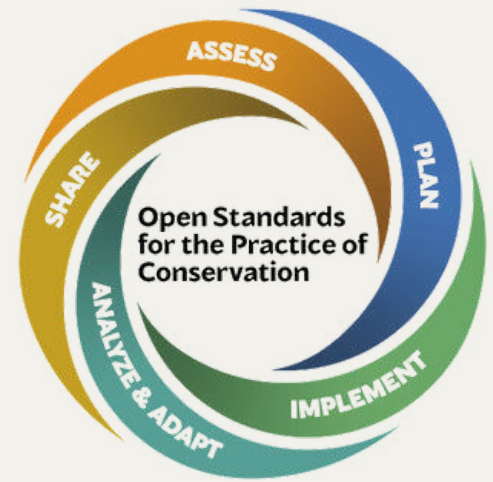
How will we do things?

- Who to influence?
- Where to intervene – where not?
- How to intervene?

Designed to:

- Achieve specific goals & objectives
- Influence key intervention points
- Include one / more activities

ACTIONS HIERARCHY



Strategy

Group of actions with common focus



Activity

Specific action / set of tasks within a strategy



Activity

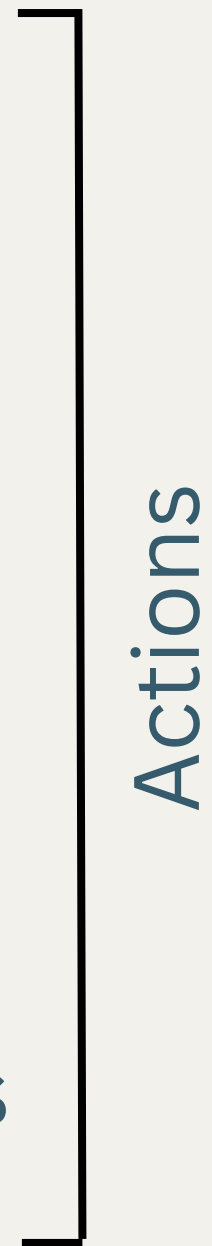


Task

Specific action required to implement activities



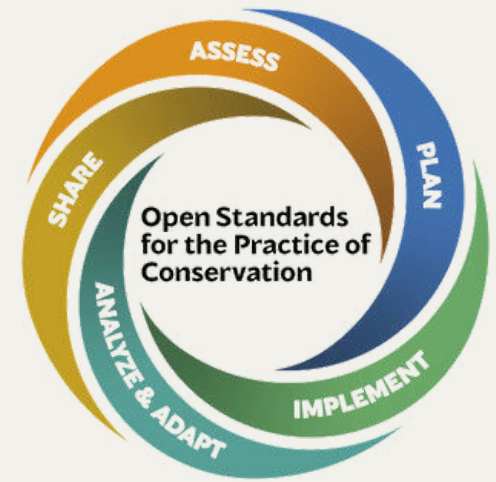
Task



Actions

ACTIONS HIERARCHY

EXAMPLES



Strategy

Promote more sustainable, small-scale agriculture

Activity

- Conduct a feasibility assessment
- Train farmers
- Create a local community-based market

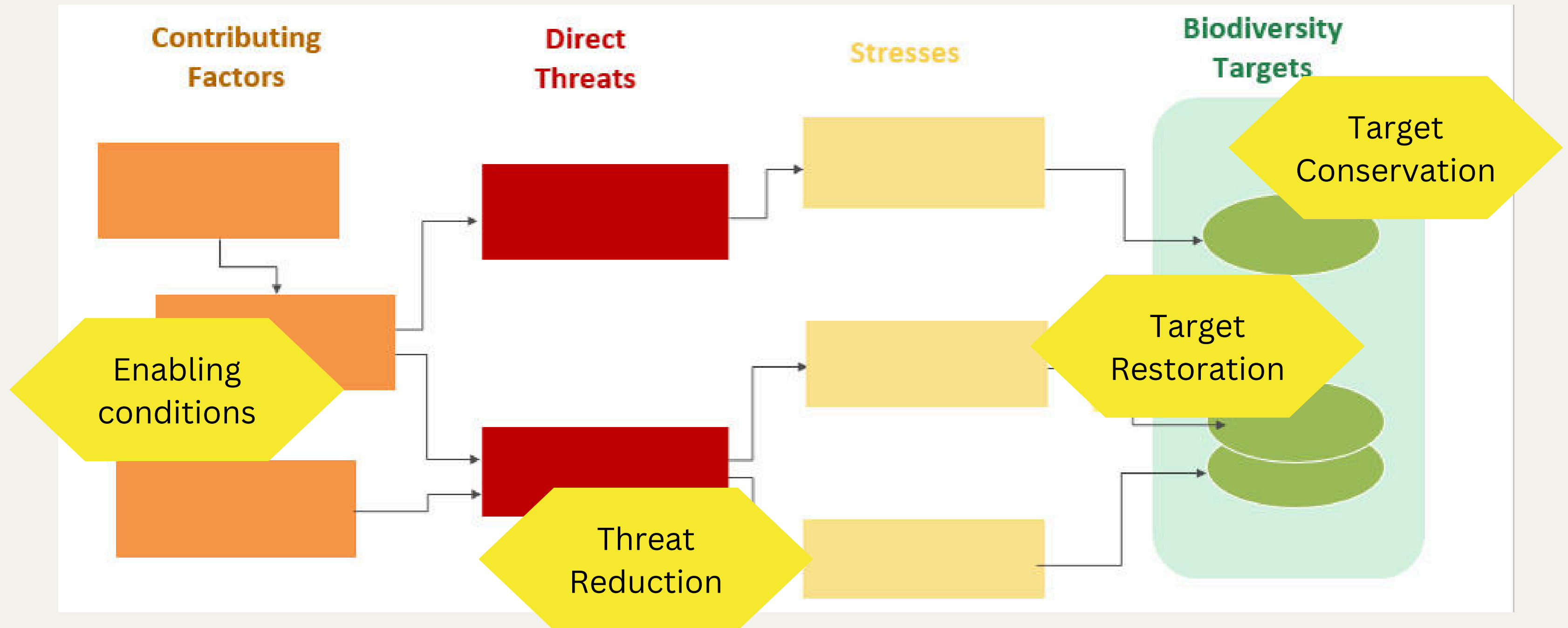
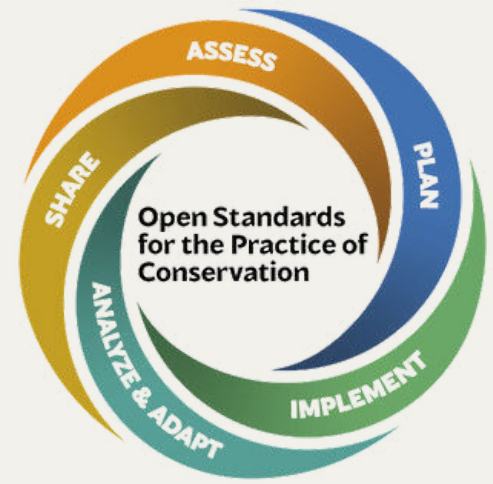
Activity

Task

- Contact local farmers
- Invite farmers and potential customers to workshop
- Book the venue
- ...

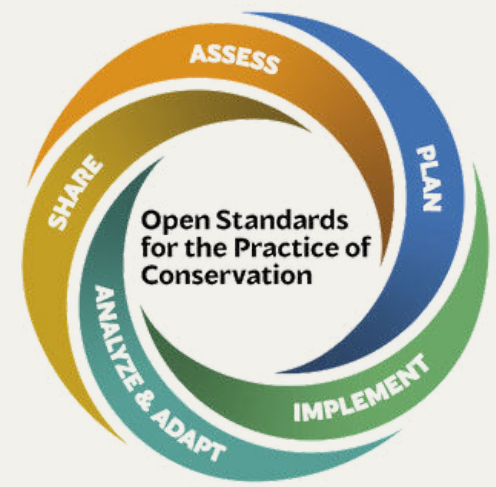
Task

TYPES OF STRATEGIES



CRITERIAS

FOR GOOD STRATEGIES



Linked to critical factors

directly affects one or more critical factors from the situation model

Focused

outlines specific courses of actions to carry out

Feasible

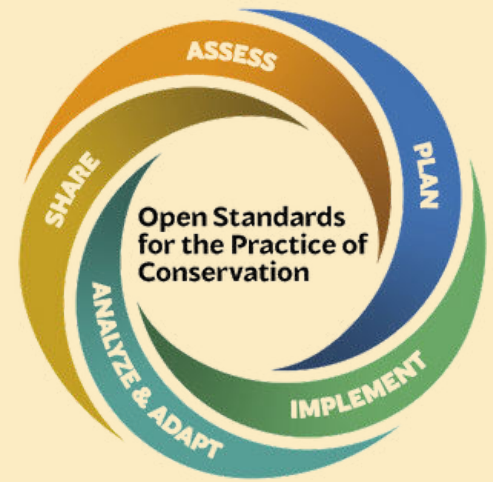
doable in terms of the project's resources & constraints

Appropriate

acceptable and fitting within site-specific cultural, social and biological norms.

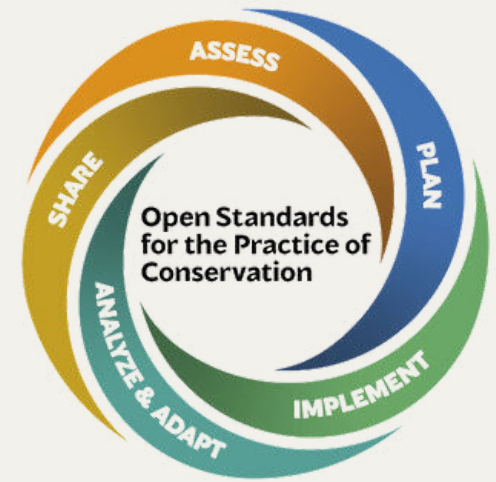


HOW TO DEVELOP STRATEGIES?



- A. Identify key intervention points
- B. Brainstorm potential actions and integrate them into strategies
- C. Pre-select some if you have many
- D. Rate selected strategies
- E. Finalize strategy selection
- F. Apply criteria for a good strategy





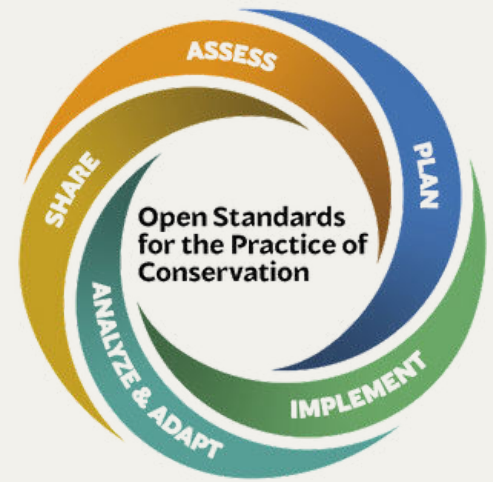
HOW TO DEVELOP STRATEGIES?

TIPS

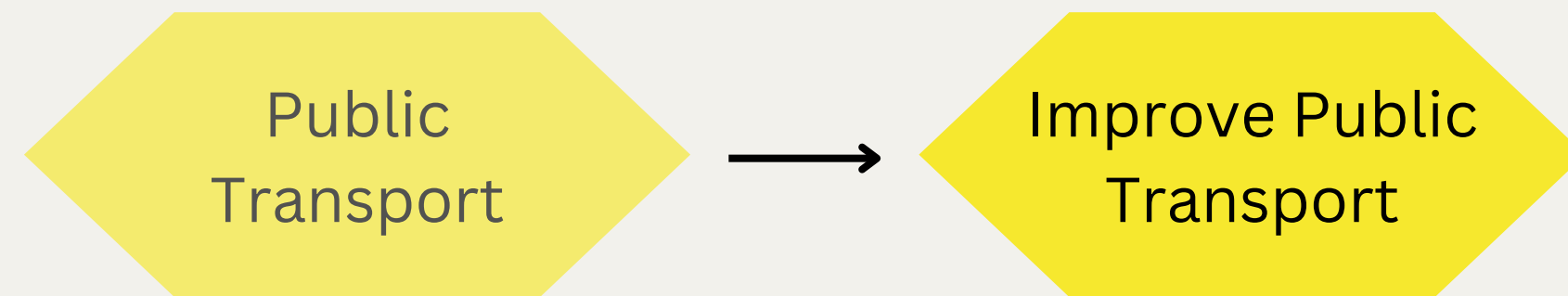
- Consider the scale at which you are working and whether your strategies should be broader, or rather more specific (e.g., a strategy at the site level could be an activity at the ecoregional level)
- Consider what your team can/want to do vs. what other organizations/partners can/will do
- Group similar strategies and look at complementary strategies
- Think outside the box!



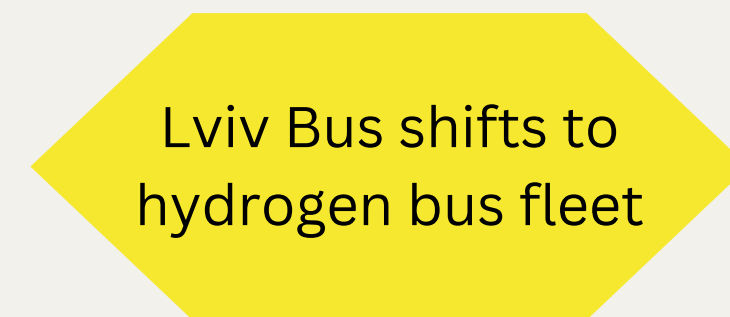
NAMING STRATEGIES



Start with a verb



If useful, you may specify more (who/where ...)



STRATEGY RATING

FOR PRIORITIZATION



IMPACT

The degree to which the strategy (if implemented) will lead to the desired changes in the situation at the project site

Very High	Strategy is very likely to completely mitigate a threat or restore target viability
High	Strategy is likely to contribute to achievement of the goal
Medium	Strategy could possibly contribute to achievement of the goal
Low	Strategy will probably not contribute to achievement of the goal

STRATEGY RATING

FOR PRIORITIZATION



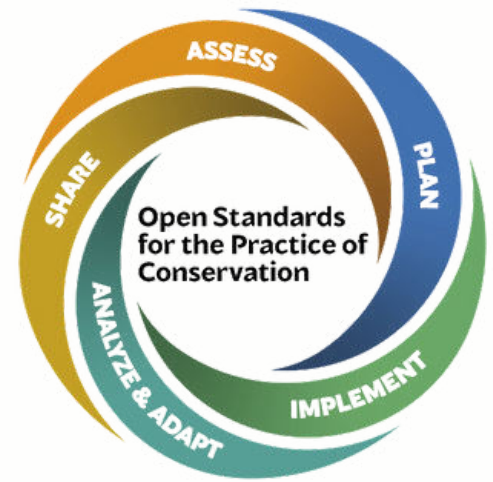
FEASIBILITY

The degree to which a project team could implement the strategy within likely time, financial, staffing, ethical, and other constraints

Very High	Strategy is ethically, technically, AND financially feasible
High	Strategy is ethically and technically feasible, but may require some additional financial resources
Medium	Strategy is ethically feasible, but either technically OR financially difficult without substantial additional resources
Low	Strategy is not ethically, technically, OR financially feasible

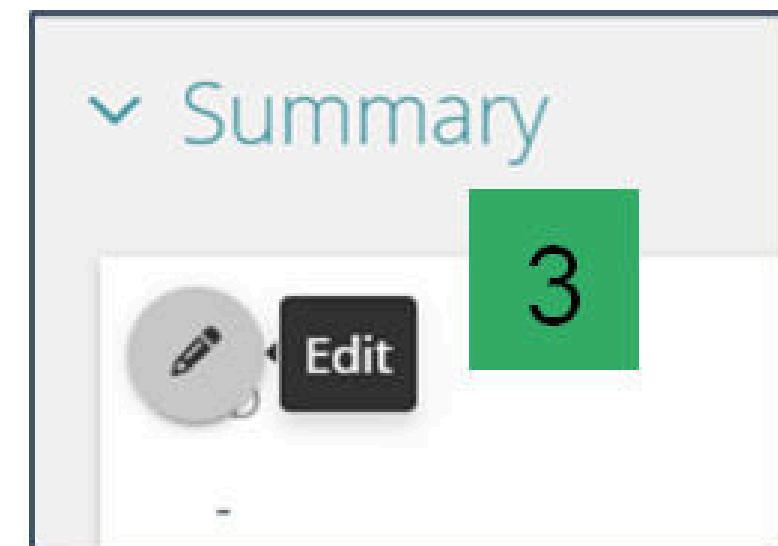
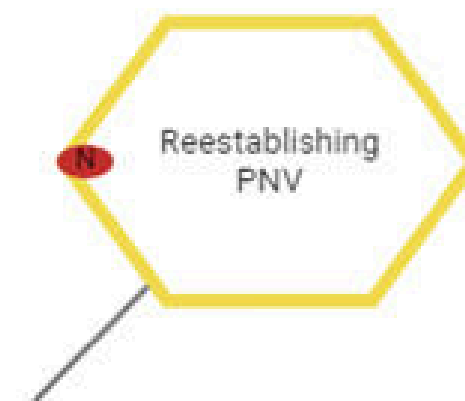
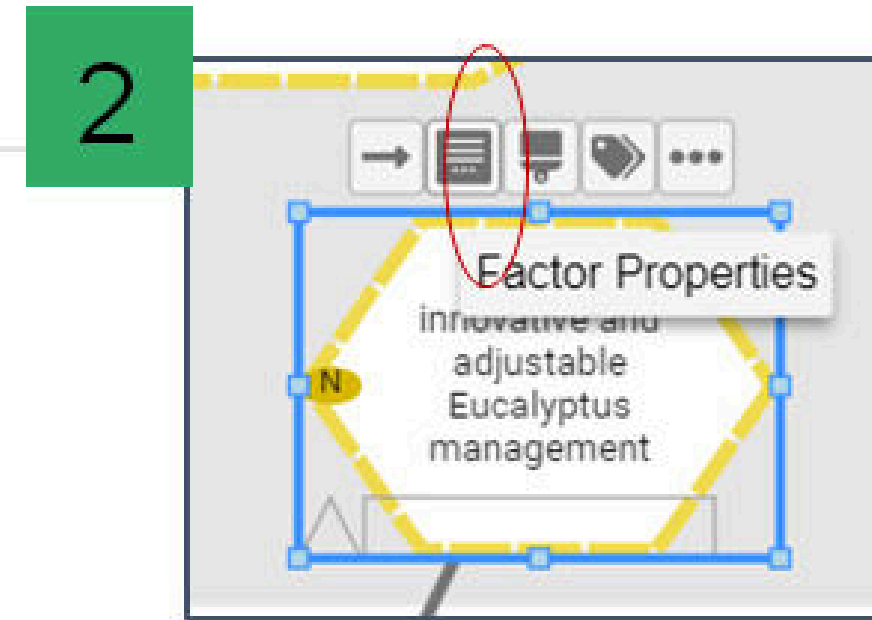
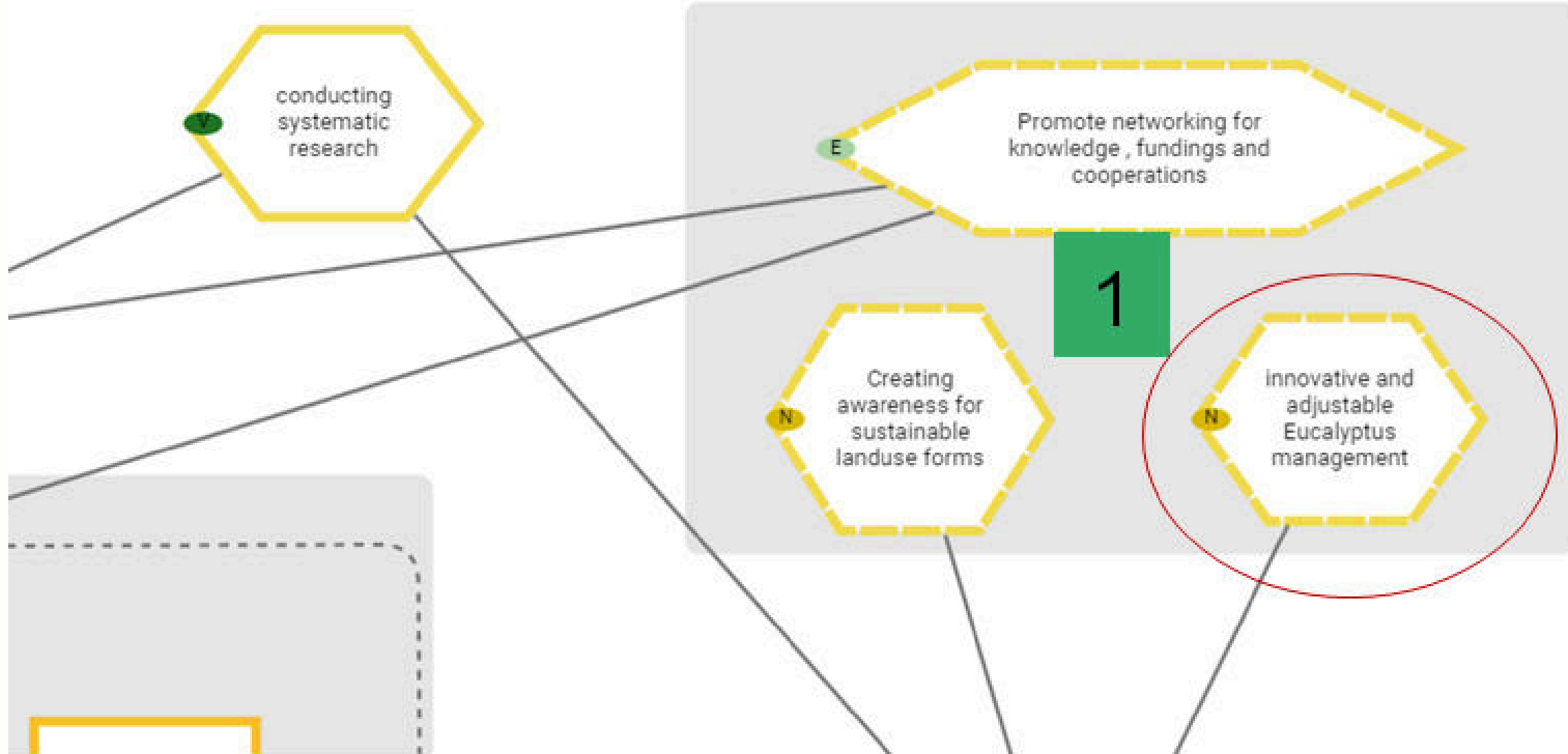
STRATEGY RATING

FOR PRIORITIZATION



IMPACT + FEASIBILITY = EFFECTIVENESS RATING

		IMPACT			
		Very High	High	Medium	Low
FEASIBILITY	Very High	Very Effective	Effective	Low Effectiveness / need more Info	Not Effective
	High	Effective	Effective	Low Effectiveness / need more Info	Not Effective
	Medium	Low Effectiveness / need more Info	Low Effectiveness / need more Info	Low Effectiveness / need more Info	Not Effective
	Low	Not Effective	Not Effective	Not Effective	Not Effective



conducting systematic research

Not Specified

Low

Medium

High

Very High

CANCEL

✓ SAVE

0 / 255

Pro...
knowledge, fundings and
cooperations

2



Factor Properties

innovative and
adjustable
Eucalyptus
management

4

Potential Impact ?



Very High



Feasibility ?



Medium



Strategy Rating



Need More Info

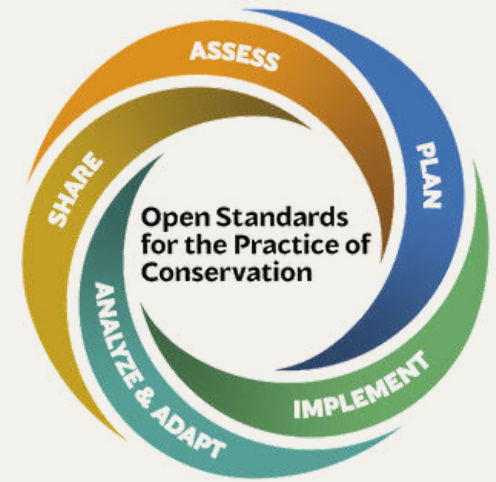
Summary



Edit

3

GROUP WORK INSTRUCTIONS



Group Work Instructions¹ (GWI) – 2.1 Strategy identification and selection

1. Purpose of Exercise

The purpose of this exercise is to define strategies to respond to priority threats and build resilience in your biodiversity and human well-being targets. To do this, you will need the situation model that you developed in previous exercises.

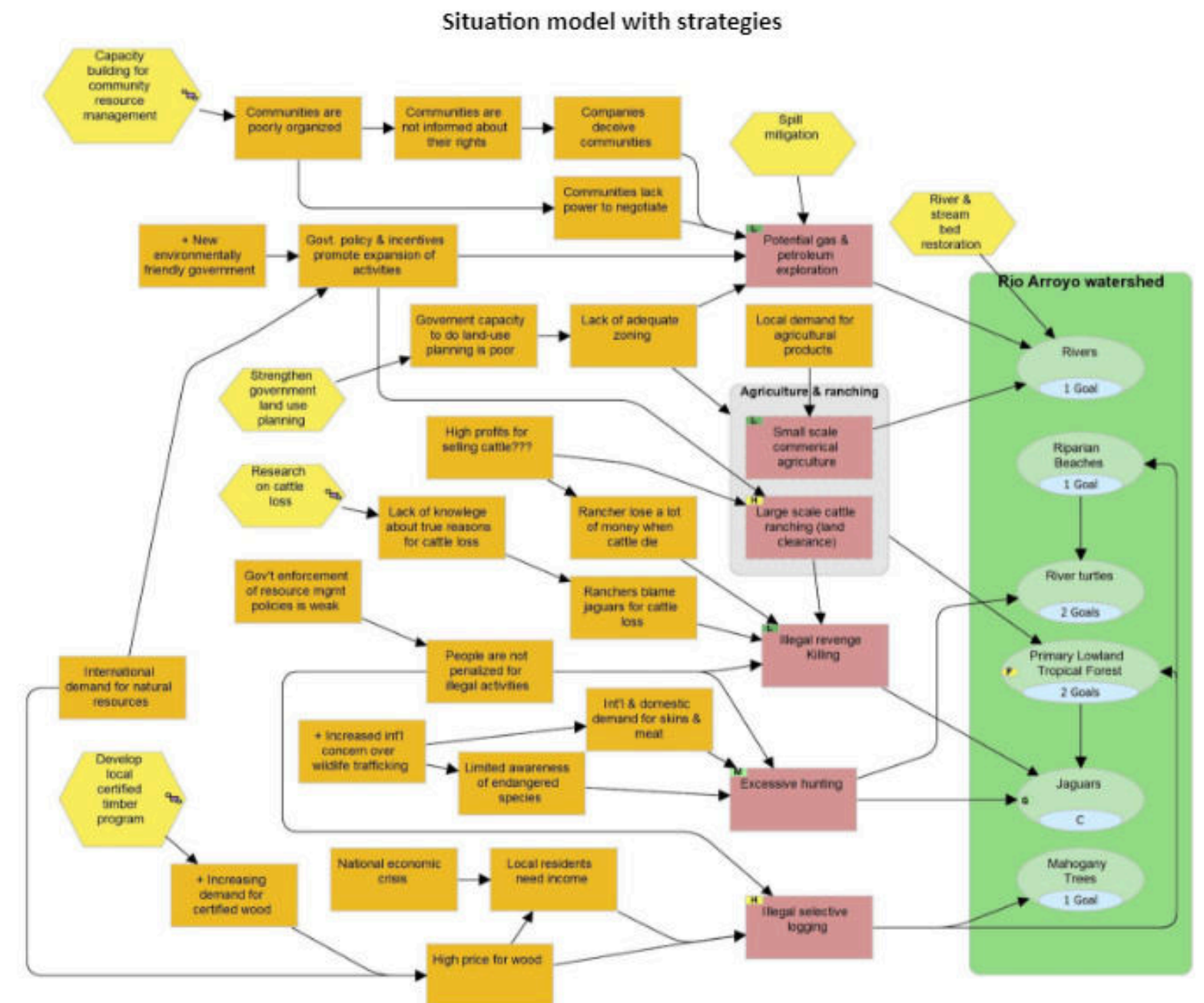
2. Conservation Standards definitions

Strategy: A set of activities with a common focus that works together to achieve specific goals and objectives by targeting key intervention points, optimizing opportunities, and limiting constraints. A good strategy meets the criteria of being:

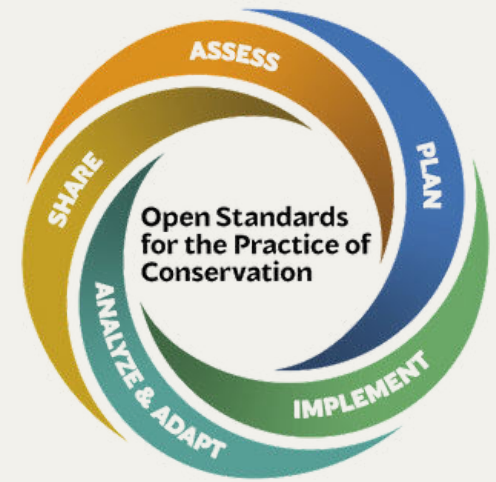
- **Linked** to critical factors: directly affects one or more critical factors from the situation model.
- **Focused:** outlines specific courses of action to carry out.
- **Feasible:** doable in terms of the project's resources & constraints.
- **Appropriate:** acceptable and fitting within site-specific cultural, social, and biological norms.

