



# Inclusion of Indigenous and Local Knowledge in Biodiversity Policies

CO-OP4CBD TRAINING

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# Embracing Diverse Knowledge Systems

Complex and interconnected environmental problems

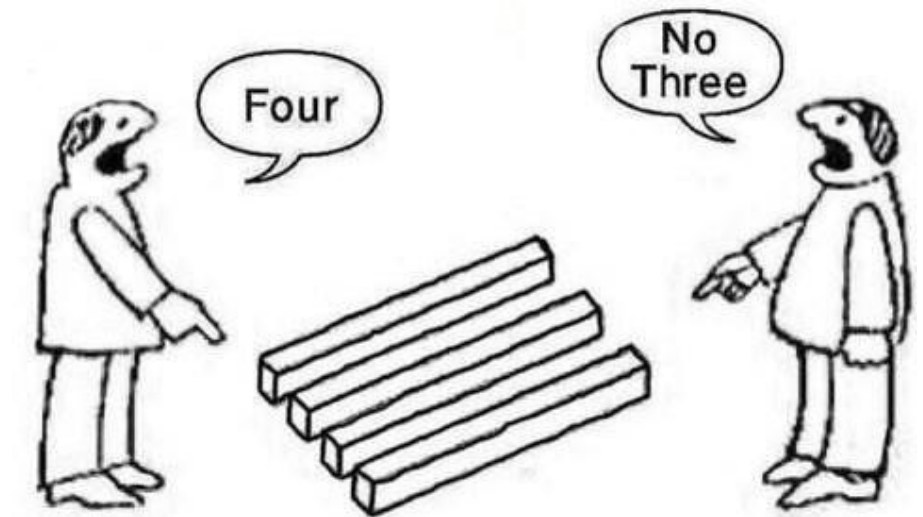
- IPLCs knowledge
- IPLCs customary governance
- IPLCs ethical principles & practices



- Policies**
- May be impacted by policies
  - Kunming-Montreal GBF
  - NBSAPs

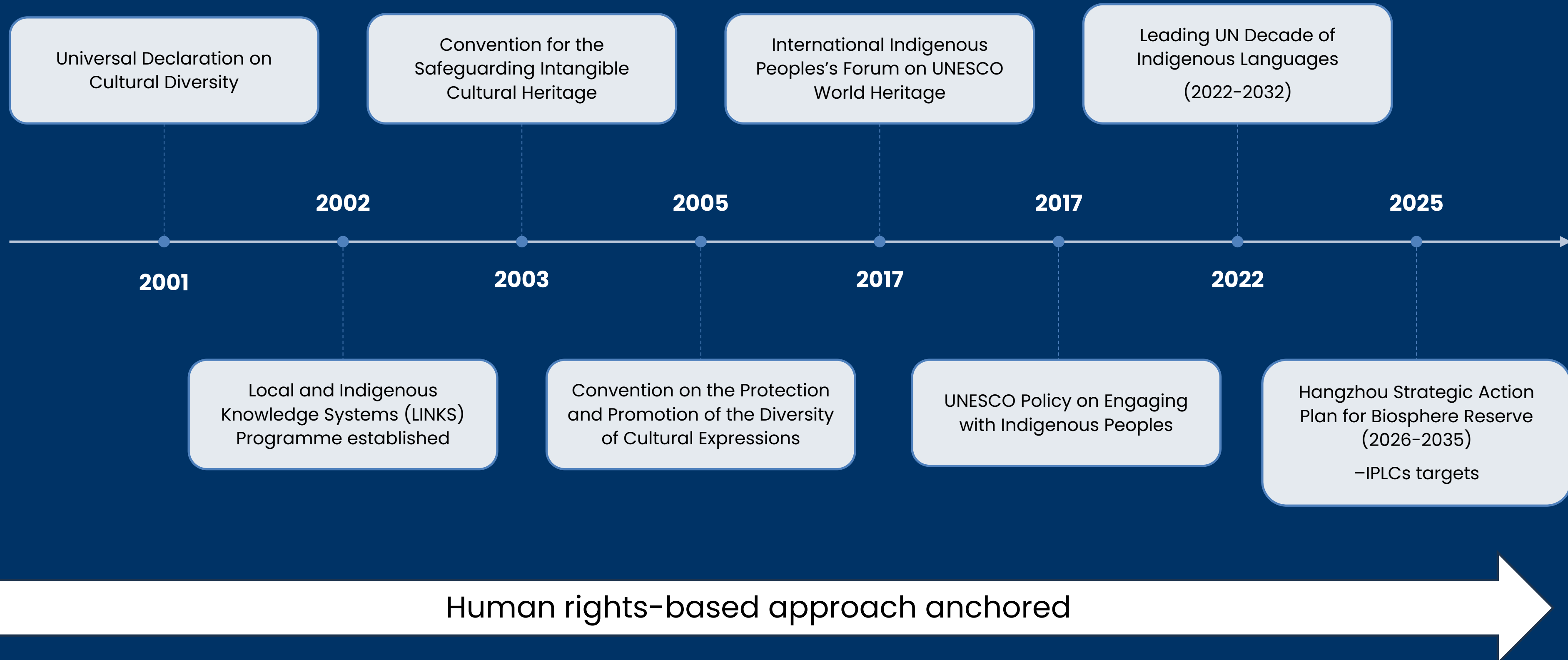
Solutions to addressing complex environmental problems

