Terms of Reference (ToR)
Biodiversity baseline assessment
Consultancy, NbS pilot site Serbia

About IUCN

IUCN is a membership Union uniquely composed of both government and civil society organisations. It provides public, private and non-governmental organisations with the knowledge and tools that enable human progress, economic development and nature conservation to take place together.

Created in 1948, IUCN is now the world's largest and most diverse environmental network, harnessing the knowledge, resources and reach of more than 1,400 Member organisations and some 16,000 experts. It is a leading provider of conservation data, assessments and analysis. Its broad membership enables IUCN to fill the role of incubator and trusted repository of best practices, tools and international standards.

IUCN provides a neutral space in which diverse stakeholders including governments, NGOs, scientists, businesses, local communities, Indigenous Peoples' organisations and others can work together to forge and implement solutions to environmental challenges and achieve sustainable development.

Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. Combining the latest science with the traditional knowledge of local communities, these projects work to reverse habitat loss, restore ecosystems and improve people's well-being.

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Background information

Climate change is increasing the frequency, intensity and magnitude of disasters, leading to a higher number of casualties as well as property and economic losses. Nature can provide cost-effective, no-regret solutions, which help increase community resilience beyond their capacity to absorb and recover from a single disaster, such as a flood or drought. IUCN has been at the forefront of developing the concept of Nature-based Solutions and has recently launched a Global Standard for Nature-based Solutions. Evidence shows that beyond the positive impact on societies and improved management of disaster risks, Nature-based Solutions benefit habitats and biodiversity as well as support climate change mitigation and adaptation.

Countries in the Western Balkans are among the most vulnerable with respect to climate change impacts affecting numerous sectors and domains. Yet, while Nature-based Solutions are increasingly used and integrated into climate change policy and action planning globally, in particular, in relation to disaster risk reduction and community resilience, in the Western Balkans, the value derived from deploying Nature-based Solutions in response to societal challenges remain underexplored. The contributions of ecosystems and biodiversity towards climate change adaptation and disaster risk reduction have not been recognised or sufficiently

reflected in relevant strategies and policies in the region. Policies and planning approaches are often fragmented or do not consider capacity gaps with regards to their implementation.

On a global scale Nature-based Solutions have been recognised to offer untapped potential to the achievement of the multiple national and international priorities on mitigating climate change, improving livelihoods, reducing desertification and conserving biodiversity. Integrating Nature-based Solutions into national climate change policy and planning is one way to promote and create a more holistic perspective that acknowledges the role of ecosystems and the services they provide. Also, it is critical that investments are mobilized for nature-based solutions through other mechanisms than public sector investments. Additionally, alignment with global and regional policy frameworks, including the Paris Agreement with NDCs as its delivery vehicle, the Sendai Framework, Agenda 2030, CBD and NAPs among others, supports the achievement of international commitments and reporting requirements. Overlaps between these frameworks as well as other activities, such as the work on UNCCD's land degradation neutrality should also be considered. Global post-2020 negotiations in particular offer opportunities for mainstreaming Nature-based Solutions into ongoing policy development and planning processes, such as updating and / or enhancing NDCs (including how to enhance climate resilience (adaptation), setting LDN targets, and defining the pathways to achieve the Post-2020 Global Biodiversity Framework.

In addition to global frameworks, the Western Balkan countries strive to align national policies with EU acquis. The recently adopted EU Green Deal, the EU Biodiversity Strategy, EU Strategy on Adaptation to Climate Change provide new opportunities for Nature-based Solutions actions. The Green Agenda for the Western Balkans currently under development will adapt the EU Green Deal and related strategies to the regional context and align goals with priorities of the Western Balkan countries. ADAPT aims to harness the potential of Nature-based Solutions for climate change adaptation and disaster risk reduction by capitalising on national, regional and global processes for policymaking and planning that facilitate effective implementation.

In the period from 2019 until 2024, IUCN ECARO has been implementing the initiative ADAPT: Nature-based Solutions for resilient societies in the Western Balkans funded by the Swedish International Development Cooperation Agency (Sida). It aimed to increase ecosystem and community resilience to climate change and environmental degradation in the Western Balkans. The project worked at multiple levels and involved government agencies, research institutions and civil society, which offered opportunities for knowledge exchange, wider capacity building and institutional strengthening as well as the potential for scaling up.