Activity: A specific action or set of tasks undertaken by project staff and/or partners to reach one or more objectives. Sometimes called an action, response, or strategic action.

3. Example



GROUP WORK INSTRUCTIONS



4. Procedure

In your team, work through the steps as outlined below. You can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

1. Revise your goals and review your situation model.
2. Identify **key intervention points** that your project will focus on. Your intervention points in the model might be on the target itself, the direct threat to the target, and/or the indirect threats and opportunities affecting the direct threats.
3. Brainstorm a list of strategy options for those key intervention points. Be sure that you concentrate on strategies that target a **sustainable reconstruction of Ukraine**. Also, take into account strategies or at least activities that promote and/or assure meaningful **participation** of different stakeholders.
4. Organize your strategies: Lump them or identify if some are activities rather than strategies.
5. Think about strategies in the long, medium, and short term.
6. If you have many strategies, use the criteria for a good strategy, as a first filter.
7. Using [Miradi Share](#), rate the prioritized strategy(ies) and discuss your results.

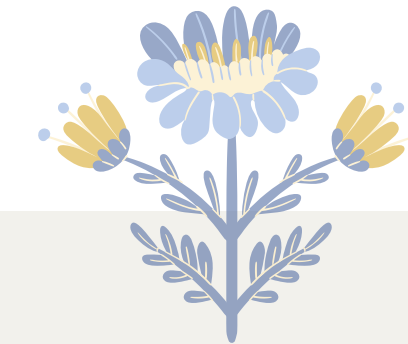
5. Checklist of the recording of your group work

- 1) Your situation model (on paper) with the strategies for your key intervention points.
- 2) The strategy-rating table on [Miradi Share](#).

6. Recommended guiding documents

The [IUCN-CMP Taxonomy of Conservation Actions](#)

[Conservation Standards v4.0](#) (p.28-32)



Be Strategic!

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funded by the EU

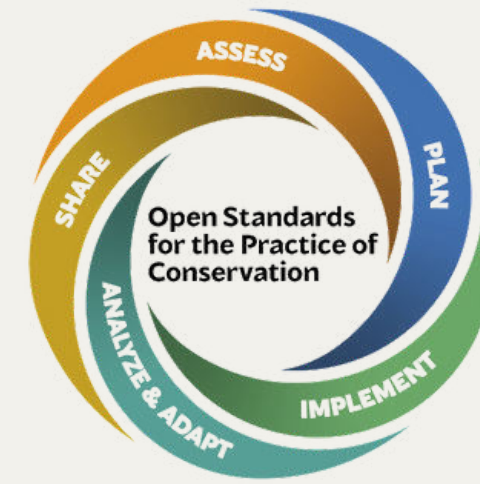


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<https://translearnn.ztu.edu.ua>

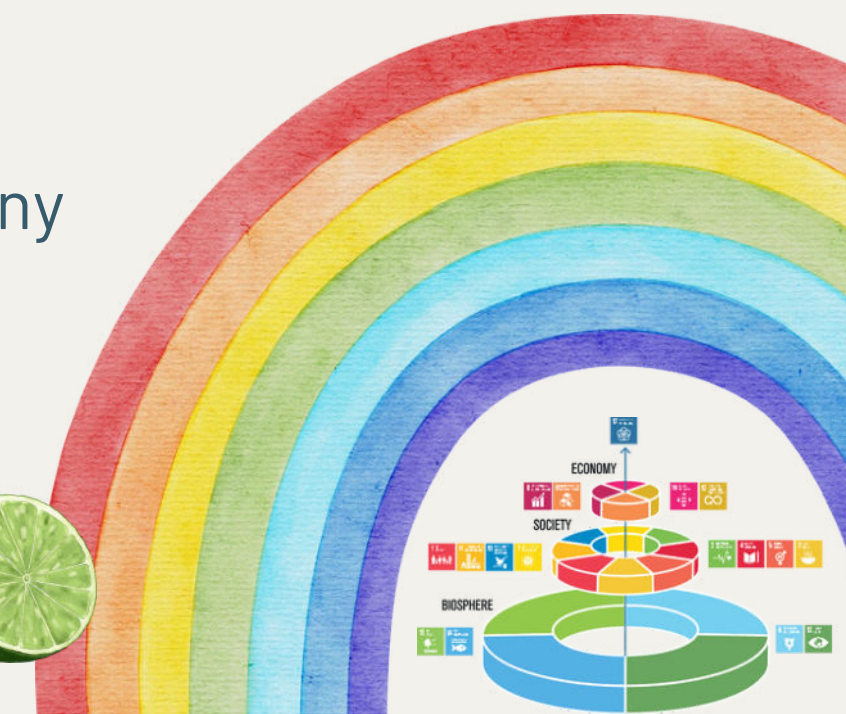


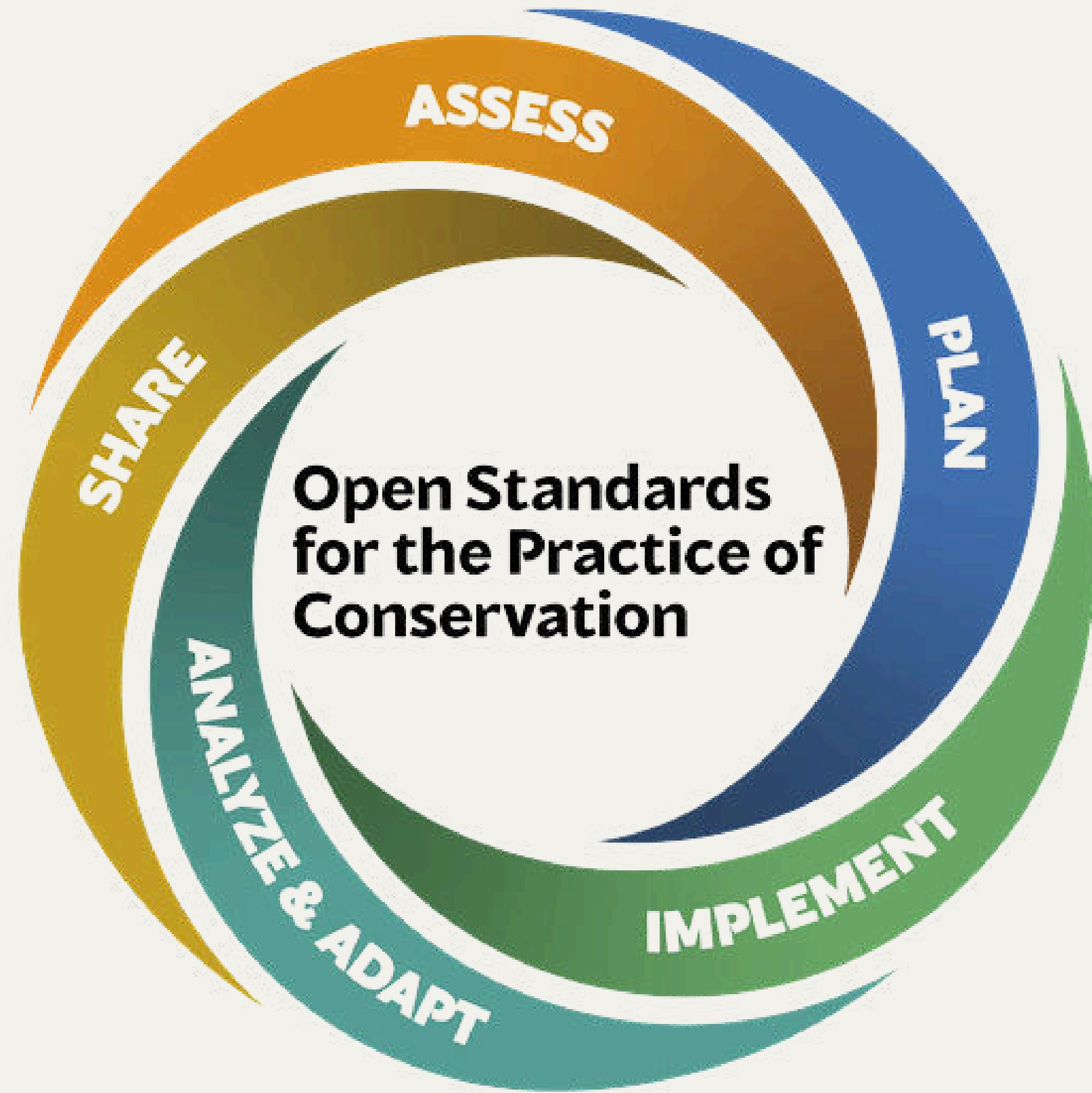


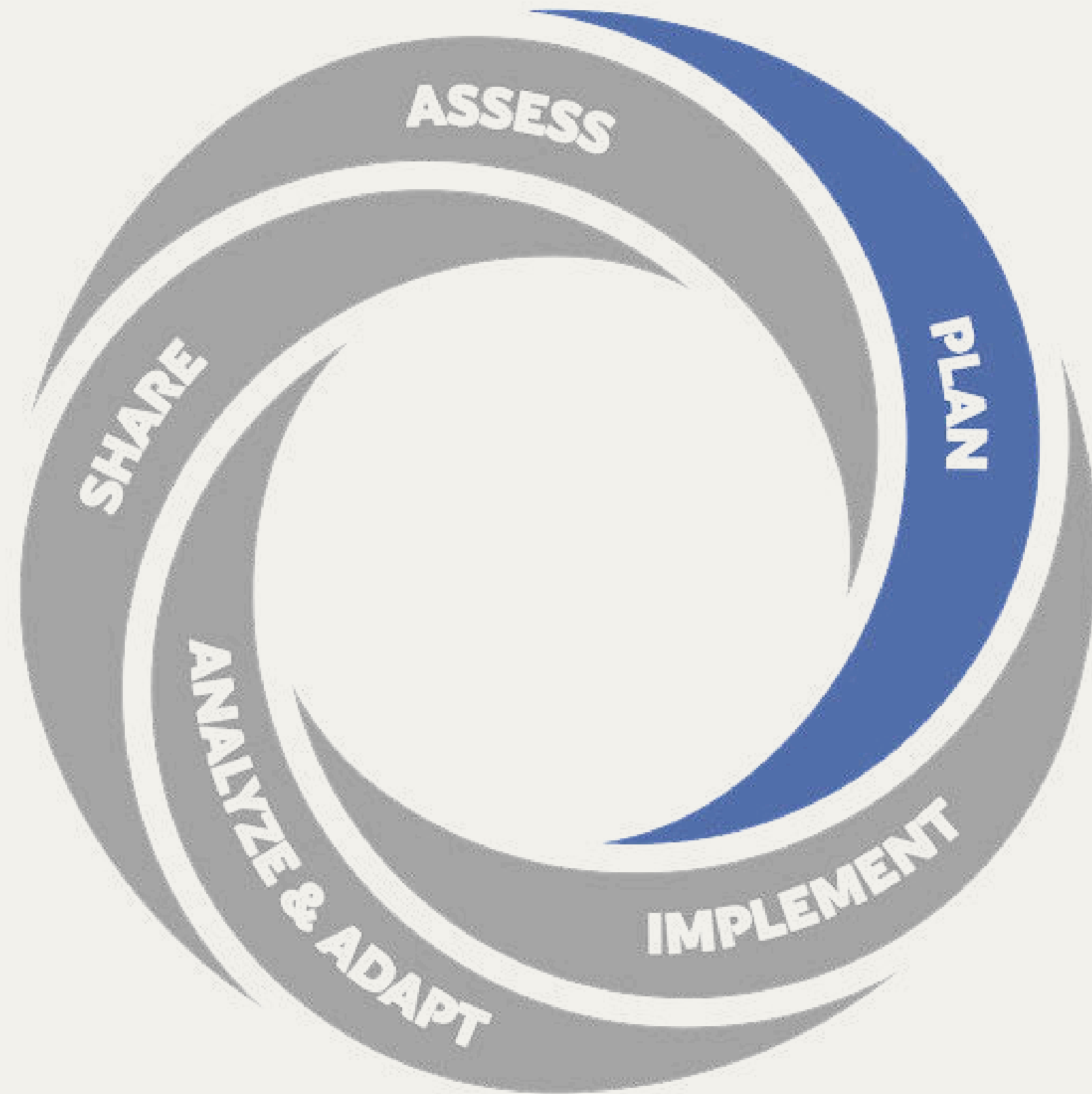
Theory of Change

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

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based on the Open Standards for the Practice of Conservation methodology







2. PLAN

- Goals
- Strategies
- **Theory of Change**
- Objectives
- Monitoring Plan
- Operational Plan



OUTLOOK



- Theory of Change & Results Chains
- How to build a Results Chain
- ToC Example
- Reflections
- How to in Miradi
- GWI



THEORY OF CHANGE



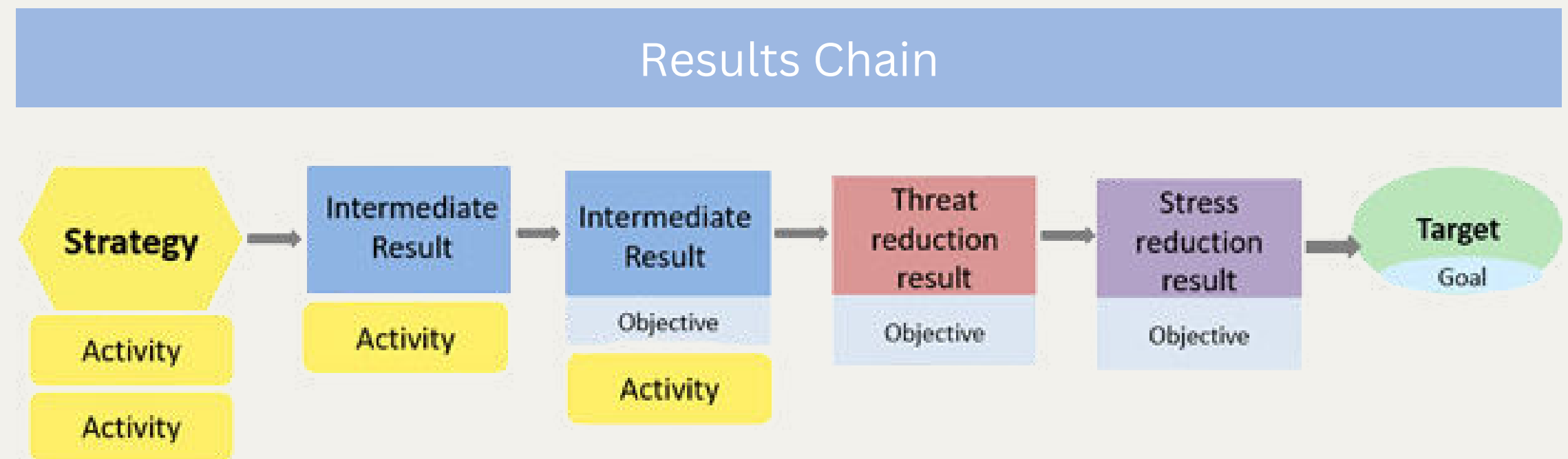
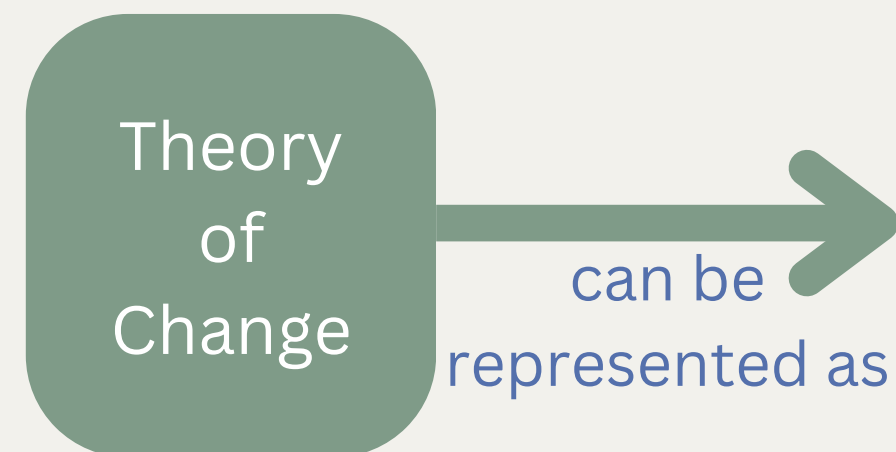
A series of causally **linked assumptions** about how a team thinks its actions will help it **achieve both intermediate results** and **longer-term goals**.

Describes how a team **believes or assumes** the strategies will act on indirect threats and opportunities, reduce direct threats, and achieve goals.

RESULTS CHAIN

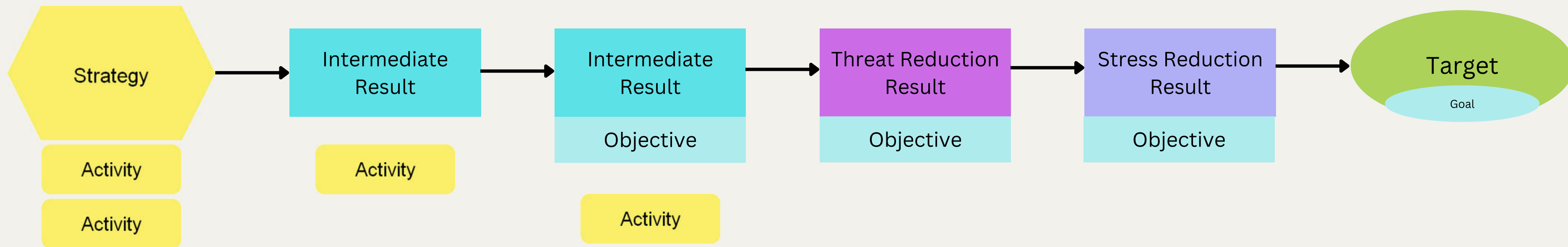
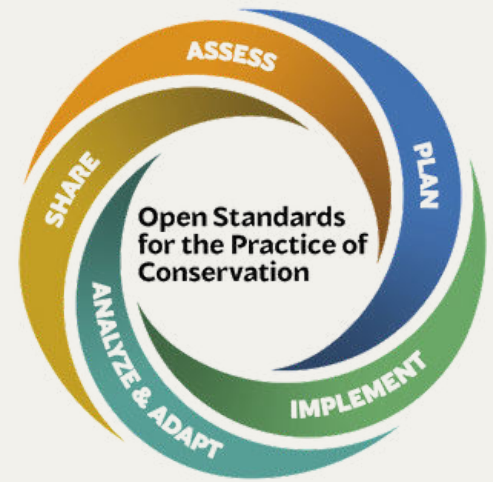


A VISUAL DIAGRAM OF A PROJECT'S THEORY OF CHANGE

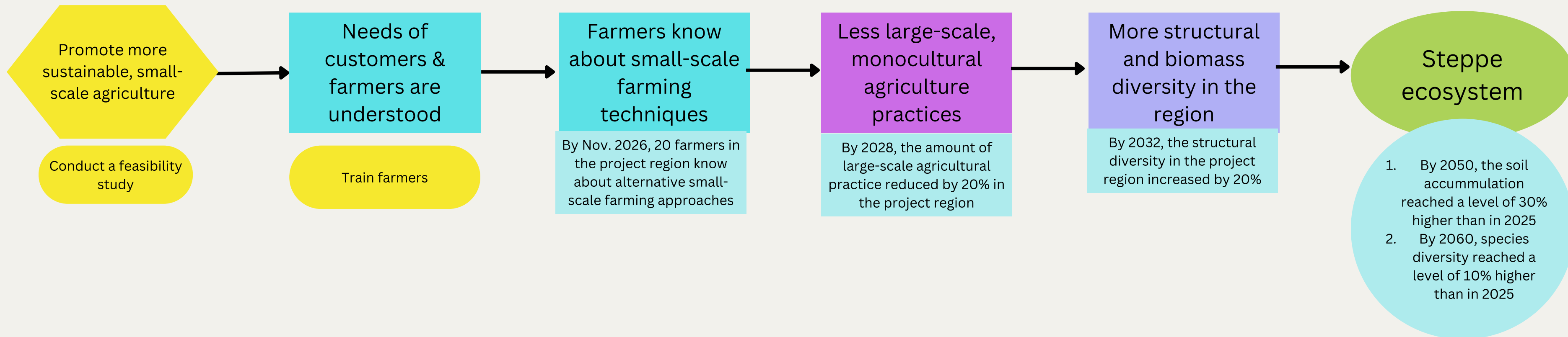
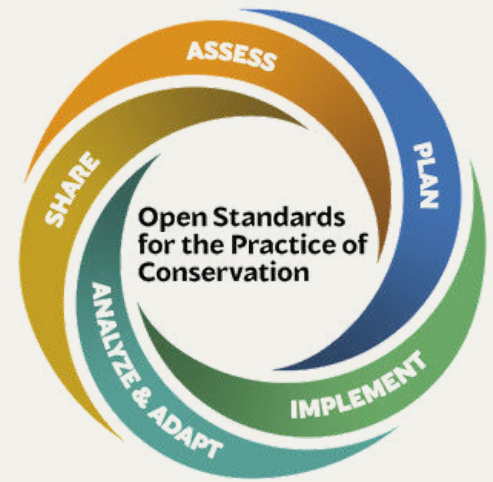


- Links interventions to targets
- Causal (if..., then...)
- A series of intermediate results

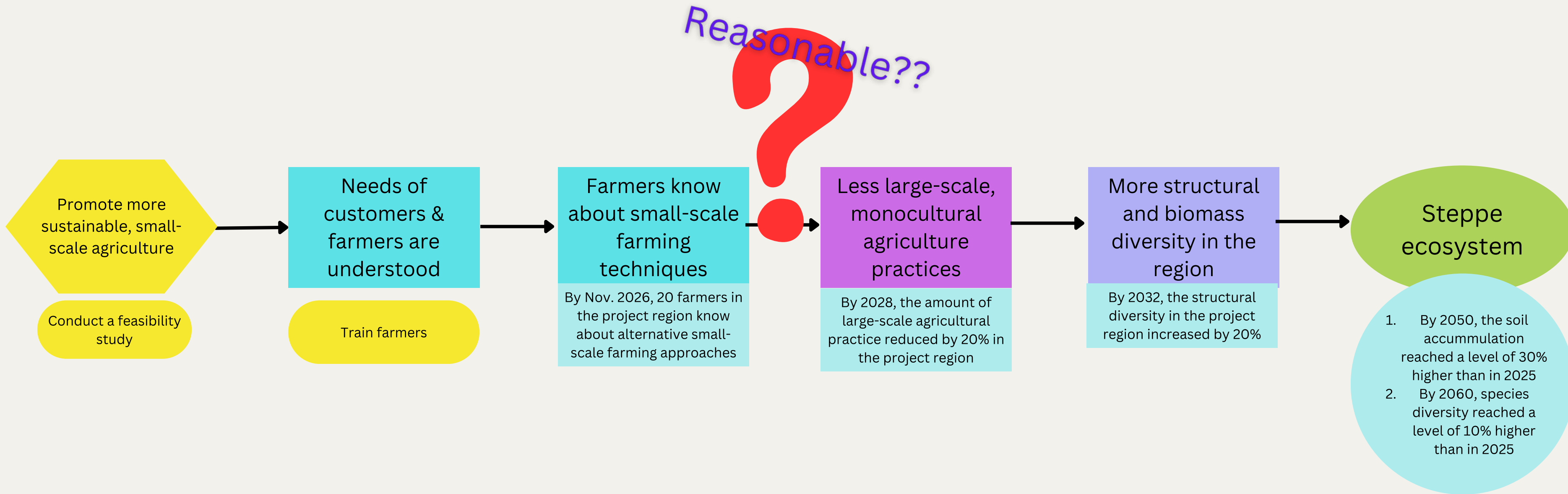
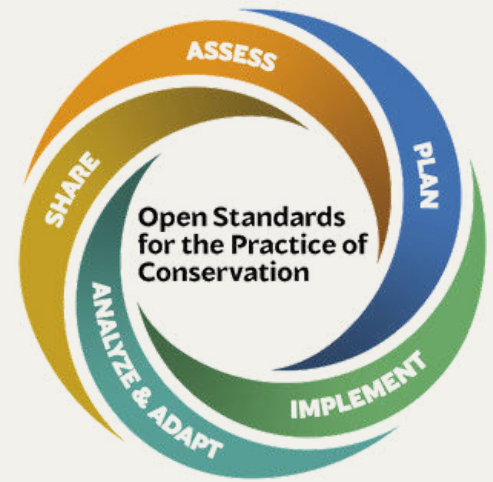
ELEMENTS OF A RESULTS CHAIN