- Seeing the world with different lenses (epistemological diversity)
- New insights and perspectives
- Door to a wealth of knowledge
- Biocultural diversity understanding
- Breaking Barriers & Building bridges across knowledge systems



$3.5 \pm 0.5$

# UNESCO Commitments to Indigenous Issues



Human rights-based approach anchored

# Local and Indigenous Knowledge Systems Programme



- **LINKS** – established as a UNESCO intersectoral platform
- Based in UNESCO's Natural Sciences Sector
- Strengthening interface of **Indigenous and local knowledge (ILK), science and policy** – particularly on biodiversity and climate change.
- Guided by **UNDRIP** and **UNESCO Policy** on Indigenous Peoples

## UN Partnerships

- Convener of **CBD Programme of Work** link between biological and cultural diversity
- Hosts and Leads **IPBES ILK Technical Support Unit**: Development and implementation of methods for working with ILK throughout IPBES assessments
- Leads the **BES-Net ILK Support Unit** (2020): Supporting the inclusion of ILK in national ecosystem assessments (NEAs) and uptake of NEAs and IPBES assessments.





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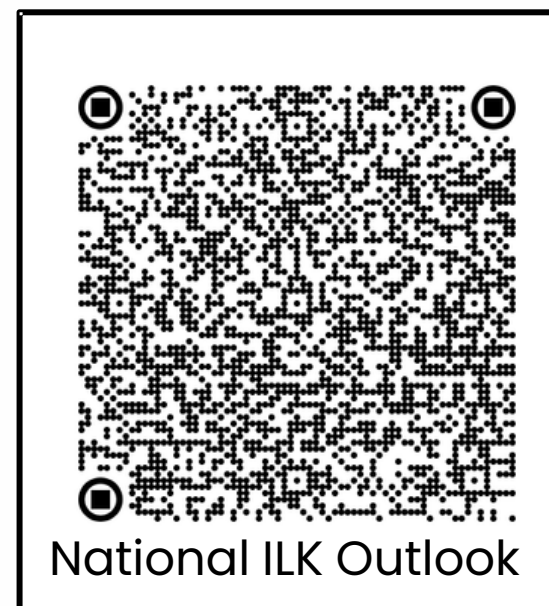
# National ILK Outlook Initiative



Mainstreaming ILK into NBSAPs

# National Outlook on ILK of Biodiversity

- Country-led and government endorsed initiative initiated in 2025
- ILK Assessment on the state of ILK of biodiversity
- Evaluation of ILK inclusion on NBSAPs and biodiversity policies
- Multi-stakeholder ILK-Policy dialogues
- ILK capacity building for policymakers and stakeholders.



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昆明生物多样性基金  
Kunming Biodiversity Fund

# National ILK Outlook Highlights

## KEY FINDINGS FROM THE NATIONAL ILK OUTLOOK



### IPLCs ARE CENTRAL TO BIODIVERSITY STEWARDSHIP

Traditional practices play a crucial role in conserving local biodiversity, as shown in Malawi, Namibia, Trinidad and Tobago.

