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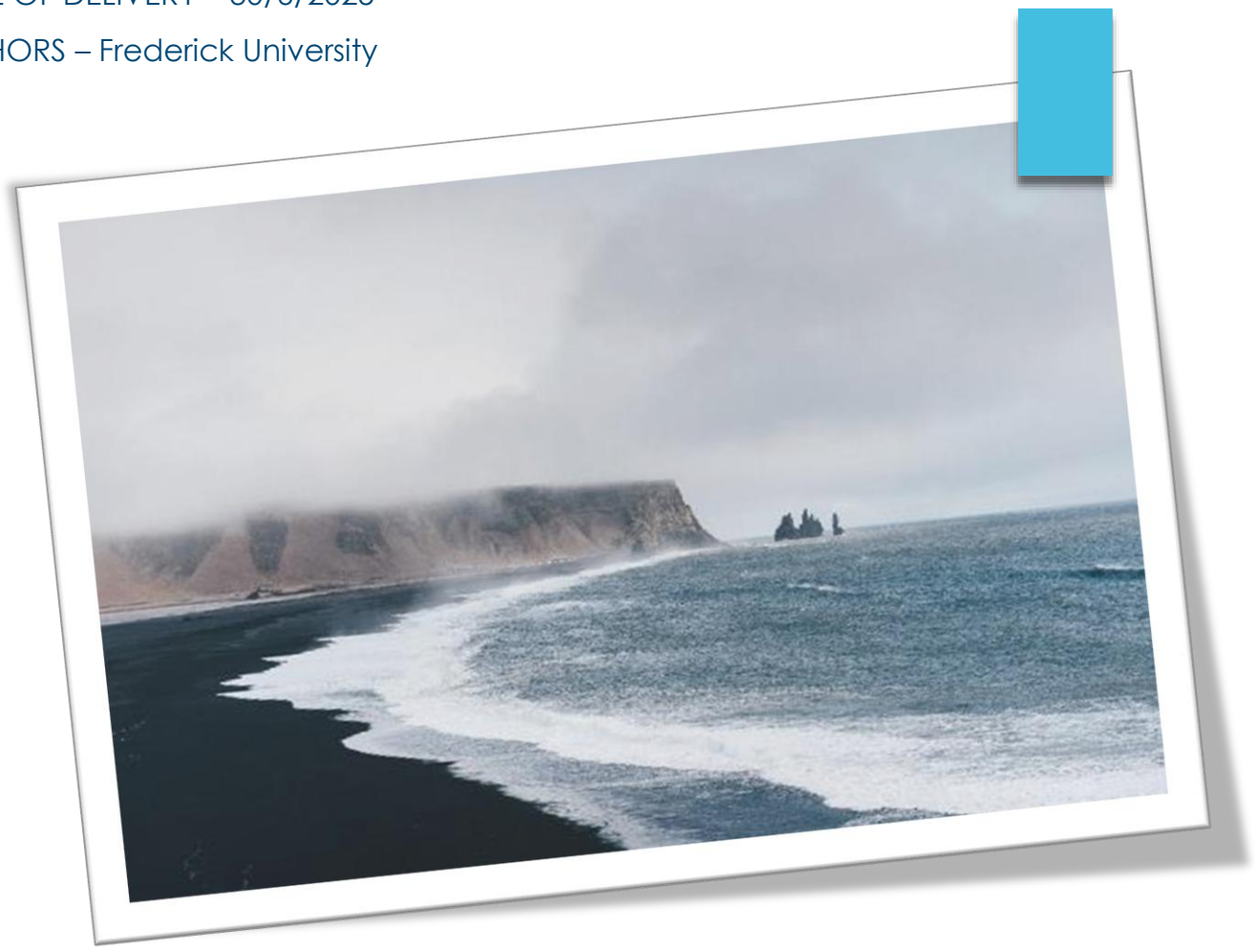
A PROactive approach for COmmunities to enAble Societal Transformation

D3.3 – Conservation and Human use Index

T3.3 - Development of integrated SESF scalable index

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V 1.0	Phoebe Vayanou, Panagiotis Georgiou, Constantinos Kounnamas	June 2025	Quality check and submission of final deliverable to the EC by TERO and ESUG

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BACKGROUND: ABOUT THE PRO-COAST PROJECT

The PRO-COAST project tackles the challenge of biodiversity loss in Europe's coastal ecosystems. Coastal and marine ecosystems provide valuable ecosystem services to humans which are now threatened by different pressures, mainly due to climate change, anthropogenic activities, and human-induced pressures like pollution, coastal and dune degradation, and the spread of non-indigenous species. Different socio-economic realities strictly relate to coastal and marine ecosystem services, representing the most vulnerable groups facing degradation and loss of biodiversity, livelihoods, and ecosystem degradation. The goal of PRO-COAST is to empower local communities to contribute to the restoration and conservation of biodiversity and ecosystem services across Europe, incorporating local knowledge into practical actions and policymaking. The project is now in progress, coordinating the efforts of 20 partners from 14 countries, focused on 9 unique case study areas (10 case studies). These studies explore a range of conservation methods across various coastal ecosystems, testing governance models and social incentives to engage local stakeholders in adopting technologies and practices for biodiversity conservation.

An important element of PRO-COAST is its holistic, interdisciplinary approach, based on a conceptual framework that treats social-ecological systems as interconnected. By mapping relationships between ecosystem components and uncovering feedback dynamics, the project seeks to identify leverage points for transformative change. PRO-COAST promotes integrated bottom-up decision-making, recognizing that environmental issues cannot be separated from social, economic, and political factors. Through extensive citizen engagement, guided by ecological and conservation science, the project aims to enhance community capacity for biodiversity conservation, offering scalable solutions that balance conservation needs with local socio-economic priorities. PRO-COAST aspires to shape adaptive, participatory governance approaches that prevent biodiversity loss and ensure sustainable, equitable access to coastal resources, and coastal and marine ecosystem services.

EXECUTIVE SUMMARY

This report -a key component of the PRO-COAST project, funded by the European Commission and UK Research and Innovation (UKRI)- presents the development of the **Conservation & Human Use Index**, a comprehensive, scalable, and transferable assessment tool, designed to identify and monitor both conflicts and synergies between conservation goals and human use of coastal semi-natural and natural areas. It is designed to track how these dynamics evolve over time, offering valuable insight into Case Study areas. Inspired by the foundational work of Nobel Laureate Elinor Ostrom and her Social-Ecological Systems Framework (SESF), the Index addresses the complexity of human-environment interactions by considering environmental, governance, and social dimensions. By applying the SESF approach, the Index helps illuminate strengths and weaknesses in governance structures, ecological conditions, and societal relationships.

The Index's flexible and user-friendly design allows for application across a wide range of ecological and social settings. It can be used in participatory workshops or as a desk-based review, requiring minimal training. The Index evaluates multiple dimensions, including Natural and Ecosystem Service Values, Threats and Pressures, Governance, and Social Perceptions, making it suitable for long-term monitoring and adaptive management. While not intended to capture every detail within a case study area, the Index provides a robust foundation for dialogue, shared understanding, and strategic planning among stakeholders and decision-makers.

This deliverable presents a) the conceptual framework, theoretical foundation, and step-by-step development of the Index and b) the detailed presentation of the final tool.

LINKS WITH OTHER PROJECT ACTIVITIES

The PRO-COAST Project includes seven Work Packages (WP). Work Package 3 (Biodiversity Management), together with others, provides the main pillars for developing the research tools and methods that will be applied in the ten case studies. Deliverable 3.3 – Conservation and Human Use Index feeds into WP2 (Theoretical Framework and Research Design), especially Task 2.2 which develops the research design, methods and tools for the case-studies, WP5 (Case studies) and also provides feedback in WP6 (Stakeholder engagement). At the same time, it provides input for the innovative tools developed and disseminated in WP7 (Dissemination and communication).

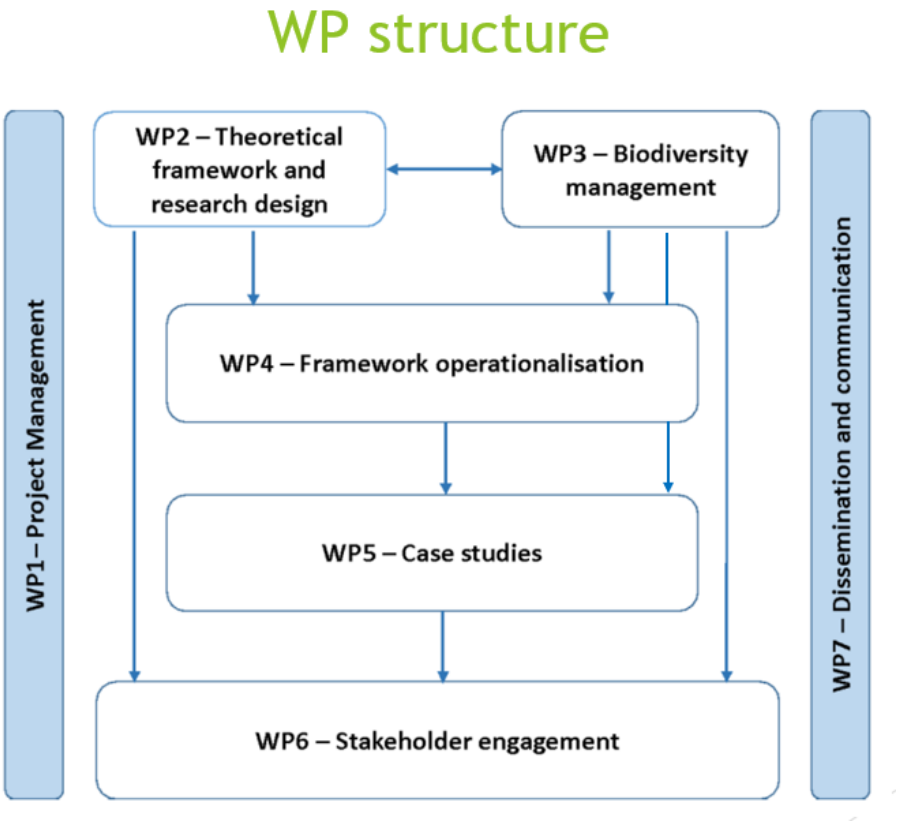


Figure 1: PRO-COAST Work Package structure

ACKNOWLEDGEMENTS

The conceptual design of the Conservation and Human Use Index presented several challenges. It required the translation of theoretical frameworks into a practical and operational tool that could accommodate a diverse range of parameters. At the same time, the Index needed to strike a careful balance: it had to be sufficiently generic to ensure applicability across all case studies, yet specific enough to yield meaningful, context-sensitive, and actionable results. Furthermore, the tool had to be user-friendly, practical, efficient, and adaptable to different socio-ecological settings.

Throughout this process, we benefited greatly from the insights and feedback provided by the multidisciplinary members of the consortium project team. Their contributions were valuable in refining our

ideas and transforming them into a robust and functional socio-ecological assessment tool. Especially, we would like to express our sincere gratitude to Irini Theodorakopoulou, Vassilis Zissimopoulos, Barbara Diez Rodriguez, Alexander Yendell, Ann-Marie Nienaber, Julie A. Ewald, Robert Kenward, and Olympia Papadopoulou.

In addition, we would like to thank PRO-COAST Coordinators Robert Kenward and Julie A. Ewald, as well as Elena Bužan and Žiga Velkavrh from University of Primorska for their valuable time, critical and thorough review of this report, which significantly contributed to enhancing its clarity and overall quality.

We also acknowledge that in the course of our research and report writing, we employed artificial intelligence tools such as ChatGPT and Google Translate. These tools were utilised to enhance linguistic formal expression and clarity. Our use of these technologies adhered to strict ethical guidelines, ensuring transparency in their application. Additionally, all AI-generated content was thoroughly reviewed and evaluated by our team to ensure the accuracy and reliability of our findings.

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ACRONYMS

CPR	Common Pool Resource
CS	Case Study
SESF	Social Ecological System Framework

1 INTRODUCTION

1.1 Aim and Objectives

This report serves as a key element of the PROactive Approach for Communities to Enable Societal Transformation (PRO-COAST) project, funded by the European Commission. The scope of this deliverable is the presentation of the development of a comprehensive, scalable and transferable index, integrating biodiversity and biodiversity conservation potential into the socio-economic framework in the light of the seminal work of the late Nobel Laureate Elinor Ostrom's Social Ecological Systems Framework (SESF).

The **Conservation & Human Use Index** is a **practical**, **multi-parameter assessment tool** designed to **identify and track conflicts, as well as synergies between conservation goals and human use of coastal areas** and track how these evolve over time. It applies the **SESF approach to analyse environmental, governance, and social dimensions in Case Study (CS) areas**, providing valuable insight between human-environment interactions (including conflicts and synergies).

The index enables conservation practitioners, local authorities, CS leaders, and other stakeholders to conduct a **structured and rapid assessment of strengths and weaknesses in governance, ecological conditions, and societal interactions within a given area**. Its participatory and flexible nature allows for use across a wide range of settings and supports collaborative, informed decision-making.