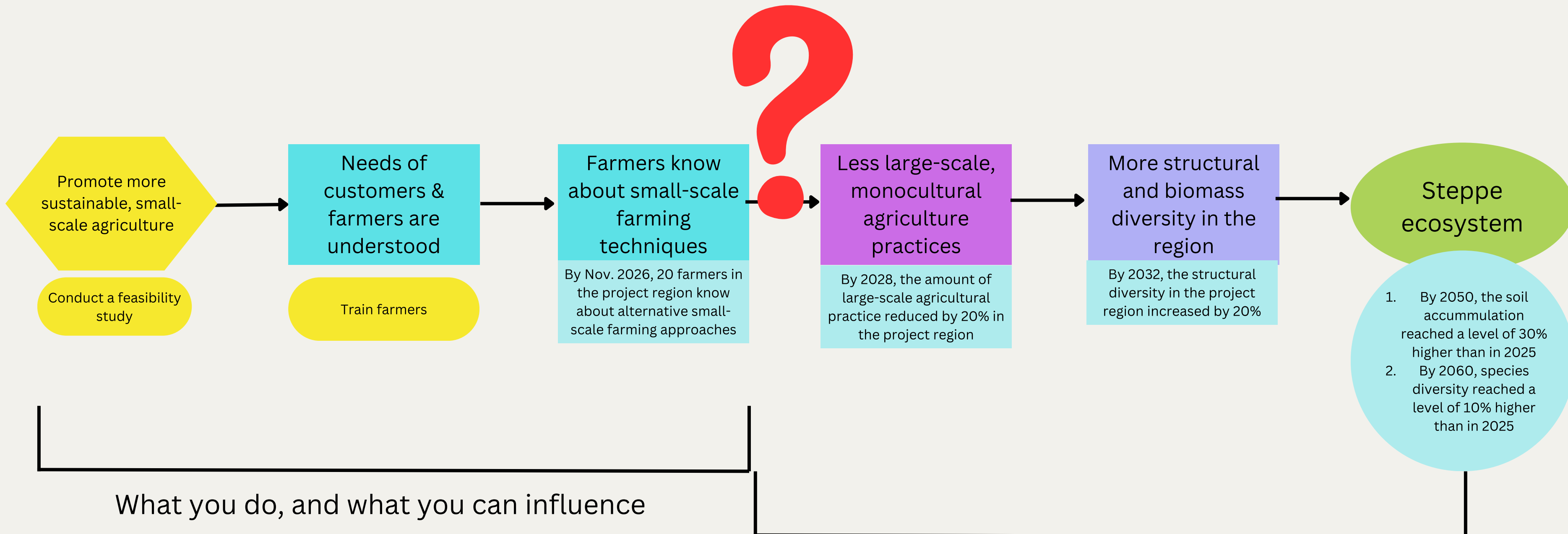
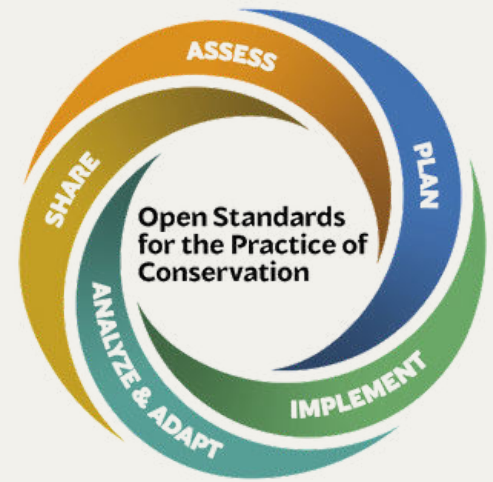
EXAMPLE OF A RESULTS CHAIN



EXAMPLE OF A RESULTS CHAIN



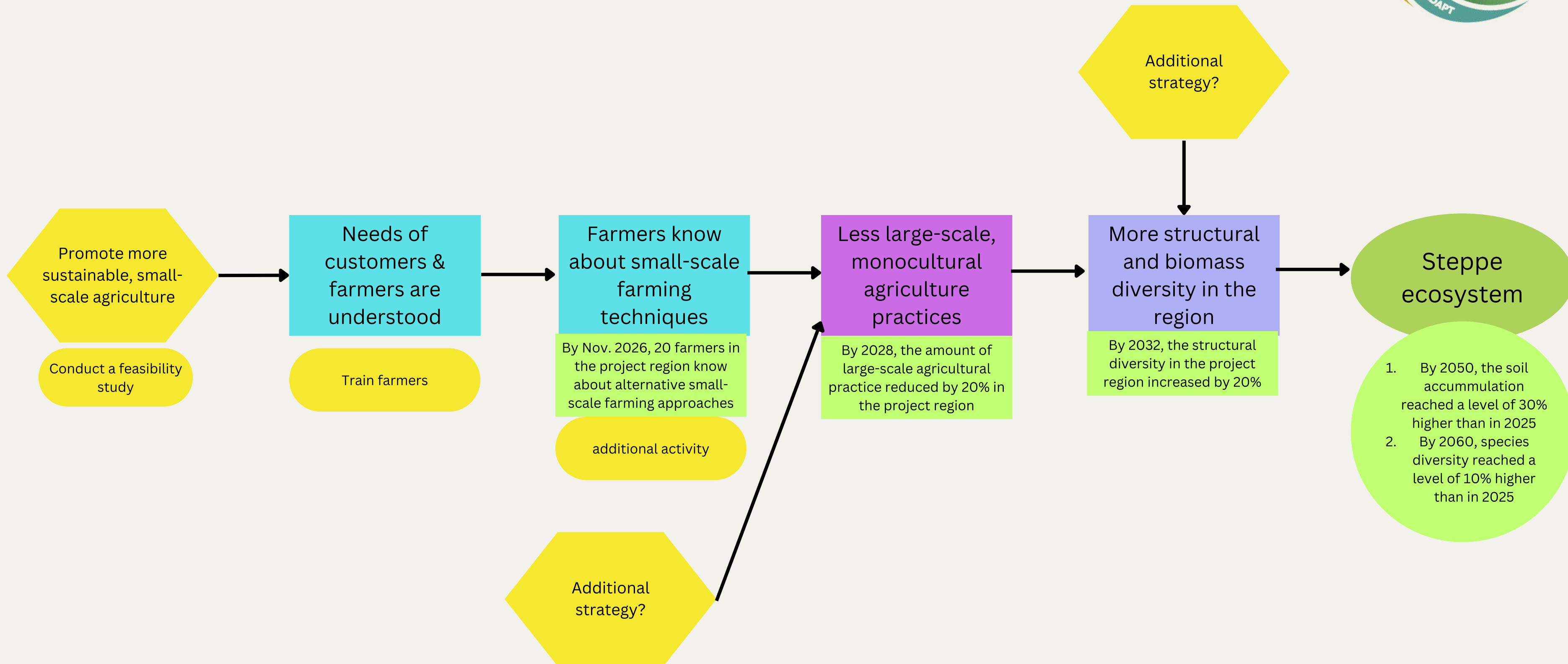
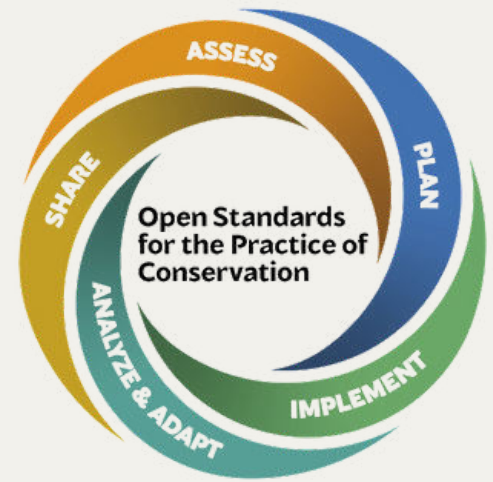
EXAMPLE OF A RESULTS CHAIN



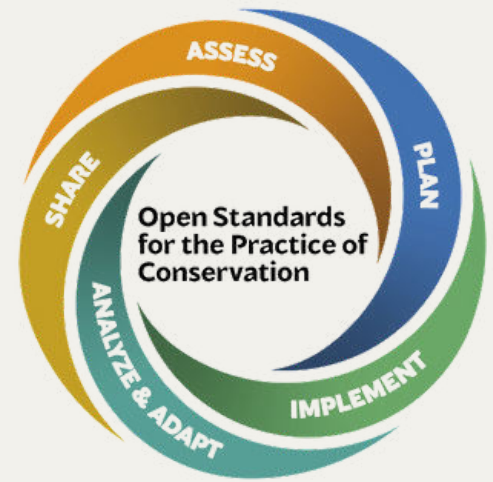
What you do, and what you can influence

What you want your target group to do and its impact
-> No direct influence from your side anymore

EXAMPLE OF A RESULTS CHAIN



HOW TO BUILD A RESULTS CHAIN?

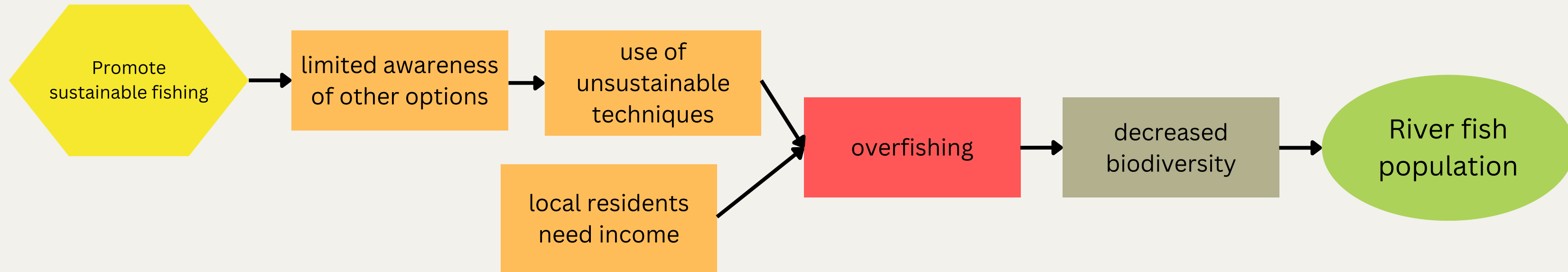


- Select strategy
- 2 ways:
 - Convert from situation model and adjust
 - Build from scratch

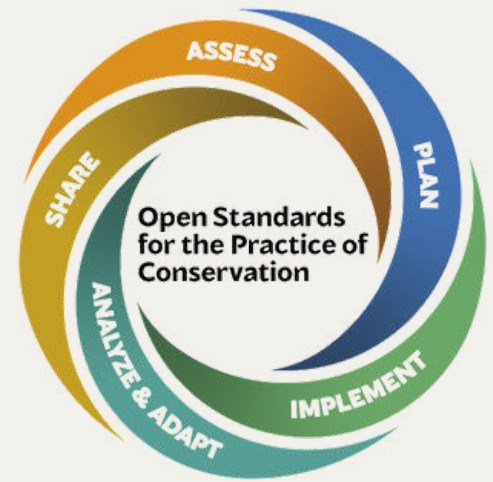
CONVERT FACTORS TO RESULTS



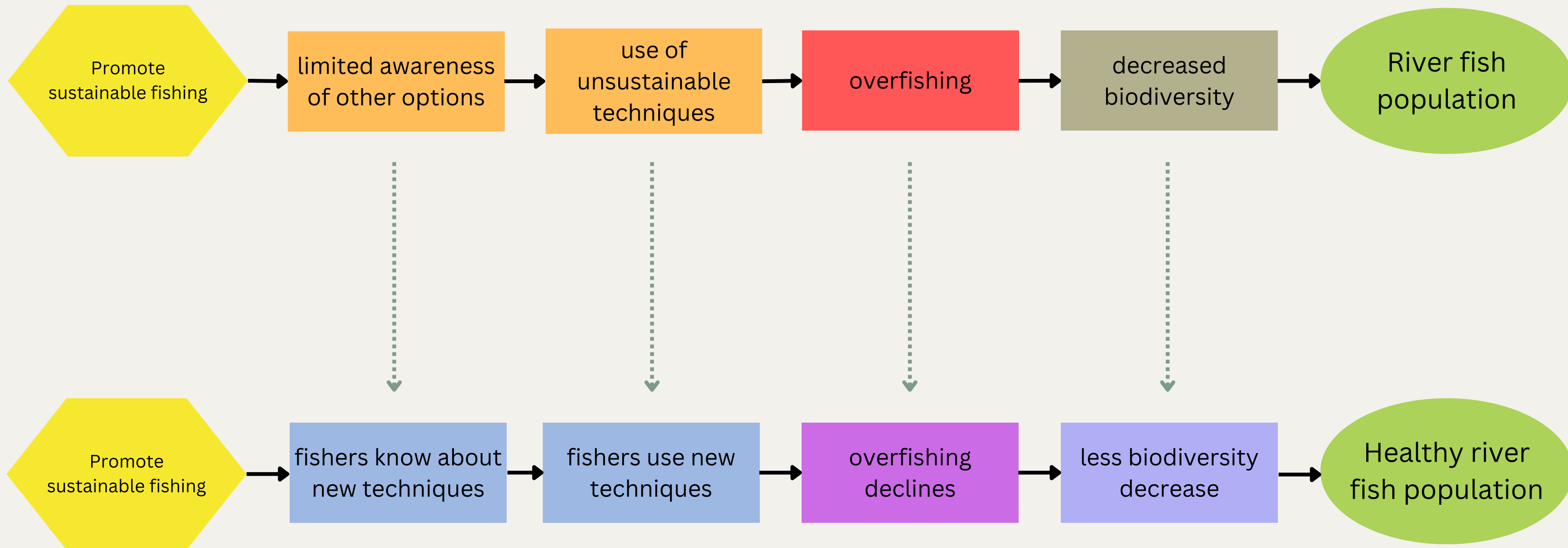
Extract from
conceptual
model



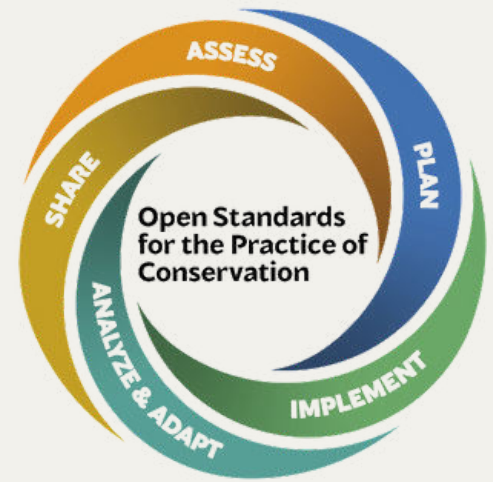
CONVERT FACTORS TO RESULTS



Extract from conceptual model



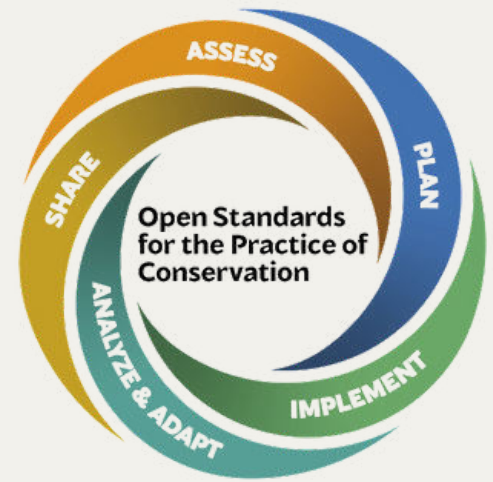
COMPLETE THE LOGIC



- If... then logic
- Direction: left to right / right to left
- Verify that it meets criteria
- Share & refine



COMPLETE THE LOGIC



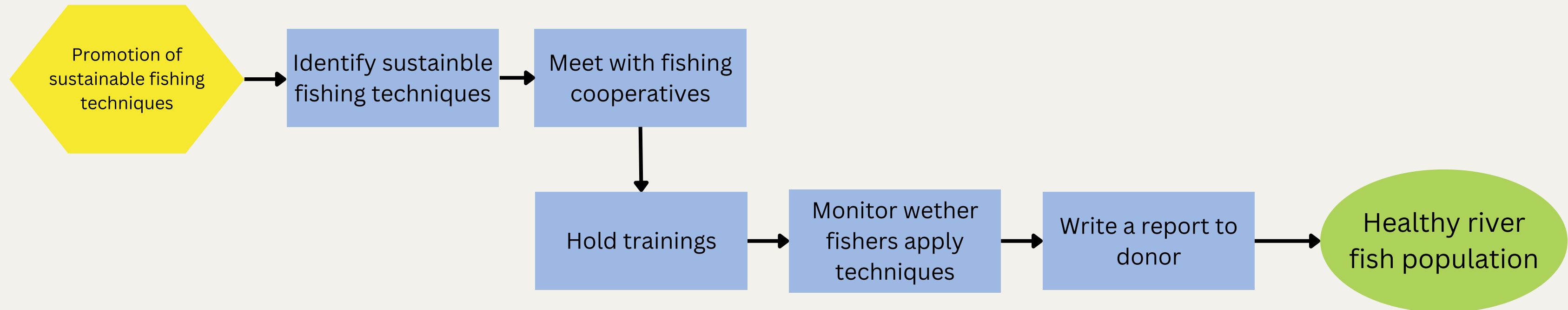
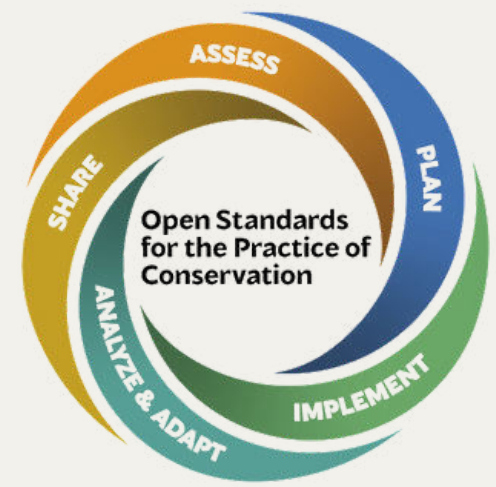
- If... then logic
- Direction: left to right / right to left
- Verify that it meets criteria
- Share & refine

A blue rectangular box held by two stylized hands. The box contains the title "Criteria" and a bulleted list of five items. The hands are pinkish-red with visible fingers.

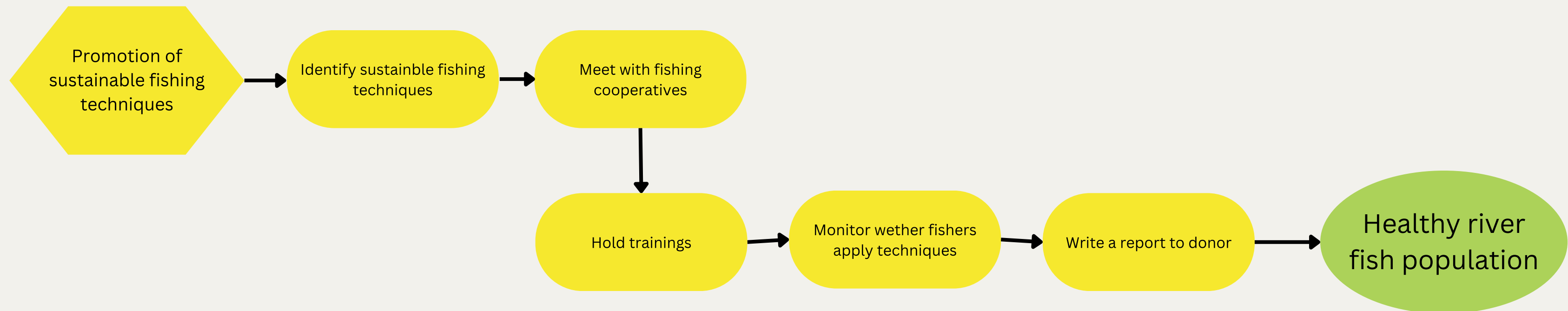
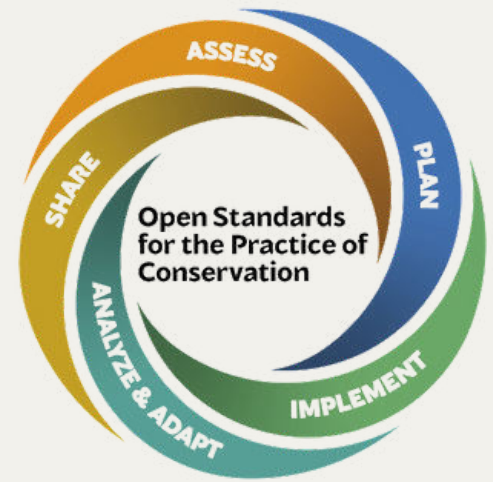
Criteria

- Results oriented
- Causally linked
- Demonstrates change
- Reasonably complete
- Simple

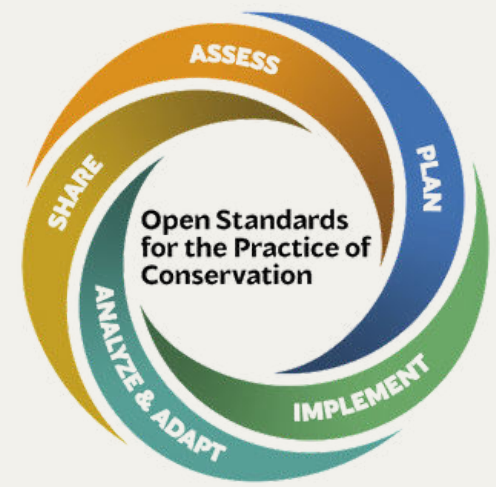
NOT A RESULTS CHAIN



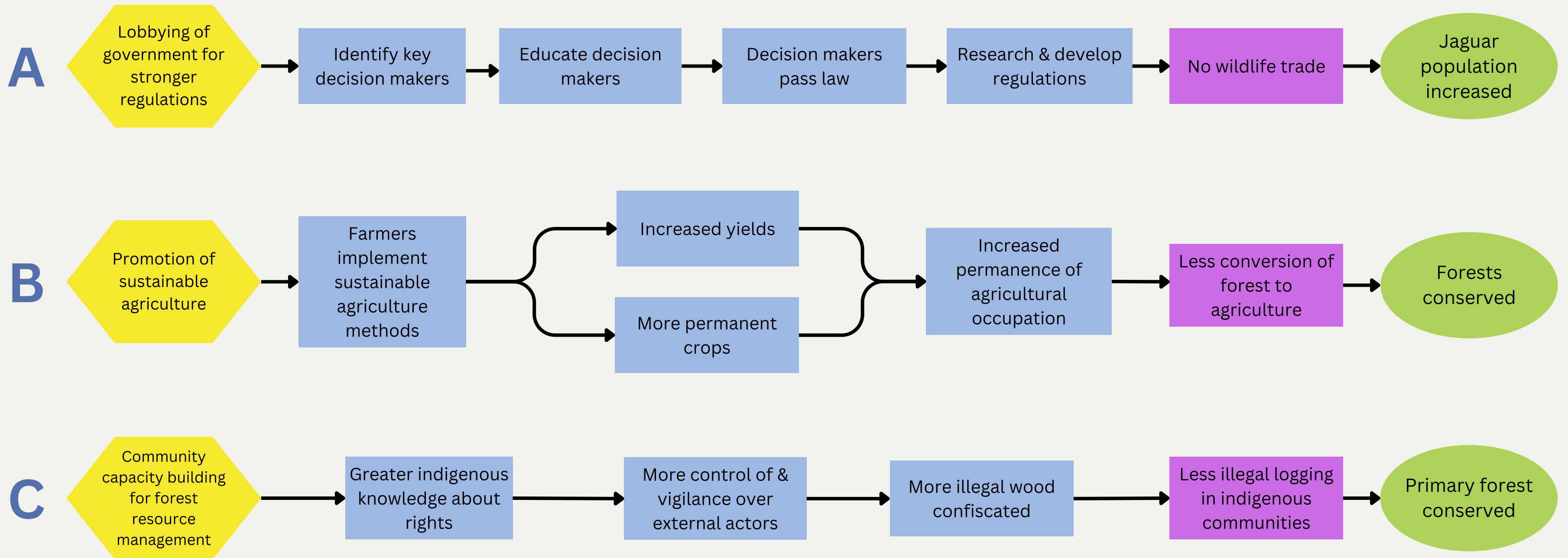
NOT A RESULTS CHAIN



YOUR TURN

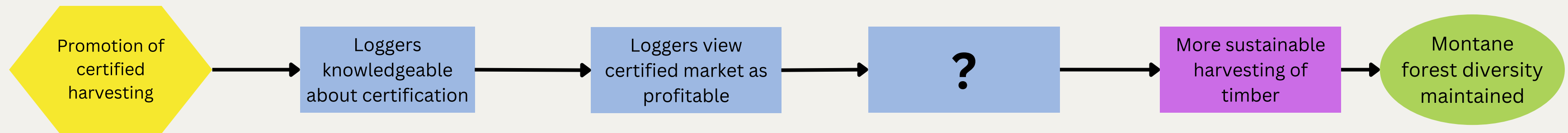
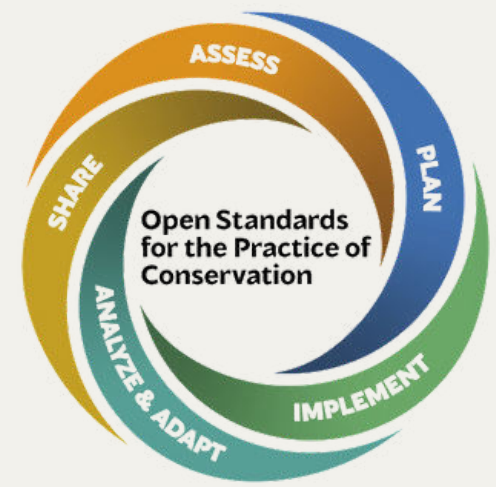


WHICH OF THE FOLLOWING IS NOT A RESULTS CHAIN?