The project had been implemented through the following three strategies:

1. Enhance knowledge and awareness of nature-based disaster risk reduction solutions among decision makers, natural resource managers and local communities with a specific focus on gender;
2. Integration of Nature-based Solutions and equitable climate-smart planning into adaptation and disaster reduction policy; and
3. Implementation of Nature-based Solutions for disaster risk reduction and their scale-up.

In order to demonstrate the value and multiple benefits of Nature-based Solutions, the project implemented two pilot NbS field projects, one in Gledic (City of Kraljevo) in Serbia and one in Elbasan municipality in Albania.

As a continuation of this, regionally important, initiative, IUCN ECARO has started the second phase of this project – ADAPT 2.0: Nature-based Solutions for climate change mitigation and adaptation in the Western Balkans. ADAPT 2.0 demonstrates the value of NbS by strengthening regional resilience and promoting sustainable development. In this new phase,

the initiative aims to enhance understanding of NbS for climate change mitigation and adaptation, while promoting their integration into regional policies and practices. Building on lessons learned from the first phase, the project facilitates regional cooperation by embedding NbS into policies and practice aligned with the Green Agenda for the Western Balkans (GAWB) and supports the development of strategic frameworks such as the Western Balkans Forest Landscape Restoration Plan. ADAPT 2.0 aims to catalyse opportunities for deploying NbS on the ground in the Western Balkans, with a long-term focus. One of its key goals is to establish a regional fund by the end of the project to mobilise resources for future NbS development and implementation, in line with regional restoration plans.

Key Objectives:

1. **Deepen Knowledge and Awareness**: Build on the lessons of ADAPT 1.0 to enhance understanding of NbS among decision-makers, local communities, and practitioners.
2. **Support Regional Policies:** Align NbS initiatives with the Green Agenda for the Western Balkans and develop strategic frameworks, including the Western Balkans Forest Landscape Restoration Plan.
3. **Implement and Scale NbS:** Expand pilot projects in Albania, North Macedonia, and Serbia while establishing a Regional Fund for sustainable NbS financing.

Brief overview of the development stages of the NbS pilot site in Serbia

In Serbia preliminary consultations with partners and stakeholders have led to the selection of the Municipality of Kraljevo as a suitable pilot site location from the ADAPT project development phase. It was highlighted Kraljevo has been particularly vulnerable to climate induced risks in recent years. A particular issue already underlined by the Municipality of Kraljevo, is the increased risk of floods due to degraded forests and erosion, which may also lead to landslides. The municipality is under exposure to climate risks and as such was listed in the Government's Decision Declaring Natural Disaster enacted in June 2018. The Ibar River and its tributaries, which originates in Montenegro and flows through Kraljevo, has been subject to consecutive floods in 2014, 2016, 2019 and 2020, creating losses by damaging people's goods and properties. All activities linked to ADAPT pilot project implementation is done in close cooperation with local authorities and interest groups, including women and youth representatives.

Furthermore, in Serbia, a Forest Landscape Restoration (FLR) opportunity assessment was carried out using the Restoration Opportunities Assessment Methodology (ROAM), to identify specific priority areas, within the Kraljevo municipality, to implement FLR. A multidisciplinary team of 5 experts undertook a series of environmental, socio-economic and gender baseline assessments and proposed restoration measures. These studies were finalised in November 2021 and looked more specifically into conservation and biodiversity status, they analysed degradation drivers and proposed options for net improvements to enhance biodiversity net-gains while improving also livelihoods.

In the process, several sites (i.e. Lojanik, Studenica, Goč and Gledić) were identified and analysed through a multi-criteria analysis and in the end the intervention area proposed - Gledićke mountain, was chosen based on best available 'science' and 'local knowledge' with constant stakeholder engagement. It is important to note that most forests in this area are privately owned.

