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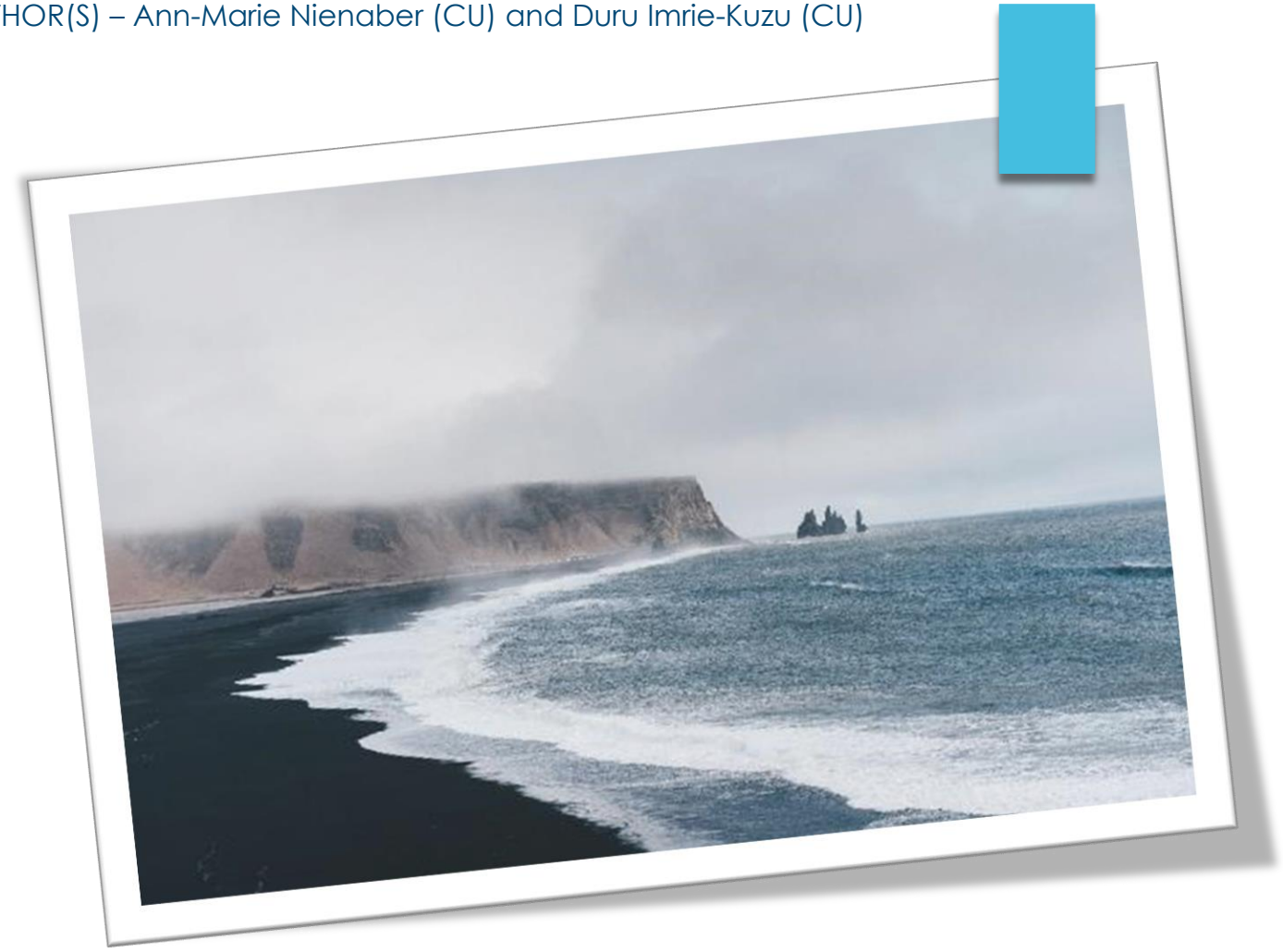
PROcoast