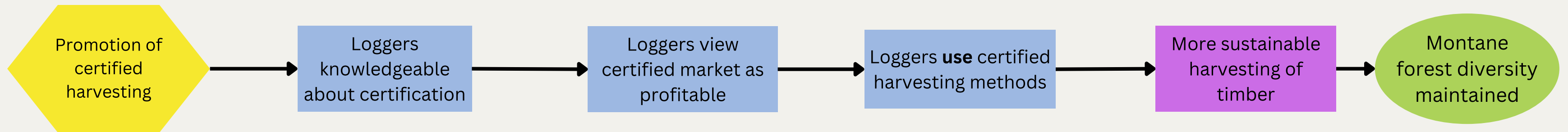
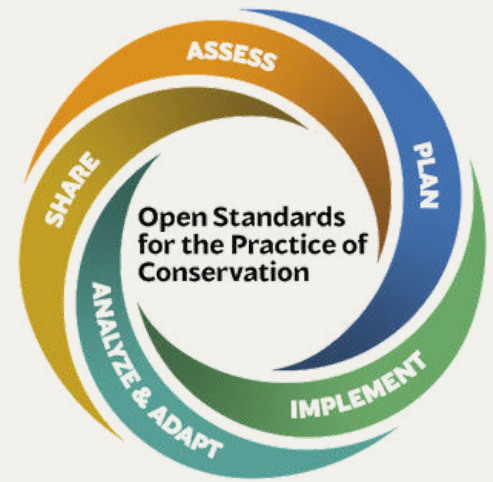
YOUR TURN

ADD THE MISSING RESULT



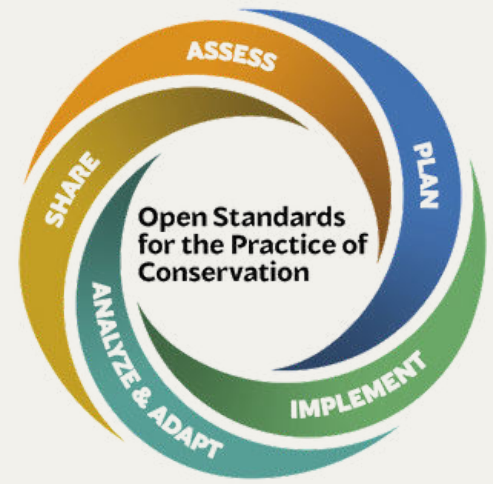
YOUR TURN

ADD THE MISSING RESULT



MIRADI SHARE

HOW TO CREATE THE TOC IN MIRADI

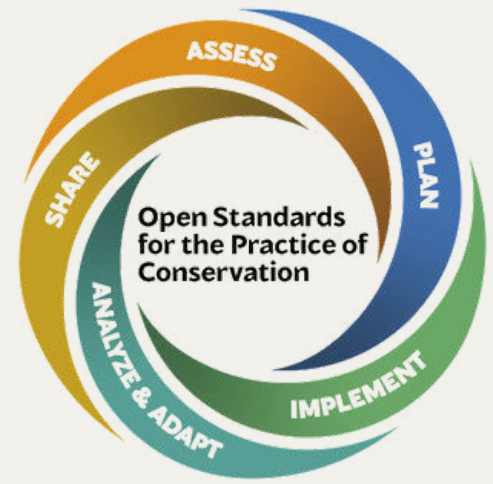


1. Select all factors in your Situation Model relevant to your chosen strategy, including the strategy box and all arrows



MIRADI SHARE

HOW TO CREATE THE TOC IN MIRADI



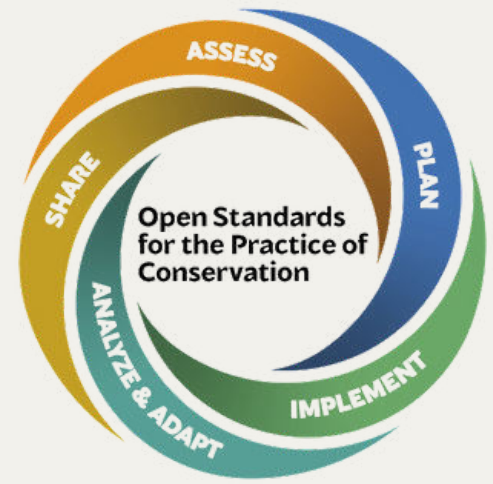
1. Select all factors in your Situation Model relevant to your chosen strategy, including the strategy box and all arrows



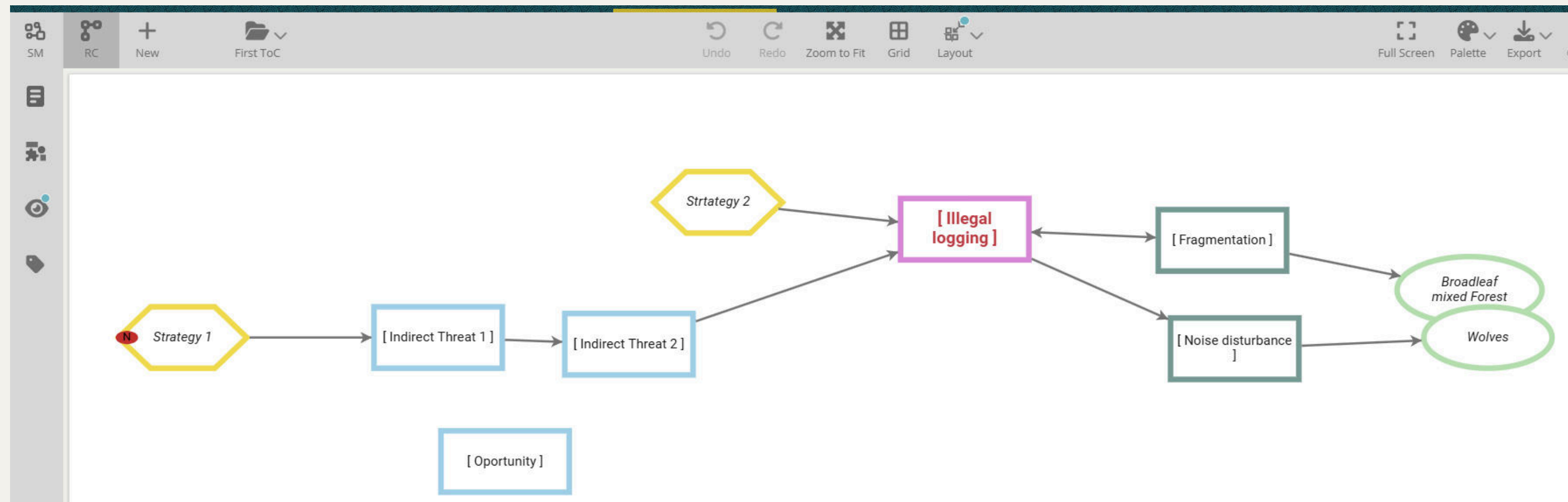
2. Right-click and choose “Create New Results Chain”

MIRADI SHARE

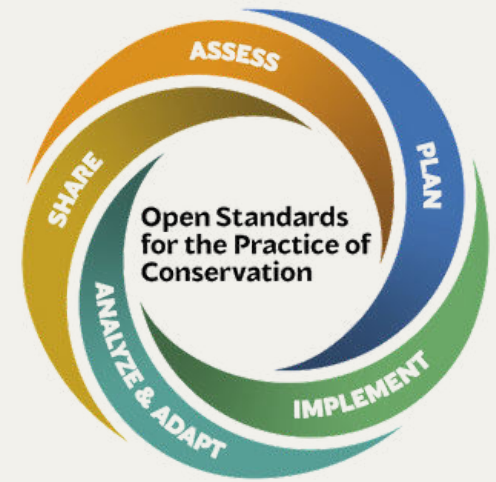
HOW TO CREATE THE TOC IN MIRADI



3. Reformulate the factor names in [brackets].
4. Add more factors according to your results on the brown paper.
5. Add activities



GROUP WORK INSTRUCTIONS



Group Work Instructions¹ (GWI) – 2.2 Theory of Change

1. Purpose of Exercise

The purpose of this exercise is to develop theories of change for your project strategies and capture them in results chains. Theories of change help you to make your assumptions explicit about how conservation strategies contribute to the reduction of priority threats and support the resilience of your biodiversity and human well-being targets. To do this, you will need the situation model that you developed in previous exercises.

2. Conservation Standards definitions

Theory of Change: A series of causally linked assumptions about how a team thinks its actions will help it achieve both intermediate results and longer-term conservation and human well-being goals. A theory of change can be expressed in text, diagrammatic (e.g., results chains), or other forms.

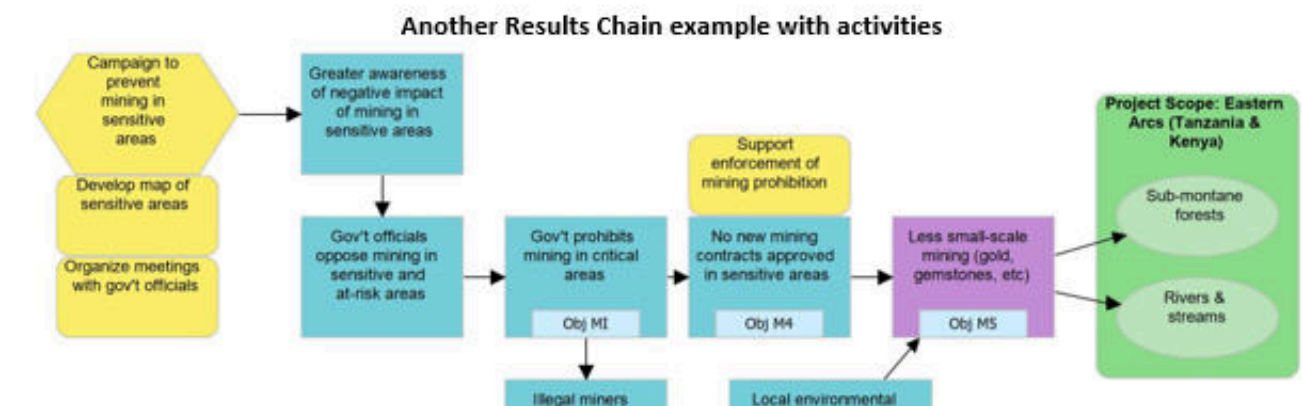
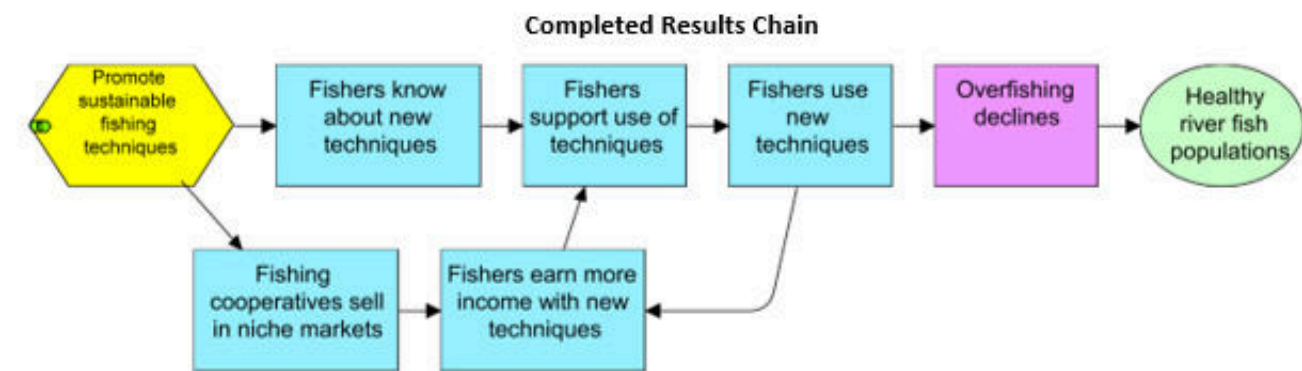
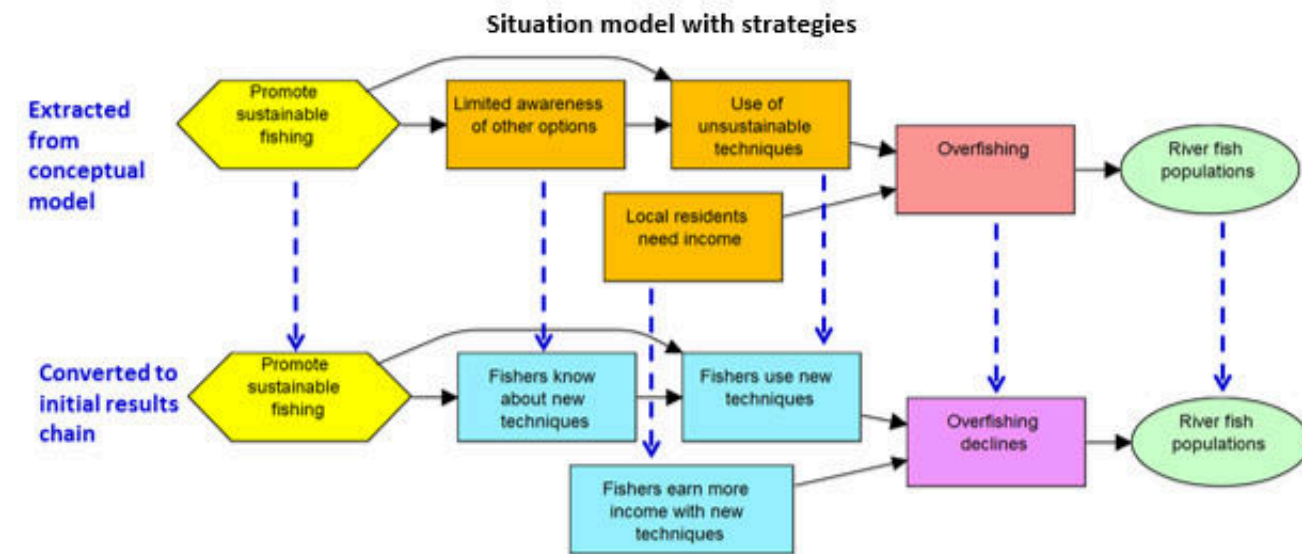
Results Chain: A visual diagram of a project's theory of change. It includes core assumptions and the logical sequence linking project strategies to one or more targets. In scientific terms, it lays out hypothesized relationships or theories of change. A good results chain meets the following criteria:

- Results-oriented** – Boxes contain desired results (e.g., reduction of hunting), and not activities (e.g., conduct a study)
- Causally linked** – There are clear connections of "if...then" between each pair of successive boxes
- Demonstrates change** – Each box describes how you hope the relevant factor will change (e.g., improve, increase, or decrease)
- Reasonably complete** – There are sufficient boxes to construct logical connections but not so many that the chain becomes overly complex
- Simple** – There is only one result per box

Activity: A specific action or set of tasks undertaken by project staff and/or partners to reach one or more results.

Objective: A formal statement detailing the desired outcome of a project, such as reducing a critical threat. It should be formulated in a SMART way.

3. Example



GROUP WORK INSTRUCTIONS



4. Procedure

In your team, work through the steps as outlined below. You can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

1. Select one (or more if they are complementary) of your prioritized strategies and copy in new cards (using the same colors – orange and red) all the **chain of relevant factors** of the situation model associated with the strategy – be sure to select all factors through to at least your biodiversity target. Locate the chain on another big brown paper.
2. Consider how the strategy will change related factors in your situation analysis and convert them to positive results. In theory, these factors should be positively affected - i.e., direct and indirect threats should be mitigated and opportunities capitalized upon such that they are the desired future conditions that contribute to the achievement of your goals. Write the positively formulated **results on cards** again.
3. Ensure that the chain meets the criteria of a good results chain. Be careful not to make your results chain overly complex. You want logical **"if...then" relationships** between results, but not too much detail such that the diagram is difficult for users to interpret.
4. Add **activities** to clarify how the project gets from one result to another. Activities can also be added to the strategies.
5. Once you have completed your results chain, you should **critically check again** the causal linkages by reading the results chain out loud, from left to right, and linking each pair of results with an "if... then" statement. Reading your chain out loud is a good test of whether the results are "causally linked." Start by saying, "If we implement X strategy, then we will achieve Result A. If we achieve Result A, then Result B will occur...." Ask yourselves if this statement really makes sense. This will help you test your logic. If an "if...then" linkage seems like a "leap of faith," you may need an additional intermediate result to make your assumptions more explicit.
6. Develop **at least one** comprehensive results chain, which could also involve more than one strategy or develop a maximum of three simple/short results chains, depending on your project design.

5. Handling in MiradiShare

1. Select all factors in your Situation Model relevant to your chosen strategy, including the strategy box and all arrows, then right-click and choose "Create New Results Chain".
2. Reformulate the factor names in [brackets].
3. Add more factors according to your results on the brown paper.
4. Add activities.

5. Checklist of the recording of your group work

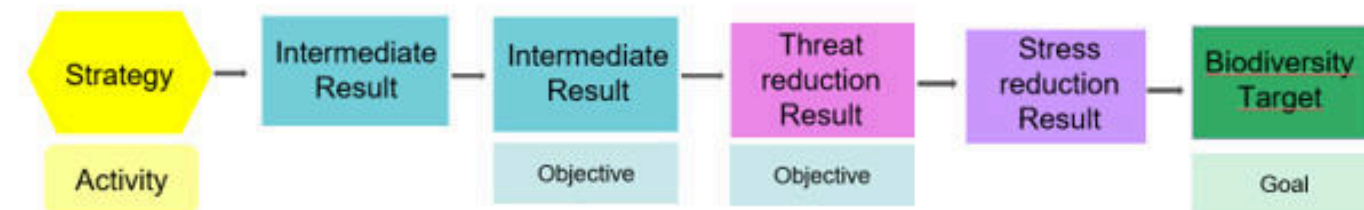
1. At least one ToC was completed on paper, with complementary strategies.
2. The ToC was transferred to Miradi Share.

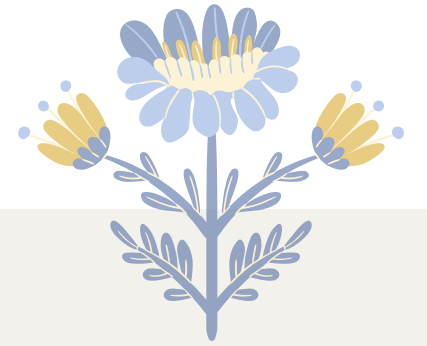
6. Recommended guiding documents

The [IUCN-CMP Taxonomy of Conservation Actions](#)

[Conservation Standards v4.0](#) (p.28-32)

Results Chain Cards Colour Code





Be Strategic!

This material was developed in the course of the joint Erasmus+ project
“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)
funded by the EU



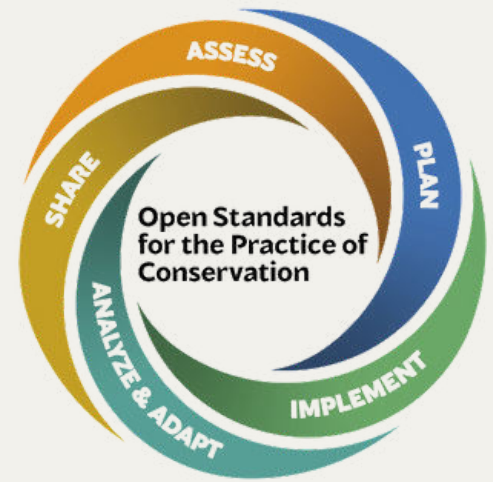
Co-funded by
the European Union



<https://translearnn.ztu.edu.ua>



CONVERT FACTORS TO RESULTS



small-scale farms
proved more
resilient

pressure from EU
and World Bank

land reform

demand for
efficiency

intensive, large-
scale agricultural
practices

decreased
biodiversity

lift of moratorium
on sale of
agricultural land

focus on export

loss of soil
biomass

Steppe
ecosystem

wind erosion

local & regional
partners network
created

local & regional
value chains are
created

small-scale
farming is
providing enough
income for
farmers

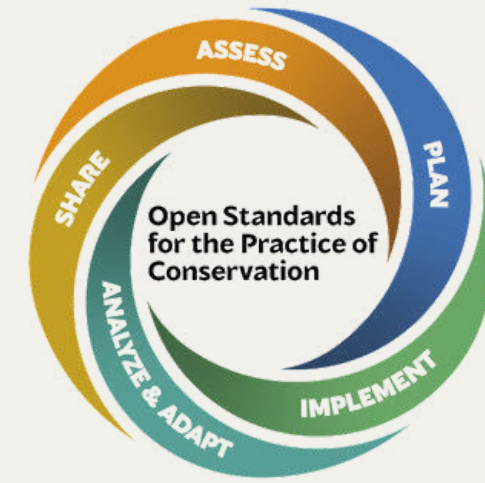
less large-scale,
monocultural
agriculture
practices

more structural
and biomass
diversity in the
region

Steppe
ecosystem

Promote more
sustainable, small-
scale agriculture

???



Operational Planning

Strategic Adaptive Management for Sustainable Reconstruction and Restoration

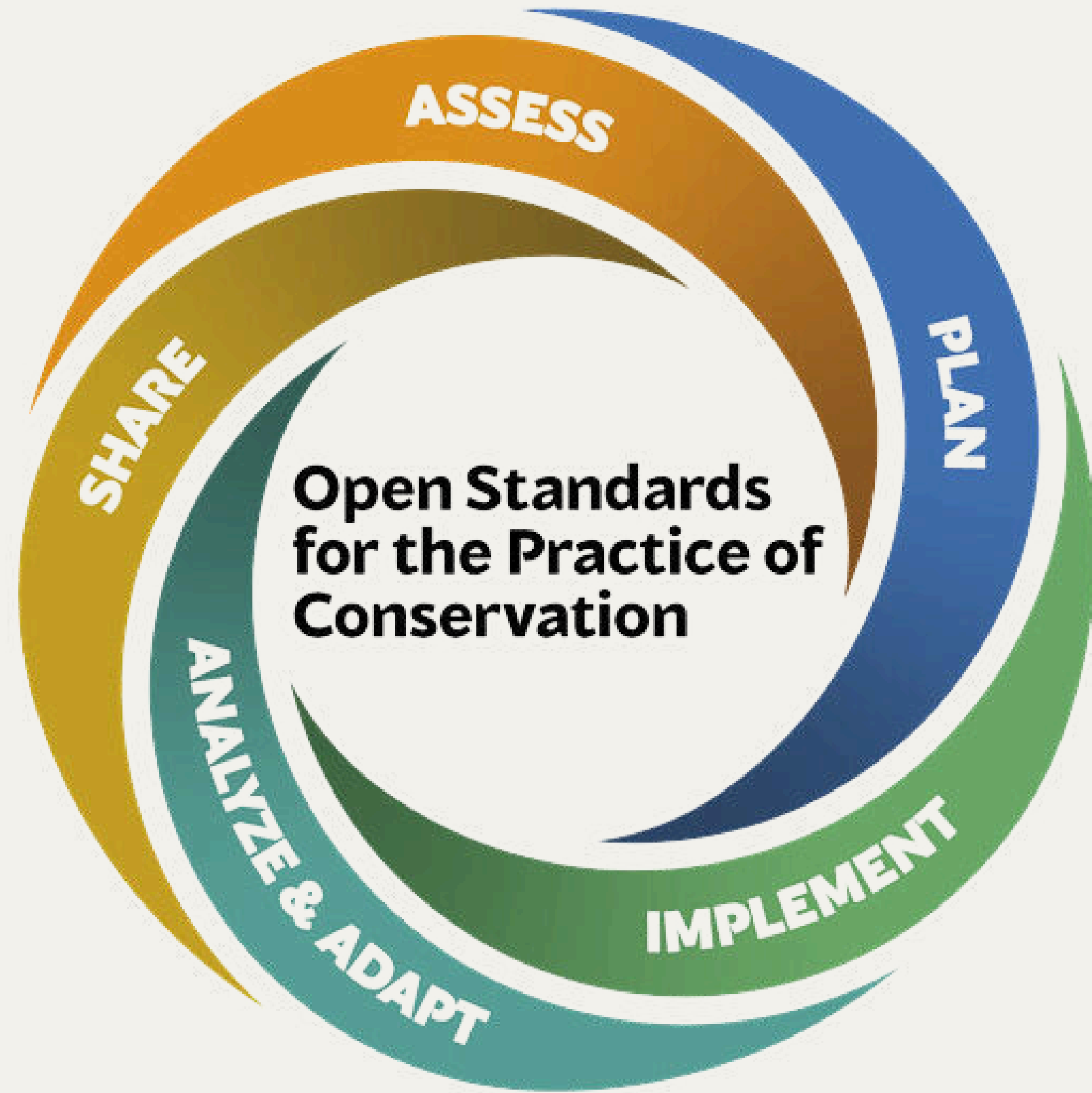
a jointly developed teaching course by partners from Ukraine, Lithuania and Germany
based on the Open Standards for the Practice of Conservation methodology

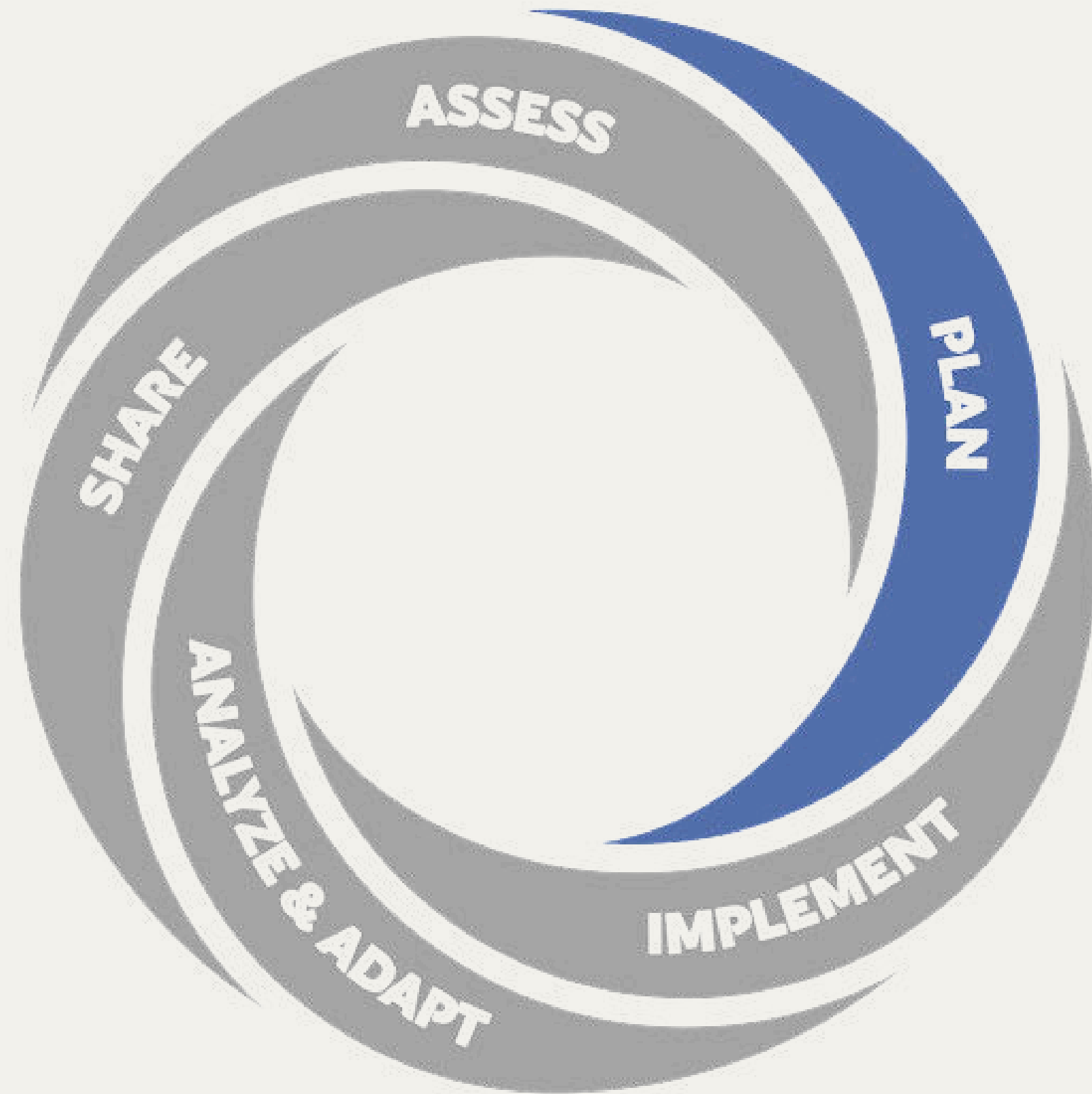


OUTLOOK

- goals, objectives & indicators
- partner setting & sustainability
- time plan & budget