### ILK DOCUMENTATION REMAINS UNEVEN

Strong ethnobotanical knowledge documentation in places, but less focus in other domains and ecosystems



### ILK IS INCREASINGLY UNDER THREAT

Several converging factors contribute to the erosion of ILK, such as weakening of knowledge transfer and socioeconomic pressures

### METHODOLOGICAL CHALLENGES PERSIST

Scientific frameworks tend to seek to validate ILK systems rather than recognize them as context-specific and intrinsically valid



## Indigenous and local knowledge remains limited in biodiversity governance



### Malawi

ILK appears in environmental, forestry, fisheries, and disaster management policies, but is underutilized in education, health, and climate adaptation.



### Namibia

Community participation and cultural heritage are recognized, though explicit ILK incorporation in biodiversity policy and planning is still limited.



### Trinidad and Tobago

The updated National Biodiversity Strategy and Action Plan provides an opportunity to strengthen ILK integration anchored on the multiple evidence base approach.



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# BES-Net Partnership Initiative



Leveraging diverse knowledge systems for informed biodiversity decision-making

# Biodiversity and Ecosystem Services Network (BES-Net)

BES-Net – A consortium of UNDP, UNEP-WCMC and UNESCO, committed to building knowledge, capacity and collaboration between science, policy and practice communities for biodiversity conservation worldwide **in line with the IPBES work programme**, with the support of the Federal Government of Germany and SwedBio.

**WP I.** Provide catalytic **BES Solution Fund** and technical assistance to countries implementing tangible nature-based solutions based on the NEA/IPBES assessment evidence

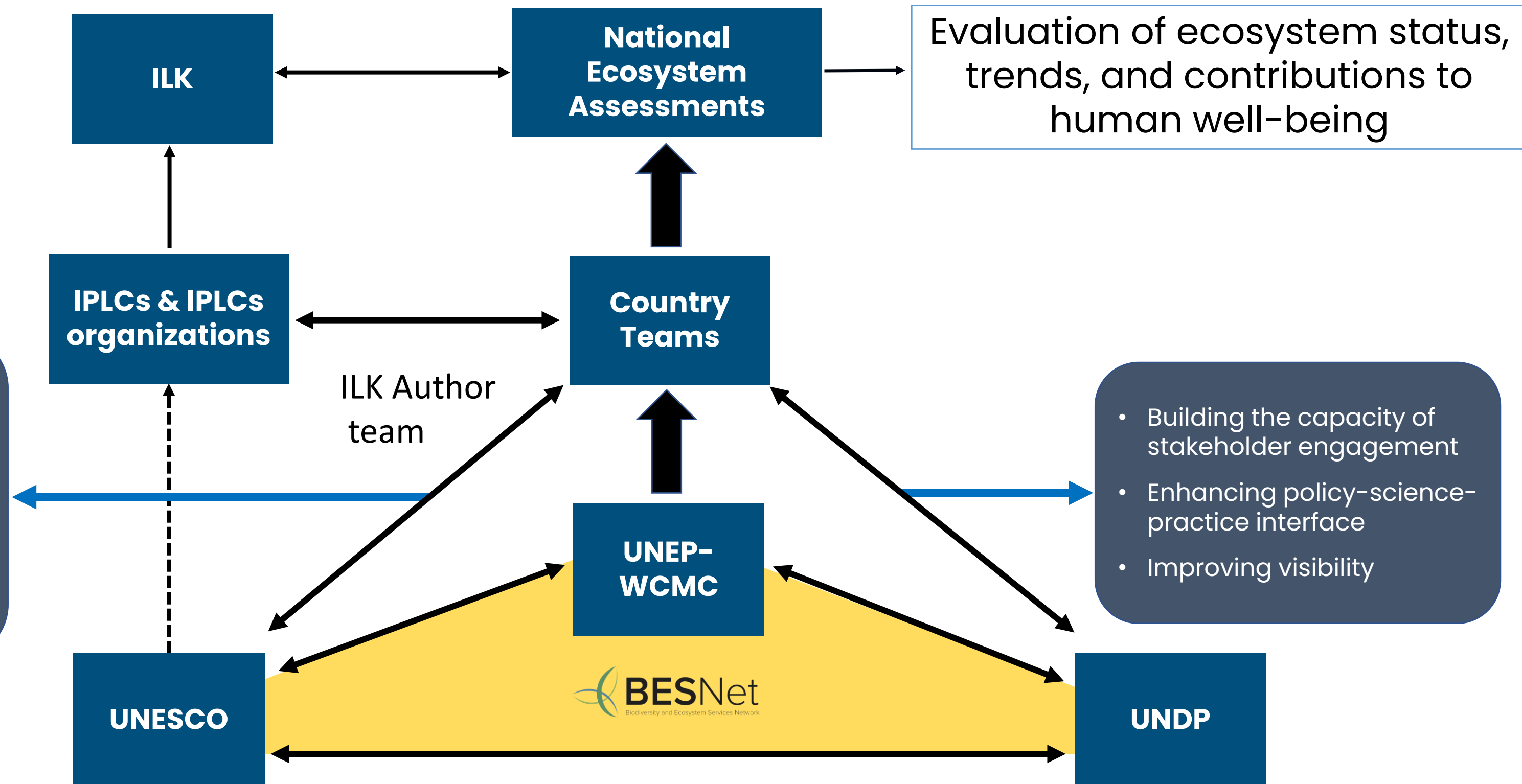
**WP III.** Strengthen the BES policy-science-practice network around the IPBES assessment themes through **Trialogues**