A PROactive approach for COmmunities to enAble Societal Transformation

D6.1 – Mapping change agents to case studies

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EXECUTIVE SUMMARY

This report highlights the pivotal role change agents play in driving behavioral change within local communities, particularly when it comes to biodiversity restoration and the prevention of biodiversity loss. These individuals possess key characteristics such as passion, resilience, and the ability to inspire and mobilize others toward a common goal. By engaging with various stakeholders within and across the community, change agents facilitate collaboration and foster a sense of shared responsibility for environmental conservation efforts. Their decisive role lies in initiating and guiding the process of change, navigating challenges, and overcoming resistance through effective communication and relationship-building. Embracing a bottom-up approach, change agents are advised to immerse themselves in the heart of local communities, gaining deep insights into their values, traditions, and concerns. This grassroots engagement allows for a more nuanced understanding of the complex dynamics at play, enabling tailored strategies that resonate with the community's unique context and aspirations. Ultimately, change agents serve as catalysts for transformative action, driving meaningful impact and paving the way for a more sustainable future.

The report is structured as follows: It begins by emphasizing the relevance of change agents in driving behavioural change, particularly in the context of biodiversity restoration and conservation. Subsequently, the report delves into the multifaceted role of change agents, elucidating their specific qualities and competencies that enable them to catalyse transformation. The significance of adopting the Bristol Approach and Extreme Citizen Engagement Approach is then elucidated, showcasing how these methodologies empower change agents to assume pivotal roles in community-based initiatives. Finally, the report provides an overview of the engagement protocol throughout the duration of the project, demonstrating how stakeholders will be actively involved and consulted to ensure effective collaboration and impact.

LINKS WITH OTHER PROJECT ACTIVITIES

WP 6 (Stakeholder engagement) relies heavily on insights from WP 4 (Framework operationalisation) to interact with broader stakeholder circles, as well as on WP 5 (Case studies), tasked with conducting case studies. The close collaboration between WP 5 and WP 6 fosters the exchange of knowledge and expertise, enhancing overall project outcomes. Moreover, WP 2 (Theoretical framework research design) and WP 3 (Biodiversity management) contribute vital insights into behavioural change, governance, and biodiversity, thereby enriching the stakeholder engagement strategies of WP 6.

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1 INTRODUCTION

1.1 Scope of the document

This report underscores the critical role that Change Agents play in catalysing behavioural change within local communities, particularly concerning biodiversity restoration and the prevention of biodiversity loss. Equipped with essential qualities such as passion, resilience, and the ability to inspire, these individuals mobilize others toward a shared environmental goal. Through engagement with diverse stakeholders, they foster collaboration and cultivate a sense of collective responsibility for conservation efforts. By initiating and guiding change processes, navigating challenges, and fostering effective communication, change agents drive progress and overcome resistance. Embracing a bottom-up approach, they immerse themselves in community dynamics, gaining profound insights into values, traditions, and concerns. This grassroots engagement enables the development of tailored strategies that resonate with each community's unique context, ultimately paving the way for transformative action and a sustainable future.

1.2 Structure of the deliverable

This deliverable starts with an emphasis on the vital role of change agents in driving behavioural change, especially in biodiversity restoration and conservation. The multifaceted role of change agents is explored next, detailing their specific qualities and competencies that facilitate transformation. It then highlights the importance of adopting methodologies like the Bristol Approach and Extreme Citizen Engagement Approach, illustrating how these empower change agents in community-based initiatives. Finally, an overview of the engagement protocol is provided, demonstrating stakeholders' active involvement and consultation to ensure effective collaboration and impact.

2 ROLE OF CHANGE AGENTS FOR BIODIVERSITY RESTORATION

2.1 Importance of Change Agents in Driving Behavioural Change

2.1.1 Bridging Insights: Leveraging Change Agents' Learnings Across Horizon Projects

Based on the valuable insights gleaned from the HORIZON project SUITS (No 690650), particularly highlighted in Policy Brief No. 3 (https://www.suits-project.eu/wp-content/uploads/2019/12/SUITS_Policy-brief-3a.pdf), it is evident that change agents play a pivotal role in driving behavioural change.

Drawing from the successes and challenges encountered in the implementation process across nine municipalities (city's local government), the following outcomes underscore the importance of selecting the right change agent:

Figure 1 Suits Project Logo

(1) Identifying the IDEAL CHANGE AGENT is crucial for successful behavioural change!