This tool is designed for **periodic use**, particularly when evaluating the effectiveness of past management efforts or identifying new challenges. It helps stakeholders to:

- Express their perspectives on current conservation practices, land and area use issues;
- Identify emerging trends in human–environment interactions;
- Reflect on past decisions and assess their outcomes.

Why Use This Index?

The **Conservation & Human Use Index** is a practical, efficient, and adaptable tool for **assessing the relationships between conservation and human activities**. With a strong focus on social-ecological conflicts, it provides rapid insights into key **environmental, governance, and societal issues arising from competing interests between conservation and human use**. The index is user-friendly, requiring minimal training, and can be used either as a desk-based review or in participatory workshops, making it suitable for a wide range of users and contexts.

Its flexible structure allows it to be applied in diverse geographic and social settings. By evaluating multiple dimensions, such as **Natural and Ecosystem Service Values, Threats and Pressures, Governance, and Social Perceptions**, the index also serves as a long-term monitoring tool, helping to track progress and inform conflict resolution strategies over time. While it is not intended to capture every detail or challenge within a Case Study area, it provides a solid foundation for dialogue between protected areas' managers and other relevant stakeholders, promoting shared understanding and guiding future conservation efforts.

1.2 Structure of this Report

This report includes **two main sections**:

Section A – Index Development Methodology --> where the development procedure of the Index is presented from the conceptual design and theoretical background to the final tool.

Section B – Presentation of the Conservation & Human Use Index --> where all Index aspects, such as the assessment procedure, assessment frequency, Index structure and dimensions, the scoring system, and interpretation of results are described.

Additionally, this report includes **two stand-alone Annexes**: a) the **Conservation & Human Use Index (Excel file)** and b) the **accompanying User Manual** of the Conservation & Human Use Index.

The dedicated User Manual was developed to accompany the Conservation and Human Use Index. It provides clear, step-by-step instructions on how to apply the Index across different contexts and it includes guidance on assessment procedure, frequency, scoring system, and interpretation of results. The manual ensures the Index is accessible and practical for use by conservation practitioners, managers, and local authorities, even with no prior training. Content overlaps between this report and the user manual are intentional, as both the final Index and the User Manual are designed to function as independent, stand-alone resources for end-users.

Finally, according to the PRO-COAST project timeline, the Conservation & Human Use Index will be tested in the coming months across the project's Case Studies, allowing for further calibration based on their feedback. While formal pilot testing is planned within PRO-COAST Case Studies, the Index has already undergone internal validation and refinement through repeated feedback cycles. The result is a tool that not only supports single assessments, but it can also be used regularly over time to monitor progress, identify emerging issues, and guide local conservation efforts through an inclusive and evidence-informed process.

2 INDEX DEVELOPMENT METHODOLOGY

2.1 Conceptual Design Requirements and Challenges

The conceptual design of the Conservation and Human Use Index was shaped by the need to address multiple, sometimes competing, requirements. To ensure its relevance, utility, and broad applicability, the Index had to meet the following key criteria:

- **Theoretical grounding**: The Index had to be grounded in the principles of the Social-Ecological Systems Framework (SESF), translating this theoretical foundation into a practical, operational tool capable of integrating a wide range of relevant parameters.
- **Generality and flexibility**: The Index needed to be sufficiently broad, flexible, and generic to be applicable across all PRO-COAST Case Study areas. At the same time, it was essential for the tool to be scalable and adaptable for use in a wide range of socio-ecological settings beyond the PRO-COAST context - ensuring its relevance to society at large.
- **Context-specific relevance**: The Index needed to generate meaningful, context-sensitive, and meaningful insights. This required it to be specific enough to identify and assess the strengths and weaknesses of individual Case Study areas effectively.
- **Geographic versatility**: While initially designed for use in coastal regions, the Index can also be suitable for application in inland areas, thereby broadening its geographic applicability.
- **Practicality and efficiency**: It was essential that the Index functions as a rapid assessment tool, capable of being completed approximately within a single day. This demanded a design that is user-friendly, simple to apply, practical in real-world contexts, efficient in execution, and easily adaptable.
- **Simplicity and adaptability**: The tool had to be relatively straightforward to complete, allowing users to work with varying levels of data availability. Its design also needed to accommodate diverse conditions without compromising usability.

The development process of the Conservation and Human Use Index took the above considerations into account and followed a structured, iterative approach, beginning with a comprehensive review of SESF applications, the conservation governance literature, as well as similar tools.

2.2 Application of SESF Principles within the Index

2.2.1 Introduction to SESF

The **Social-Ecological System Framework (SESF)**, developed by Nobel Laureate Elinor Ostrom, provides a comprehensive approach to understanding the complex interactions between ecological and social components in resource governance. Understanding the dynamics of complex interactions between humans and nature is crucial for promoting both human well-being and ensuring the sustainable management of natural resources. (Liu et al., 2015; Bisaro and Hinkel, 2016; Liu et al., 2018; Gain et al., 2019).

Recognising that neither natural nor human systems operate in isolation, Ostrom's SESF identifies a set of core subsystems -including resource systems, resource units, governance systems, and actors- that interact dynamically within a broader socio-political and ecological context (Ostrom, 2009). By structuring analysis around these subsystems and their interactions, the SESF facilitates comparative studies across diverse resource settings, from forests management to fisheries, and promotes an in-depth understanding of the conditions under which collective action and sustainable management are most likely to emerge (McGinnis & Ostrom, 2014). Additionally, the SESF proposed by Ostrom (2009) provides the option to

treat the social and ecological systems at almost equal depth (Binder et al., 2013). The subsystems, resource systems, and resource units of SESF represent the ecological system, while the governance system and actors represent social systems.

This framework has since become a foundational tool in interdisciplinary research on sustainability and adaptive governance.

2.2.2 SESF Variables and Indicators into the Conservation and Human Use Index

Although the SESF framework serves as a valuable tool for applying a diagnostic approach to the analysis of natural resource management within complex social-ecological systems, its operationalisation in more than one Common Pool Resource (CPR) management problem is not an easy task. Most scholarly articles apply the SESF framework in a specific CPR case (Gain et al., 2019; Leslie et al., 2015; Thiel et al., 2015; Basurto et al., 2013; Schlüter et al., 2014).

The SESF includes four main variables: Resource Systems (RS), Resource Units (RU), Governance Systems (GS), and Actors (A). In addition, it includes two exogenous variables: Related Ecosystems (ECO) and Social, Economic, and Political Settings (S) and the focal action situation, which includes Interactions (I) and Outcomes (O) (McGinnis and Ostrom, 2014; Figure 2.1).

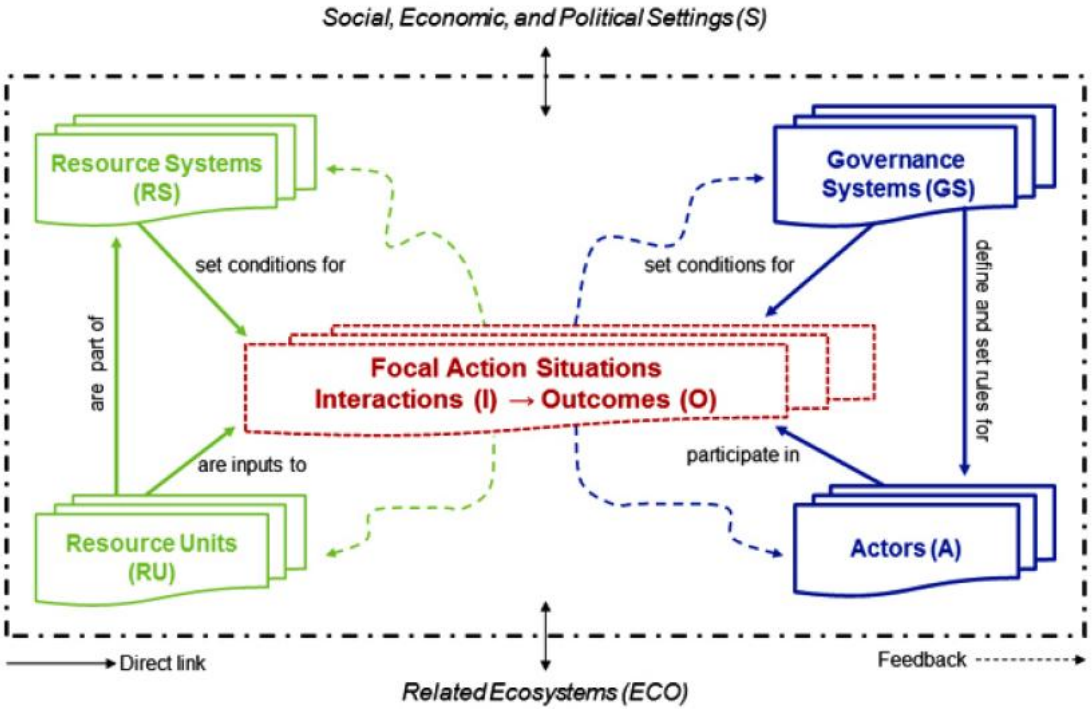


Figure 2.1: Revised social-ecological system framework (SESF) with multiple first-tier components (source: McGinnis & Ostrom, 2014)

Following the development of the SESF, Hinkel et al. (2014) and Schlüter et al. (2014) suggested that RU is an attribute of RS and the exogenous variables, Social, Economic, and Political Settings (S) and Related Ecosystems (ECO), are attributed and included in the concept “Environment” as they are external to the focal SES being analysed.

To incorporate the principles of the SESF into the Conservation and Human Use Index, we adopted these recommendations, leading to the identification of **four key SESF variables: Resource Systems (RS), Environment (E), Governance (G), and Actors (A)** (Figure 2.2).

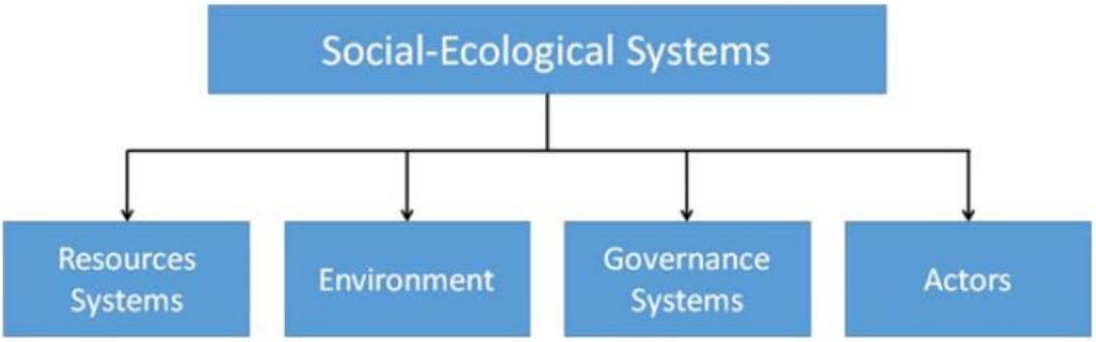


Figure 2.2: Revised social-ecological system framework based on Hinkel et al. (2014) and Schlüter et al. (2014) (source: Gain et al., 2019)

Subsequently, **specific indicators were identified for each of these four key SESF variables**, and a **set of qualitative questions was developed to assess each indicator** (Table 2.1). The indicators and the detailed questions per indicator were selected based on a combination of scientific literature and existing similar assessment tools, as well as the authors' own experience in the protection, management, and governance of protected areas.

The Resource Systems indicators, which relate to ecosystem services, were informed by the IUCN Protected Areas Benefits Assessment Tool + (PA-BAT+) (Ivanić et al., 2020). The Governance-related indicators were derived from the Elinor Index (Mahajan et al., 2023) which assesses equitable management and governance in area-based conservation. Additionally, the indicators related to Actors, which are expressed through social perception aspects in the Index, were shaped by relevant literature, including studies on the social impacts of European Protected Areas and policy recommendations by Jones et al. (2020). These sources were further complemented by real-world experience and insights from conservation areas' practitioners to ensure that the questions developed were both contextually grounded and broadly applicable across diverse case studies.

A key priority in developing the Index was to strike a balance between robustness and usability. It was designed to be user-friendly, requiring minimal training, adaptable for both focus groups and desk-based applications, and applicable in both data-rich and data-poor contexts. Questions were carefully selected to equally represent both ecological and social aspects, while keeping the language simple and the scoring intuitive.

It is also important to note that responses provided in the Conservation and Human Use Index are based on the knowledge, perceptions, and experiences of the individuals or groups completing the assessment. As such, answers are inherently subjective and may vary depending on the respondent's role, familiarity with the CS area, and comparison with other areas. This relativity is considered a valuable component of the assessment, as it captures diverse perspectives that can help identify knowledge gaps, management blind spots, or areas of consensus.

The detailed questions per indicator and SESF Variables are presented in the accompanying Annexes of this Report: Annex 1: Conservation and Human Use Index Excel file and Annex 2: Conservation and Human Use Index – User Manual.

Table 2.1 below presents the SESF variables, the Indicators for each variable and the number of questions per indicator, as well as per SESF variable.