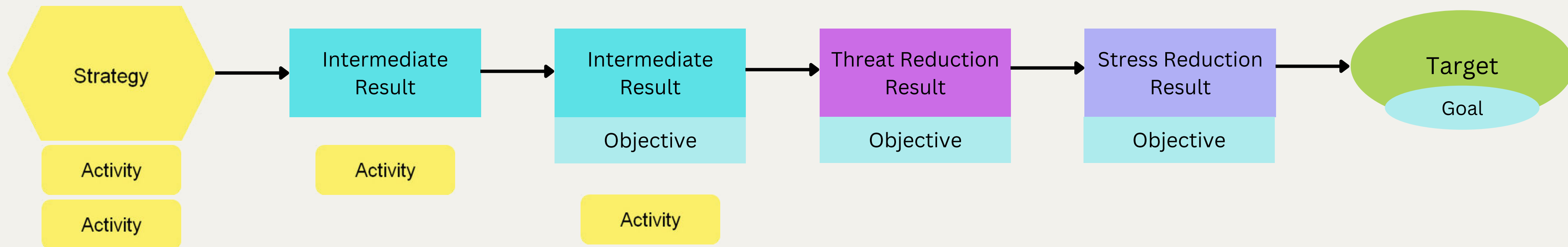
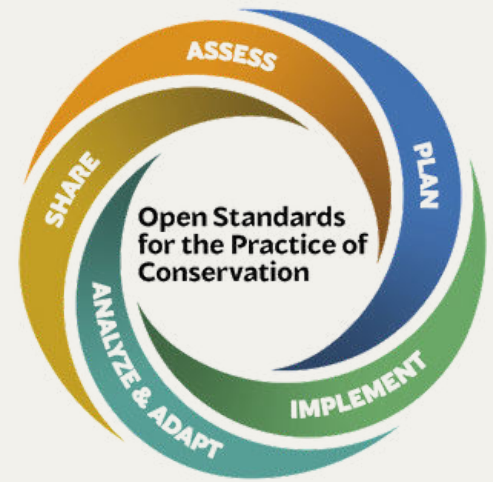


2. PLAN

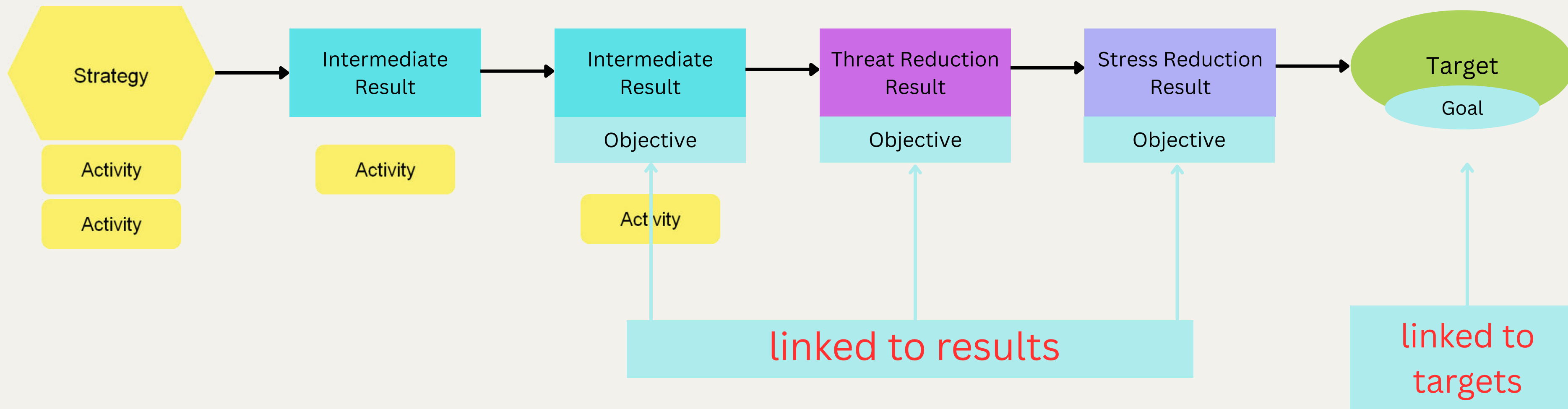
- **Goals**
- Strategies
- Theory of Change
- **Objectives**
- Monitoring Plan
- Operational Plan



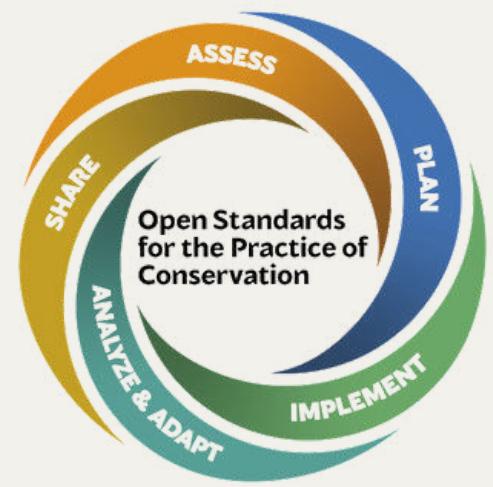
ELEMENTS OF A RESULTS CHAIN



ELEMENTS OF A RESULTS CHAIN

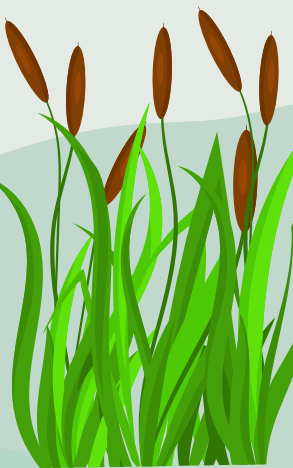


GOAL

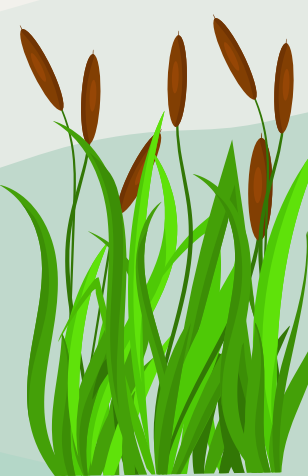
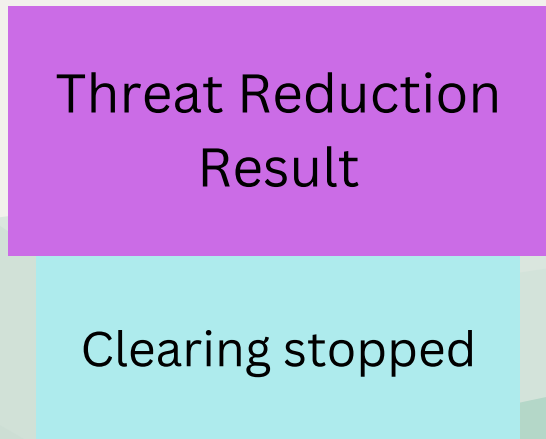
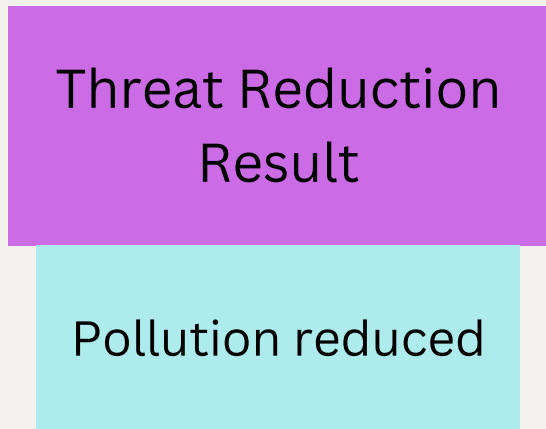
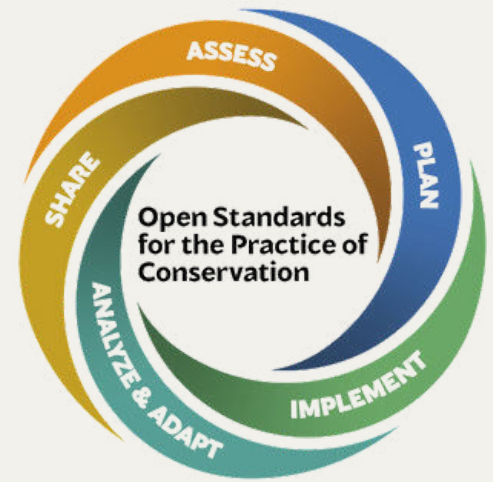


A formal statement detailing a project's desired **impact**, such as the **desired future status of a target**.

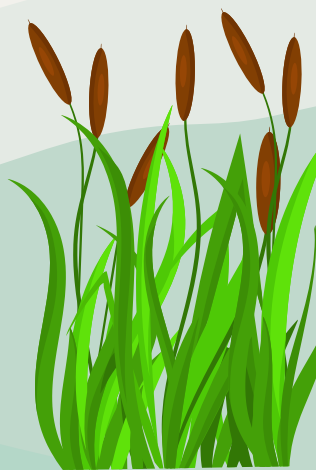
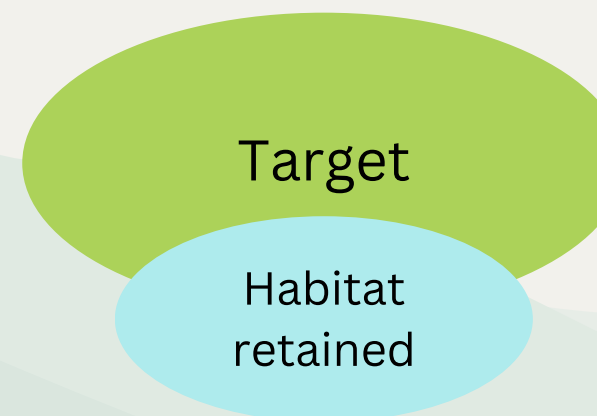
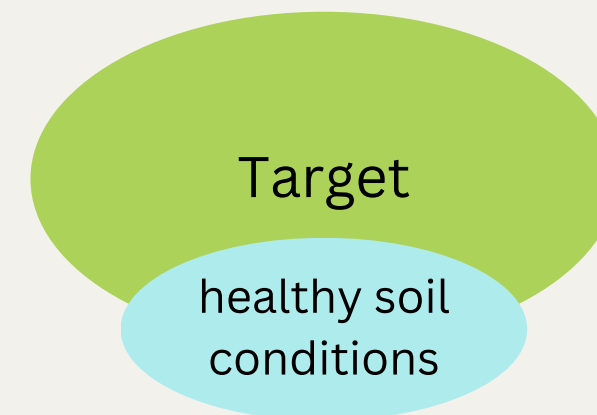
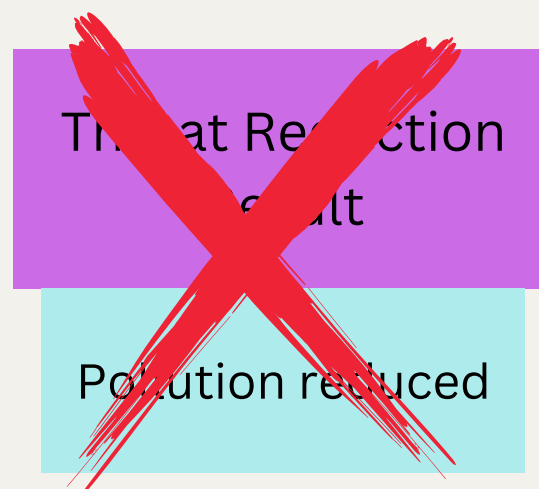
✓ It is related to the **Target Viability Assessment**.



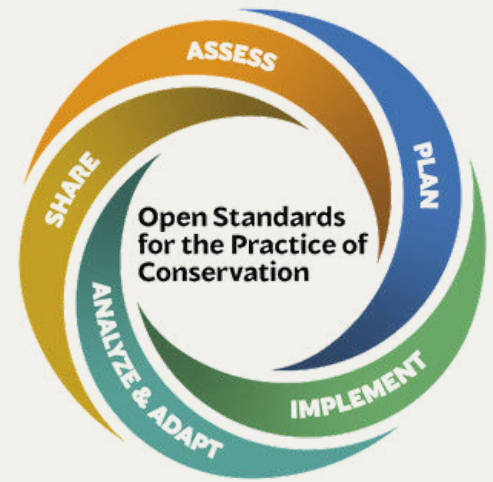
GOAL



GOAL



OBJECTIVES



A formal statement detailing a desired **outcome** of a project, such as reducing a critical threat.