It is paramount to identify a change agent who has strong relationships with decision-makers (e.g., officials; political leaders) within the municipality. The agent should have the necessary authority to engage with top management and garner their support when needed, even when confronted with bureaucratic organizational structures. Flexibility, positivity towards change, and strong social skills are essential traits for effective change agents, as they navigate complexities and foster innovation within an organization and across a wider community. A focus on results and alignment with overall goals aids in prioritizing initiatives and gaining stakeholders' confidence. Taking responsibility for decisions, even amidst dissenting opinions, demonstrates accountability, and fosters trust among members of a stakeholder group such as employees and other groups such as governmental partners or the wider society. Acknowledging diverse perspectives and incorporating them into decision-making processes fosters inclusivity and strengthens relationships within the organization.

(2) Role as a Catalyst for Change:

The change agent serves as a role model for the entire local authority and its' network of key stakeholder partners, leading by example and promoting a culture of continuous learning and adaptation. Transforming local communities into learning communities is essential to effectively respond to technological, social, and environmental changes. Embracing a 'learn to learn' approach fosters adaptability and innovation, crucial for addressing challenges such as biodiversity loss and promoting sustainable practices.

Incorporating these findings from SUITS into policy initiatives will pave the way for driving behavioural change within local communities to mitigate biodiversity loss. This approach holds promise for fostering a more sustainable and resilient future, where communities actively contribute to biodiversity conservation efforts through sustainable biodiversity measures.

2.1.2 Catalysts for Sustainability: Empowering Change Agents for Collective Action and Environmental Impact

Change agents play an important role as catalysts for transformative action and sustainability. Their significance lies in several key aspects:

- **Mission and Vision**: Change agents embody the mission and vision of initiatives aimed at behavioural change. They articulate the goals and objectives, inspiring others to actively participate in achieving collective objectives.
- **Core Team Leadership**: Change agents lead the core team responsible for implementing behavioural change strategies. They provide direction, guidance, and motivation to team members, ensuring alignment with project goals.
- **Gatekeepers to Stakeholder Groups**: Change agents act as gatekeepers, facilitating communication and collaboration between various stakeholder groups. They bridge the gap between community members, organizations, and decision-makers, ensuring diverse perspectives are considered.
- **Role Models**: Change agents serve as role models, embodying the behaviours and values advocated for in the change process. Through their actions and attitudes, they inspire others to adopt similar practices, fostering a culture of sustainability and positive change.
- **Community Engagement**: Change agents actively engage with community members, building trust, rapport, and partnerships. By listening to and understanding local needs, preferences, and concerns, they tailor interventions to resonate with the community's perspective, enhancing effectiveness and relevance.
- **Advocacy and Influence**: Change agents advocate for behavioural change at various levels, from grassroots initiatives to policy-making processes. They leverage their influence and networks to garner support, mobilize resources, and effect systemic change.
- **Capacity Building:** Change agents invest in capacity building, empowering individuals and communities to become agents of change themselves. They provide education, training, and resources, equipping stakeholders with the knowledge and skills needed to drive sustainable practices.

In essence, successful change agents would be instrumental in fostering a culture of sustainability, driving collective action, and realizing impactful change towards a better future for both communities and the environment.

2.2 Key Attributes for Change Agents

2.2.1 Understanding the Change Agent: Defining Terms

The term “change agent” refers to an individual or entity that takes intentional action to facilitate and drive change within a system, organization, or community (Nienaber et al., 2023a; van den Berg et al., 2019). They play a crucial role in catalysing and implementing transformative initiatives, often by challenging

existing norms, practices, or structures and advocating for innovative solutions. Change agents possess the skills, knowledge, and motivation to inspire others, foster collaboration, and navigate resistance, ultimately striving to achieve positive outcomes and sustainable impact (Nienaber et al., 2023b).