Table 2.1: Indicators used in the Conservation and Human Use Index for each of the four key SESF variables

SESF Variables	Indicators	Number of Questions per Indicator	Number of Questions per SESF Variable
Resource Systems	Key natural values of the Case Study area (i.e. in terms of natural landscapes and biodiversity: flora and fauna species and habitats)	5	33
	Status of natural values in the Case Study area	5	
	Ecosystem Services Values	23	
Environment	Primary threats - pressures impacting the overall conservation status of the Case Study area	11	38
	Primary challenges or impacts affecting the overall conservation status of the Case Study area	3	
	Degree to which ecosystem services are affected by the pressures and threats in the Case Study area	24	
Governance	Management mechanism overview	2	27
	Existence of (a) Management Plan(s) and its implementation procedure for the Case Study area	1	
	Existence of monitoring programs or initiatives in place in Case Study area	3	
	Operational capacity - Allocation of resources	5	
	Regulations and enforcement	6	
	Diversity of expertise	1	
	Coordination and collaboration	4	
	Transparency and accountability	3	
	Perceived environmental outcomes	1	
	Perceived social outcomes	1	
Actors	Well-being and health	4	37
	Human rights and access to resources	4	
	Knowledge and education	4	
	Livelihoods and economic impacts	4	
	Local culture and values	4	
	Social relations	4	
	Social equity (inclusion and empowerment)	4	
	Diversity	9	

2.2.3 Assessing Performance for Selected Indicators

The questions that feed in the Index assessment are multiple-choice, i.e. the respondent selects one -or in a few cases more than one- answer from a list of provided options. The selection is made by marking the suitable answer with an “X”. In order to compare and summarise the performance of all the questions and indicators, the qualitative values are converted into a comparable scale using the **value function approach**.

Value functions are mathematical representations that allow for systematic and transparent comparisons across attributes of human judgements that make it possible to treat people’s values and judgements

explicitly, logically and systematically, even when input data are subjective or perception-based (Beinat, 1997). This method has also been implemented in other recent tools, such as the Elinor Index (Mahajan et al., 2023), which uses an ordinal scoring scale to evaluate the strength of governance and management arrangements in conservation areas.

Using this normalisation approach, all assessed questions of the Conservation and Human Use Index are answered using a 0-3 value function scale, allowing qualitative judgements to be captured in a comparable and systematic way. Each indicator and respective question are scored from 0 (indicating the worst performance) to 3 (representing the best performance). The intermediate values 1 and 2 refer to low and moderate performance, respectively.

This approach enables a rapid evaluation of complex features through a standardised, but accessible format and ensures that stakeholder views and expert insights can be captured in a way that is logically structured, mathematically tractable, and scalable for future comparisons. At the same time, this scoring design allows practitioners to easily interpret results, track changes over time, and communicate findings in both technical and non-technical contexts.

3 PRESENTATION OF THE CONSERVATION & HUMAN USE INDEX

3.1 Assessment Procedure

The Conservation & Human Use Index can be completed using **one of three methods or a combination of these**, depending on available resources, timing, access to stakeholders, and what is more suitable to the conditions of the Case Study area:

- **Desk-Based Assessment**

The desk-based assessment method is carried out by a knowledgeable individual, typically the area manager or a conservation practitioner, using available data, official reports, and expert knowledge and insights. This approach is especially useful when stakeholder access is limited or when a preliminary overview of the situation is needed. While it may not capture the full range of stakeholder perspectives, it enables a quick, informed assessment and can lay the groundwork for a more participatory process in the future.

Estimated time for completion: 3 hours, depending on availability of background data, familiarity with Case Study area, how well the documentation available is organised.

- **Combined Desk-Based Assessment by Multiple Stakeholder Groups**

This method involves distributing the Index (excel file) individually to representatives of various stakeholder groups (e.g. local communities, NGOs, government agencies, experts), who complete the assessment independently, based on their own knowledge and perspective. Once all responses are received, a coordinating individual, typically the CS area manager or a conservation practitioner, consolidates the results into one overall Master Index Assessment.

The **Master Index Assessment** is created by assigning numerical values to each answer category and calculating the mean score for each question across all stakeholder responses (refer to scoring system below). The average is then rounded to the nearest whole number and converted back into the corresponding category. This process reflects the overall perception across groups, while maintaining transparency and comparability.

Examples:

I. If the responses to a question are Low, Low, Moderate and High, then Mean = (1+1+2+3)/4= 1.75. This is rounded to 2, and the result is Moderate.

II. If the responses to a question are Absent, Absent and High, then Mean = (0+0+3)/3= 1 and the Result is Low.

This scoring approach ensures all inputs are equally weighted and allows practitioners to later explore the range of opinions in more detail if needed.

Estimated time for completion:

I. ~3 hours for each stakeholder representative to complete the Index

II. ~2 days for the coordinator to collect inputs and compile the Master Index

III. Total time: ~3 days, depending on the number of stakeholder groups

- **Facilitated Focus Group Discussion**

Facilitated focus groups bring together representatives from different stakeholder groups to collaboratively complete the assessment. The session is facilitated by two trained facilitators, one to guide the discussion and one to record responses. Each stakeholder group completes one version of the Index, reflecting their collective perspective. Once all groups have completed their assessments, mean scores are calculated and entered into the Master Index for interpretation. The method for combining multiple responses is the same as outlined in the Combined Desk-Based Assessment by Multiple Stakeholder Groups section.

Focus groups are encouraged, as they offer first-hand insights from those directly involved with the CS area. This approach provides a balanced overview by integrating diverse viewpoints and also allows practitioners to revisit individual group assessments for a deeper understanding of differing perceptions. Additionally, focus groups enable stakeholders to hear each other's perspectives directly, fostering more informed dialogue, increased mutual understanding, and the identification of shared priorities and common ground that can guide future decision-making and collaboration. Sharing the Index with participants in advance can further enhance the quality of the discussion by allowing time for reflection and preparation.

Estimated time for completion: 1 day (6-8 hours, including breaks) depending on number of stakeholder groups, how familiar participants are with the area/issues and discussion flow. This may also require additional time for setup and introduction.

- **Combined Approach Implementation**

The combined approach builds on the focus group method, with the added value of a desk-based assessment conducted in advance by the facilitators. This preparatory step helps provide background context, including the area size, ecological features, policy landscape, and historical management actions. This information supports facilitators in framing the discussion and helps participants engage more meaningfully with the questions. While the process is still driven by stakeholder dialogue, the desk-based input complements it by grounding the discussion in documented knowledge. Together, these elements produce a richer, more robust assessment.

Estimated time for completion: 1-2 days depending on time spent on the desk-based preparation and then facilitating the focus group.

3.2 Assessment Frequency

The Index is designed for periodical use, ideally annually, or every few years, depending on the context and management cycle. Repeated application allows stakeholders to:

- Monitor and compare changes over time
- Revisit earlier responses and track progress
- Adjust management actions based on evolving needs and feedback

3.3 Index Structure & Dimensions

3.3.1 Background information

Before beginning the scoring section, the Index includes **a set of 19 non-mandatory background questions** related to the Case Study area. These background information questions cover **general Case**

Study area characteristics, such as the site name, size of the area, existing management frameworks and conservation goals, and who is conducting the assessment. They provide essential contextual information that helps interpret the results, but are not included in the scoring, as they do not represent performance-based criteria. The aim is to provide essential context that helps interpret the scoring results and support future comparisons over time. This is because their purpose is not to evaluate performance or outcomes, but to ensure that assessments are grounded in a shared understanding of the Case Study area current situation.

3.3.2 Assessment Dimensions

The Index is based on **four key dimensions, adapted from the Social Ecological Systems Framework (SESF)**. Each of these dimensions is assessed through a series of structured questions designed to evaluate both current conditions and stakeholder perceptions.

The **total number of assessed questions** is **133**. All questions are mandatory; however, if a particular question is not relevant or applicable to the Case Study area, the option "***Not Applicable***" may be selected, which will not affect the scoring calculations.

Each question belongs to one of the following four dimensions (referred to as "attributes" within the Index):

1. **Resource System (R)** --> which within the Index refers to the **"Natural Values and Ecosystem Services Values"**

This dimension assesses the **ecological significance and value of the CS area, including important landscapes, flora and fauna species and habitats, their status and the value of the area in terms of ecosystem services**.

[total number of questions: 33]

2. **Environment (E)** --> which within the Index refers to the "**Threats and Pressures**"

This dimension assesses the **degree that different types of human activities, environmental factors, or natural phenomena negatively impact the ecosystem, biodiversity, and sustainability of the CS area**.

[total number of questions: 38]

3. **Governance System (G)** --> which within the Index refers to "**Governance**"

This dimension assesses the **effectiveness of policies, regulations, processes and practices through which decisions about the management and conservation of the CS area are made and implemented**, such as decision-making, stakeholder participation and inclusion, social justice and transparency.

[total number of questions: 27 (*25 of those being scored*)]

4. **Actors (A)** --> which within the Index refers to "**Social Perceptions**"

This dimension assesses the **views, values, attitudes, and level of engagement of local communities and other interested stakeholders regarding the management, accessibility, social justice, diversity, benefits, and challenges of the CS area**.

[total number of questions: 37]

3.4 Scoring System

3.4.1 Scoring Scale (Individual question marking scale)

Each question is scored on a 0 to 3 scale as follows:

0 = Least desirable outcome
1 = Somewhat undesirable outcome
2 = Moderately desirable outcome
3 = Most desirable outcome

In cases where a question is not applicable to the case study area, an "N/A" (Not Applicable) option is available. When a question is marked as N/A, it is excluded from the scoring calculations, and the system automatically adjusts the maximum possible score for that attribute to ensure the final percentage remains accurate.

Most questions allow the selection of the option **'Not Applicable' (N/A)**, which should be used only when the question or feature does not genuinely apply to the Case Study area, such as for geographical, legal, or contextual reasons. In contrast, the **'Absent'** option is selected when a relevant feature, mechanism, or condition is expected, but is currently missing from the Case Study area. Selecting 'Not Applicable' (N/A) ensures that the scoring remains fair and is not influenced by elements that are irrelevant to the specific context of the Case Study area.

Indicative Examples:

--> If a threat, such as agriculture is relevant to the type of Case Study area (e.g. a terrestrial or coastal site), but is not currently present or observed, then the response is set to "Absent." However, if the threat is entirely irrelevant, such as agriculture in a fully marine protected area, then the response is set to "Not Applicable (N/A)."

--> If the Case Study area is officially recognized and would normally be expected to have a managing authority, but no such authority exists, then the response is set to "Absent." Conversely, if the area is used informally, with no legal or policy requirement for management, or if it lacks ecological significance and does not require management, then the response is set to "N/A."

--> If environmental education programmes would be relevant, but are entirely missing, then the response is set to "Absent." However, if the Case Study area has no resident or visiting population, making such programmes unnecessary, then the response is set to "N/A."

3.4.2 Attribute and Overall Score Calculation (How the overall Index is scored)

Each attribute score is calculated as a percentage of its maximum possible score, based on the number of questions answered (excluding any marked as N/A). This percentage is then multiplied by 25, since each attribute represents 25% of the total score. With four attributes in total, this results in a final percent score out of a maximum 100.

All attributes are equally weighted to ensure a balanced evaluation across all dimensions. This equal weighting prevents any single aspect from disproportionately influencing the overall result and supports a holistic understanding of the case study area.

3.5 Interpretation of Results

After completing the assessment, results are produced for each one of the four main attributes, as well as an overall score for the CS area. This allows users to gain both a broad overview and a detailed breakdown of where strengths and weaknesses lie.

All scores and colour grading are generated automatically in the Excel tool.

In addition to the main four attributes, the Index also provides individual scores for **3 sub-attributes under the "Natural Values & Ecosystem Services" (R) attribute**:

I. The **ecological significance and value of the CS area**, including important landscapes, flora, fauna, and habitats (R1)

II. The **overall status of landscapes, species, and habitats within the area** (R2)

III. The **ecosystem services value**, reflecting the importance of the area in providing provisioning, regulating, cultural, and supporting services that benefit human health, biodiversity, productivity, and well-being (R3)

3.5.1 Individual attribute grading interpretation

In the Excel version of the Index, each attribute and sub-attribute score is automatically assigned a colour-coded range (red, orange, yellow, or green) corresponding to the following grading levels:

Score Range	Performance Level	Colour Code
0-6.25%	Minimal	Red
6.26-12.50%	Low	Orange
12.51-18.75%	Moderate	Yellow
18.76-25%	High	Green

These categories are matched with narrative descriptions that are automatically generated in the Excel tool (see Excel tool for full descriptions).

For example:

I. A **Minimal score in overall status of landscapes, flora species, fauna species and habitats in the CS area** indicates the **area has highly degraded biodiversity, with severely impacted natural values**. Urgent and significant intervention is needed to address the critical ecological decline.

II. A **Moderate score in Governance** may reflect that **governance is operational, but could benefit from improvement**. Conservation policies are in place, and enforcement is moderate, though management effectiveness can be strengthened. Addressing minor gaps would enhance the overall governance framework.

III. A **High score in Social Perception** shows **support and trust in conservation efforts**. Stakeholders actively participate in governance, view policies as beneficial, and contribute to sustainable practices. Ongoing communication and monitoring are essential to maintaining high levels of social perception and engagement with CS area management.