**WP II.** Improve the national BES evidence base by coordinating the co-creation of **national ecosystem assessments (NEAs)**

**WP IV.** Enhance global BES communication and knowledge sharing by connecting partners and promoting their interactions through the **BES-Net online platforms**

# ILK Framework for NEAs



- Building trust relationships
- Coaching interdisciplinary and transdisciplinary cooperation
- ILK concepts and methods and rights issues
- Participatory research

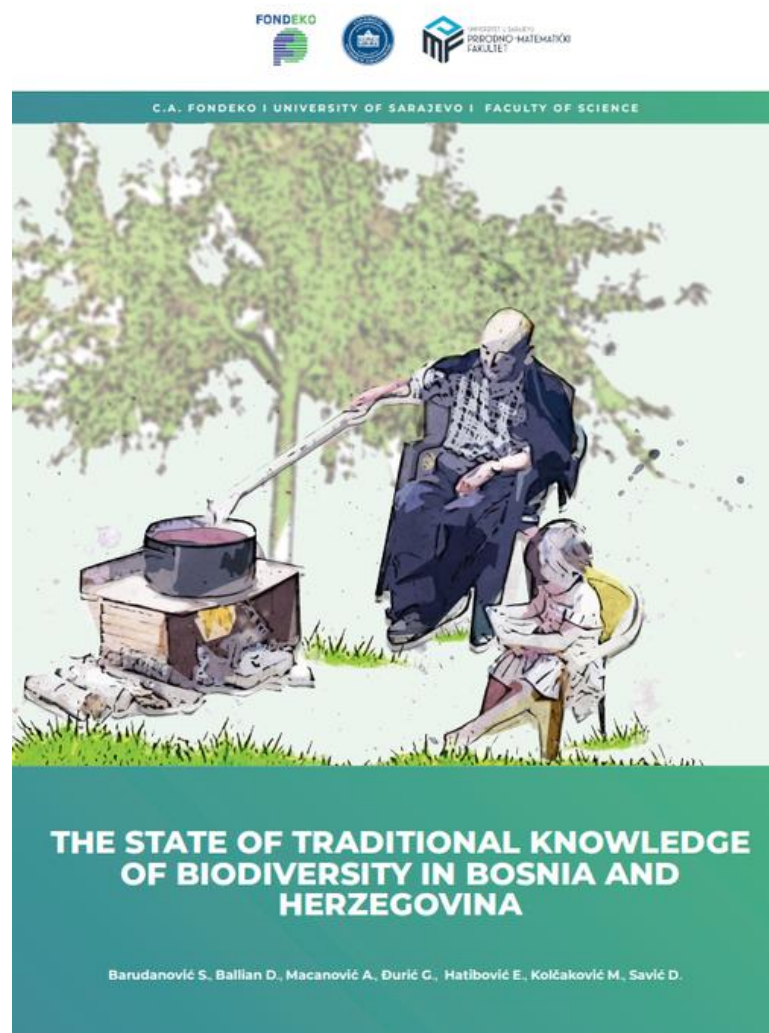
- Building the capacity of stakeholder engagement
- Enhancing policy-science-practice interface
- Improving visibility