The ROAM application in the Municipality of Kraljevo was not intended to be a land-use planning exercise. However, the results and recommendations from the ROAM are a useful point of departure for land-use planning and were used to develop the project technical design. The ROAM assessment map and other outputs from the Municipality of Kraljevo point

decision-makers and planners to restoration opportunities in the village of Gledić, and provides preliminary information on how to go about restoration of these areas, including the most cost-effective types of restoration.

The technical design for the FLR pilot mentioned above was finalised and approved by the ADAPT project partners and donor in October 2022. The Design is accompanied by a management and maintenance plan for the FLR pilot and a Monitoring and Evaluation Framework. These are key documents that offer useful information about the land ownership (cadastre analysis), proposed restoration measures, costs, benefits as well as roles and responsibilities for different stakeholders involved in the process.

In the final pilot project stage, a hired forestry company implemented designed FLR measures with slight modifications in line with the state on the ground in the moment of the implementation. The field work has been done from June until December 2024. The following measures have been applied:

- Underplanting and enrichment planting in the shelter of existing and remaining trees, using manually constructed individual gradoni with manually prepared planting holes for 1,333 seedling/ha
- Planting and enrichment planting in manually prepared planting holes for 575 seedlings/ha
- Natural Forest Rehabilitation. Assisted natural regeneration should be applied on 90 ha at least
- Building Loose-Stone Check Dams using locally available stone material
- Establishing a Silvopastoral system by fencing pasture and parts of existing natural forest, and by providing a constant water source for livestock
- Establishing a Silvopastoral system by fencing pasture and parts of existing natural forest, and by providing a constant water source for livestock.

As a part of the pilot project development, a Monitoring and Evaluation Framework for the pilot has been drafted. The MEF provides an evidence-based approach in the implementation of the NbS, ensuring that efficiency and effectiveness are monitored and evaluated based on good-quality quantitative and qualitative data. To be able to continuously monitor, hence evaluate the progress of the pilot project, the MEF defines a set of output indicators for groups of activities, whilst in order to determine the impact that the pilot project is achieving in the local community, a set of key performance indicators (KPI) were developed. The role of the KPIs is to provide an evidence-based rationale in different periods of time through which the overall effects of the pilot project's activities could be perceived. Simultaneously, KPIs play a crucial role in the MEF as they provide a tool through which conclusions can be made on periodical markers of success, or otherwise failure to achieve the desired effects. In that sense, the assessment of the KPIs achievement should be an integral part of annual monitoring and evaluation reports. The KPIs derive from the overall objective for the component 3: Increase implementation of the nature-based disaster risk reduction solutions, while the implementation of the NbS pilot project is set as *Output 3.2. Pilot NbS projects structured and implemented*. Given that the essence of the pilot project is in implementing NbS that will improve the state of the local landscape, increasing the lifespan of the existing forest and enriching biodiversity in the intervention area, one complex indicator was developed to monitor biodiversity enhancing – *Biodiversity net gain*. This indicator includes landscape and species characteristics.

Table 1. Biodiversity Net Gains (BNG) Indicator

Row ID	Field	Indicator metadata
1	Indicator name	Biodiversity Net Gain (BNG)
2	Measurement unit	Composite indicator (Baseline value is 100)

3	Definition and concepts	BNG is a composite descriptive indicator that measures the quality of the biodiversity in the intervention area. The indicator is composed of the following elements: • (A) Aboveground biomass, in tonnes per hectare, • (B) Topsoil organics, in depth in cm • (C) Keystone species, in number • (D) Species count, per species in number Option 1. Each sub-indicator accounts for 25% of the BNG worth. Option 2. Each sub-indicator is evaluated separately.
4	Type of indicator	Outcome
5	Baseline	Baseline will be calculated in 2025. The calculation should be conducted by experts in forestry and/or in biology/ecology. The deliverable should consist of baseline values and the supporting narrative report.
6	Milestone	First year of the pilot implementation: Baseline Milestone 1. End of the second year of the pilot implementation: BNG/Sub-indicators ≥ Baseline Milestone 2. End of the fifth year of the pilot implementation: BNG/Sub-indicators ≥ Milestone 1
7	Target	End of the tenth year of the pilot implementation: BNG/Sub-indicators ≥ Milestone 2
8	ADAPT objective	Disaster Risk Reduction
9	Data collection	The data for the baseline assessment is obtained through research by the IUCN ECARO; The data for assessing milestones and target values is collected by IUCN ECARO, if funds are available, or by the City of Kraljevo within its own capacity or with use of external funding.
10	Roles and responsibilities	IUCN ECARO is responsible for procuring research for the baseline assessment, in line with internal procurement policies and procedures, managing the research and making data available. IUCN ECARO, if funds are available, or City of Kraljevo administration is responsible for organising periodical research for purposes of assessing milestones and target values. They provide a narrative report on this indicator.
11	Time measurement achieved	Periodical
12	Aggregation issues	The baseline assessment is crucial for setting the methods and practices in assessing BNG, hence the issue may occur if in the process of procurement of experts, IUCN is not able to procure experts with valuable academic and practical skill set.
13	Reporting	Baseline: IUCN ECARO Milestone/target period: City of Kraljevo
14	References	N/A
15	Notes	N/A