3.5.2 Overall Index grading interpretation

The final score, calculated out of 100, assigns the Case Study to one of four broader categories, each of which is associated with a corresponding recommended course of action:

Final Score (0-100)	Interpretation	Suggested Action
0-25%	**Plan**	Urgent action needed to develop foundational governance and conservation responses
26-50%	**Build**	Initial efforts exist, but major gaps need addressing. Engage stakeholders to strengthen responses.
51-75%	**Strengthen**	A functioning system is in place; focus on refining and improving weak areas.
76-100%	**Maintain**	Strong performance; maintain momentum through ongoing monitoring and early response to emerging risks.

This structured scoring system, paired with colour codes and tailored descriptions, enables clear, consistent interpretation of both strengths and weaknesses. It also ensures that results can be easily communicated to stakeholders, managers, and policy-makers.

4 REFERENCES

Basurto, X., Gelcich, S., & Ostrom, E. (2013). The social–ecological system framework as a knowledge classificatory system for benthic small-scale fisheries. Global Environmental Change, 23(6), 1366–1380.

Beinat, E. (1997). Value functions for environmental management. Dordrecht: Kluwer Academic Publishers.

Binder, C. R., Hinkel, J., Bots, P. W. G., & Pahl-Wostl, C. (2013). Comparison of frameworks for analyzing social-ecological systems. Ecology and Society, 18(4), Article 26.

Bisaro, A., & Hinkel, J. (2016). Governance of social dilemmas in climate change adaptation. Nature Climate Change, 6(4), 354–359.

Gain, A. K., Ashik-Ur-Rahman, M., & Vafeidis, A. (2019). Exploring human-nature interaction on the coastal floodplain in the Ganges-Brahmaputra delta through the lens of Ostrom's social-ecological systems framework. Environmental Research Communications, 1(5), 051003.

Ivanić, K-Z., Stolton, S., Figueroa Arango, C. and Dudley, N., 2020. Protected Areas Benefits Assessment Tool + (PA-BAT+): A tool to assess local stakeholder perceptions of the flow of benefits from protected areas. Gland, Switzerland: IUCN.

Jones, N., McGinlay, J., Dimitrakopoulos, P.G., Ianni, E., Nastran, M., Pipart, N., Polajnar Horvat, K., Roberts, C., Saratsi, E., Scolozzi, R., Scotti, M., Tardivo, G. and Whitehouse, A., 2020. Social impacts of European protected areas and policy recommendations. Environmental Science & Policy, 112, pp.134-140.

Leslie, H. M., Basurto, X., Nenadovic, M., Sievanen, L., Cavanaugh, K. C., Cota-Nieto, J. J., Erisman, B. E., Finkbeiner, E., Hinojosa-Arango, G., Moreno-Báez, M., Nagavarapu, S., Reddy, S. M. W., Sánchez-Rodríguez, A., Siegel, K., Ulibarria-Valenzuela, J. J., Weaver, A. H., & Aburto-Oropeza, O. (2015). Operationalizing the social-ecological systems framework to assess sustainability. Proceedings of the National Academy of Sciences, 112(19), 5979–5984.

Liu, J., Hull, V., Godfray, H. C. J., Tilman, D., Gleick, P., Hoff, H., Pahl-Wostl, C., Xu, Z., Chung, M. G., Sun, J., & Li, S. (2018). Nexus approaches to global sustainable development. Nature Sustainability, 1(9), 466–476.

Liu, J., Mooney, H., Hull, V., Davis, S. J., Gaskell, J., Hertel, T., Lubchenco, J., Seto, K. C., Gleick, P., Kremen, C., & Li, S. (2015). Systems integration for global sustainability. Science, 347(6225), 1258832.

Mahajan, S.L. et al. (2023) 'Introducing Elinor for monitoring the governance and management of area - based conservation', Conservation Biology, 38(2).

McGinnis, M. D., & Ostrom, E. (2014). Social-ecological system framework: Initial changes and continuing challenges. Ecology and Society, 19(2), 30.

Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems. Science, 325(5939), 419–422.

Schlüter, M., Hinkel, J., Bots, P. W. G., & Arlinghaus, R. (2014). Application of the SES framework for model-based analysis of the dynamics of social-ecological systems. Ecology and Society, 19(1), Article 36.

Thiel, A., Adamseged, M. E., & Baake, C. (2015). Evaluating an instrument for institutional crafting: How Ostrom's social–ecological systems framework is applied. Environmental Science & Policy, 53, 152–164.

ANNEX 1: CONSERVATION & HUMAN USE INDEX EXCEL FILE

ANNEX 2: CONSERVATION & HUMAN USE – USER MANUAL



CONSERVATION & HUMAN USE INDEX

- User Manual -

June 2025

PRO Coast

Preface

The **Conservation & Human Use Index** was developed as a deliverable under the HORIZON project **PRO-COAST**, titled **A PROactive approach for COmmunities to enAble Societal Transformation (2023-2026)**. The project aims to **empower local communities and civil society to take an active role in restoring and protecting biodiversity and ecosystem services across Europe's coastal regions**.

It promotes **inclusive environmental governance by integrating local knowledge into decision-making and equipping ecosystem managers and local society with the tools needed to make informed, biodiversity-conscious decisions**. PRO-COAST adopts a holistic view that values both the intrinsic worth of nature and its practical benefits for human wellbeing, aiming to enhance both ecological health and social resilience.

To address the complex dynamics of coastal social ecological systems, PRO-COAST applies the seminal work of the late Nobel Laureate Elinor Ostrom's **Social Ecological Systems Framework (SESF)**. This framework is applied and tested across ten representative Case Studies covering all five European coastal regions, including both EU and non-EU areas. Each Case Study addresses specific conservation challenges and engages local stakeholders through participatory methodologies.

In this context, the **Conservation & Human Use Index** provides a **practical tool for identifying conflicts and synergies between conservation goals and human use of coastal areas**, supporting future action in line with PRO-COAST's commitment to societal transformation through inclusive and informed stewardship.

Citation: *Vayanou, Ph., Georgiou, P., Kounnamas, C. (2025). Conservation & Human Use Index. Under PRO-COAST: A PROactive approach for COmmunities to enAble Societal Transformation (2023–2026).*

DISCLAIMER

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Objectives of Index

The **Conservation & Human Use Index** is a **multi-parameter assessment tool** designed to **identify and track conflicts between biodiversity conservation and ecosystem service overexploitation**. It applies the **SESF approach to analyse environmental, governance, and social dimensions in Case Study (CS) areas**, providing valuable insight between human-environment interactions.

The index enables conservation practitioners, local authorities, CS leaders, and stakeholders to conduct a **structured and rapid assessment of strengths and weaknesses in governance, ecological conditions, and societal interactions within a given area**. Its participatory and flexible nature allows for use across a wide range of settings and supports collaborative, informed decision-making.

The tool is designed for periodic use, particularly when evaluating the effectiveness of past management efforts or identifying new challenges. It helps stakeholders to:

- Express their perspectives on current conservation and use issues;
- Identify emerging trends in human–environment interactions;
- Reflect on past decisions and assess their outcomes.

Why Use This Index?

The **Conservation & Human Use Index** is a practical, efficient, and adaptable tool for **assessing the relationships between conservation and human activities**. With a strong focus on social-ecological conflicts, it provides rapid insights into key **environmental, governance, and societal issues arising from competing interests between conservation and human use**. The index is user-friendly, requiring minimal training, and can be used either as a desk-based review or in participatory workshops, making it suitable for a wide range of users and contexts.

Its flexible structure allows it to be applied in diverse geographic and social settings. By evaluating multiple dimensions, such as **Natural and Ecosystem Service Values, Threats and Pressures, Governance, and Social Perceptions**, the index also serves as a long-term monitoring tool, helping to track progress and inform conflict resolution strategies over time. While it is not intended to capture every detail or challenge within a Case Study area, it provides a solid foundation for dialogue between managers and stakeholders, promoting shared understanding and guiding future conservation efforts.

Structure of this User Manual

This manual provides **step-by-step guidance** on:

1. **How to conduct the Assessment**
2. **Assessment Frequency**
3. **Index Structure, Dimensions & Scoring System**
4. **Interpretation of Results**
5. **Guidance on Index Questions**

Instructions

How to conduct the Assessment

The Conservation & Human Use Index can be completed using **one of three methods or a combination**, depending on available resources, timing, access to stakeholders, as well as what is more suitable to the conditions of the Case Study area:

- **Desk-Based Assessment**

The desk-based assessment method is carried out by a knowledgeable individual, typically the area manager or a conservation practitioner, using available data, official reports, and expert knowledge and insights. This approach is especially useful when stakeholder access is limited or when a preliminary overview of the situation is needed. While it may not capture the full range of stakeholder perspectives, it enables a quick, informed assessment and can lay the groundwork for a more participatory process in the future.

Estimated time for completion: 3 hours depending on availability of background data, familiarity with Case Study area, and how well the documentation available is organised.

- **Combined Desk-Based Assessment by Multiple Stakeholder Groups**

This method involves distributing the Index individually to representatives of various stakeholder groups (e.g. local communities, NGOs, government agencies, experts), who complete the assessment independently, based on their own knowledge and perspective. Once all responses are received, a coordinating individual, typically the CS area manager or a conservation practitioner, consolidates the results into one overall Master Index Assessment.

The Master Index Assessment is created by assigning numerical values to each answer category and calculating the mean score for each question across all stakeholder responses (refer to scoring system below). The average is then rounded to the nearest whole number and converted back into the corresponding category. This process reflects the overall perception across groups, while maintaining transparency and comparability.

Examples:

I. If the responses to a question are Low, Low, Moderate and High→ Mean = (1+1+2+3)/4= 1.75. Rounded to 2. → Result = Moderate

II. If the responses to a question are Absent, Absent and High → Mean = (0+0+3)/3= 1→ Result = Low

This scoring approach ensures all inputs are equally weighted and allows practitioners to later explore the range of opinions in more detail if needed.

Estimated time for completion:

I. ~3 hours for each stakeholder representative to complete the Index

II. ~2 days for the coordinator to collect inputs and compile the Master Index

III. Total time: ~3 days, depending on the number of stakeholder groups

- **Facilitated Focus Group Discussion**

Facilitated focus groups bring together representatives from different stakeholder groups to collaboratively complete the assessment. The session is facilitated by two trained facilitators, one to guide the discussion and one to record responses. Each stakeholder group completes one version of the Index, reflecting their collective perspective. Once all groups have completed their assessments, mean scores are calculated and entered into the Master Index for interpretation. The method for combining multiple responses is the same as outlined in the Combined Desk-Based Assessment by Multiple Stakeholder Groups section.

Focus groups are encouraged, as they offer first-hand insights from those directly involved with the CS area. This approach provides a balanced overview by integrating diverse viewpoints and also allows practitioners to revisit individual group assessments for a deeper understanding of differing perceptions. Additionally, focus groups enable stakeholders to hear each other's perspectives directly, fostering more informed dialogue, increased mutual understanding, and the identification of shared priorities and common ground that can guide future decision-making and collaboration. Sharing the Index with participants in advance can further enhance the quality of the discussion by allowing time for reflection and preparation.

Estimated time for completion: 1 day (6-8 hours, including breaks) depending on number of stakeholder groups, how familiar participants are with the area/issues and discussion flow. May require additional time for setup and introduction.

- **Combined Approach Implementation**

The combined approach builds on the focus group method, with the added value of a desk-based assessment conducted in advance. This preparatory step helps provide background context, including the area size, ecological features, policy landscape, and historical management actions. This information supports facilitators in framing the discussion and helps participants engage more meaningfully with the questions. While the process is still driven by stakeholder dialogue, the desk-based input complements it by grounding the discussion in documented knowledge. Together, these elements produce a richer, more robust assessment.

Estimated time for completion: 1-2 days depending on time spent on the desk-based preparation and then facilitating the focus group.



Assessment Frequency

The Index is designed for **periodical use**, ideally annually, or every few years, depending on the context and management cycle. Repeated application allows stakeholders to:

- **Monitor and compare changes over time**
- **Revisit earlier responses and track progress**
- **Adjust management actions based on evolving needs and feedback**



Index Structure, Dimensions & Scoring System

Background information

Before beginning the scoring section, the Index includes **a set of 19 non-mandatory background questions** related to the Case Study area. These background information questions cover **general Case Study area characteristics, such as the site name, size of the area, existing management frameworks and conservation goals, and who is conducting the assessment**. They provide essential contextual information that helps interpret the results, but are not included in the scoring, as they do not represent performance-based criteria. The aim is to provide essential context that helps interpret the scoring results and support future comparisons over time. This is because their purpose is not to evaluate performance or outcomes, but to ensure that assessments are grounded in a shared understanding of the Case Study area current situation.

Assessment Dimensions

The Index is based on **four key dimensions, adapted from the Social Ecological Systems Framework (SESF)**. Each of these dimensions is assessed through a series of structured questions designed to evaluate both current conditions and stakeholder perceptions.

The total number of assessed questions is 133. All questions are mandatory; however, if a particular question is not relevant or applicable to the Case Study area, the option "Not Applicable" may be selected, which excludes this question from the scoring calculations.

Each question belongs to one of the following four dimensions (referred to as "attributes" within the Index):

1. **Resource System (R)** --> which within the Index refers to **"Natural Values and Ecosystem Services Values"**

This dimension assesses the **ecological significance and value of the CS area, including important landscapes, flora species, fauna species and habitats, their status and the value of the area in terms of ecosystem services**.