ILK Author team



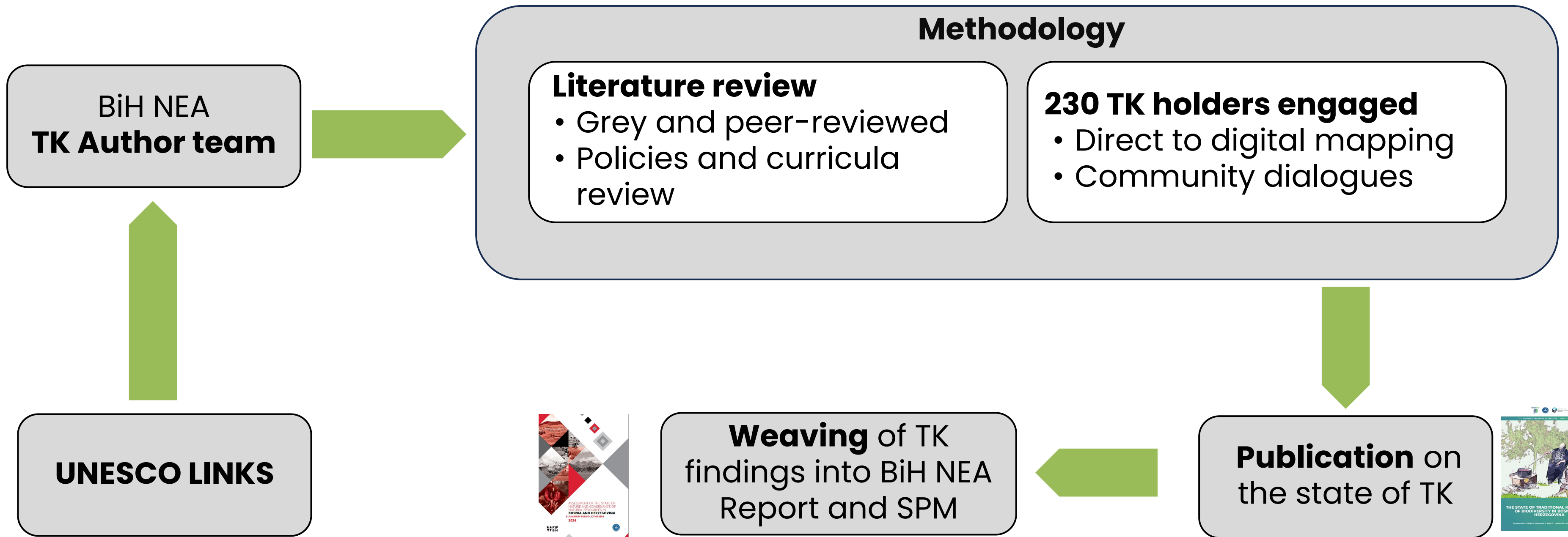
# Bosnia and Herzegovina NEA

- Conducted from 2019 to 2024
- First ever assessment on the **state traditional knowledge of biodiversity**
- First ever **National Ecosystem Assessment**
- Traditional knowledge woven into the scientific national ecosystem assessment



# BiH Process of weaving Traditional Knowledge in NEA

Bosnia and Herzegovina National Ecosystem Assessment (BiH NEA) Process



Guided by IPBES Conceptual Framework



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# THE VALUE OF TRADITIONAL KNOWLEDGE OF BIODIVERSITY IN BOSNIA AND HERZEGOVINA

Traditional knowledge in Bosnia and Herzegovina (BiH) plays a crucial role in preserving biodiversity, cultural heritage, and sustainable use of resources. This knowledge, passed down through generations, connects deeply with BiH's natural environment and local communities.

## MEDICINAL VALUE

**Medicinal Plants:** Around 256 plant species used in traditional medicine for various treatments.

**Mushrooms:** Have both nutritional and medicinal values, i.e., boletus, milkweed and morels.

**Herbal Remedies:** Traditional herbal treatments used for various ailments and are transmitted through folk medicine.



- Many communities in BiH still use traditional medicinal practices in addition to modern medicine. Herbalists, known for their expertise, are highly valued.
- Women regularly use traditional medicine, while men primarily use this method of treatment only when sick.
- The use of medicinal floral is declining despite its wide availability.