SMART CRITERIA



S

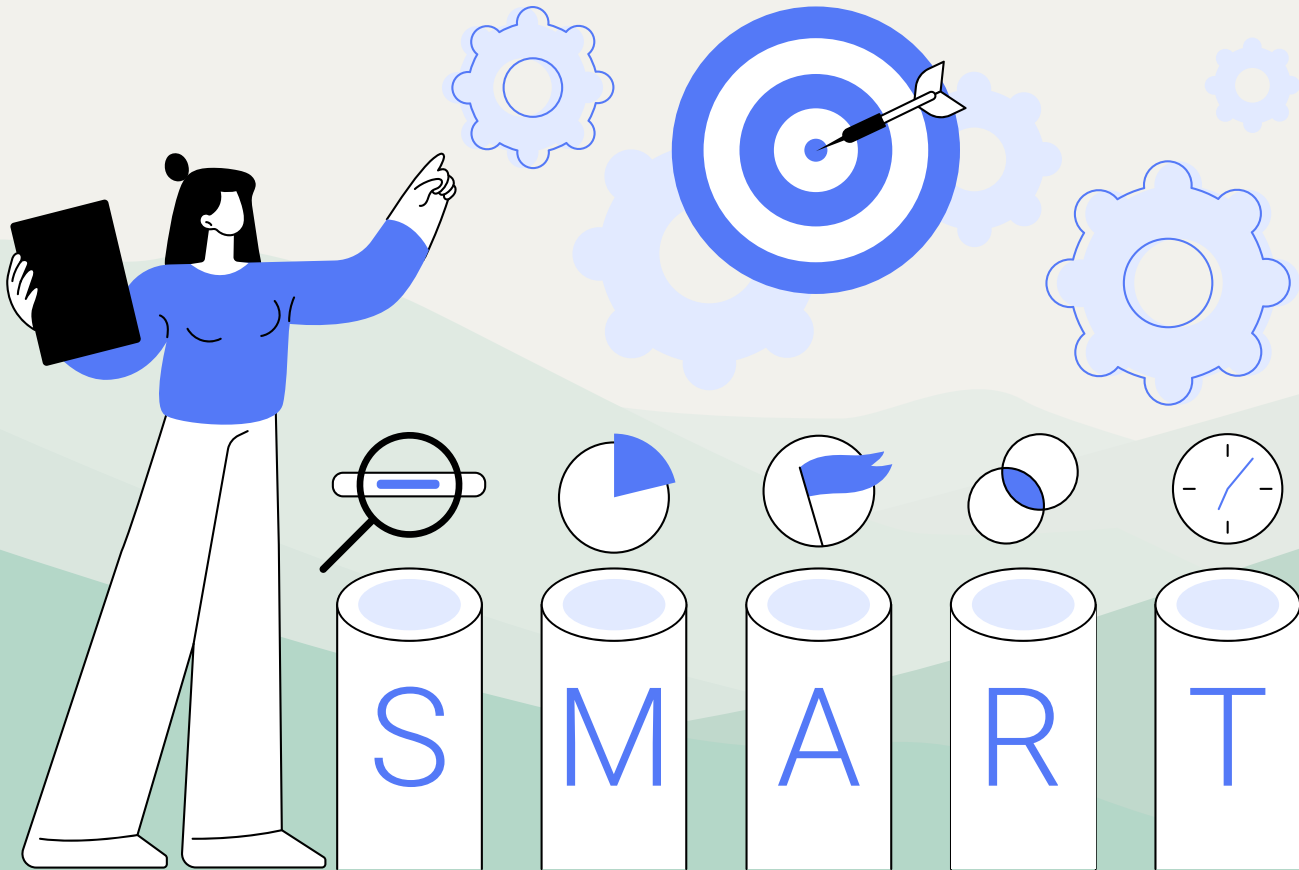
Specific

M

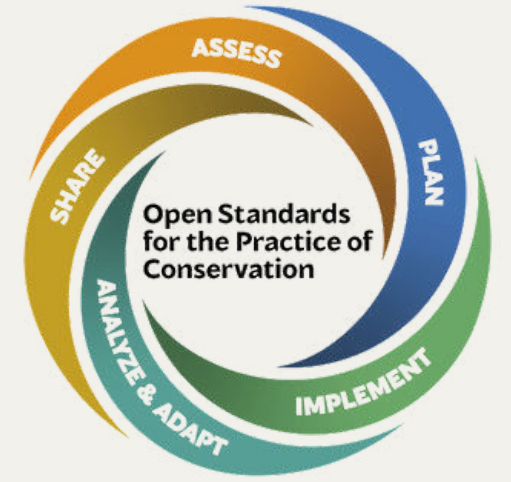
A

R

T



SMART CRITERIA



S

Specific

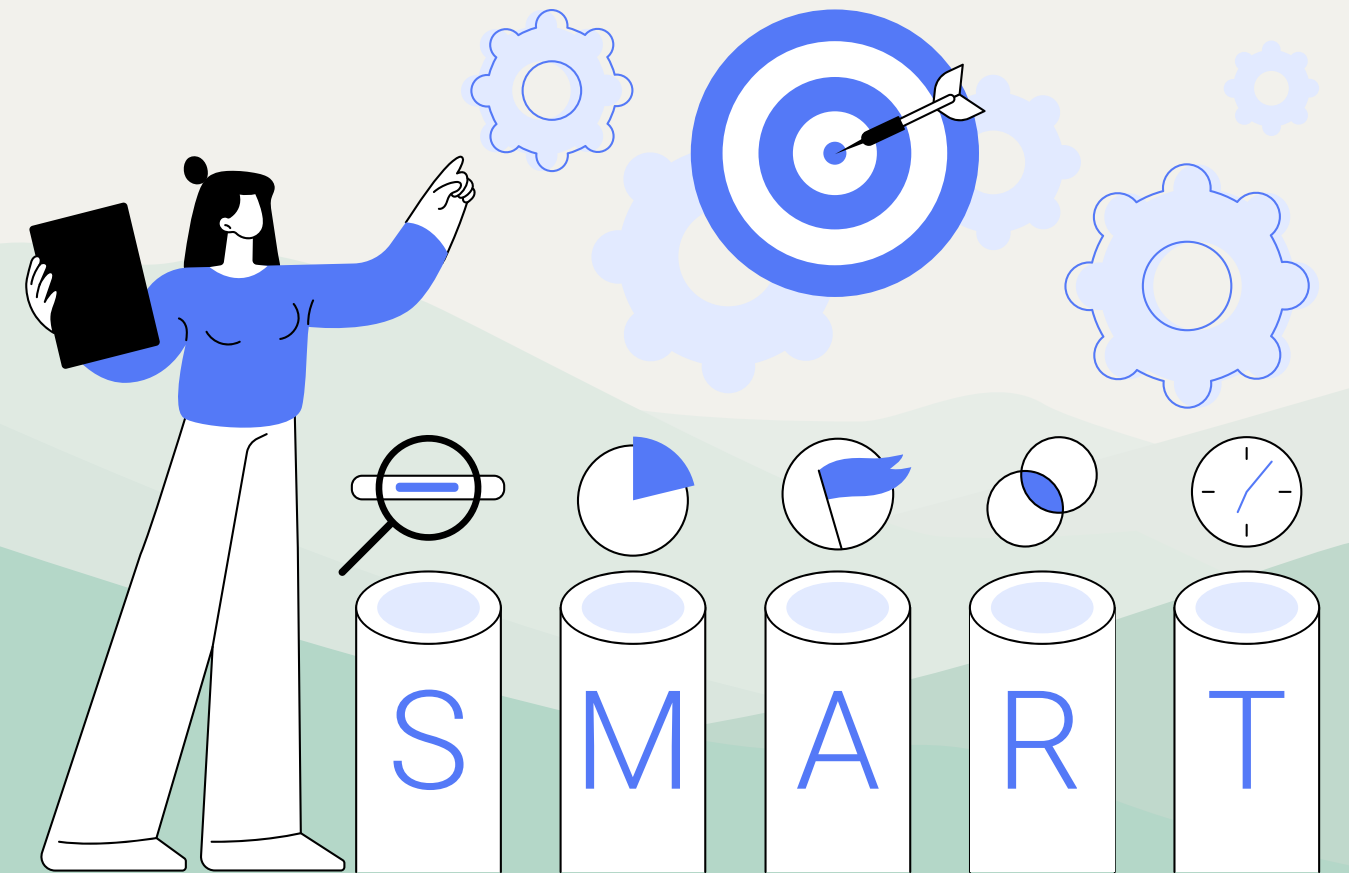
M

Measurable

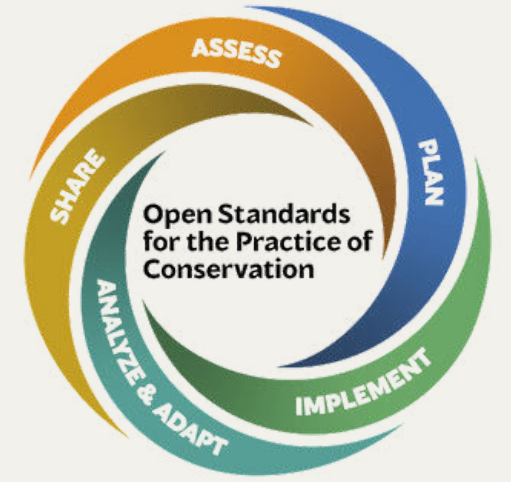
A

R

T



SMART CRITERIA



S

Specific

M

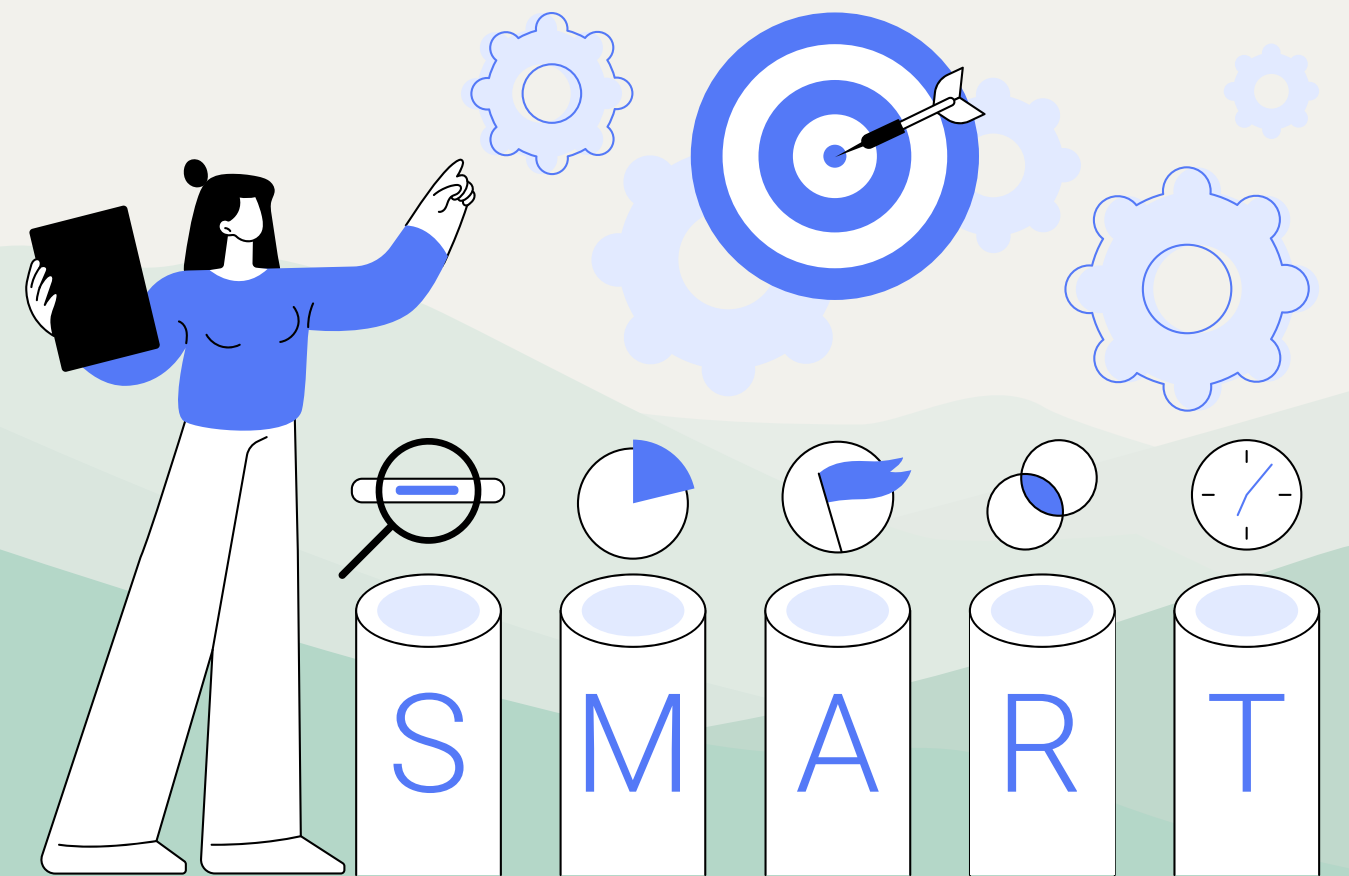
Measurable

A

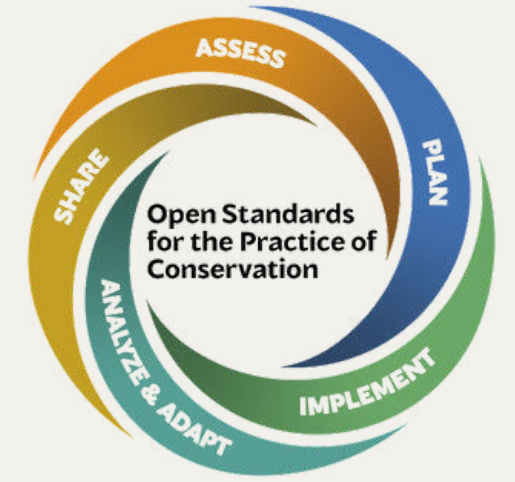
Achievable

R

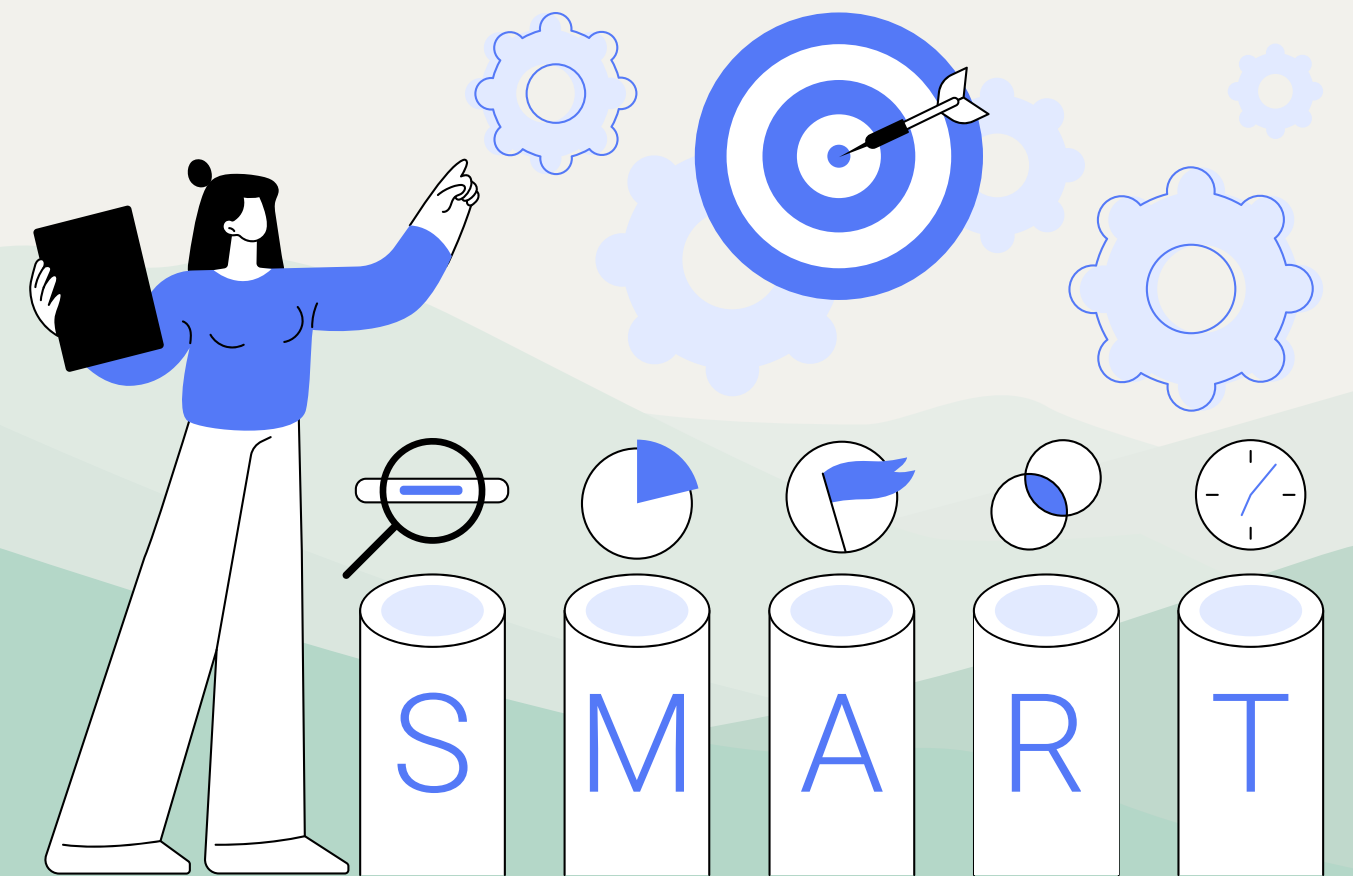
T



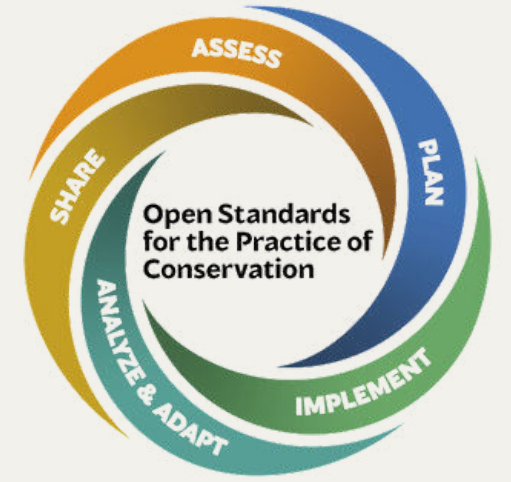
SMART CRITERIA



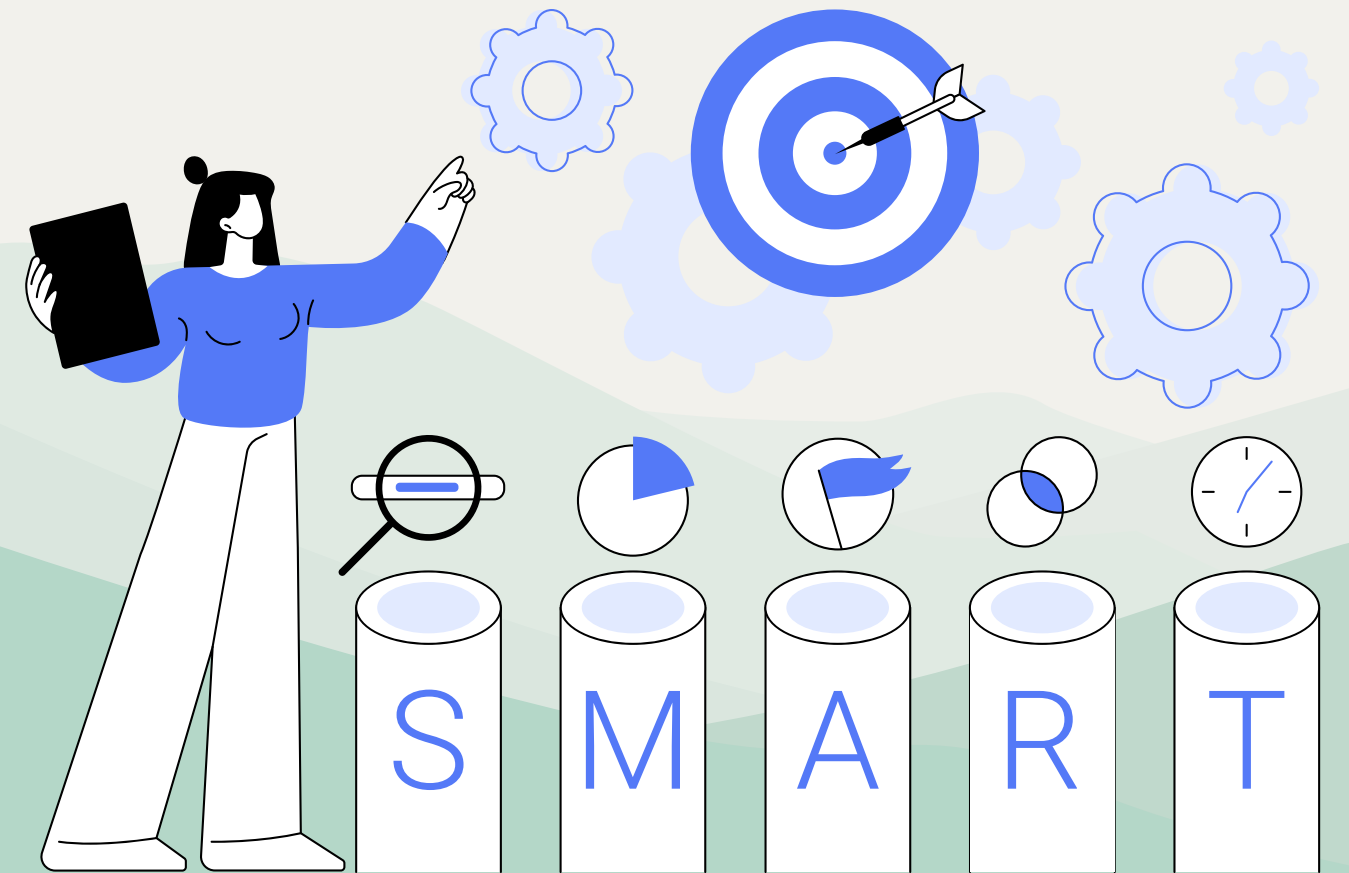
- S** Specific
- M** Measurable
- A** Achievable
- R** Results-oriented
- T**



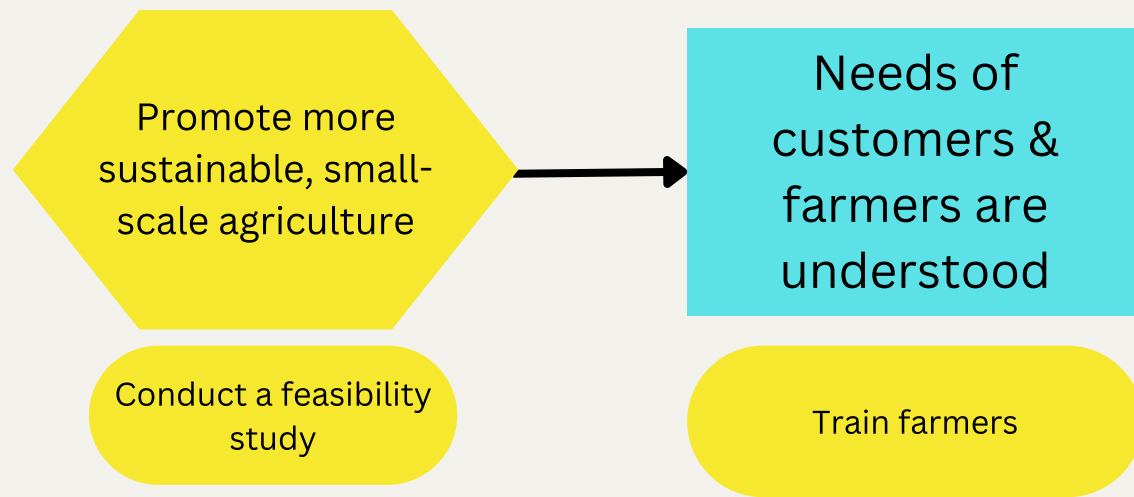
SMART CRITERIA



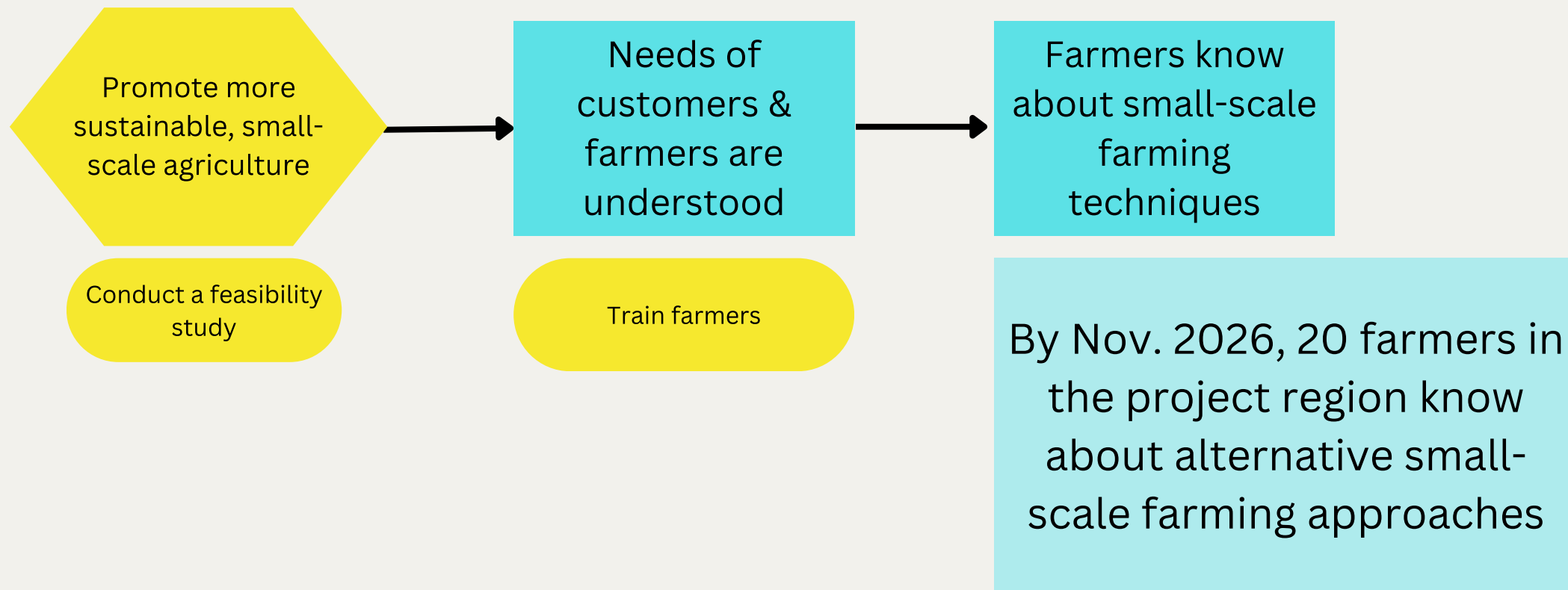
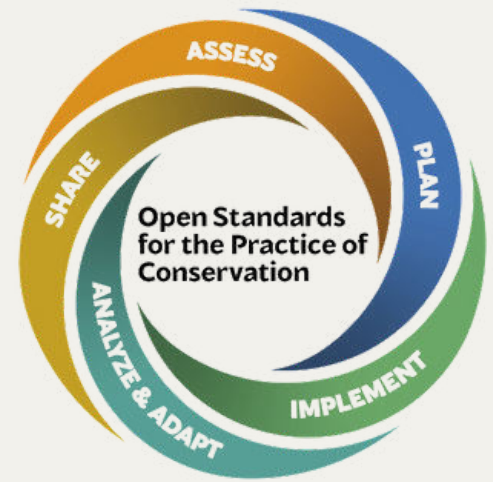
- S** Specific
- M** Measurable
- A** Achievable
- R** Results-oriented
- T** Time limited



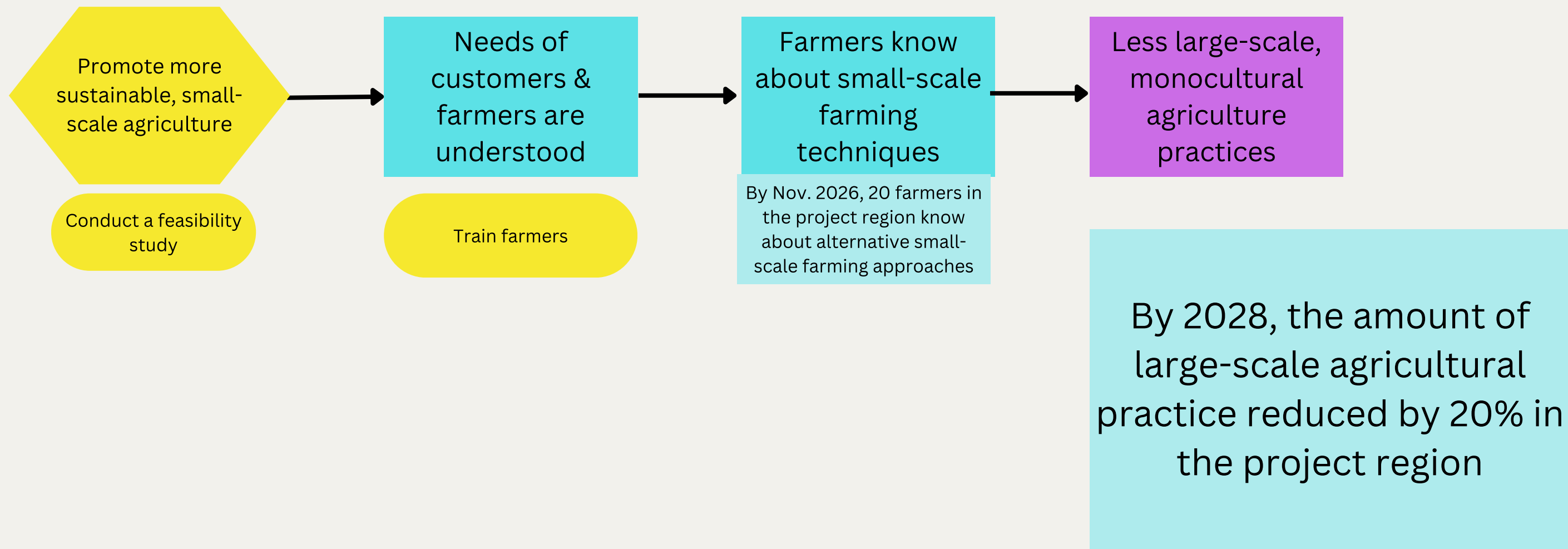
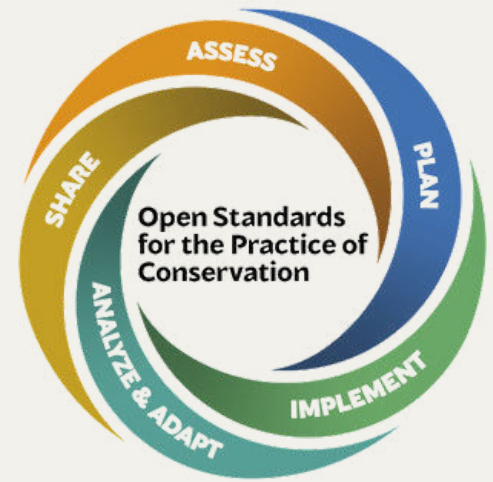
EXAMPLE OF A RESULTS CHAIN



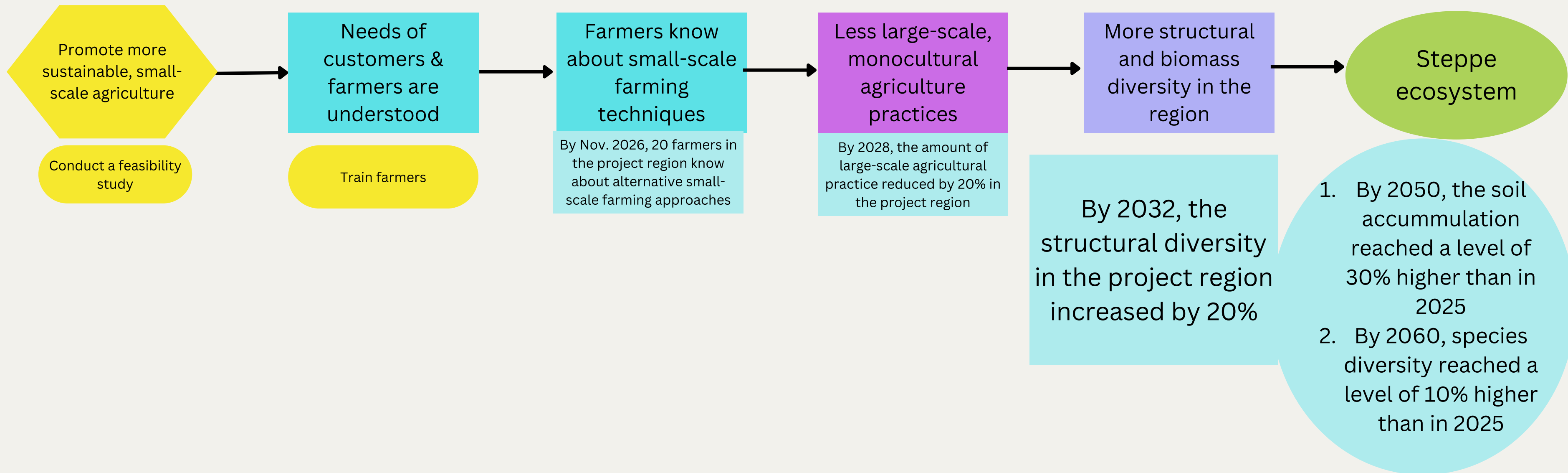
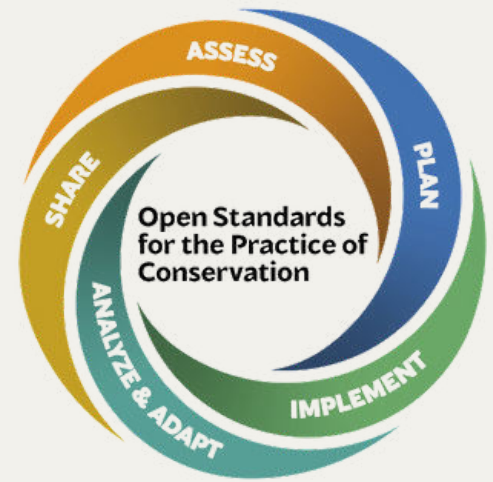
EXAMPLE OF A RESULTS CHAIN



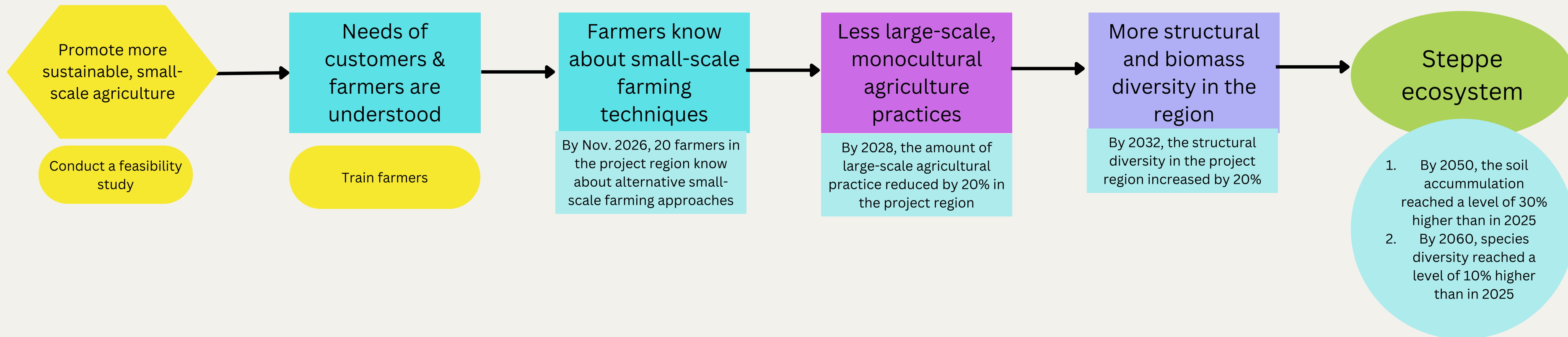
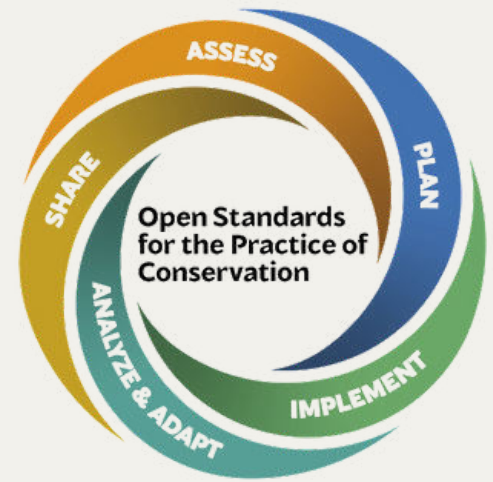
EXAMPLE OF A RESULTS CHAIN



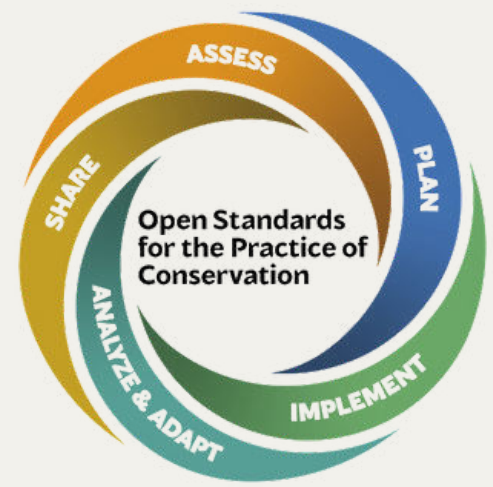
EXAMPLE OF A RESULTS CHAIN



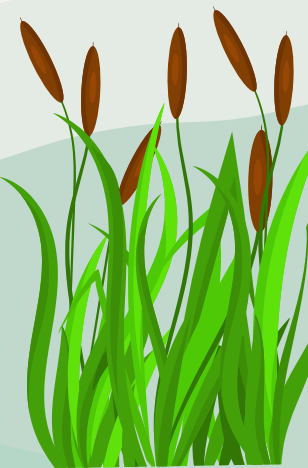
EXAMPLE OF A RESULTS CHAIN



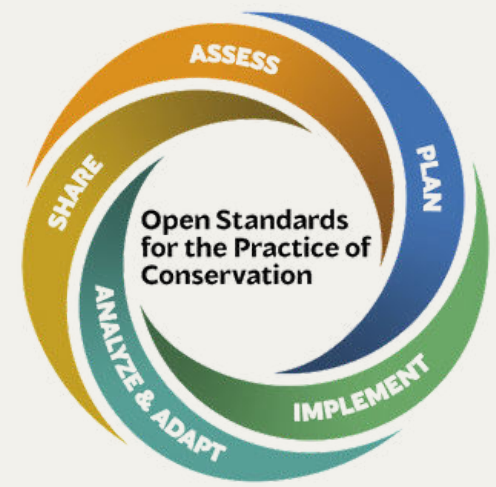
OBJECTIVES



- not all results need objectives
- choose the most relevant results



YOU CHOOSE!



WHICH OF THE FOLLOWING COMPLY WITH THE CRITERIA FOR A GOOD OBJECTIVE?

1. By 2010, no water concessions are granted in identified critical grasslands and associated wetlands.

YOU CHOOSE!



WHICH OF THE FOLLOWING COMPLY WITH THE CRITERIA FOR A GOOD OBJECTIVE?

1. By 2010, no water concessions are granted in identified critical grasslands and associated wetlands.
2. Promote community wellbeing and health in the area surrounding the Indah Biosphere Reserve.

YOU CHOOSE!



WHICH OF THE FOLLOWING COMPLY WITH THE CRITERIA FOR A GOOD OBJECTIVE?

1. By 2010, no water concessions are granted in identified critical grasslands and associated wetlands.
2. Promote community wellbeing and health in the area surrounding the Indah Biosphere Reserve.
3. To establish a sustainable enterprise-based conservation and development project that meets the needs of local people while protecting biodiversity in the region surrounding Indah Biosphere Reserve.

YOU CHOOSE!



WHICH OF THE FOLLOWING COMPLY WITH THE CRITERIA FOR A GOOD OBJECTIVE?

1. By 2010, no water concessions are granted in identified critical grasslands and associated wetlands.
2. Promote community wellbeing and health in the area surrounding the Indah Biosphere Reserve.
3. To establish a sustainable enterprise-based conservation and development project that meets the needs of local people while protecting biodiversity in the region surrounding Indah Biosphere Reserve.
4. By the end of the project, annual household income for all families participating in non-timber forest product harvesting enterprises has increased by at least 20%.

YOU CHOOSE!