[total number of questions: 33]

2. **Environment (E)** --> which within the Index refers to "**Threats and Pressures**"

This dimension assesses the **degree that different types of human activities, environmental factors, or natural phenomena negatively impact the ecosystem, biodiversity, and sustainability of the CS area**.

[total number of questions: 38]

3. **Governance System (G)** --> which within the Index refers to "**Governance**"

This dimension assesses the **effectiveness of policies, regulations, processes and practices through which decisions about the management and conservation of the CS area are made and implemented**, such as decision-making, stakeholder participation and inclusion, social justice and transparency.

[total number of questions: 27 (*25 of those being scored*)]

4. **Actors (A)** --> which within the Index refers to "**Social Perceptions**"

This dimension assesses the **views, values, attitudes, and level of engagement of local communities and other interested stakeholders regarding the management, accessibility, social justice, diversity, benefits, and challenges of the CS area**.

[total number of questions: 37]

Scoring System

I. **Scoring Scale** (Individual question marking scale)

Each question is scored on a 0 to 3 scale as follows:

0 = Least desirable outcome
1 = Somewhat undesirable outcome
2 = Moderately desirable outcome
3 = Most desirable outcome

In cases where a question is not applicable to the case study area, an "N/A" (Not Applicable) option is available. When a question is marked as N/A, it is excluded from the scoring calculations, and the system automatically adjusts the maximum possible score for that attribute to ensure the final percentage remains accurate.

II. **Attribute and Overall Score Calculation** (How the overall Index is scored)

Each attribute score is calculated as a percentage of its maximum possible score, based on the number of questions answered (excluding any marked as N/A). This percentage is then multiplied by 25, since each attribute represents 25% of the total score. With four attributes in total, this results in a final percent score out of a maximum of 100.

All attributes are equally weighted to ensure a balanced evaluation across all dimensions. This equal weighting prevents any single aspect from disproportionately influencing the overall result and supports a holistic understanding of the case study area.



Interpretation of Results

After completing the assessment, **results are produced for each one of the four main attributes, as well as an overall score for the CS area**. This allows users to gain both a **broad overview and a detailed breakdown of where strengths and weaknesses lie**.

In addition to the main four attributes, the Index also provides individual scores for **3 sub-attributes under the "Natural Values & Ecosystem Services" (R) attribute**:

I. The **ecological significance and value of the CS area**, including important landscapes, flora, fauna, and habitats (R1)

II. The **overall status of landscapes, species, and habitats within the area** (R2)

III. The **ecosystem services value**, reflecting the importance of the area in providing provisioning, regulating, cultural, and supporting services that benefit human health, biodiversity, productivity, and well-being (R3)

Individual attribute grading interpretation

In the Excel version of the Index, each attribute and sub-attribute score is automatically assigned a colour-coded range (red, orange, yellow, or green) corresponding to the following grading levels:

Score Range	Performance Level	Colour Code
0-6.25%	Minimal	Red
6.26-12.50%	Low	Orange
12.51-18.75%	Moderate	Yellow
18.76-25%	High	Green

These categories are matched with narrative descriptions that are automatically generated in the Excel tool (see Excel tool for full descriptions).

For example:

I. A **Minimal score in overall status of landscapes, flora species, fauna species and habitats in the CS area** indicates the **area has highly degraded biodiversity, with severely impacted natural values**. Urgent and significant intervention is needed to address the critical ecological decline.

II. A **Moderate score in Governance** may reflect that **governance is operational but could benefit from improvement**. Conservation policies are in place, and enforcement is moderate, though management effectiveness can be strengthened. Addressing minor gaps would enhance the overall governance framework.

III. A **High score in Social Perception** shows **support and trust in conservation efforts**. Stakeholders actively participate in governance, view policies as beneficial, and contribute to sustainable practices. Ongoing communication and monitoring are essential to maintaining high levels of social perception and engagement with CS area management.

Overall Index grading interpretation

The final score, calculated out of 100, assigns the Case Study to one of four broader categories, each of which is associated with a corresponding recommended course of action:

Final Score (0-100)	Interpretation	Suggested Action
0-25%	**Plan**	Urgent action needed to develop foundational governance and conservation responses
26-50%	**Build**	Initial efforts exist, but major gaps need addressing. Engage stakeholders to strengthen responses.
51-75%	**Strengthen**	A functioning system is in place; focus on refining and improving weak areas.
76-100%	**Maintain**	Strong performance; maintain momentum through ongoing monitoring and early response to emerging risks.

This structured scoring system, paired with colour codes and tailored descriptions, enables clear, consistent interpretation of both strengths and weaknesses. It also ensures that results can be easily communicated to stakeholders, managers, and policymakers.

Note: All scores, colour grading, and narrative descriptions are generated automatically in the Excel tool.



Assessment Questions

Note on subjectivity and relativity of responses:

The responses provided in this Index are based on the knowledge, perceptions, and experiences of the individuals or groups completing the assessment. As such, answers are inherently subjective and may vary depending on the respondent's role, familiarity with the CS area, and comparison with other areas.

This relativity is considered a valuable component of the assessment, as it captures diverse perspectives that can help identify knowledge gaps, management blind spots, or areas of consensus.

Participants are encouraged to answer as honestly and reflectively as possible, using their own understanding and context as reference.

In the Tables below, each question of the Index is explained in more detail and guidance is provided on how to answer each question.

There are **5 Tables** corresponding to the questions in:

1. **Background information** [*Index Excel Tab: CS_Background Information*]
2. **Natural Values and Ecosystem Services Values** [*Index Excel Tab: Environment*]
3. **Threats and Pressures** [*Index Excel Tab: Environment*]
4. **Governance** [*Index Excel Tab: Governance & Social*]
5. **Social Perceptions** [*Index Excel Tab: Governance & Social*]



Note on responses in relation to Non-Applicable (N/A) option:

Most questions allow the selection of the option 'Not Applicable' (N/A), which should be used only when the question or feature does not genuinely apply to the Case Study area, such as for geographical, legal, or contextual reasons.

In contrast, the 'Absent' option should be selected when a relevant feature, mechanism, or condition is expected, but is currently missing from the Case Study area.

Selecting 'Not Applicable' (N/A) ensures that the scoring remains fair and is not influenced by elements that are irrelevant to the specific context of the Case Study area.

Indicative Examples:

--> If a threat such as agriculture is relevant to the type of Case Study area (e.g. a terrestrial or coastal site) but is not currently present or observed, select "Absent." However, if the threat is entirely irrelevant-such as agriculture in a fully marine protected area- select "Not Applicable (N/A)."

--> If the Case Study area is officially recognized and would normally be expected to have a managing authority, but no such authority exists, select "Absent." Conversely, if the area is used informally, with no legal or policy requirement for management, or if it lacks ecological significance and does not require management, select "N/A."

--> If environmental education programmes would be relevant but are entirely missing, select "Absent." However, if the Case Study area has no resident or visiting population, making such programmes unnecessary, select "N/A."



1. Background Information

Question	What is this question asking?	Answer Guidance
B01-Name of institution associated with this assessment	This question simply identifies which organisation, institution, or management body is responsible for completing the assessment. This information helps track who provided the data and supports consistency across repeated assessments or comparisons between sites.	Open field. Fill in the full name of the institution conducting the assessment.
B02-Type of institution associated with this assessment	This question helps identify the type of organisation or individual completing the assessment. Understanding the background of the respondent is important for interpreting results, as different institutions may have different levels of access to information, perspectives, and priorities.	Please select the option that best describes the institution or individual completing the assessment. If more than one applies, tick all relevant boxes. • Non-governmental Organisation (NGO) • CS area manager • CS personnel • Government personnel • Local community member / representative • Other (please specify)
B03-Role of the person responsible for completing this Assessment	This question aims to clarify the specific role or position of the individual completing the Index. This helps with interpreting the answers, as different roles may bring different types of knowledge, experience, and perspectives to the assessment.	Briefly describe the person's role (e.g. marine biologist, local NGO coordinator, area manager, community leader, etc.). If multiple people were involved, specify the lead respondent and note any supporting roles.
B04-How was the information in this assessment gathered?	This question identifies the method used to complete the assessment. It helps clarify whether the results are based on individual expert input, stakeholder collaboration, group discussion, or a combination of these.	Select the applicable method: • **Desk-based Assessment** – Conducted by one person using existing documents, knowledge, and data. • **Combined Desk-based Assessment by several Stakeholder groups** – Stakeholders complete the Index separately (e.g. online or in writing) and responses are combined. • **Facilitated Focus Group Discussion** – Stakeholder groups complete the Index through guided discussion, typically led by a facilitator. • **Combination** – A mix of the above methods.

Question	What is this question asking?	Answer Guidance
B05-Rationale for assessment	This question asks why the Index was completed at this time. It helps track whether the assessment is a first-time baseline or part of ongoing monitoring efforts.	Choose one: • **Baseline Information (1st time)** – This is the first time the Index is being completed for this Case Study area. • **Monitoring of Changes** – This is a follow-up assessment to monitor developments, progress, or changes since the last assessment.
B06-Number of people engaged from key stakeholder groups in filling the Index	This question asks how many individuals from each stakeholder group were involved in the assessment process. It helps to understand the diversity and inclusivity of the exercise. If an individual belongs to more than one category, hers/his primary role in relation to CS area is assigned.	Write the number of people involved from each of the following categories: • **Local community** – e.g. local residents, community leaders • **NGO** – members of non-governmental organisations • **Academic** – researchers, scientists, students • **Government** – local or national authority representatives • **Private Sector** – businesses, tourism operators, landowners • **Other** – please specify in the space provided
B07-Gender representation of stakeholders consulted in filling the Index	This helps record how gender-inclusive the assessment process was by listing the number of participants by gender identity.	Write the number of participants that identified as: • Female • Male • Non-binary • Prefer not to say • N/A
B08-Country	This question captures the national context in which the Case Study (CS) area is located.	Write the official name of the country where the CS area is located. If the CS area spans more than one country (e.g. transboundary coastal systems), list all relevant countries involved. **Example:** Cyprus
B09-District	This question identifies the specific administrative region or district within the country where the Case Study (CS) area is located.	Provide the name of the district, municipality, or equivalent administrative division where the CS area is primarily located. If the area overlaps more than one district, list all applicable names. **Example:** Paphos
B10-Name of CS area	This question requests the official or commonly recognised name of the Case Study (CS) area being assessed. The name should clearly identify the location where the Index is applied.	Write the full name of the CS area. This could be the official designation of a protected area, or a local area name. **Example:** Akamas Peninsula.

Question	What is this question asking?	Answer Guidance
B11-Size of CS area (in sq. kilometers)	This records the physical size of the Case Study area.	Insert the size in square kilometres (km²). If unknown, write "N/A".
B12-CS area boundaries	These questions explore whether the physical and administrative boundaries of the Case Study (CS) area are clearly documented, recognised, and understood by relevant parties. **Example**: In some areas, a marine protected zone may be defined on paper, but not all fishers or community members may be aware of its limits or legal implications.	• **Yes**: The boundary is well-defined in documentation and understood by stakeholders (e.g. community members, managers, fishers, etc.). • **No**: The boundary is not formally defined or widely known, leading to confusion or overlap in land/resource use.
B13-Existence of legal protection status based on EU, National and International Legislation	This question explores whether the Case Study (CS) area is formally protected under any legal framework at national, EU, or international level. These protections may influence how the area is managed, the types of activities allowed, and the level of enforcement.	For each of the three levels of legislation, select **Yes** if the area is officially recognised and protected under that category, or **N/A** if the legislation is not relevant or applicable to your country/context. If **Yes** is selected, briefly specify the designation (e.g. Natura 2000 site, Ramsar Wetland, National Park, etc.). • **National Legislation** – e.g. Local protected area status, National Parks, Nature Reserves under national law. • **EU Legislation** – e.g. Natura 2000 network under the Birds and Habitats Directives. • **International Legislation** – e.g. Ramsar Convention on Wetlands, SPAMI under the Barcelona Convention, UNESCO Biosphere Reserve. • **N/A** – Select only if none of these legislative frameworks are relevant to the context.
B14-Year of first formal establishment/ legal designation	This refers to the year when the Case Study (CS) area was first officially established or legally recognised under any type of formal conservation or land-use designation (e.g. National Park, Natura 2000, Biosphere Reserve, etc.). It helps place the current status of the area in historical and management context.	• **Year** – Write the year the site was formally designated under any legal or official framework (e.g. 2003). • **N/A** – Select if the site has no formal designation or if this information is unavailable.
B15-Name of Management Authority(ies)	This question refers to the organisation(s) officially responsible for managing the Case Study (CS) area. It helps clarify who oversees decision-making, enforcement, monitoring, and implementation of conservation or resource-use policies.	• **Name of Primary Management Authority** – Write the official name of the main managing institution or authority. • **If more than one, please specify** – Include names of any other institutions involved in co-management or with shared responsibilities.