## FOOD AND NUTRITIONAL VALUE

**Wild Edibles:** Ancient BiH diets valued wild plants like spinach, sorrel, and primula for their nutritional benefits. Although less common now, wild fruits such as hazelnut, sweet chestnut, and dogwood continue to feature in traditional recipes, preserving BiH's culinary heritage.



**Ingredients for Beverages and Salads:** 24 spice species and 16 wild fruit species are used in the Central region.

**Traditional Beverages:** 67 wild fruit species in the Eastern region used for preserves, teas, syrups, and traditional brandy, preserving unique flavours and nutrients.

**Indigenous Vegetables:** 49 wild vegetable species used in the Central region and 63 in the Eastern region.

## CULTURAL HERITAGE



Traditional practices such as craft-making and animal husbandry are part of the BiH cultural identity.



### Culinary Practices

The practices of drying fruits, i.e., plums and preparing traditional dishes such as cicvara, puree, livno cheese, sauerkraut, and drinks such as dogwood pickle, liqueurs have been preserved.

Women are the guardians of traditional recipes through their regular application.

### Crafts and Materials

Historically, many crafts relied on plant-derived materials. Plants like oak and chestnut provided tannins for leatherwork, and local woods were carved into musical instruments and household items.

### Ritual and Symbolic Uses

Plants were also embedded in spiritual and social rituals, i.e., the immortelle symbolized life transitions like marriage readiness.

### Intangible Heritage

Encompasses rituals, beliefs, and values linked to the environment, passed through generations.

### Heritage Preservation Efforts

In BiH, intangible cultural heritage is safeguarded for its essential skills, values, and historical practices vital to local identity.

Women play a key role in preserving traditional practices, especially in sustainable natural resource use and traditional diets.

## BIOCULTURAL DIVERSITY

**Species Diversity**  
BiH is home to an estimated 15,000 to 20,000 fungi species and 5,000 vascular plants, many of which have cultural and ecological importance.



**Ecological Role**  
Biodiversity in BiH is tightly linked to traditional uses, such as of edible and medicinal plants.

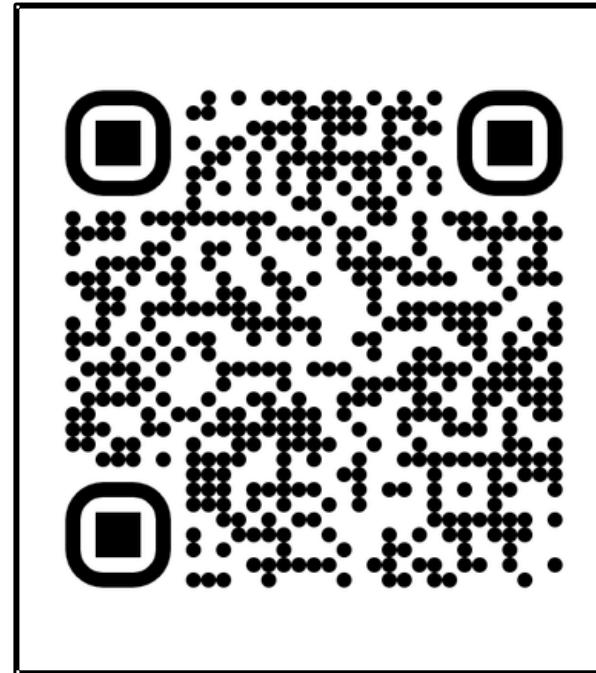


**Sustainable Practices**  
Traditional knowledge supports biodiversity through practices like sustainable harvesting, crop rotation, and limited hunting, signifying ecological interdependence.



**Biodiversity-Culture Nexus**  
Conservation efforts in BiH highlight the role of biodiversity in cultural practices and ecological sustainability. Preserving biodiversity also safeguards traditional knowledge essential for sustainable resource management.

# Summary of Key findings from TK Publication



# SUSTAINABLE TRADITIONAL PRACTICES AND KNOWLEDGE OF BIODIVERSITY CONSERVATION IN BOSNIA AND HERZEGOVINA



Traditional practices in Bosnia and Herzegovina (BiH) are integral to biodiversity conservation, relying on traditional ecological knowledge to sustain natural resources. These methods emphasize a balance between human needs and environmental health, supporting species and cultural diversity, ecosystem stability, and community resilience.

