**SUPPLEMENTARY MATERIAL**

**Template S1**

Baseline assessment of TCLs’ current challenges, local conditions and other context specific information (conducted by Helmholtz Centre for environmental research – UFZ)

**Section 1: Personal information**

1. **Last name, first name**
2. **Name of Transition Coastal Lab (TCL)**
3. **Role in EmpowerUs**
4. **Are you living in the TCL community?**
* Yes
* No
* Other:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. **Which of the following groups of stakeholders are working with in your TCL? (check all that apply)**
* Public authority (e.g. municipality, agency, ministry)
* Political entity (e.g. city or regional parliament)
* Civil Society Organisation (e.g. non-governmental organisations)
* Private sectors (e.g. company, SME, consultant)
* Academia/Research (e.g. university, research institute)
* International or transnational organisation (e.g. EU, UN, River basin management)
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. **What is your professional background?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. **Please, specify your above answers**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Section 2: Main challenges to be addressed in your TCL**

1. **What are the main challenges your coastal community are facing today (please, weight each of them using the following scale:**
2. Not relevant at all for the whole community
3. Relevant to some extent for part of the community
4. Relevant to some extent for the whole community
5. Very relevant for part of the community
6. Very relevant for the whole community
7. Extremely relevant: Priority number one to tackle by the community
8. I don't know

**A.1. Coastal beach erosion** (Is it safe to build here, or will erosion increase?)

**A.2. marine pollution** (Is it safe to swim here, or is the water too polluted? Is it safe to eat fish caught here, or do they contain too many contaminants?)

**A.3. Fishing stock decline** (e.g. are small-scale fisheries and fishing industry suffering from declining fishing stocks? Can leisure fishermen catch as much fish/fish species as the former generation? Are fishing stocks being overharvested or have coastal communities still the possibility to have fishing activities?)

**A.4. Weather patterns** (e.g. Have you noticed that storminess, flooding due to sea level rise, flash floods, etc. increased?)

**A.5. Land degradation & deteriorating** **ecosystems** (e.g. Is it wise to invest in tourism development or other projects here, or will the area lose its attractiveness due to other land use / developments?)

**A.6. Population growth in coastal areas** (e.g. Have you noticed that the effects of booming population growth and economic and technological development are occurring here?)

**A.7. Economic development and competing demands** (e.g. Do you observe unprecedented pressure on the economic development of their resources?)

**A.8. Loss of coastal biodiversity** (e.g. Are the unique coastal ecosystems and their functions are threatened due to habitat conversion, land cover change, pollutant loads, and introduction of invasive species, etc.?)

**A.9. Water quality** (e.g. Is pollution from industry, agriculture, and urban areas degrading the quality of much water?)

**A.10. Conflicts with predators** (e.g. predator-human conflicts, or predator-farm animal/fish conflicts)

**A.11. Conflicts between different users of the sea/with land users**

**9. Please, elaborate or comment your answers to the question A**
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**10. What types of other societal challenges are in play in your TCL (please, weight each of them using the following scale:**

1. Not relevant at all for the whole community
2. Relevant to some extent for part of the community
3. Relevant to some extent for the whole community
4. Very relevant for part of the community
5. Very relevant for the whole community
6. Extremely relevant: Priority number one to tackle by the community
7. I don't know

*Mark only one per row*

B.1. Gender segregated labor force

B.2. Ethnically segregated labor force

B.3. Outmigration of young people

B.4. Lack of higher educational opportunities

B.5. Lack of career opportunities for professionals/higher educated

B.6. Poor connectivity/mobility/transport networks

B.7. Seasonal influx of people/heightened holiday home demands

B.8. Lack of investment in local area

B.9. Skewed gender ratios in population

B.10. Challenges adding and capturing value locally to raw materials/resources (e.g., fish processing for higher-value products)

B.11. Generational labor change (e.g. ‘greying of the fleet’ in fisheries)