Question	What is this question asking?	Answer Guidance
		• **N/A** – Select if there is no official management authority or if the information is unavailable.
B16-Governance Type	This question identifies the governance model currently in place for managing the Case Study (CS) area. It focuses on who holds the main responsibility for decisions and implementation of conservation or resource-use actions. **Tip:** Select the option that best represents the current management structure. If multiple governance types apply, the dominant or officially recognised one should be chosen.	• **Co-Management** – Joint responsibility shared between two or more parties (e.g. government and local community or NGO). • **Government Led** – Managed primarily by a national, regional, or local government body. • **NGO** – Managed mainly by a non-governmental organisation. • **Local Community** – Managed primarily by local community groups or traditional leaders. • **Private** – Managed by a private entity, such as a company or individual landowner. • **None** – No formal governance system is in place.
B17-CS area primary management objectives (1-5 maximum)	This section asks you to list the main goals or intended outcomes of managing the Case Study (CS) area. These are the **top priorities** that guide decision-making, planning, and implementation of conservation or sustainable use efforts.	• You can list up to five key objectives. • Use brief, clear descriptions (1–2 sentences each). • If the area does not have formal objectives, select N/A. **Examples:** • Protect biodiversity or endangered species • Improve ecosystem health or water quality • Support sustainable resource use (e.g. fisheries, agriculture) • Enhance local livelihoods or community benefits • Promote eco-tourism or recreational use • Adapt to climate change or reduce risk from hazards
B18- Name of individual coordinating the Index Assessment	This question captures the name of the person responsible for facilitating and compiling the Index Assessment. This individual is typically a conservation practitioner, project lead, or area manager. Their role involves overseeing the assessment process, gathering inputs from stakeholder groups, calculating mean scores, and finalising the overall master Index.	**Example:** Anna Rose
B19- Date conducting the Index Assessment	This question records the date (or range of dates) during which the Index Assessment was carried out.	Please enter the full date (DD/MM/YYYY) or a date range if the process spanned multiple days. **Example: 08/10/2024 – 09/10/2024**

2. Natural Values and Ecosystem Services Values

Question	What is this question asking?	Answer Guidance
R011 - Important Landscapes - Significance	This question aims to assess whether the Case Study area includes any notable natural or cultural landscapes of value. **Natural landscapes** refer to areas shaped primarily by natural processes, such as coastlines, forests, wetlands, cliffs, dunes, or mountain ranges. These areas may hold ecological, aesthetic, geological, or wilderness value. **Cultural landscapes** are shaped through human interaction with nature and include agricultural terraces, historic villages, sacred places, or traditional land-use systems that reflect local heritage and identity. Both types of landscapes can be valued for their ecological importance, scenic beauty, historical meaning, or cultural significance. Relevant frameworks that may recognise or protect such landscapes include: • Local designations (e.g. Local Nature Reserves, municipal conservation zones) • National frameworks (e.g. National Parks, cultural heritage protection laws) • EU-level protection (e.g. Natura 2000 sites, European Heritage Label) • International conventions (e.g. UNESCO World Heritage Sites, UNESCO Cultural Landscapes, Ramsar Sites, European Landscape Convention).	Respondents should reflect on both the presence and perceived importance of natural and cultural landscapes within the area. The response is subjective and may depend on the respondent's familiarity with the area and comparisons with other regions in the country. • **Many** – The area includes a rich variety or concentration of significant natural or cultural landscapes, widely known or valued in local, national, or international contexts. • **Moderate** – The area includes a fair number of valued landscapes. • **Few** – Only a small number of such landscapes are known to exist. • **Absent** – No natural or cultural landscapes of clear or known value are present in the CS area.
R012- Species & Habitats - Significance	This question aims to identify whether the Case Study (CS) area includes any ecologically important species or habitats that are recognised and protected through legal or formal conservation frameworks. These may include:	• **High significance**: Many protected features (>20) or presence of critically important habitats/species (e.g. only breeding site for a species) • **Moderate significance**: Moderate number (6–20) with noticeable importance

Question	What is this question asking?	Answer Guidance
	• **Flora species** – e.g. endemic or endangered plant species • **Fauna species** – e.g. protected birds, mammals, reptiles, or marine species • **Habitats** – e.g. sand dunes, wetlands, forests, or coral reefs that are essential to the life cycle of certain species Also, ecological significance is not only based on the number of species present. A site may be highly significant even with only one or a few species, if it plays a critical role, such as being the only breeding site, a key migratory stopover, or hosting habitat types that are rare or declining. For example: • Salt lakes may be essential for flamingoes. • Coastal dunes may be critical nesting grounds for plovers. • A specific habitat type that supports a rare plant or endemic reptile, that is unique in the region. Protected flora, fauna, and habitats in the assessment are typically recognised under a variety of legal or formal conservation frameworks. These include international agreements such as the Bern Convention, Ramsar Convention, and CITES, as well as EU directives like the Birds Directive and Habitats Directive, which form the basis of the Natura 2000 network. National-level tools such as the Red Data Book and local protected species or habitat lists also apply. These frameworks help identify which features are legally significant, guiding scoring based on the species' or habitats' importance and protection status.	• **Low significance**: Few protected features (1–5) with limited significance • **Absent**: No protected species or habitats present
R021-Important Landscapes - Status	This question assesses the current condition of key landscape features in the area. For natural landscapes, think of forests, coastal zones, wetlands, and other ecologically significant areas. For	• **Present: Good Status / No threats** – Landscapes are well-preserved and show little or no sign of degradation. There are no major ongoing threats.

Question	What is this question asking?	Answer Guidance
	cultural landscapes, consider places with historic, traditional, or aesthetic value shaped by long-standing human interaction with nature—like terraced farming areas or sacred groves (see R011 for natural and cultural definitions). You're being asked whether these are thriving, moderately impacted, or facing serious threats.	• **Present: Moderate Status / Moderate Threats** – Landscapes still exist but face some issues (e.g. erosion, encroachment, pollution) that could worsen without action. • **Present: Threatened Status / Important Threats** – The landscapes are under serious stress from activities like development, agriculture, tourism, or infrastructure expansion. • **Absent** – The landscape type in question does not exist in the area.
R022-Species & Habitats-Status	These questions assess the current condition of key biological components in the area. "Flora" refers to plant species, "Fauna" to animal species, and "Habitats" to the ecosystems they live in (like wetlands, dunes, forests, or seagrass meadows). You're being asked whether these are thriving, moderately impacted, or facing serious threats. The response can be based on scientific information, i.e. results of monitoring programs, or relevant reporting to EU for Birds or Habitats Directives, but if this knowledge/data does not exist, the answer can be based on perceptions.	• **Present: Good Status / No threats** – The species and habitats are in healthy condition, showing stable or improving trends, and are not facing notable pressures. • **Present: Moderate Status / Moderate Threats** – There are some signs of stress (e.g. habitat loss, invasive species, pollution), but not yet severe. Intervention may be needed. • **Present: Threatened Status / Important Threats** – Species or habitats are clearly declining or under serious pressure (e.g. population drop, ecosystem fragmentation). • **Absent** – The particular type of flora, fauna, or habitat is not present in the area.
R031- Provisioning services: ecosystems' ability to provide resources	These questions ask whether the area is important for delivering goods that people use directly from nature, like food, water, and natural materials. Provisioning services are the tangible products ecosystems provide. This includes things like: • **Food** (e.g. fish, agriculture, livestock, honey) • **Water** (e.g. for drinking or irrigation) • **Raw materials** (e.g. timber, fibre) • **Medicinal or biochemical resources** (e.g. plants used in traditional medicine or cosmetics) • **Ornamental resources** (e.g. flowers, shells, decorative plants) • **Genetic material** (e.g. native species with unique traits useful for breeding, agriculture, or research)	• **High Significance** – The area plays a key role in providing the service at a local, regional, or even national level. • **Moderate Significance** – The area provides these services, but not extensively. • **Low Significance** – Some presence or use, but minimal contribution or limited benefit. • **Absent** – The service is not provided by this area.

Question	What is this question asking?	Answer Guidance
	You are being asked how significant these contributions are in your area.	
R032- Regulating services: ecosystems' beneficial regulatory processes	These questions consider whether the CS area helps nature run smoothly, like reducing floods, cleaning the air, or keeping soil healthy. Regulating services are the natural processes that ecosystems perform to keep things in balance. This includes: • **Climate regulation** (e.g. carbon capture in forests or wetlands) • **Flood control** (e.g. wetlands or forests absorbing heavy rain) • **Purification** (e.g. soils filtering pollutants, plants cleaning air) • **Water flow and quality** (e.g. rivers, forests, or wetlands regulating supply) • **Soil health** (e.g. preventing erosion or maintaining fertility) • **Pollination** (e.g. bees or other pollinators from nearby natural habitats) • **Pest and disease control** (e.g. natural predators keeping pests in check) You are being asked how much the area contributes to each of these services.	• **High Significance** – The area is known for playing a major role in one or more of these natural functions. • **Moderate Significance** – The area supports these processes, but not extensively. • **Low Significance** – These functions exist but are minor. • **Absent** – The area does not contribute noticeably to any of these regulating services.
R033 - Cultural services: ecosystems' non-material benefits	These questions consider how the CS area contributes to people's quality of life through non-material benefits. This includes: • **Recreation and tourism** (e.g. hiking, beach visits, wildlife watching) • **Aesthetic enjoyment** (how visually pleasing the area is) • **Artistic inspiration** (e.g. used in paintings, photography, writing) • **Education and research** (e.g. school visits, field studies, knowledge-building)	• **High Significance** – The CS area is widely recognised or actively used for one or more of these cultural services. • **Moderate Significance** – These benefits exist and are locally appreciated or used occasionally. • **Low Significance** – Limited relevance or only minor cultural value. • **Absent** – No known or meaningful cultural benefits linked to the CS area.

Question	What is this question asking?	Answer Guidance
	• **Spiritual or religious value** (e.g. sacred sites or traditional practices) • **Cultural and historical significance** (e.g. archaeological features, cultural identity) • **Mental well-being and health** (e.g. peace, relaxation, emotional restoration) You're assessing how strongly these values apply to the CS area.	
R034 -Supporting services: services necessary for the provision of all other ecosystem services	These questions consider the CS area's role in sustaining key ecological functions that make all other ecosystem services possible. These include: • **Ecosystem process maintenance**: natural processes like soil formation, nutrient cycling, and primary production (e.g. plant growth). • **Lifecycle maintenance**: functions that support different life stages of species, such as nursery areas, pollination, seed dispersal, and species interactions. • **Biodiversity maintenance and protection**: ensuring genetic diversity, species richness, and habitat variety that underpin overall ecosystem resilience and functioning. You're assessing how critical the CS area is in supporting these foundational processes.	• **High Significance** – The CS area plays a key ecological role and contributes substantially to sustaining life-supporting functions. • **Moderate Significance** – Some relevant processes are present and contribute to broader ecosystem health. • **Low Significance** – Supporting functions are limited or degraded but not entirely absent. • **Absent** – The CS area has no relevant ecological support functions, or they have been severely disrupted.

3. Threats and Pressures

Question	What is this question asking?	Answer Guidance
E01- Primary threats/ pressures impacting the overall protection status of the CS area	These questions consider direct human activities or natural pressures that threaten the CS area's ecosystems, biodiversity, and conservation objectives. You are being asked to assess the intensity and relevance of specific threats like over-visitation, land use change, pollution, or climate change within your area. These threats can degrade habitats, disturb wildlife, or compromise ecosystem services and are crucial for monitoring adaptive management.	• **Absent** – This threat is not present at all. • **Low Impact** – The threat exists but causes minor disturbances or is well-managed. • **Moderate Impact** – The threat is present and has a noticeable effect on conservation or resource use. • **High Impact** – The threat is severe, widespread, or rapidly worsening and poses serious risks to ecological or social values in the area. • **N/A** – This threat is not relevant to the CS area (e.g. agriculture in a marine area)
E02- Primary challenges or impacts affecting the overall protection status of the CS area	These questions consider the current condition and outcomes of ongoing pressures in the CS area, focusing on visible or measurable impacts such as habitat degradation, biodiversity loss, or erosion. These impacts reflect the results of threats over time and signal areas where urgent or continued action may be needed.	• **Absent** – No evidence of this impact is present in the CS area. • **Low Impact** – The impact exists but is minor or localised, with minimal ecological or management concern. • **Moderate Impact** – There is a noticeable effect on ecosystems, species, or landforms, but the situation may still be manageable or reversible. • **High Impact** – The challenge is severe and widespread, with major ecological consequences, often requiring urgent mitigation or restoration actions. • **N/A** – This impact is not relevant to the CS area (e.g. erosion in a forested inland area)
E031- Provisioning services: ecosystems' ability to provide resources	These questions consider how much the provisioning capacity of the CS area (e.g. food, water, raw materials, medicinal and genetic resources) is currently being affected by human activity or environmental pressures. It focuses on the decline or disturbance in nature's ability to continue providing these resources.	• **Absent** – There is no impact on this ecosystem service. • **Slightly Affected** – The resource is still being provided, with minimal or localised decline. • **Moderately Affected** – There is a noticeable reduction in quantity, availability, or reliability. • **Highly Affected** – The resource has significantly diminished, disrupted, or is at risk of no longer being available. • **N/A** – This specific ecosystem service is not present in the CS area or not relevant to the local context.