MEF also developed an alternative indicators for measuring biodiversity in case the monitoring bodies are unable to procure a detailed research for such purposes. For measuring species characteristics, two indicators were developed – Diversity of native plant species and Diversity

of bird species. In order to monitor effectiveness of the FLR measures that will be implemented in pilot area in Gledić, the baseline assessment should be established.

Table 2. Diversity of native plant species Indicator

Row ID	Field	Indicator metadata
1	Indicator name	Diversity of native plant species
2	Measurement unit	Number of species
3	Definition and concepts	The indicator is quantitative and presents number of plant species in the parcels where FLR measures will be implemented. Through this research, only native plant species should be used for assessing plant diversity, while presence and harmful effect of non-native and invasive species should be indicated. Research should be done only on the parcels where measures related to forest restoration are implemented. Methodology should be developed by the expert engaged for baseline assessment (botanist). Methodology should be drafted based on standard methodology for floristic inventory and plant diversity assessment, as well as the measures implemented through the NbS pilot project.
4	Type of indicator	Outcome
5	Baseline	Baseline will be calculated in 2025. The research should be conducted by experts in botany. The deliverable should consist of baseline values and the supporting narrative report.
6	Milestone	First year of the pilot implementation: Baseline Milestone 1. End of the second year of the pilot implementation: Target ≥ Baseline value Milestone 2. End of the fourth year of the pilot implementation: Target ≥ Milestone 1.
7	Target	End of the tenth year of the pilot implementation: Target ≥ Milestone 2
8	ADAPT objective	Biodiversity Net Gain
9	Data collection	The data for the baseline assessment is obtained through research by the IUCN ECARO; The data for assessing milestones and target values is collected by IUCN ECARO, if funds are available, or by the City of Kraljevo within its own capacity or with use of external funding
10	Roles and responsibilities	IUCN ECARO is responsible for procuring research for the baseline assessment, in line with internal procurement policies and procedures, managing the research and making data available. IUCN ECARO, if funds are available, or City of Kraljevo administration is responsible for organising periodical research for purposes of assessing milestones and target values. They provide a narrative report on this indicator.
11	Time measurement achieved	Periodical
12	Aggregation issues	The baseline assessment is crucial for setting the methods and practices in assessing this indicator, hence risks may occur if in the procurement process fails due to lack of highly specialised experts in this field.

		Moreover, differences and inconsistences between datasets will occur in case methodology used in the baseline assessment is not followed in the further assessments. Therefore, the same methodology should be used in order to avoid data inconsistencies.
13	Reporting	Baseline: IUCN ECARO Milestone/target period: IUCN ECARO/City of Kraljevo
14	References	N/A
15	Notes	N/A