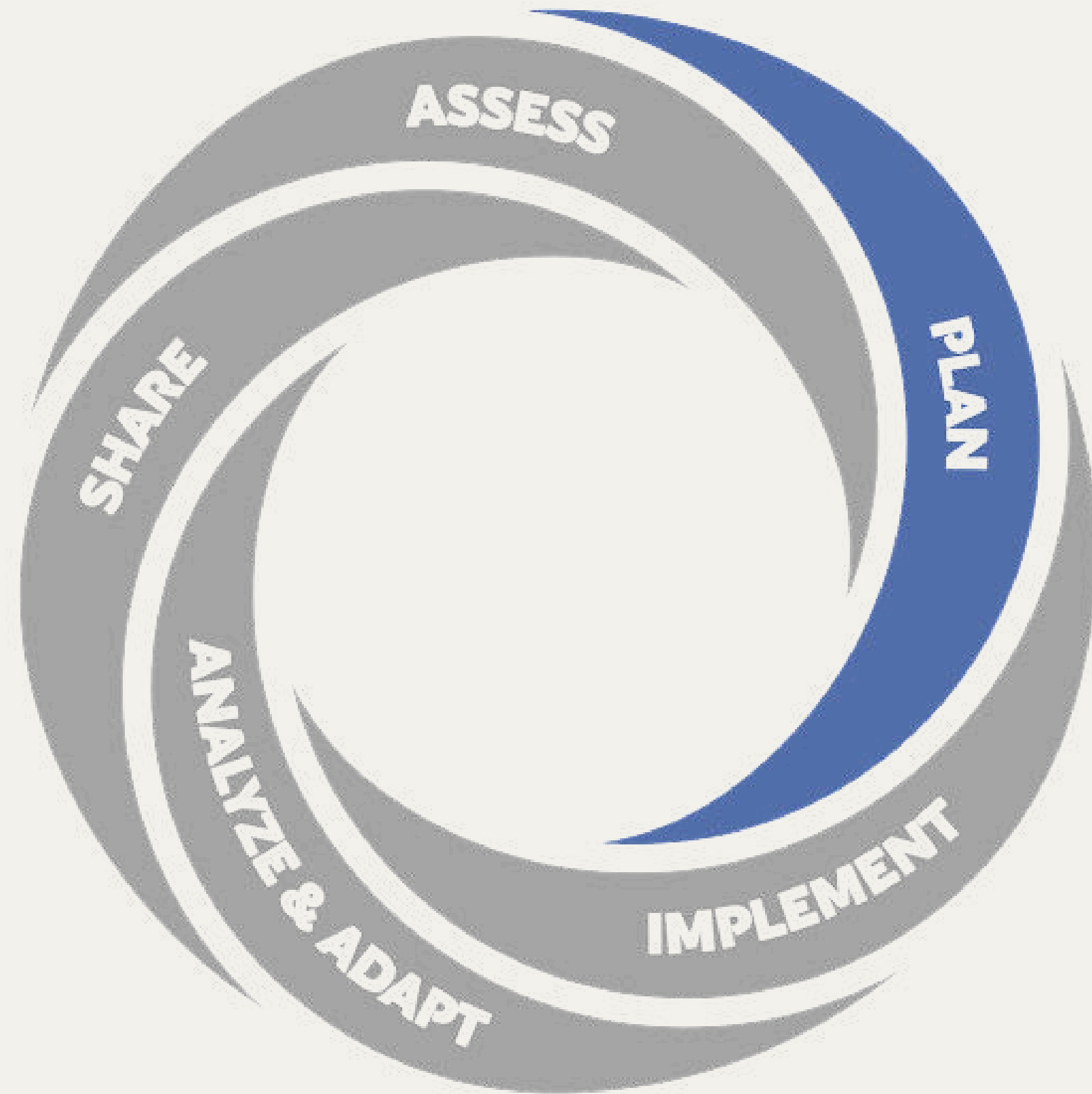


WHICH OF THE FOLLOWING COMPLY WITH THE CRITERIA FOR A GOOD OBJECTIVE?

1. By 2010, no water concessions are granted in identified critical grasslands and associated wetlands.
2. Promote community wellbeing and health in the area surrounding the Indah Biosphere Reserve.
3. To establish a sustainable enterprise-based conservation and development project that meets the needs of local people while protecting biodiversity in the region surrounding Indah Biosphere Reserve.
4. By the end of the project, annual household income for all families participating in non-timber forest product harvesting enterprises has increased by at least 20%.

BREAK?

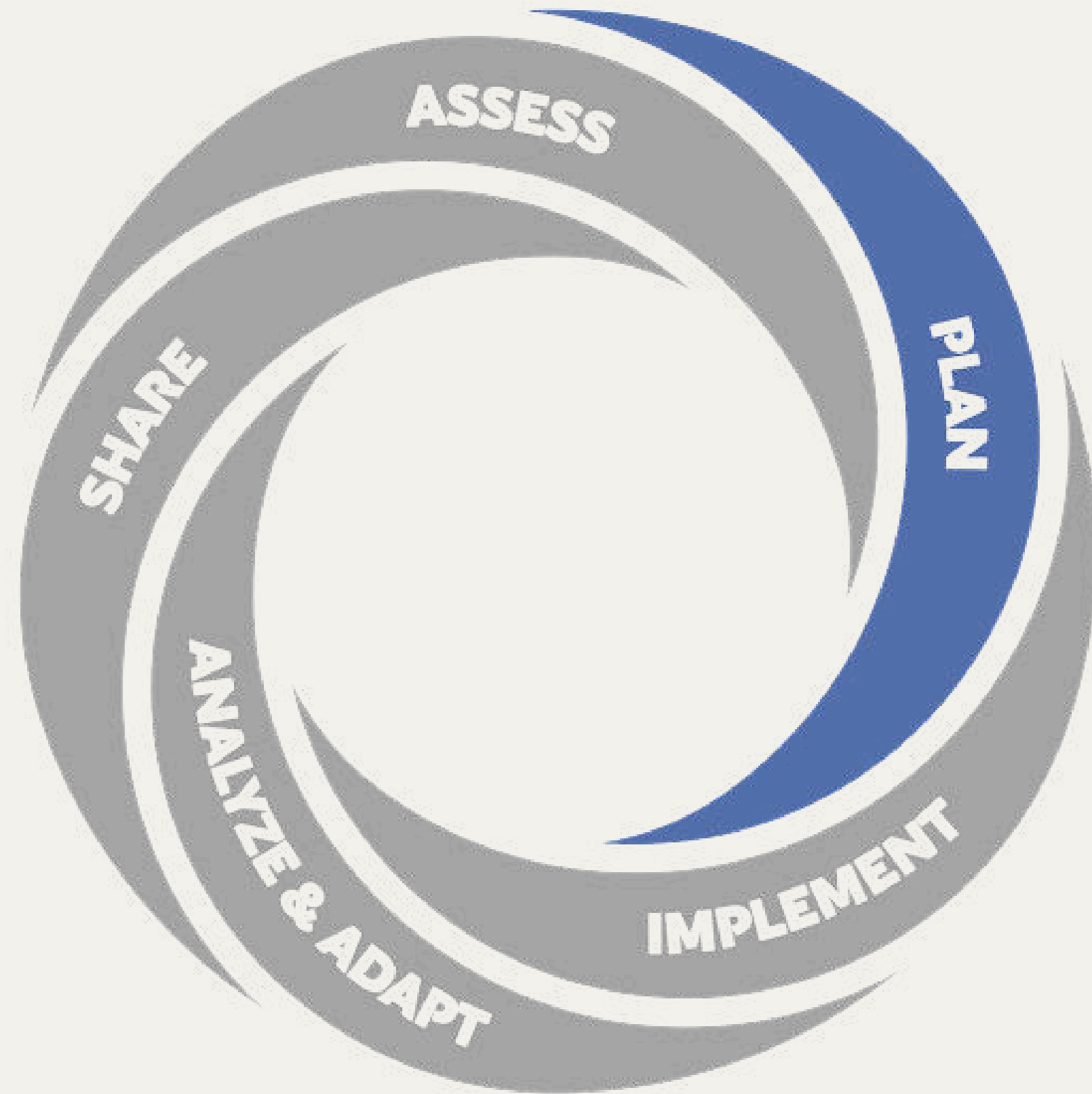




2. PLAN

- Goals
- Strategies
- Theory of Change
- Objectives
- **Monitoring Plan**
- Operational Plan



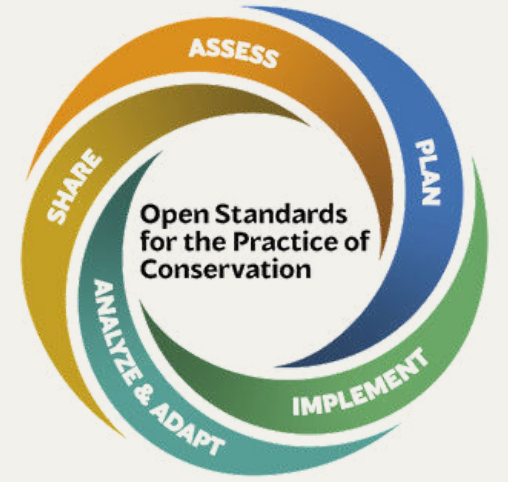


2. PLAN

- Goals
- Strategies
- Theory of Change
- Objectives
- Monitoring Plan
- **Operational Plan**



RESOURCES



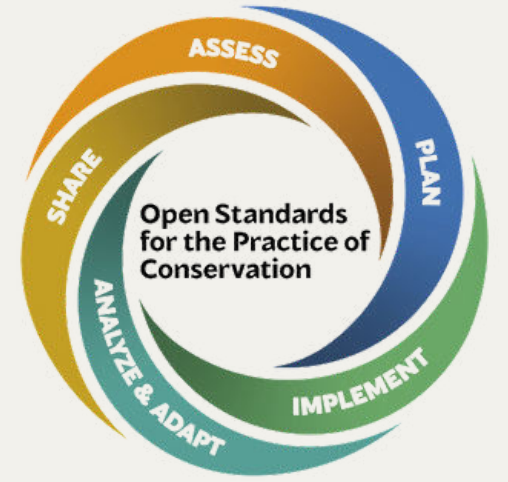
Human

capacities

skills

relationships

RESOURCES



Human

Budget

skills

staff

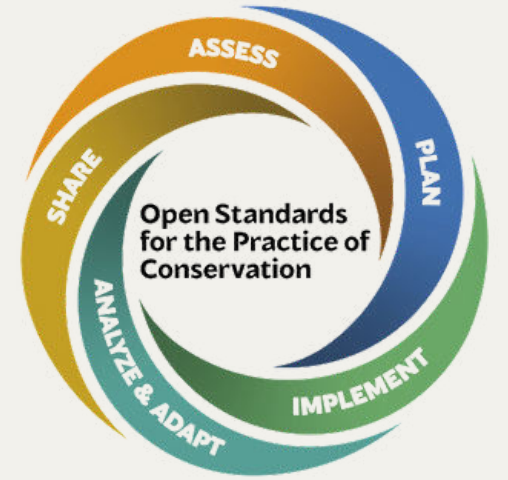
materials

capacities

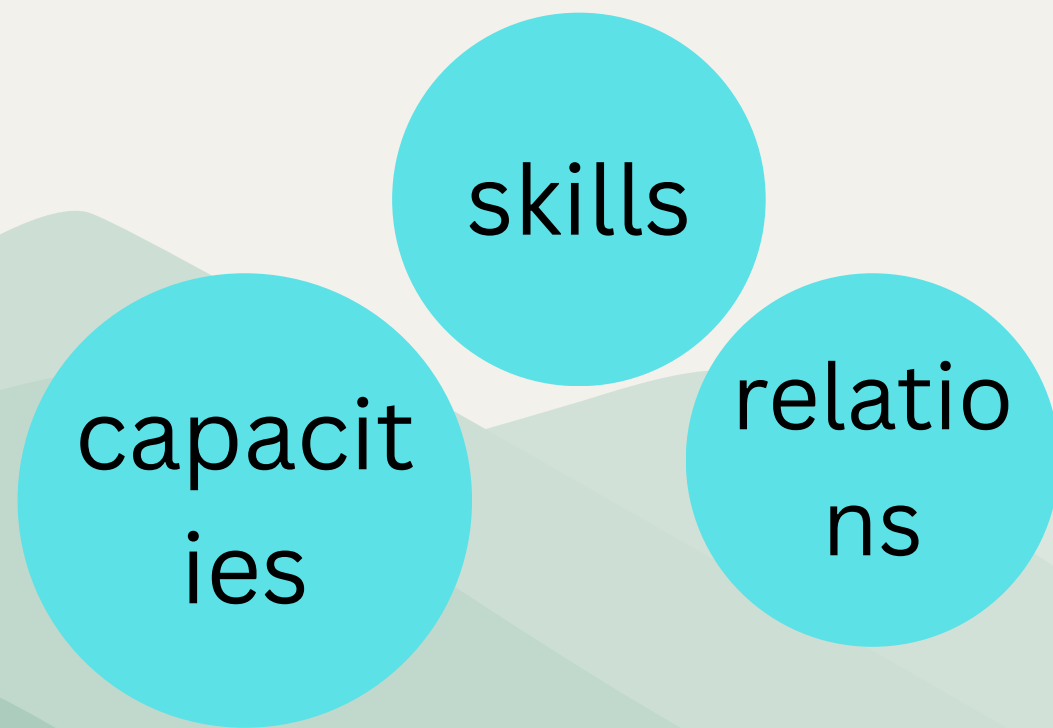
relations

travel

RESOURCES



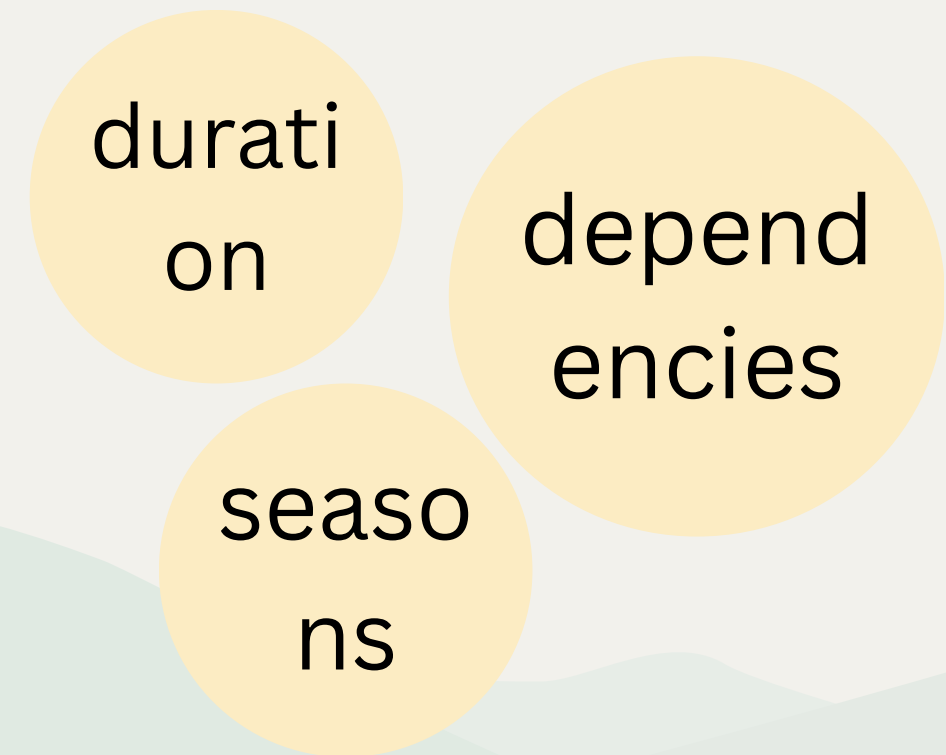
Human



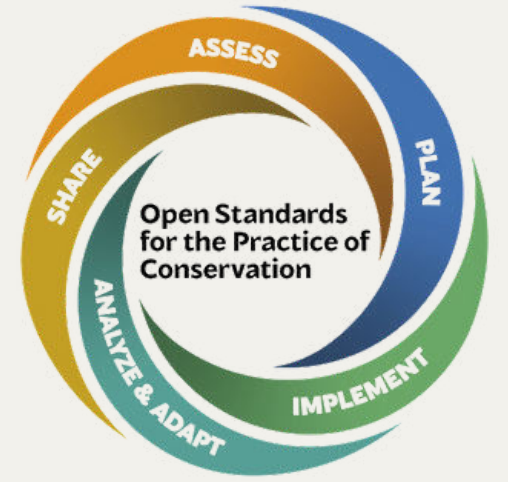
Budget



Time

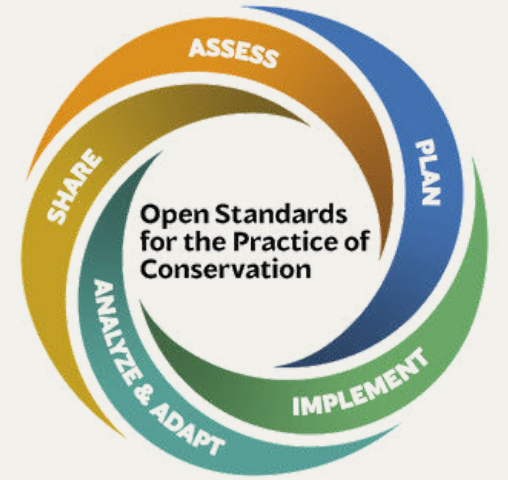


PARTNER SETTING



- Do we have
 - necessary leadership?
 - sufficient human capacity & skills?
- What capacity do our partners & stakeholders have?

PARTNER SETTING

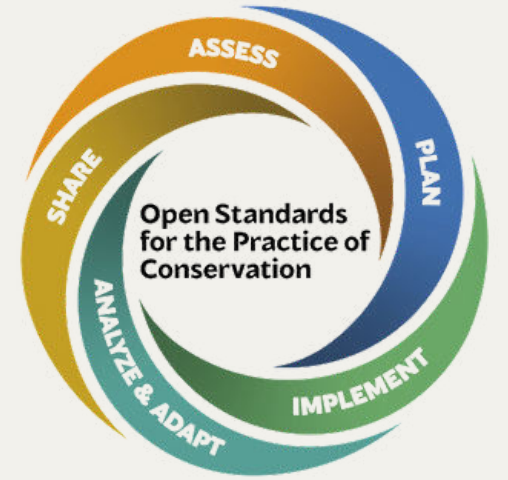


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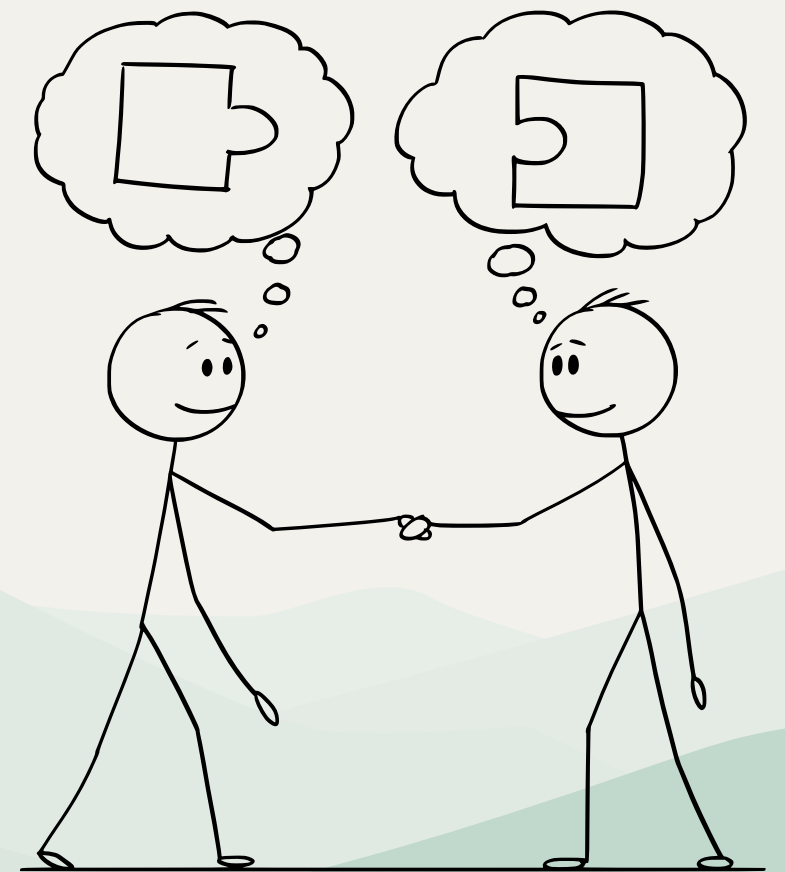
... identify the right partner to work with/through

PARTNER SETTING



Important strategic step

- combine complementary expertise
- pull in other stakeholders
- think of ownership and of project sustainability!



PARTNER SETTING

EXAMPLE

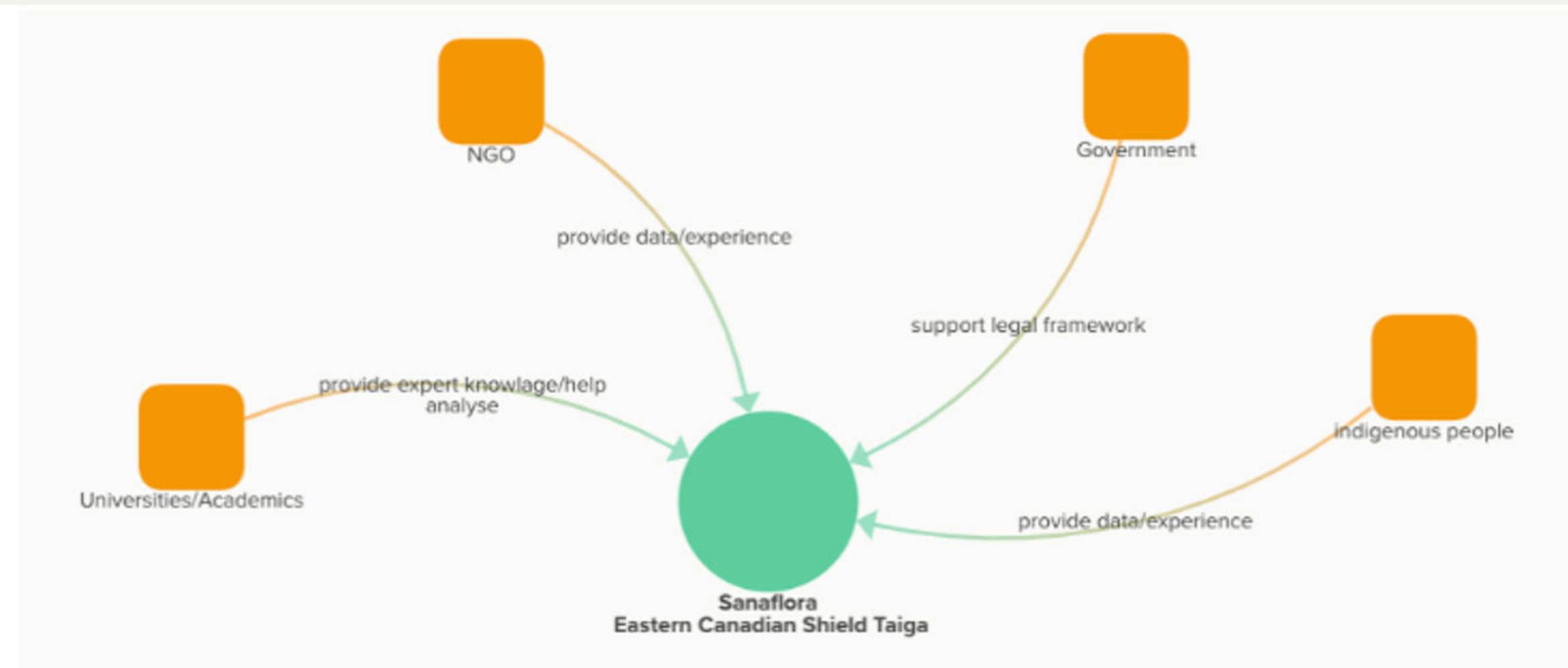
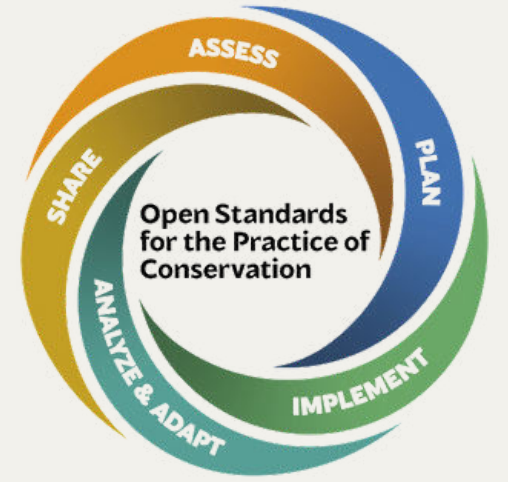
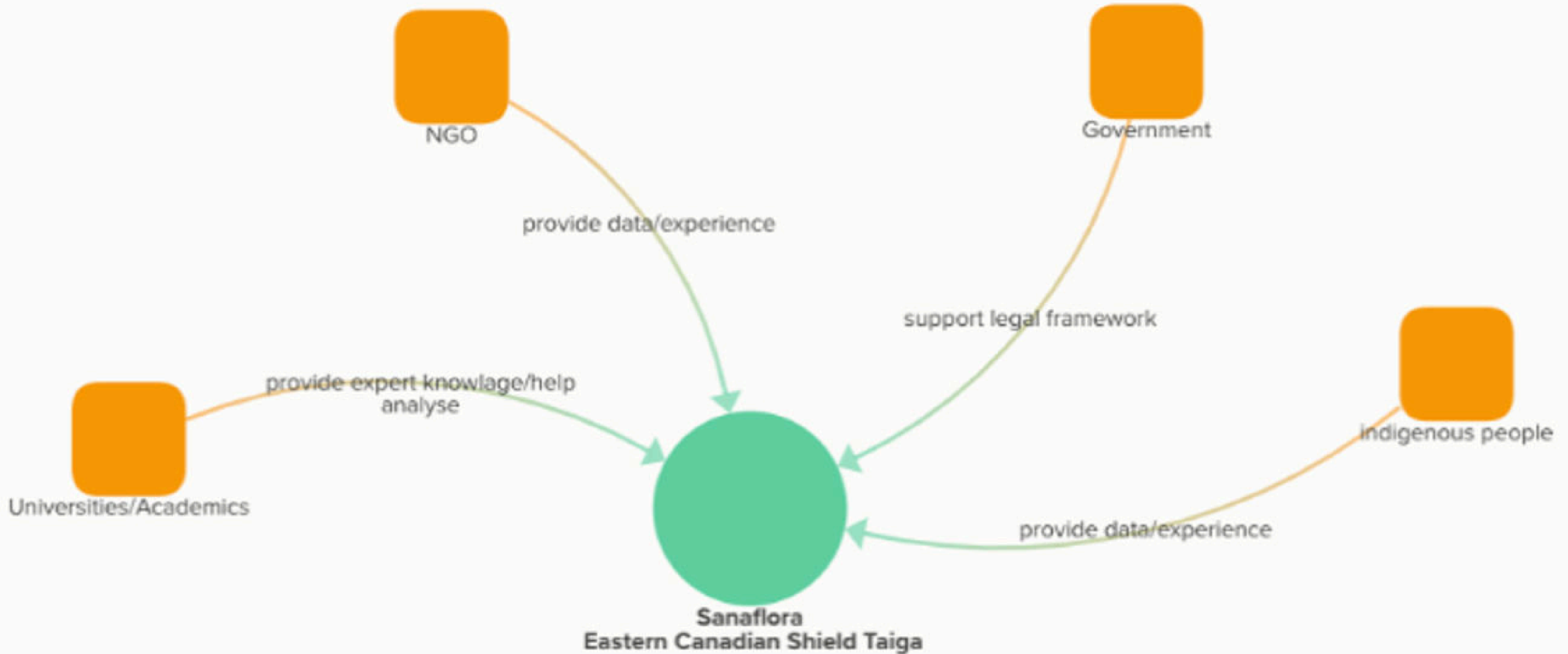