Question	What is this question asking?	Answer Guidance
E032- Regulating services: ecosystems' beneficial regulatory processes	These questions assess how well the CS area regulates natural processes (e.g. climate, water cycles, pollination, etc.) and how human activities or environmental changes are affecting these processes. Ecosystems provide essential functions that regulate climate, soil fertility, water quality, and pest control, which are critical for long-term environmental and human health.	• **Absent –** There is no impact on this ecosystem service. • **Slightly Affected** – The area is still providing the regulatory process, but slight disturbance has been noticed, such as minor reductions or changes. • **Moderately Affected** – The process is being impacted, showing moderate changes or declines (e.g., water purification is still functional but reduced). • **Highly Affected** – The area is severely impacted, and the ability to perform this function is greatly diminished or lost, such as significant disruptions in pollination or water quality regulation. • **N/A** – This specific ecosystem service is not present in the CS area or not relevant to the local context.
E033- Cultural services: ecosystems' non-material benefits	These questions consider how various non-material cultural benefits provided by the CS area are being affected. These include aspects, such as recreation, aesthetic beauty, heritage, mental health, education, and cultural identity. The aim is to understand whether the cultural value and experience of the area are being maintained or deteriorating due to external pressures or internal changes.	• **Absent –** There is no impact on this ecosystem service. • **Slightly Affected** – The cultural benefit still exists with minimal changes or pressures. • **Moderately Affected** – Noticeable decline or restriction in access, recognition, or enjoyment of the cultural benefit. • **Highly Affected** – Cultural value is significantly degraded, at risk of being lost, or no longer accessible to stakeholders. • **N/A** – This specific ecosystem service is not present in the CS area or not relevant to the local context.
E034- Supporting services: services necessary for the provision of all other ecosystem services	These questions consider whether fundamental ecological functions that support all other ecosystem services in the CS area are being negatively affected. This includes processes such as soil formation, nutrient cycling, and primary production, as well as services like species interactions, seed dispersal, and biodiversity support at genetic, species, or habitat level.	• **Absent –** There is no impact on this ecosystem service. • **Slightly Affected** – Minor impacts observed, basic functioning remains intact. • **Moderately Affected** – Noticeable impacts that may reduce the effectiveness or continuity of these foundational services. • **Highly Affected** – Severe degradation of key ecological functions, threatening the entire ecosystem's ability to support other services. • **N/A** – This specific ecosystem service is not present in the CS area or not relevant to the local context.

4. Governance

Question	What is this question asking?	Answer Guidance
G01- Management Mechanism Overview	The first question is to identify whether there is an official or de facto body overseeing the management of the CS area. This could include government agencies, local councils, NGOs, or co-management structures. The second question refers to the level of legal or institutional recognition that the management body holds. Recognition strengthens the legitimacy and effectiveness of area governance.	**Question 1:** • **Yes** – There is a clearly identified authority or managing entity with an active role. • **No** – There is no authority formally or informally managing the CS area. **Question 2:** • **Local** – Recognised by local authorities or community governance structures. • **National** – Officially acknowledged within national legislation or government structures. • **International** – Recognised under international conventions or agreements (e.g. Ramsar, UNESCO). • **N/A** – Not applicable, or no recognised authority exists.
G02- Existence of (a) Management Plan(s) and its Implementation Procedure for the CS area	This question checks whether a formal management plan exists for the CS area, and if so, whether it is actually being put into practice. A management plan outlines strategies, actions, and timelines for achieving conservation and use objectives.	• **Efficiently Implemented** – A management plan exists and is being applied as intended, with clear procedures, actions, and results. • **Partly being Implemented** – A plan exists and is in partial use, but with gaps in coverage, resources, or consistency. • **Existence of Management Plan but not implemented** – A plan has been developed but has not yet been put into action. • **Absent** – No management plan currently exists for the CS area.
G03-Existence of monitoring programs or initiatives in place in CS area	This section explores whether monitoring systems are active in the CS area and how much their findings influence decision-making. Monitoring efforts can focus on both a) ecological elements, e.g. species, habitats, biological monitoring (macroinvertebrates, diatoms, etc.), physicochemical parameters (pH, nutrients, pollutants, etc.) and b) social elements (such as tourism, locals' or visitors' perception, or economic activities). It is important to understand if these systems are	**Question 1** • **Efficiently Implemented** – Monitoring systems are active, consistent, and cover relevant ecological parameters. • **Partly being Implemented** – There is some ecological monitoring, but it is either irregular or limited in scope. • **Existence of Monitoring Program but not implemented** – A programme or plan exists but is not currently active. • **Absent** – No monitoring system exists. **Question 2** • **Efficiently Implemented** – Social dimensions are regularly monitored and documented.

Question	What is this question asking?	Answer Guidance
	implemented and if their findings are actually being used.	• **Partly being Implemented** – Social monitoring exists but is patchy or under development. • **Existence of Monitoring Program but not implemented** – There is a plan but no active implementation. • **Absent** – No social monitoring efforts are in place. **Question 3** • **Highly incorporated on Decision Making** – Evidence is actively used to inform policies and guide management. • **Partly incorporated on Decision Making** – Results are occasionally used in management decisions. • **Slightly incorporated on Decision Making** – Some evidence is referenced but does not significantly guide decisions. • **Not at all** – Research and monitoring results are not influencing decision-making.
G04-Operational Capacity - Allocation of Resources	This section evaluates whether the team or authority managing the CS area has the operational means to carry out effective conservation and management. This includes human resources, funding, skills, and enforcement capacity. Strong operational capacity is essential for delivering long-term positive outcomes.	**Question 1** • **High Capacity** – The management team has all the required skills, knowledge, and access to information. • **Medium Capacity** – Some key skills or information may be lacking, but operations are generally functional. • **Low Capacity** – There are major gaps in skills or access to relevant information. • **Not at all** – There is no demonstrated capacity to meet management objectives. **Question 2** **High Capacity** – Rules and regulations can be enforced consistently and effectively. • **Medium Capacity** – Enforcement occurs but with some limitations (e.g. staffing, authority, tools). • **Low Capacity** – Enforcement is rare or irregular due to major limitations. • **Not at all** – Enforcement mechanisms are entirely lacking or non-functional. **Question 3** • **Fully Sufficient** – Staffing levels are appropriate for the size and needs of the area.

Question	What is this question asking?	Answer Guidance
		• **Sufficient** – Staff are present, but more personnel would enhance effectiveness. • **Somewhat Insufficient** – Staffing is clearly lacking in some areas. • **Insufficient** – Very limited or no staff available to carry out management. **Question 4** • **Fully Sufficient** – Funding covers all operational needs. • **Sufficient** – Most needs are met, but funding could be improved. • **Somewhat Insufficient** – Key activities are underfunded. • **Insufficient** – Resources are not available for basic management tasks. **Question 5** • **Secure** – Funding is stable and guaranteed in the medium to long term. • **Somewhat Secure** – Some funding sources are reliable, others are uncertain. • **Somewhat Insecure – Funding** is sporadic and uncertain. • **Insecure** – No secure funding is available for CS area management.
G05-Regulations and Enforcement	This section explores the strength, clarity, and implementation of rules governing natural resource use in the CS area. Well-established and fairly enforced regulations are key to both conservation and the protection of community rights.	**Question 1** • **Fully Enforced and Comprehensive** – Strong legal framework and consistent enforcement across all aspects. • **Mostly Enforced, Some Gaps** – Most regulations are applied, but some areas lack enforcement. • **Partially Enforced, Significant Gaps** – Major issues exist with enforcement or legal coverage. • **No Regulations or Minimal Enforcement** – Legal framework is missing or not implemented. **Question 2** • **Very Frequently** – Sanctions are regularly applied. • **Sometimes** – Penalties occur, but not consistently**.** • **Rarely –** Very few enforcement cases are pursued. • **Never –** Penalties are not enforced or used. **Question 3** • **Always Considered –** Enforcement adjusts according to case specifics. • **Mostly Considered –** Infractions are usually differentiated. • **Occasionally Considered** – Factors are only sometimes reflected. • **Never Considered** – Same treatment regardless of context.

Question	What is this question asking?	Answer Guidance
		Question 4 **Clearly Defined and Enforced –** Rights are explicit and protected. • **Mostly Defined with Minor Gaps** – Rights are mostly clear, with small issues. • **Partially Defined, Often Overlooked** – Many ambiguities or inconsistencies exist. • **No Clear Definitions or Enforcement** – Rights are vague or not recognised. **Question 5** • **Fully Able** – Communities can access and use resources as entitled. • **Mostly Able with Some Restrictions** – Some limitations are present, but access is generally available. • **Rarely Able** – Major restrictions prevent access. • **Not Able** – Communities are excluded from natural resource benefits. **Question 6** • **Fully Appropriate and Effective** – Laws reflect ecological realities and are well-enforced. • **Mostly Appropriate, Some Issues** – Some room for improvement, but generally sound. • **Partially Appropriate, Significant Issues** – Outdated or ineffective rules. • **Inappropriate or Non-Existent** – Legal framework fails to regulate activities effectively.
G06- Diversity of Expertise	This question explores whether different types of knowledge are valued and systematically included in decision-making processes. These knowledge types may include scientific research, local community experience, traditional ecological knowledge, and practical field-based understanding.	• **Yes through formalised mechanisms** – There are structured systems in place (e.g. advisory boards, official stakeholder consultations, multi-actor platforms) that routinely integrate various forms of knowledge into management decisions. • **Partially, but informally** – Some consideration of different knowledge types takes place, but there is no official process or structure to guide it. • **Rarely and informally** – Knowledge diversity is occasionally considered, but in an ad hoc or inconsistent way. • **Not at all** – Decision-making is based solely on a single type of knowledge (usually scientific or technical), excluding others.
G07-Coordination and collaboration	This section examines the degree of inclusivity, interaction, coordination, and cooperation	**Question 1:**

Question	What is this question asking?	Answer Guidance
	among different actors involved in the governance and management of the CS area.	• **Fully inclusive** – All relevant stakeholder groups are actively involved in planning and decision-making. • **Mostly inclusive** – Most key stakeholders are included, though some may be underrepresented. • **Partially inclusive** – Involvement is limited to a few select groups, with noticeable gaps. • **Not inclusive at all** – Stakeholders are generally excluded from the management process. **Question 2:** • **Excellent Coordination and Collaboration** – Strong partnerships, open communication, and synergy among institutions. • **Good Coordination, Some Gaps** – Overall coordination is good, but there are some issues that affect efficiency. • **Weak Coordination, Major Issues** – Institutions struggle to work together, with poor communication and misalignment. • **No Coordination or Collaboration** – Institutions work in silos with no meaningful collaboration. **Question 3:** • **Fully Involved in Decision-Making** – Stakeholders regularly contribute to rule changes and updates. • **Sometimes Involved** – Stakeholders are consulted occasionally but not consistently. • **Rarely Involved** – Only a few stakeholders have influence, usually through informal means. • **Not Involved** – There is no mechanism for stakeholder input on rule changes. **Question 4:** • **Fully Coordinated at All Levels** – Clear, effective integration between local, regional, and national governance. • **Mostly Coordinated with Minor Gaps** – Levels of management generally align, though small gaps may exist. • **Partially Coordinated, Major Gaps** – Fragmented structure with significant challenges in communication or cooperation.

Question	What is this question asking?	Answer Guidance
		• **No Coordination Between Levels** – Different levels of management operate independently without alignment.
G08- Transparency and Accountability	This section considers how accountable the governance of the CS area is, how transparently it communicates with stakeholders, and whether fair and functional conflict resolution mechanisms are available. Conflict resolution mechanisms refer to formal or informal systems in place to address disagreements, disputes, or grievances among stakeholders. These mechanisms help ensure that concerns are heard and addressed fairly, promoting cooperation and trust. **Examples include:** • Mediation by neutral third parties • Community dispute resolution committees • Legal appeals • Dialogue platforms or stakeholder forums	**Question 1:** • **Always Held Accountable** – There are clear procedures and they are consistently followed. • **Mostly Held Accountable** – Procedures are in place and generally followed, with occasional gaps. • **Rarely Held Accountable** – Accountability is weak and often not enforced. • **Never Held Accountable** – There are no consequences for failing to carry out responsibilities. **Question 2:** • **Always Timely** – Information is shared proactively and without delays. • **Mostly Timely** – Generally timely, though sometimes delayed. • **Sometimes Delayed** – Often shared too late to act on. • **Never Timely** – Information is not shared or is consistently late. **Question 3:** • **Fully Accessible and Effective** – There are accessible and trusted systems in place. • **Mostly Accessible, Minor Issues** – Some minor barriers exist, but systems generally work. • **Partially Accessible, Significant Issues** – Access is limited, or the process is not trusted. • **No Access or Ineffective** – Stakeholders have no way to resolve conflicts, or the system does not function.
G09- Perceived environmental outcomes	This question asks for an overall perception of whether the ecological outcomes set for the CS area are being met. Ecological outcomes refer to the environmental goals or management objectives of the CS area, such as maintaining or improving the conservation status of habitats and species, enhancing biodiversity, or restoring ecosystem functions. These are often the reasons the area is managed or protected in the first place.	• **Fully Achieved** – All or nearly all ecological objectives are being met with positive visible results. • **Mostly Achieved with Minor Issues** – Most outcomes are being met, but some minor challenges remain. • **Partially Achieved, Major Issues** – Only a few objectives are being met; significant problems are present. • **Not Achieved** – Objectives are not being met; the ecological state is poor or worsening.