Table 3. Diversity of bird species Indicator

Row ID	Field	Indicator metadata
1	Indicator name	Diversity of bird species
2	Measurement unit	Number of species
3	Definition and concepts	The indicator is quantitative and presents number of bird species in the parcels where FLR measures are implemented. Research should be done only on the parcels where measures related to forest restoration will be implemented. Methodology should be developed by expert engaged for baseline assessment (ornithologist). Methodology should be drafted based on standard methodology for bird fauna inventory and bird diversity assessment, as well as the measures implemented through the NbS pilot project.
4	Type of indicator	Outcome
5	Baseline	Baseline will be calculated in 2025. The research should be conducted by experts in ornithology. The deliverable should consist of baseline values and the supporting narrative report.
6	Milestone	First year of the pilot implementation: Baseline Milestone 1. End of the second year of the pilot implementation: Target ≥ Baseline value Milestone 2. End of the fourth year of the pilot implementation: Target ≥ Milestone 1.
7	Target	End of the tenth year of the pilot implementation: Target ≥ Milestone 2
8	ADAPT objective	Biodiversity Net Gain
9	Data collection	The data for the baseline assessment is obtained through research by the IUCN ECARO; The data for assessing milestones and target values is collected by IUCN ECARO, if funds are available, or by the City of Kraljevo within its own capacity or with use of external funding
10	Roles and responsibilities	IUCN ECARO is responsible for procuring research for the baseline assessment, in line with internal procurement policies and procedures, managing the research and making data available. IUCN ECARO, if funds are available, or City of Kraljevo administration is responsible for organising periodical research for purposes of assessing milestones and

		target values. They provide a narrative report on this indicator.
11	Time measurement achieved	Periodical
12	Aggregation issues	The baseline assessment is crucial for setting the methods and practices in assessing this indicator, hence risks may occur if in the procurement process fails due to lack of highly specialised experts in this field. Moreover, differences and inconsistences between datasets will occur in case methodology used in the baseline assessment is not followed in the further assessments. Therefore, the same methodology should be used in order to avoid data inconsistencies.
13	Reporting	Baseline: IUCN ECARO Milestone/target period: IUCN ECARO/City of Kraljevo
14	References	N/A
15	Notes	N/A

Scope of work

IUCN is seeking a qualified Bird fauna Expert and Flora Expert to provide a biodiversity baseline assessment in pilot project area in Gledić in line with indicators *Diversity of native plant species* and *Diversity of bird species*, as well as to analyse and test both mentioned indicators and *Biodiversity Net Gain Indicator*, all presented in tables above. Please note that baseline values for indicators BNG (A) and BNG (B) are already calculated and will be provided to the selected Consultant for further calculations.

The consultants will collaborate closely with the IUCN project management team, relevant IUCN units, project partners, and other experts. While the Bird Fauna Expert and Flora Expert will each be responsible for their respective areas of expertise, they will also be required to jointly develop certain documents and carry out shared tasks, as outlined below.

To ensure the successful delivery of the biodiversity baseline assessment in the Gledić pilot project area, the consultants will undertake the following tasks:

1. Research Methodology (both experts)
The methodology should include a detailed description of the methods to be applied for data collection in the baseline assessment of bird and plant species. It should be developed collaboratively by both experts, with each expert responsible for their respective field of expertise in the document's development. The methodology must align with best practices and scientifically validated methods for data collection on birds and plants. It should be designed to ensure an accurate baseline assessment and facilitate monitoring research of plant and bird diversity scheduled for 2028. The consultants must submit the methodology for approval by IUCN prior to commencing field research on flora and bird fauna.

2. Biodiversity Baseline Assessment Report
The report should include an analysis of the state of bird species diversity in the pilot project area, conducted by the Bird Fauna Expert, and an analysis of plant diversity in the pilot project area, conducted by the Flora Expert. Experts are expected to collect field data on bird and plant diversity based on the established research methodology in the locations where NbS measures have been implemented, covering app. 90ha of forest habitats. These data should be processed and presented as baseline values for the respective project indicators outlined in the previous section. Additionally, the report should provide information on the current state of habitats and the primary drivers of degradation and biodiversity loss in the research area.

Furthermore, it should outline the significance of bird and plant species in the context of relevant national and international policies. Finally, the report should include recommendations for future research on flora and bird fauna, as well as propose active conservation measures to further enhance biodiversity in the pilot project area.