2.2.2 Trust as Baseline for Successful Relationships between Change Agents and Stakeholders of their Community

Trust is a foundational element for effective leadership and successful change agents (Nienaber et al., 2023b). Across all levels – micro, meso, and macro - building and maintaining trust is paramount for fostering positive relationships, driving collaboration, and achieving meaningful outcomes (Fulmer, 2018; Nienaber et al., 2015). Trust between the change agent and the identified stakeholder groups will include those locally based in the community, as well as those not locally placed, such as investors. For the project's purpose, it is crucial to consider both groups. Thus, we refer to trust between stakeholder groups and change agents in terms of both local community members and those in a broader context. To drive behavioral change, it is important to develop trustful relationships with all decisive stakeholder groups, from the micro to the macro level. Here's why trust is so crucial for change agents:

- **Building Rapport**: Trust forms the basis of rapport and positive relationships between change agents and the different stakeholder groups(Nienaber et al., 2015). By demonstrating reliability, integrity, and authenticity, change agents establish trust with individuals and groups, creating an environment of openness, honesty, and mutual respect.
- **Enhancing Communication**: Trust facilitates open and transparent communication, enabling change agents to convey their messages effectively and engage stakeholders in meaningful dialogue (Nienaber & Schewe, 2011). When trust exists, stakeholders are more likely to listen attentively, share their perspectives openly, and collaborate constructively towards common goals.
- **Fostering Collaboration:** Trust fosters collaboration and teamwork among diverse stakeholders, encouraging them to work together towards shared objectives (Nienaber, Holtgrave & Romeike, 2018). When stakeholders trust the change agent and each other, they are more willing to cooperate, share resources, and align their efforts, leading to greater synergy and collective impact.
- **Driving Engagement:** Trust motivates stakeholders to actively participate and engage in change initiatives. When individuals trust the change agent's intentions and capabilities, they are more likely to invest their time, energy, and resources in the change process, contributing their ideas, expertise, and support to achieve shared goals.
- **Managing Resistance:** Trust helps change agents to effectively manage resistance and navigate challenges encountered during the change process. When stakeholders trust the change agent, they are more receptive to feedback, more willing to adapt to change, and more likely to overcome obstacles together, rather than resisting or undermining the change efforts.
- **Sustaining Momentum:** Trust is essential for sustaining momentum and commitment over the long term. When stakeholders trust the change agent's leadership and vision, they remain

committed and resilient in the face of setbacks, maintaining their focus and dedication to achieving desired outcomes despite obstacles or setbacks.

- **Building Credibility:** Trust enhances the change agent's credibility and influence, enabling them to inspire confidence and garner support from stakeholders at all levels. When change agents consistently demonstrate trustworthiness, competence, and reliability, they earn the respect and admiration of others, amplifying their impact and effectiveness as leaders.

In summary, trust is the cornerstone of successful change leadership, enabling change agents to build rapport, enhance communication, foster collaboration, drive engagement, manage resistance, sustain momentum, and build credibility with stakeholders across micro, meso, and macro levels. By prioritizing trust-building efforts, change agents can create an environment of trust and confidence that empowers stakeholders to embrace change and work together towards shared aspirations and goals.

2.2.3 Individual Characteristics of a Change Agent

Change agents are advised to develop a unique set of characteristics that enable them to effectively drive behavioural change and inspire transformative action within communities of which they are a part. These key traits include:

- **Power and Influence**: Change agents wield power and influence, enabling them to effect meaningful change and rally support for their initiatives. They leverage their authority, expertise, and networks to mobilize resources, garner support, and influence decision-making processes.
- **Empathy and Compassion**: Change agents demonstrate empathy and compassion towards others, understanding their perspectives, needs, and challenges. They actively listen, empathize, and communicate with stakeholders, building trust and rapport, and fostering a sense of shared purpose and solidarity.
- **Visionary Leadership**: Change agents exhibit visionary leadership, articulating a compelling vision for change and inspiring others to rally behind it. They demonstrate clarity, conviction, and passion, galvanizing support and commitment towards common goals and objectives.
- **Resilience and Determination**: Change agents display resilience and determination in the face of obstacles and setbacks. They persevere in the pursuit of their goals, adapting to challenges, and setbacks, and learning from failures to drive continuous improvement and innovation.
- **Strategic Thinking**: Change agents employ strategic thinking and planning to devise effective strategies and interventions for driving behavioural change. They analyse complex problems, identify root causes, and develop tailored solutions that address the unique context and needs of their communities.
- **Networking and Collaboration**: Change agents excel in networking and collaboration, forging partnerships, and alliances with diverse stakeholders to achieve common goals. They build bridges between individuals, organizations, and communities, fostering cooperation, synergy, and collective impact.
- **Adaptability and Flexibility:** Change agents are adaptable and flexible, responding nimbly to changing circumstances and They must respond nimbly to changing circumstances and evolving

needs, embracing innovation, experimentation, and continuous learning. When engaging in fundamentally transformative change, things often go wrong due to strong resistance from both obvious and unexpected sections of the community. Being agile in dealing with such situations is crucial for success.