Question	What is this question asking?	Answer Guidance
	Example: If the CS area's management plan aims to improve the conservation status of an endangered turtle species, and monitoring shows that the population is increasing and nesting sites are undisturbed, this would indicate that the ecological outcomes are being successfully achieved.	
G010-Perceived social outcomes	This question explores whether the social outcomes of the CS area are being achieved, based on the perceptions of those involved or affected. Social outcomes refer to the benefits or changes experienced by people due to the management of the CS area. These might include improved livelihoods, food security, social equity, empowerment, access to natural resources, cultural preservation, or community well-being. **Example:** If the CS area has a goal to support local fishers through fair access to resources and community involvement in decisions, and this is happening effectively, it indicates that the social outcomes are being achieved.	• **Fully Achieved** – All or nearly all intended social benefits have been realised. • **Mostly Achieved with Minor Issues** – Most social goals are met, though there may be some small challenges. • **Partially Achieved, Major Issues** – Some social outcomes are visible, but significant barriers remain. • **Not Achieved** – Social goals are not being met, and the situation may be causing harm or exclusion.

5. Social Perceptions

Question	What is this question asking?	Answer Guidance
A01 – Well-being & Health	These questions consider how the CS area affects the well-being, lifestyle, and recreational use of the area by local communities and visitors. This includes physical and mental health, quality of life, and engagement with nature-based activities.	**Question 1:** • **Very Positive** – The CS area strongly supports the overall well-being of the community. • **Moderately Positive** – The CS area provides some well-being benefits. • **Neutral** – The CS area neither contributes to nor harms well-being. • **Negative** – The CS area negatively affects well-being. **Question 2:** • **Very Positive** – There is a clear, positive improvement in daily life. • **Moderately Positive** – Some improvement, but not significant. • **Neutral** – No noticeable effect on quality of life. • **Negative** – Quality of life is negatively impacted by the CS area. **Question 3:** • **Very Frequently** – Regular use by many people. • **Frequently** – Often but not daily. • **Occasionally** – From time to time. • **Never** – The CS area is not used for recreation. Note: If the area could be used for recreation and is not due to restricted access, then this should be marked as "never". If the area cannot realistically be used for recreation due to the nature of where it is, etc., then this should be marked N/A. **Question 4:** • **Strongly Agree** – The CS area has played a strong role in improving health. • **Agree** – Some positive impact noted. • **Disagree** – No improvement noted. • **Neutral** – No opinion or effect observed.
A02- Human Rights & Access to Resources	These questions consider whether local communities have access to land and resources, how fairly they perceive management rules, and if any displacement or rights-related issues have occurred due to CS area regulations.	**Question 1:** • **Full Access** – Communities can fully use land/resources without restriction. • **Moderate Access** – Some access exists, but certain restrictions apply. • **Limited Access** – Access is allowed only under limited or specific conditions. • **No Access** – Communities are not allowed access to land/resources.

		Question 2: • **Very Fair** – Rules are clear, equitable, and widely accepted. • **Fair** – Generally seen as acceptable, though not perfect. • **Somewhat Unfair** – Certain communities feel disadvantaged or excluded. • **Very Unfair** – The rules are viewed as unjust or discriminatory. **Question 3:** • **Significant Displacement** – Entire communities or large portions moved or excluded. • **Moderate Displacement** – Noticeable displacement of groups or activities. • **Minor Displacement** – A small portion of community activities affected. • **No Displacement** – No reported impact on residency or traditional use areas. **Question 4:** • **Strong Ability** – There are functioning and accessible mechanisms for appeal. • **Moderate Ability** – Some ability to negotiate or appeal, but with limitations. • **Limited Ability** – Only minimal options exist, often inaccessible. • **No Ability** – No mechanisms or opportunities exist to address grievances.
A03- Knowledge & Education	These questions consider how much the local communities and visitors know about the environmental values of the CS area, whether educational activities take place, and if these lead to behaviour change and accessibility to learning.	**Question 1:** • **Very Well Informed** – Most people understand the environmental value and uniqueness of the area. • **Moderately Informed** – There's some general awareness but not in detail. • **Slightly Informed** – Awareness is limited and patchy. • **Not Informed At All** – Communities and visitors are unaware of environmental values. **Question 2:** • **Very Frequently** – Programs are held regularly and reach many people. • **Occasionally** – Events take place now and then. • **Rarely** – Activities are infrequent or inconsistent. • **Never** – No such programs take place. **Question 3:** • **Significant Positive Change** – A visible improvement in community or visitor behaviour. • **Moderate Change** – Some changes are noticed but not widespread. • **Minimal Change** – Little difference in behaviours despite awareness. • **No Change At All** – No impact observed from environmental education.

		Question 4: • **Very Accessible** – Education is easy to attend and understand. • **Moderately Accessible** – Some access is available, but not for everyone. • **Limited Access** – Few opportunities and only certain groups can benefit. • **Not Accessible At All** – No access to education programmes.
A04 – Livelihoods & Economic Impacts	These questions consider how the CS area has affected local job opportunities, income levels, reliance on natural resources, and support through alternative livelihoods like ecotourism.	**Question 1:** • **Significantly Improved** – The CS area created many new job opportunities. • **Improved for some sectors / worsened for others** – Some industries benefited, while others were negatively impacted. • **No Significant Change – Employment conditions remained mostly the same.** • **Worsened** – Fewer job opportunities are available because of the CS area. **Question 2:** • **Highly Dependent** – Most people rely on these activities for their livelihood. • **Moderately Dependent** – These are important but not the only sources of income. • **Slightly Dependent** – Few people rely on natural resource use. • **Not Dependent At All** – The community earns income from other sources. **Question 3:** • **Significant Income Increase** – Income levels have risen substantially. • **Moderate Income Increase** – There has been a noticeable but smaller rise. • **No Change In Income** – No impact on earnings. • **Income Has Decreased** – Households now earn less than before. **Question 4:** • **Very Well Supported** – Strong support exists through effective programmes. • **Moderately Supported** – Some help is provided, but it's limited. • **Slightly Supported** – There is minimal support. • **Not Supported At All** – No alternative livelihood initiatives are in place.
A05 – Local Culture & Values	These questions consider how well the CS area supports traditional practices, cultural preservation, and community involvement in cultural decision-making.	**Question 1:** • **Strongly Supported** – Traditional practices are actively encouraged and protected. • **Moderately Supported** – There is support, but not comprehensive. • **Slightly Restricted** – Some restrictions have affected traditional uses. • **Heavily Restricted** – Traditional practices are significantly limited or discouraged.

		Question 2: • **Fully Preserved** – All known sites are protected and maintained. • **Mostly Preserved** – Most sites are protected, though some may be overlooked. • **Somewhat Preserved** – Partial protection exists, with concerns for some sites. • **Not Preserved** – Cultural or sacred sites have been neglected or degraded. **Question 3:** • **Strongly Strengthened** – Traditions are actively revitalised through CS management. • **Somewhat Strengthened** – Positive effects exist, though limited. • **Slightly Weakened** – Management decisions have led to some cultural loss. • **Significantly Weakened** – Local traditions have been deeply affected or diminished. **Question 4:** • **Strong Influence** – Local voices shape cultural aspects of management directly. • **Moderate Input** – Communities are consulted, but influence is limited. • **Limited Input** – There is minimal opportunity to influence cultural decisions. • **No Input** – Cultural values are not considered from the community's perspective.
A06- Social Relations	These questions consider how the CS area affects trust, cooperation, conflict, and social ties among community members and stakeholders.	**Question 1:** • **High Trust and Confidence** – Authorities are widely trusted and perceived as fair and responsive. • **Moderate Trust But Some Concerns** – There is some trust, but also noticeable scepticism. • **Low Trust** – Most people have little faith in the authorities. • **No Trust At All** – Stakeholders believe authorities are completely untrustworthy. **Question 2:** • **Rarely** – Conflicts are uncommon. • **Occasionally** – Conflicts happen from time to time. • **Frequently** – Conflicts are a regular issue. • **Constantly** – Conflict is persistent and unresolved. **Question 3:** • **Highly Cooperative** – Collaboration is strong and consistent.

		• **Somewhat Cooperative** – There is occasional collaboration. • **Limited Cooperation** – Only a few individuals or groups cooperate. • **Not Cooperative At All** – The community does not work together at all. **Question 4:** • **Strongly Strengthened** – Management has brought the community closer. • **Somewhat Strengthened** – Positive change, though limited. • **Slightly Weakened** – Minor tensions have emerged. • **Significantly Weakened** – Policies have caused serious rifts in the community.
A07-Social Equity (Inclusion and Empowerment)	These questions consider how fairly different voices and social groups are represented and empowered in the decision-making and benefit-sharing related to the CS area.	**Question 1:** • **Fully Represented** – Local voices are actively and meaningfully included in all major decisions. • **Moderately Represented** – Locals are consulted but not always influential. • **Minimally Represented** – Inclusion happens rarely or in minor matters. • **Not Represented** – Local voices are absent from decision-making processes. **Question 2:** • **Very Fairly Distributed** – All groups benefit equitably from the CS area's management. • **Somewhat Fair** – Distribution is generally fair but with some imbalances. • **Unequally Distributed** – Certain groups benefit much more than others. • **Highly Unfair** – Benefits are concentrated in only a few hands. **Question 3:** • **Fully Included** – Marginalised groups are intentionally and consistently involved. • **Partially Included** – Some groups are included, but not all or not consistently. • **Minimally Included** – Inclusion is rare or symbolic. • **Not Included** – These groups are completely left out of decision-making. **Question 4:** • **Highly Transparent** – Decision-making is open, documented, and clearly communicated. • **Moderately Transparent** – Some transparency exists, but not across all areas. • **Limited Transparency** – Decisions are often unclear or poorly communicated. • **Not Transparent** – There is no insight into how decisions are made.
A08 – Diversity	These questions consider how various aspects of stakeholder diversity are acknowledged and integrated into the management of the CS	**Question 1:** • **Fully Documented and Considered** – The CS area management formally recognises and integrates ethnic/racial diversity in planning.

	area, promoting inclusion and fair representation.	• **Mostly Documented, Minor Gaps** – Ethnic/racial diversity is considered, though not systematically across all processes. • **Partially Documented, Significant Gaps** – Some attention to diversity exists, but it's limited or inconsistent. • **Not Documented or Considered** – No measures are in place to acknowledge or integrate ethnic/racial diversity. **Question 2:** • **Fully Considered** – Stakeholders of all age groups are actively engaged in decisions. • **Mostly Considered, Minor Gaps** – Most age groups are represented, with a few gaps. • **Partially Considered, Significant Gaps** – Only certain age groups are involved. • **Not Considered** – Age is not considered during management processes. **Question 3:** • **Fully Inclusive and Accommodated** – All facilities and engagement methods are accessible and inclusive. • **Mostly Inclusive, Minor Gaps** – Accommodations exist but may lack consistency or resources. • **Partially Inclusive, Significant Gaps** – Few accommodations; people with disabilities face barriers. • **Not Inclusive or Accommodated** – No measures to ensure inclusion or access for disabled persons. **Question 4:** • **Fully Considered** – Management efforts take income, employment, and economic differences into full account. • **Mostly Considered, Minor Gaps** – Some economic diversity is considered, but not across all processes. • **Partially Considered, Significant Gaps** – Only a few socioeconomic groups are engaged. • **Not Considered** – Economic context is not factored into decisions or outreach. **Question 5:** • **Fully Considered** – Communication and involvement strategies are tailored to various educational levels. • **Mostly Considered, Minor Gaps** – Some effort is made to reach stakeholders

		with diverse education. • **Partially Considered, Significant Gaps** – Most engagement favours more formally educated groups. • **Not Considered** – No attention to education levels in stakeholder engagement. **Question 6:** • **Fully Considered** – Materials and meetings are accessible in all relevant local languages. • **Mostly Considered, Minor Gaps** – Some languages are covered, but others may be excluded. • **Partially Considered, Significant Gaps** – A single language dominates communication. • **Not Considered** – No effort made to accommodate different languages. **Question 7:** • **Fully Considered** – Management aligns with and respects all relevant cultural norms and practices. • **Mostly Considered, Minor Gaps** – Cultural sensitivity exists but may be lacking in specific areas. • **Partially Considered, Significant Gaps** – Cultural practices are sometimes overlooked. • **Not Considered** – No recognition or respect for cultural context in planning. **Question 8:** • **Fully Represented and Considered** – All genders are equitably involved in consultation and governance. • **Mostly Represented, Minor Gaps** – Gender inclusion is generally good but can be improved. • **Partially Represented, Significant Gaps** – Gender bias or underrepresentation exists. • **Not Represented or Considered** – Gender diversity is not acknowledged in participation. **Question 9:** • **Fully Considered** – Planning respects religious practices, including timing and access needs. • **Mostly Considered, Minor Gaps** – Generally respectful, though some needs may be overlooked.

		• **Partially Considered, Significant Gaps** – Religion is occasionally considered but not systematically. • **Not Considered** – Religious practices are ignored or excluded from decision-making.