## TRADITIONAL PRACTICES AND KNOWLEDGE

*In BiH, there is a significant wealth of traditional and local knowledge and practices in the use of biodiversity and ecosystem services.*



### Sustainable Use

The use of biodiversity in BiH has a strong base in traditional knowledge, innovation and practices. E.g., sustainable foraging is common for harvesting mushrooms, hazelnuts, chestnuts, and wild cherries.

### Practices for Sustained Income

Historical records show that harvesters collected resources moderately to sustain income. E.g., to ensure future harvests, green-winged orchid tuber collectors left one tuber for regrowth, while sweepers shook off sorghum seeds to secure the next yield.

### Traditional fishing

Local population is still engaged in traditional fishing of catfish, pike, perch, bream, roach and barbel, despite reduced fish stocks.

### Sustainable Agriculture

Practices such as crop rotation, organic fertilization, and low-impact farming techniques improve soil quality and promote habitat diversity.

## CHALLENGES TO TRADITIONAL PRACTICES AND KNOWLEDGE

*In BiH, there is a proven loss of traditional knowledge and practices.*

- Climate Change and Environmental Degradation:** Climate change, deforestation and pollution threaten local biodiversity, impacting the habitats and species essential for traditional practices.
- Lack of Legal Protection and Regulation** for traditional crafts, practices and indigenous plant varieties.
- Loss of Interest among Young Generation:** With modernization, traditional knowledge is at risk as younger generations focus less on these practices.
- Industrialization** substituted some traditional methods, reducing the demand for local materials and traditional knowledge systems.
- Urbanization:** Rural-urban migration and changes in lifestyle habits impacted traditional practices and intergenerational knowledge transfer through folk traditions.

## HOW TO STRENGTHEN AND SCALE-UP TRADITIONAL PRACTICES AND KNOWLEDGE

*In BiH, there is a strong interest in learning and returning to traditional knowledge and practices. However, traditional knowledge is underutilized in national biodiversity planning and actions.*

### Policy Support

Review and update national and local policies to protect traditional practices and knowledge, promote equitable access to benefit sharing, regulate sustainable harvesting, and support ecotourism tied to biodiversity conservation and cultural preservation.

### Knowledge Co-production

Support scientific collaboration with traditional knowledge holders for evidence-based and local appropriate solutions.

### Documentation

Document traditional knowledge in line with Free, Prior and Informed Consent (FPIC) and community data sovereignty.

### Education

Mainstream traditional ecological knowledge into school curricula to raise awareness and preserve folk practices and knowledge for future generations.

### Community Engagement Programs

Establish community-led initiatives that encourage knowledge sharing between generations and celebrate cultural heritage.

### Young Generation

Leverage community social networks and digital tools to promote intergenerational knowledge transfer.

### Awareness Creation

Raise awareness on the values and importance of traditional knowledge in biodiversity conservation, targeting different actors.

# Traditional Knowledge Findings from BiH NEA SPM



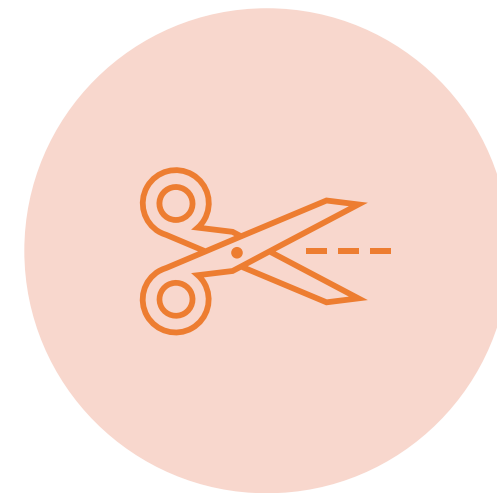
There is a great abundance of traditional and local knowledge and practices regarding the use and conservation of biodiversity and ecosystem services in BiH, but its loss due to demographic changes is confirmed in our findings (*well established*).



Nature is an important part of cultural and traditional social identity in BiH and it supports the improvement of human health and well-being through a set of non-material NCPs (*established, but incomplete*).



Although BiH acceded to a large number of international treaties related to the protection of biodiversity, species and ecosystems, it still did not accede to treaties supporting conservation of gene diversity and related indigenous knowledge (*well established*).



..... traditional and knowledge are not included in decision-making efforts to identify sustainable solutions (*well established*).

**Thank you**

**Merci Beaucoup**

**Asante Sana**

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