- **Experience and Expertise**: Change agents bring valuable experience and expertise to their roles, drawing on their knowledge, skills, and insights to inform their actions and decision-making. They leverage their past successes and failures, as well as lessons learned from similar initiatives, to inform their approach and drive positive change.

In summary, change agents embody a unique blend of power, empathy, vision, resilience, strategic thinking, networking, adaptability, and expertise, enabling them to lead and inspire meaningful behavioural change within communities.

2.3 Role of change agents in fostering transformative communities to mitigate biodiversity loss.

Transformation, in the context of biodiversity, is a fundamental, system-wide reorganization across technological, economic, and social factors, including paradigms, goals and values, needed for the conservation and sustainable use of biodiversity, good quality of life and sustainable development.

Change agents within transformative communities hold a pivotal position in mitigating biodiversity loss. Their leadership is instrumental in catalysing collective action and driving behavioural change initiatives tailored to the unique environmental challenges faced by coastal areas. By fostering awareness of the critical importance of biodiversity conservation for sustainable coastal ecosystems, change agents inspire communities to take proactive measures.

They lead critical examinations and reorientations of biodiversity goals and strategies, ensuring alignment with sustainable development objectives. Change agents facilitate the development and implementation of innovative biodiversity measures and strategies, leveraging capacity-building efforts to meet evolving challenges.

Moreover, change agents prioritize the human aspect of behavioural change, recognizing that successful biodiversity conservation requires more than just technological advancements. They engage in interactive and participatory processes, drawing upon experiences from previous projects such as SUITS H2020 to guide community-led initiatives effectively. Through collaborative efforts, change agents develop toolkits for implementing key performance indicators tailored to transformative communities, promoting adoptable solutions for biodiversity conservation initiatives across Europe and internationally.

In the context of coastal communities, change agents play a decisive role in:

- **Visionary Leadership**: Change agents will articulate a clear vision for the desired change and inspire others to align their efforts towards achieving it. They will communicate the rationale behind the change and its benefits to all stakeholders.
- **Change Management Planning:** Change agents will develop comprehensive change management plans that outline the strategies, activities, and timelines required to successfully

implement the desired changes. This includes assessing the impact of the change, identifying potential risks and barriers, and developing mitigation strategies.

- **Stakeholder Engagement:** Change agents will actively engage with stakeholders at all levels in the community to build buy-in and support for the change initiative. They communicate regularly, address concerns, and solicit feedback to ensure that all voices are heard and considered throughout the change process.
- **Resistance Management:** Change agents will anticipate and address resistance to change by understanding the root causes of resistance and implementing strategies to overcome them. This may involve providing training and support, addressing misconceptions, and involving resistant stakeholders in the change process.
- **Facilitation and Coaching:** Change agents will facilitate meetings, workshops, and training sessions to promote understanding of the change and build capabilities within the community. They also provide coaching and support to individuals and teams as they navigate the challenges associated with the change.
- **Monitoring and Evaluation:** Change agents will continuously monitor the progress of the change initiative, track key performance indicators, and evaluate the effectiveness of change management strategies. They make adjustments as needed to ensure that the change stays on track and achieves the desired outcomes.

In essence, change agents serve as catalysts for transformative action, driving behavioural change initiatives and fostering a culture of sustainability within coastal communities. Their leadership is essential for safeguarding coastal biodiversity and ensuring the long-term resilience of coastal ecosystems.

3 CHANGE AGENTS IN PRO-COAST

3.1 Overview of the nine case studies in PRO-COAST

The project methodology will undergo testing in nine case studies situated across the European continent, encompassing both EU and non-EU regions. While the coastal ecosystem serves as the overarching theme for all case studies, each case study presents unique challenges and contexts. Among the case studies, there are three situated in the Mediterranean region, three in the North-east Atlantic Ocean, one in the Baltic Sea, and one in the Black Sea. They encompass diverse environments, including islands and continental coastal areas (Table 1).