B.12. Over-use/over-tourism

**11. In question B, how are any of the challenges rated d, e or f related to the fact that you are living near the sea? Please, elaborate or comment on your answers
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**12. Why is your coastal region important? (please, use the scale from 1 – I strongly disagree with this statement” to “7 – I strongly agree with this statement”; option 0 can also be selected for the answer “I don’t know")**

1. It plays an important role as a place for human settlement and tourism
2. It is a favoured area for energy generation because of easy delivery of fuel for power stations and convenient disposal of cooling water
3. It has unique ecosystem(s) to be preserved for the future generations
4. It plays an important role in the economy of the region
5. It is an important zone in natural ecosystems, home to a wide range of biodiversity
6. It harbours important ecosystems such as freshwater or estuarine wetlands, which are important for bird populations and other terrestrial animals
7. It delivers other important ecosystem services

**13. Please, elaborate or comment your answers to the question A** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**14. If you have any additional comments, please provide them here:**

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**Additional aspects studied within the follow-up in-depth interviews (conducted by Queen’s University Belfast among the TCLs – the full interview template can be found in Flannery et al., 2023):**

**•** Policy scope and content (key policies, legislation, programmes and strategy documents you can provide)

• Governance and participation (involvement in particular partnerships or networks, mechanisms to consult or involve the wider public, etc.)

• Monitoring and evaluation technics to assess the impact of policies (incl. use of participatory approaches)

**Table S2 |** Examples of indicators for monitoring and evaluation of the TEP sustainability impact proposed to the TCLs according to their local context and needs (more details on indicator selection, metrics, and other application related information can be found in Kabisch *et al*. 2016; Raymond *et al*. 2017; Connop *et al*., 2020; IUCN 2020; EC 2021; Sowińska-Świerkosz *et al*. 2021; Dushkova & Ivlieva 2024)

|  |  |
| --- | --- |
| **Type of indicators** | **Examples of indicators** |
| Core environmental indicators  | * Recreational value of blue-green spaces
* Cultural value of blue-green spaces
* Connectivity of urban green and blue spaces
* Species diversity
* Access to public amenities
* Accessibility of green spaces
* Local food production (%)
* Tree shade for local heat change
* Sustainable transportation modes allowed
* Walkability (No./%)
* Soil sealing (%)
* Species diversity within a defined area (N)
* Proportion of natural areas within a defined residential zone (%)
* Number of conservation priority species
* Pollinator species presence (No./ha or %)
 |
| Indicators related to place regeneration | * Traditional events organized in NBS areas (No.)
* Scenic routes and landmarks created (No.)
* Scenic paths created (km)
* Viewshed (sq. km)
 |
| Indicators related to Knowledge and Social Capacity Building for Sustainable Transformation of coastal area | * Citizen involvement in environmental education activities (No. of people)
* Social learning regarding ecosystems and their functions (No. of activities and No. of people
* Pro-environmental behavior (No. of activities and No of people
* Children involved in pro-environmental educational activities (No. per year)
* Proportion of children involved in pro-environmental educational activities (%)
* Engagement with NBS sites and projects (Qualitative data - dimensionless)
* Citizens’ awareness regarding nature and ecosystem services (No.)
* Green intelligence awareness (No. of activities; No. of attendees; No. of publications)
* Green farming educational and/or participatory activities (No.)
 |
| Indicators related to health and well-being | * No. of outdoor physical activity
* General well-being and happiness (self-reported, qualitative)
* Encouraging a healthy lifestyle
 |
| Indicators related to Participatory Planning and Governance | * Stakeholder involvement in co-creation of NBS (No.)
* Number of governance innovations adopted (No.)
* Development of a climate resilience strategy (extent) (No.)
* Adaptation of local plans and regulations to include NBS (No.
* Inclusion of different social groups in NBS
 |
| Economic indicators | * Number of new green jobs created
* Number of new green businesses established in proximity to NBS
* Increase in nature-based tourism (Mean no. of visitors/day per year)
* New activities in the nature-based tourism sector (No.)
 |

**REFERENCES**

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