3. Analysis of the Applicability of MEF Indicators

To ensure the applicability of biodiversity-related indicators developed through the MEF, experts are tasked with testing the *Biodiversity Net Gain Indicator,* the *Diversity of Bird Species Indicator,* and the *Diversity of Plant Species Indicator*. The experts should assess whether the developed indicators effectively reflect biodiversity improvements, considering the implemented NbS measures and the environmental challenges within the pilot project area. Furthermore, the experts should evaluate the feasibility and relevance of the developed indicator passports and the information they provide. Based on their analyses, experts should propose new indicators in the form of detailed passports and/or recommend modifications to the existing indicator passports. If new indicators are proposed, the experts must set the baseline values through the Baseline Biodiversity Assessment Report.

Expected deliverables and tentative timeframe

	Task	Deliverable	Tentative timeline
1	**Research Methodology developed**	- Research Methodology document	10 March 2025
2	**Biodiversity Baseline Assessment Report developed**	- Draft Biodiversity Baseline Assessment Report	20 July 2025
		- Final Biodiversity Baseline Assessment Report	25 August 2025
3	**Analysis of the Applicability of MEF Indicators developed**	- Draft Analysis of the Applicability of MEF Indicators	10 July 2025
		- Final Analysis of the Applicability of MEF Indicators	15 August 2025

The tasks, deliverables and timelines presented above have been prepared in accordance with the current project work plan and logframe. Tasks, deliverables and timeframes may be adjusted in accordance with adaptive project management and updated yearly work plan and logframe, as well as the best practices for implementation of required research. This will be done in consultation between the Biodiversity baseline assessment Consultant and the ADAPT project management team.

Available resources

1. Technical design Gledic pilot (internal report, available at request)
2. Implementation of the NbS pilot project measures (internal report, available at request)
3. Monitoring and Evaluation Framework, Gledic pilot (internal report, available at request)
4. Restoration Opportunities Assessment Report (internal report, available at request)
5. IUCN Global Standard for Nature-based Solutions
6. A guide to the Restoration Opportunities Assessment Methodology (ROAM)
7. ADAPT project
8. IUCN Monitoring and Evaluation Policy

Duration of the assignment

The duration of this assignment will last over the period from the signing of the contract until **31 August 2025**, or longer if required to complete the tasks in accordance with best practices. However, it is essential that the research methodology and timeline established during this assignment are fully replicable for the biodiversity monitoring assessment planned for 2028, which must be completed by 31 July 2028.

Please note that the biodiversity monitoring assessment in 2028 is not part of this assignment. The consultants are expected to ensure that the processes and methodologies developed during the current assignment can be effectively applied in the future monitoring activities.

Meetings and travel

The Consultant is required to participate in a series of physical meetings and consultations. This will require travel that will be subject to IUCN Travel Policy for Non-Staff.

When possible, in-person meetings will be prioritised, but if not possible due to legitimate reasons and in line with prior agreement with the IUCN ECARO team, virtual meetings and validations will take place.

Travel costs will be subject to prior written approval by IUCN ECARO and will be reimbursed after submission of all receipts and accompanied documentation.

Responsibilities and communication

The Consultant is mandated by IUCN for all the tasks and deliverables mentioned in above sections. All deliverables need to be submitted to IUCN ECARO in English by the given deadline.

Pricing information

The maximum available budget for this consultancy is estimated at **EUR 9,600**, including VAT and excluding assignment-related travel costs. All costs i.e. accommodation, transport and subsistence costs will be reimbursed based on real costs incurred. The travel costs should be included in the Financial proposal and should be justified through the Technical proposal.

Experience and qualifications

The consultancy is open to a consultancy company or a team of experts with the following expertise:

- Demonstrated experience in biodiversity research, concretely flora and bird fauna research, in Serbia with focus on forest habitats;
- Demonstrated experience in developing and/or testing the application of the biodiversity-related indicators, ideally using passports of indicators;
- Good understanding of the principles and criteria of the IUCN Global Standard for Nature-based Solutions will be considered an asset;
- Good understanding of global, regional and national biodiversity-related policies;
- English language proficiency;
- Serbian language proficiency.

Consultancy companies submitting an offer, need to prove that expert(s) assigned to this task fulfil the aforementioned criteria.

If independent expert or team of experts from Serbia are submitting an offer, it is necessary to have a status of legal entity in accordance with the Serbian legislation (DOO, AD, preduzetnik etc.).