Table 1 Pro-Coast case studies.

	Country	**Geographical territory**	**European marine region**
1	Malta	Comino Island	Mediterranean Sea
2	Italy	Acquatina di Frigole, Apulia	
3	Slovenia	Akaran (Debeli Rtic)	
4	Montenegro	Boka Kotorska Bay	
5	Ireland	Streedagh beach, Sligo	North-east Atlantic Ocean

6	UK	Arne Parish	
7	Norway	Bergen	
8	Estonia	Kloogaranna-Laulasmaa	Baltic Sea
9	Romania	Corbu Bay	Black Sea

3.2 PRO-COAST's change agents in each case and their roles

In the following section, all nine case studies will be briefly described, before an overview of the identified change agents will be presented.

EU CS1 Comino Island | Malta |Small Island (2.95km²) in the Mediterranean Sea.



Figure 2 Comino Island, Malta

PARTNER: FoEM

Biodiversity Challenges: One of the biodiversity challenges faced in the Kemmuna u lGżejjer ta' Madwarha region is the degradation of soil due to unsustainable agricultural practices. This degradation poses a threat to the overall health of the ecosystem and contributes to habitat loss and fragmentation.

PRO-COAST Targets: To address this challenge, the PRO-COAST project aims to implement responsible tourism, sustainable agricultural practices and soil restoration measures like cover cropping as part of its broader objectives. Specifically, the project targets the introduction of sustainable agricultural practices to mitigate soil degradation and promote ecosystem resilience. With respect to the introduction of sustainable agricultural practices, PRO-COAST will work towards changing the perceptions and behaviours of tourists, governmental authorities, farmers and residents in the region as well as positively transforming regulations and economic policies, and their respective impacts on biodiversity loss in the Island.

Identified Change Agent: Martin De Giovanni and Michelangelo Galea, Friends of the Earth Malta

Role of Change Agent: De Giovanni and Galea play a crucial role in driving the implementation of sustainable agricultural practices and soil restoration measures. They work closely with local stakeholders to raise awareness about the importance of adopting these practices and facilitate their adoption within the community. Through their leadership and advocacy, Martin and Michelangelo inspire collective action and empower stakeholders to contribute to the conservation and restoration of soil health in the region.

EU CS2 Apulia | Italy | Protected area of Aquatina di Frigole. Mediterranean Sea.



Figure 3 Protected area of Aquatina di Frigole

PARTNER: UniSal

Biodiversity Challenges: Challenges to biodiversity conservation in this area include poor management of the lagoon-sea connection, small-scale oil spills, antifouling dispersions, and illegal activities such as littering and fishing in restricted areas. These threats endanger iconic species and their habitats.

Targets of PRO-COAST: The PRO-COAST initiative aims to address these challenges through several targeted actions. This includes

increasing societal awareness of the issue, especially among local communities and visitors about the importance of the area's biodiversity and the threats this faces. Change agents will capitalise on the message that when ecosystems die, people die. The initiative also aims to enhance literacy through establishing educational programs which will increase the local community's understanding of species of significance to biodiversity and through the promotion of citizen monitoring of biodiversity changes. Furthermore, the initiative will share research findings with the local and visiting (tourist) population to foster a deeper appreciation for the ecosystem and evaluate the systemic connections between marine litter, illegal activities, and changes in biodiversity with the ultimate goal of informing conservation strategies, developing transformative actions and changing behaviours.

Identified Change Agent: Francesco Zangaro, University of Salento

Role of Change Agent: Zangaro is a PhD candidate at the university of Salento with a strong interest in applied ecology, biodiversity conservation, habitat management and conservation of endangered species. He will play a crucial role in driving behavioural change within the community. He leads efforts to increase awareness, enhance literacy, disseminate research findings, and assess systemic correlations. By fostering engagement and empowering stakeholders, Zangaro promotes positive behavioural changes and contributes to the conservation of biodiversity in the area.

EU CS3 Area of Strunjan | Slovenia Akaran (Debeli Rtic) in Adriatic Sea.