Figure 4 – Partner network depicting roles and interactions

Source: Own visualization ©Sanaflorea

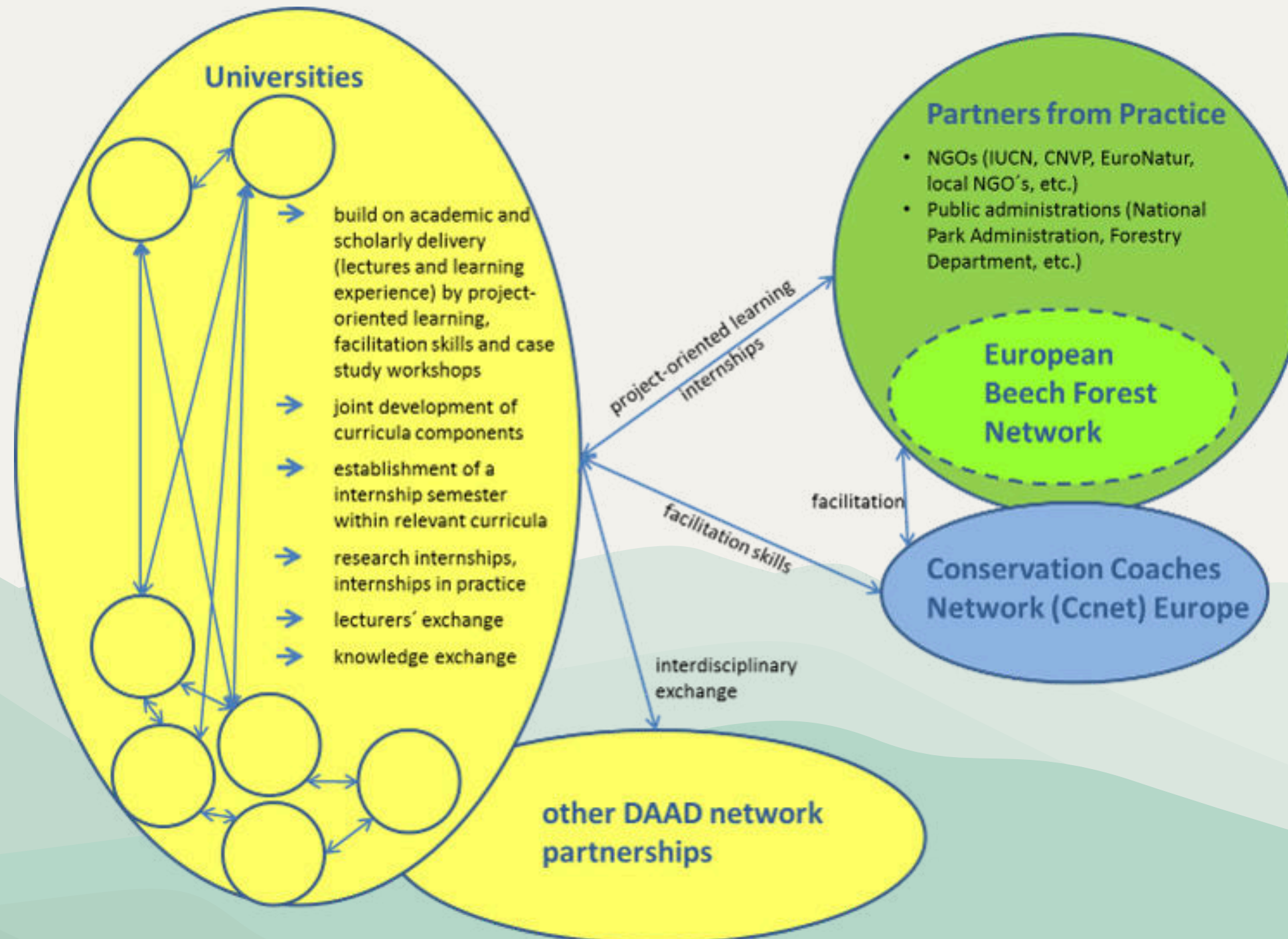
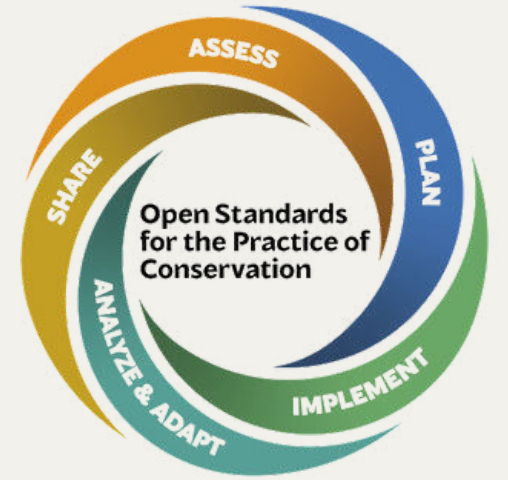
PARTNER SETTING

EXAMPLE



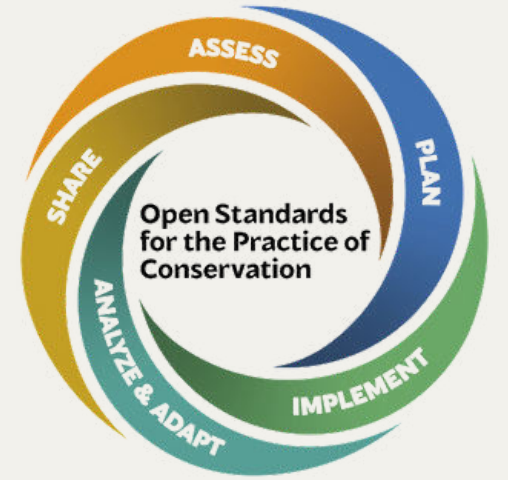
PARTNER SETTING

EXAMPLE



EXIT STRATEGY

PROJECT SUSTAINABILITY



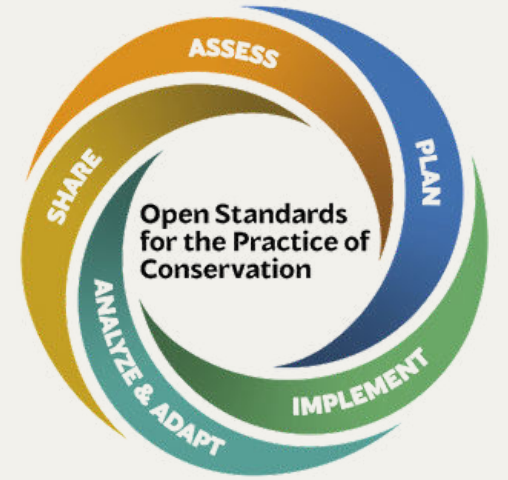
Many factors to consider:

- Project ownership
- Financial feasibility
- Built-up capacity
- Political commitment
- Replication / scaling up
- etc.

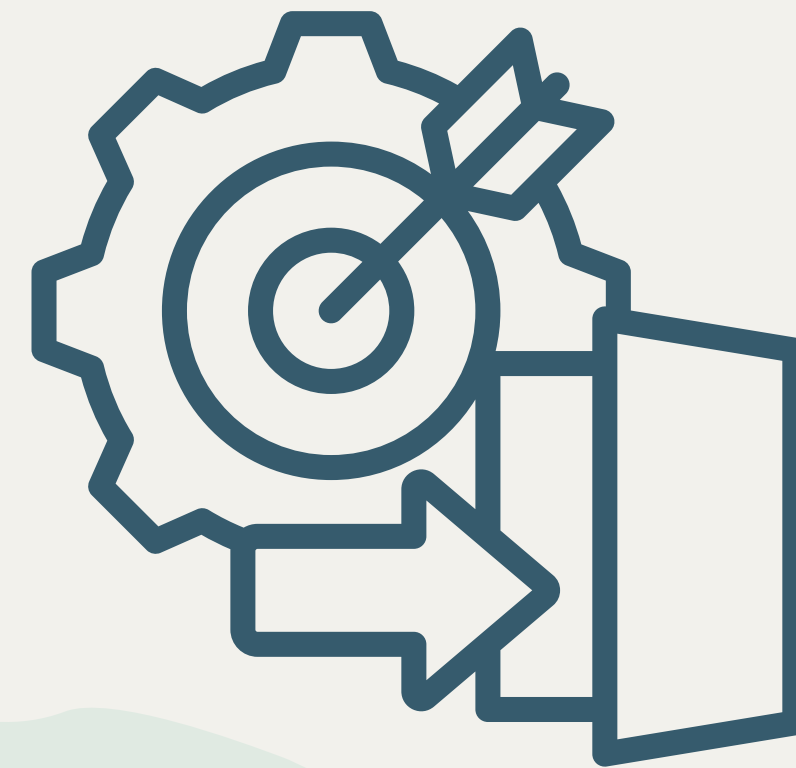
here: **sustainability** as
synonym for durability /
continuity

EXIT STRATEGY

PROJECT SUSTAINABILITY



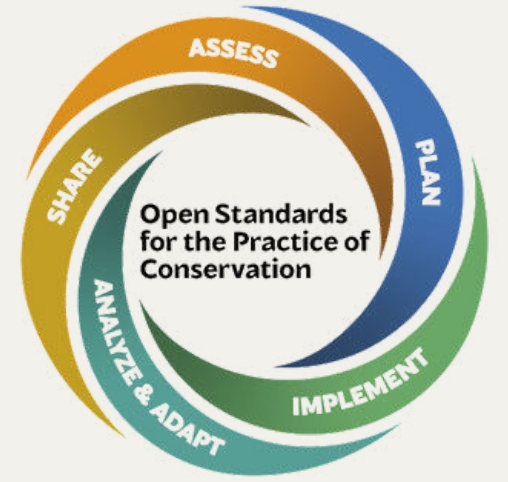
- Not about ending but sustaining
- Which objectives will contribute?
- Type and timing of exit
- Who will continue activities?
- Exit criteria



BREAK?



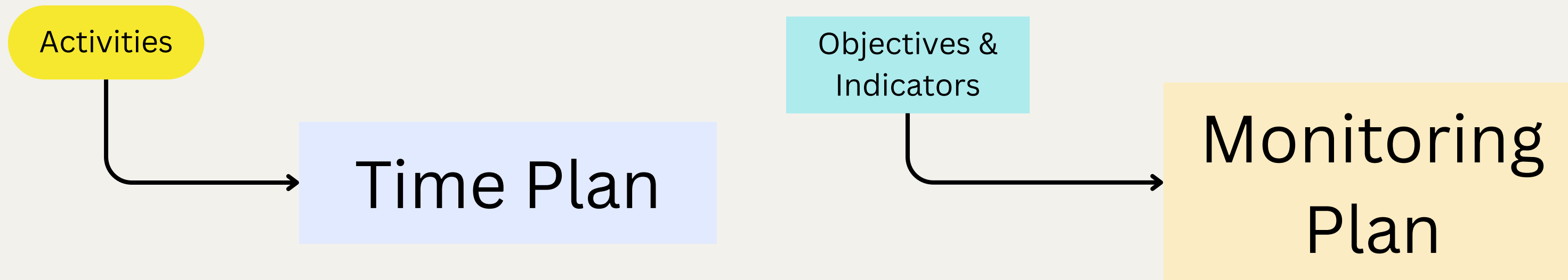
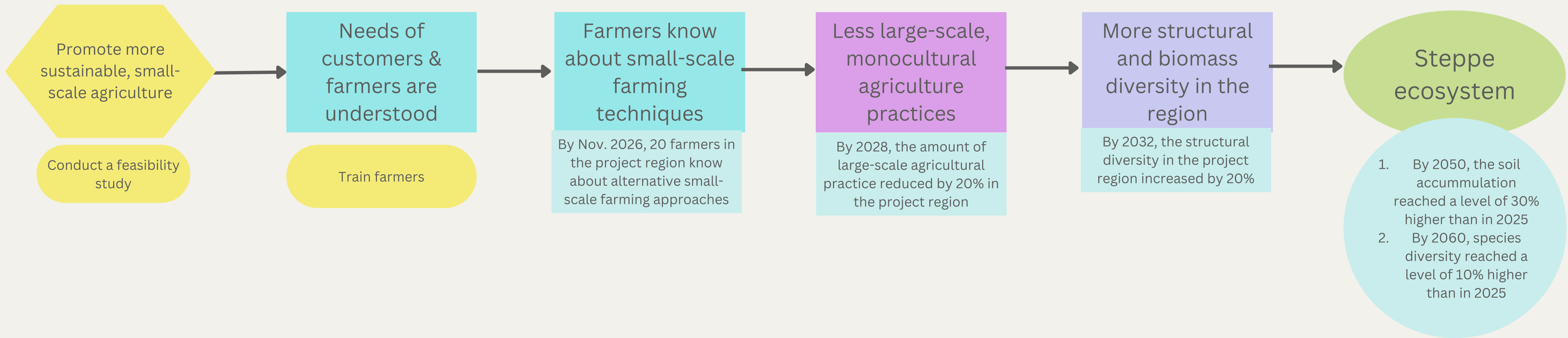
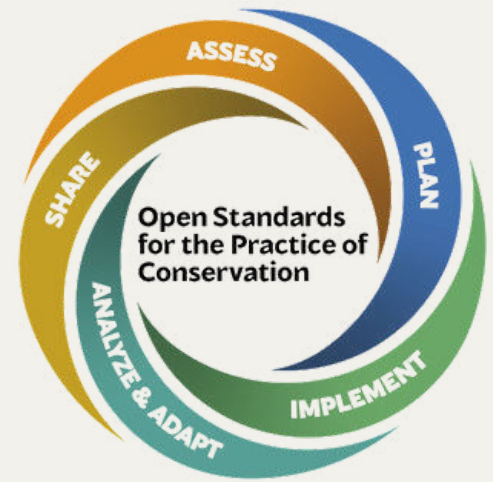
WORK PLAN



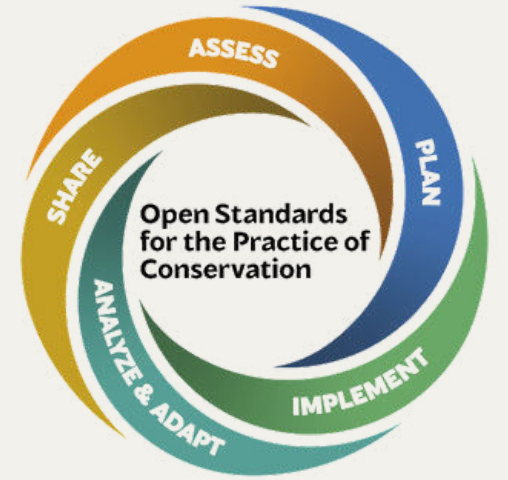
What?
When?
Who?
Costs?



EXAMPLE OF A RESULTS CHAIN



TIME PLAN

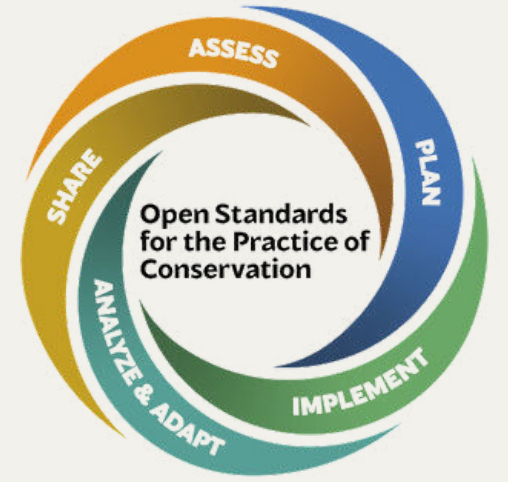


Name of Organisation													
Name of Project													
Activities	Year 1				Year 2				Year 3				...
	1	2	3	4	1	2	3	4	1	2	3	4	
Activity 0													
Strategy 1													
Activity 1													
Activity 2				M									
Activity 3													
Activity 4													
Strategy 2													
Activity 5													
Activity 6													
Activity 7			M				M				M		
...													
Monitoring activities													

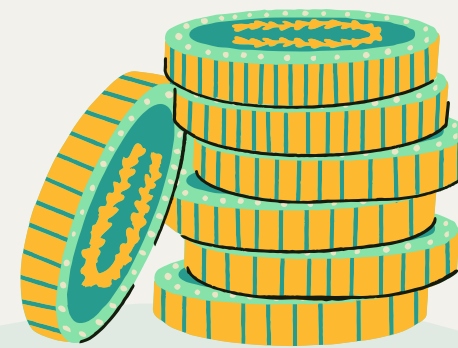
see template in Moodle



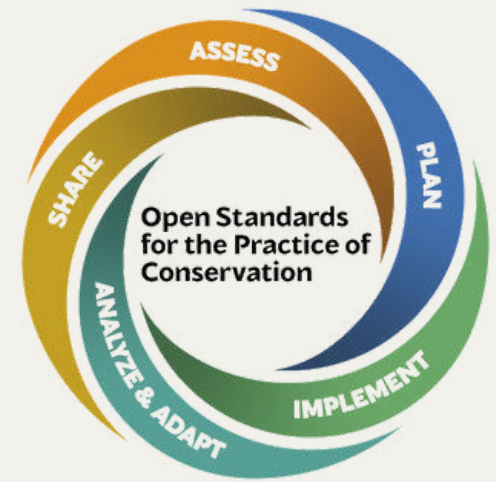
BUDGET PLAN



- Staff costs
- Fees for externals
- Travel costs
- Material costs (e.g. equipment, catering, print, ...)



GROUP WORK INSTRUCTIONS 1



Group Work Instructions¹ (GWI) – 2.3.a Goals, Objectives, and Indicators

1. Purpose of Exercise

The purpose of this exercise is:

- to define your project's goals and objectives and identify the activities that you will have to carry out to achieve them.
- to define indicators that will be used for monitoring.

In order to do this, you will need the results chains that you developed in the previous exercise.

2. Conservation Standards definitions

Goal: A formal statement detailing a project's desired impact, such as the desired future status of a target.

Objective: A formal statement detailing the desired outcome of a project, such as reducing a critical threat.

SMART criteria for goals and objectives:

- **Specific** – Clearly defined so that all people involved in the project have the same understanding of what the terms in the goal or objective mean.
- **Measurable** – Definable in relation to some standard scale (numbers, percentages, fractions, or all/nothing states)
- **Achievable** – Practical and appropriate within the context of the project site, and the political, social, and financial context (especially relevant to objectives; goals may be more aspirational)
- **Results-Oriented** – Represents necessary changes in target condition, threat reduction, and/or other key expected results
- **Time Limited** – Achievable within a specific time frame, generally 1-10 years for an objective, and 10-20 years for a goal.

Indicator: A measurable entity related to a specific information need, such as the status of a target, change in a threat, progress toward an objective, or association between one or more variables.
Criteria for a good indicator:

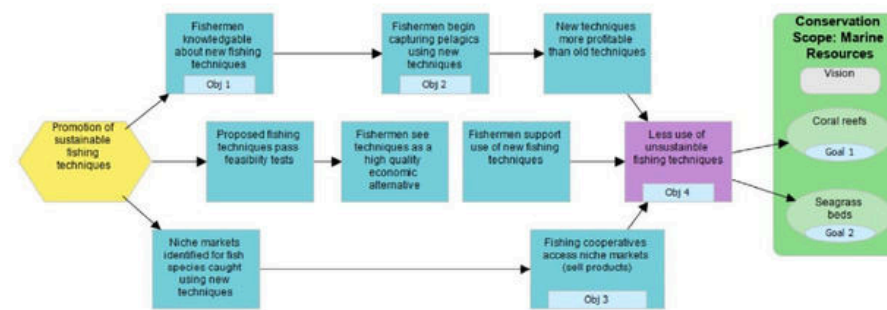
A good indicator meets the criteria of being: measurable, precise, consistent, and sensitive.

¹ Based on FOS Break-out instructions 2015




3. Example


Sustainable fishing techniques Result Chain with objectives and goals




Indicators examples:



Objective 2: By 2033, at least 50% of artisanal fishermen fishing within a 5 km radius of the Marine Reserve are using at least one of the new, sustainable fishing techniques promoted by the project.
Indicator: % of artisanal fishermen fishing within a 5 km radius of the marine reserve that are using at least one of the new sustainable fishing techniques promoted by the project



Objective 3: By 2037, all four of the local fisheries cooperatives have accessed new markets that offer a better per-unit price for their products.
Indicator: # of local fisheries cooperatives that have accessed new markets that offer a better per-unit price for their products



Goal 1: By 2045, at least 80% of the coral reef habitat in the northern bioregion will have live coral coverage of at least 20% and will contain healthy populations of key species.*
Indicator: % of live coral coverage
Indicator: Parrotfish density/100 square meters
Indicator: Abundance of spiny lobster

* Healthy populations will be based on the available evidence.



4. Procedure

In your team, work through the steps as outlined below. You can use the [Conservation Standards How-To-Guidance](#) for further guidance on your tasks.

Task A. Finalizing Goals with indicators

Using your viability assessment

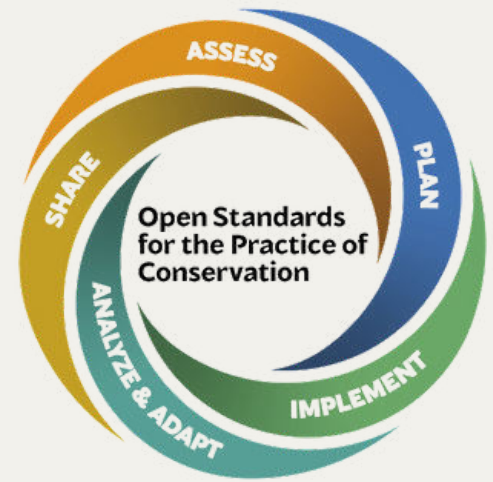
- 1) Have a look at your **viability assessment** and especially the future desired status of the relevant KEAs (Key Ecological Attributes). Using the SMART criteria, formulate goals for your biodiversity targets.
- 2) Develop indicator(s) for measuring your goals.

Task B. Developing Objectives

Using your results chains:

- 1) Select a **key result** in your results chain (Theory of Change) where you want to add an objective.
- 2) Write a draft objective for the selected key result.
- 3) Use the SMART criteria to revise, modify and improve your draft objective.
- 4) Develop indicator(s) for measuring the objective.
- 5) Repeat steps 1-4 for other key results of your Theory of Change.

GROUP WORK INSTRUCTIONS 2



Group Work Instructions¹ (GWI) – 2.3.a Operational Planning

1. Purpose of the exercise

After having a better understanding of how your strategies will work and the activities your project will implement, it is important to think about human capacity, skills, and other financial and non-financial resources. This process will help you to visualize how the expertise and capacity of your stakeholders will support the long-term implementation of the project. Use your ToC as the basis for this exercise.

2. Elements

a. Partner Setting

Why?

- To look for synergies for implementing the project
- To pull in other stakeholders
- Think of ownership and of project sustainability

Tasks

- Considering the stakeholder mapping, select potential partners that could support the implementation of the project, beyond monitoring activities. Discuss what their role could be, their expertise to share, etc.
- Optional: Prepare a partner setting diagram.

Example:

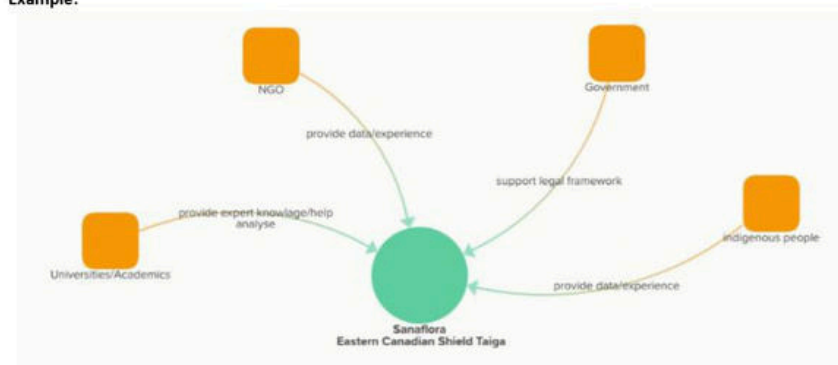


Figure 4 – Partner network depicting roles and interactions

Source: Own visualization ©Sanafora

¹ Based on FOS Break-out instructions 2015



b. Sustainability of the Project

Why?

- To ensure the impact of your project's achievements beyond your team's involvement
- To create structures and processes that can sustain
- To prevent unrealistic expectations among the project team and stakeholders

Main sustainability factors to consider:

- Project ownership
- Financial feasibility
- Built-up organizational, community and individual capacity

Additional factors that might be relevant:

- Policy and legislative environment
- Political commitment
- Replication / scaling up
- Societal benefits/costs and equity
- Ecological sustainability
- Economic forces
- Appropriate technology and methodologies
- Socio-cultural issues, ethnicity and gender

An exit strategy should include:

- What sustainability factors need to be addressed
- The objectives that specifically contribute towards achieving this
- Type and timing of exit (with an indicative time scale)
- Who will continue activities?
- What exit criteria will need to have been met to allow you to exit?

Tasks

Make notes for your presentation, documenting the main considerations and arguments for a strong sustainability logic and exit strategy in your project logic.

3. Optional

c. Time Plan including Milestones

Why?

- To show the sequence and dependencies of your activities
- Use Milestones to highlight major deliverables
- To communicate progress to externals (e.g. donors)

Tasks

- Develop a time plan (Gantt-Chart) for the project (-> **template** on Moodle)
- Optional: Include in this table Milestones using the letter "M" (M1, M2, ...)

Recommendations:

- Sort the activities according to your strategies or results and sequence.
- Use different colours for each strategy or result.



Template of Time plan

Name of Organisation	Year 1				Year 2				Year 3				...
	1	2	3	4	1	2	3	4	1	2	3	4	
Name of Project													
Activities													
Activity 0													
Strategy 1													
Activity 1													
Activity 2													
Activity 3													
Activity 4													
Strategy 2													
Activity 5													
Activity 6													
Activity 7													
...													
Monitoring activities													

Examples of Milestones:

- Approval of a concept/management plan/land use plan/...
- Publication of a leaflet/website/...
- Agreement/contract with stakeholder X
- Completion of a capacity-building center

d. Budget Plan

Why?

- To get an overview of and show the financial means that are needed
- To create an overall sum that you will ask funding for

Categories of costs

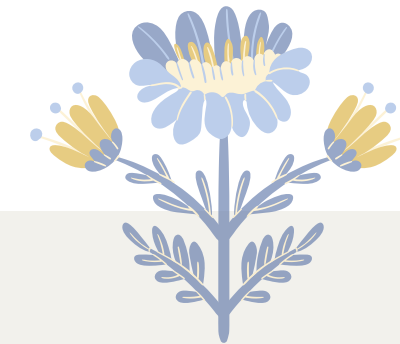
- Staff Costs (-> baseline numbers on Moodle)
- Other Resources
 - Fees
 - Travel
 - Material

Tasks

- Develop a simple cost calculation for your activities according to the types of costs (-> **template** on Moodle)

Considerations:

- Only make rough guesses
- Include 10 % of the overall budget for monitoring activities



Happy Planning!

This material was developed in the course of the joint Erasmus+ project
“Transformational Learning Network for Resilience - Enabling Ukrainian higher education to ensure a sustainable and robust reconstruction of (post-war) Ukraine” (2023-2025)

funded by the EU



Co-funded by
the European Union




<https://translearnn.ztu.edu.ua>






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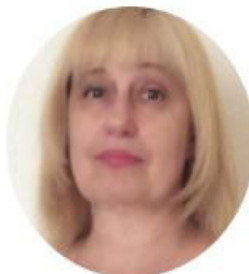
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