Figure 4 Area of Strunjan, Slovenia

PARTNER: UP

Biodiversity Challenges: Coastal habitats face challenges such as soil erosion, disturbance of wildlife due to tourism, and the presence of litter attracting seagulls and increasing the risk of zoonosis. Protected species including *Cladocora caespitosa*, *Pinna nobilis*, *Ruppia cirrhosa*, and *Zostera marina* are at risk.

Targets of PRO-COAST: PRO-COAST aims to address these challenges by using citizen data science through, for example, an extended version of the Step Change Application (https://stepchangeproject.eu/citizen-science-initiatives/wildlife-conservation/) that has been designed to identify wildlife in Slovenia) to raise environmental awareness. Engagement activities will focus on expanding outreach in protected areas, specifically targeting human-wildlife interactions.

Identified Change Agent: Luka Duniš; Žiga Velkavrh; Minja Krstić; Lea Podgoršek; Elena Buzan (University of Primorska)

Role of Change Agent: Duniš, Velkavrh, Krstić, Podgoršek and Buzan play a crucial role in driving behavioural change within the community. Through initiatives and engagement activities supported by PRO-COAST, they promote environmental awareness and facilitate community involvement in biodiversity conservation efforts. Their leadership and advocacy contribute to the protection and sustainable management of coastal habitats and species.

Non-EU CS4 Boka Kotorska Bay area | SW Montenegro, Largest bay in the Adriatic Sea.



Figure 5 Boka Kotorska Bay, Montenegro

PARTNER: CEM (Chamber of Commerce)

Biodiversity Challenges: The bay faces significant challenges including land-based influences, the impact of cruising tourism, uncontrolled fishing, and recreational boating, all of which threaten its biodiversity and ecosystem health.

Targets of PRO-COAST: The PRO-COAST project aims to address these challenges by implementing technological solutions, a media campaign, training sessions, and lobbying to reduce the ecological footprint on biodiversity as well as promoting the sustainable management of resources and cruising industry, while preserving cultural integrity and essential socio-economic interests of the local community and businesses. PRO-COAST will develop a digital library to promote biodiversity awareness and advocate for the adjustment of local policies to ensure conservation and sustainable use of biodiversity. The team will prioritise specific conservation initiatives based on scientific assessments provided by Faculty of Maritime Studies in Kotor and the Institute of Marine Biology in Montenegro.

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Identified Change Agent: Ana Filipović and Ana Pavicevic (Chamber of Commerce, Montenegro)

Role of Change Agents: Pavicevic and Filipović play a crucial role in driving positive changes within the community. Pavicevic with support from Filipović will lead efforts to implement PRO-COAST targets, foster collaboration among stakeholders, and advocate for sustainable practices. Through leadership and advocacy, both inspire collective action and empower the community to contribute to the conservation and sustainability of the bay's biodiversity.

EU CS5 Sligo | Ireland | Streedagh beach, Sligo located in the Atlantic Ocean.



Figure 6 Streedagh beach, Ireland

PARTNER: ATU (Atlantic Technological University)

Biodiversity Challenges: Coastal dunes, sandy shores, and mesic grasslands in the Northwest of Ireland face significant challenges from sea level rise, extreme climate events, coastal erosion, and flooding. These environmental stressors threaten the delicate balance of ecosystems and biodiversity in the region.

PRO-COAST Targets: To address these challenges, the PRO-COAST project has set several targets. Firstly, the project will engage with local coastal community groups, facilitate their collaboration and involvement in conservation efforts. Secondly, the project will launch an awareness campaign to educate residents and visitors about the importance of sand dune protection measures and the value of coastal ecosystems. Thirdly, the project will conduct surveys of residents and visitors to assess their awareness of sand dune protection measures, their willingness to comply with the measures, and the perceived value of these ecosystems to them.

Name of Change Agent: Fredrick Otieno and Mahdieh Raji (Atlantic Technological University)

Role of Change Agent: Otieno and Raji play a pivotal role in driving the implementation of PRO-COAST targets. They work closely with local coastal community groups, stakeholders, and authorities to foster collaboration and engagement. Through their leadership and advocacy, Fredrick and Mahdieh inspire collective action, raise awareness, and empower stakeholders to actively participate in biodiversity conservation and coastal protection efforts in the region.

Non- EU CS6 Arne Parish | UK | River estuary and coast.



Figure 7 Arne Parish, UK

PARTNER: ANATRACK

Biodiversity Challenges: The rural area, comprising grassland, heathland, woodland, river estuary, and coast, faces various challenges to biodiversity conservation. These include intensive grazing and hedge cutting, nutrient and phosphate run-off, invasive alien species (IAS) that disrupt coastal and other woodland, and mineral extraction activities.

PRO-COAST Targets: To address these challenges, the PRO-COAST project proposed three main targets. Firstly, the project proposed to reintroduce once-common-now-rare plants to provide food for birds and butterflies, promoting cultural ecosystem services. Secondly, the team proposed to **create new** ponds to support invertebrates and amphibians, which serve as food sources for birds, and which therefore contribute to regulatory ecosystem services. Thirdly, and as a main focus agreed for Pro-Coast, the project will aim to **r**estore to the mainland populations of red squirrels which now persist only on adjacent offshore islands, primarily to aid carbon sequestration efforts and enhance biodiversity.

Name of Change Agent: Bridget Kenward (European Sustainable Use Group and Anatrack Ltd.)

Role of Change Agent: Kenward plays a crucial role in driving the implementation of PRO-COAST targets within the local community. She works to involve all community members, providing leadership, knowledge, and guidance. By fostering collaboration and engagement, Kenward will empower stakeholders to actively participate in biodiversity conservation efforts, ensuring the success and sustainability of the project in Arne Parish, UK.

Non-EU CS7 Bergen| Norway | Southwestern coast surrounded by mountains & fjords.



Figure 8 Bergen, Norway.

PARTNER: UIB (University of Bergen)

Biodiversity Challenges: The issue of ghost fishing in the coastal area around Bergen, Norway, and the problem of below-surface plastic pollution are significant environmental concerns that pose threats to marine ecosystems and biodiversity. Ghost fishing refers to the phenomenon where abandoned, lost, or discarded fishing gear continues to catch fish and other marine animals unintentionally. This gear, including nets, lines,

and traps, can remain in the ocean for years, trapping and killing marine life indiscriminately. In Bergen, Norway, a region with a rich maritime tradition and a bustling fishing industry, ghost fishing poses a serious threat to local marine habitats and wildlife. In addition to ghost fishing, the issue of below-surface plastic pollution further threatens marine ecosystems in Bergen and beyond.

PRO-COAST Targets: To address these challenges, the PRO-COAST project aims to reduce the level of abandoned or lost fishing gear. Fishing gear can become lost or abandoned due to accidents, storms, or improper disposal practices. Once lost, this gear can continue to catch marine life for years, contributing to overfishing and habitat destruction. In part, the project will address this through informing stakeholders about the development of new regulations and working with enforcement agencies., In some cases, there may be inadequate regulations or enforcement mechanisms in place to prevent ghost fishing or ensure the responsible disposal of fishing gear. This can allow ghost gear to accumulate in marine environments with little accountability for its impact. The project will also address the economic incentives of the fishing industry, which drive the abandonment of gear, or the use of unsustainable fishing practices, further exacerbating the problem of ghost fishing.

Name of Change Agent: Selina Rombach (University of Bergen) and Ruben Oddekalv (Norges Miljøvernforbundet)

Role of Change Agent: Rombach and Oddekalv works towards empowering local communities to act against ghost fishing and plastic pollution in their areas. He works with communities to identify the necessary tools, resources, and support needed to implement grassroots initiatives, such as beach clean-ups, recycling programs, and sustainable fishing practices. Ruben will engage with various stakeholders, including government agencies, fishing industries, environmental organizations, local communities, and the public to foster collective action and collaboration towards reducing ghost fishing and plastic pollution. His engagement with a wide variety of stakeholders is aimed at raising awareness, advocating for policy changes, fostering innovation, and monitoring progress towards a more sustainable future for the marine ecosystem in Bergen.

EU CS8 Kloogaranna-Laulasmaa | Estonia Coastal area in Baltic Sea



Figure 9 Kloogaranna-Laulasmaa, Estonia

PARTNER: TalTech

Biodiversity Challenges: Coastal dunes and sandy shores in this area face significant challenges stemming from urban pressure and their proximity to the capital, Tallinn. These challenges include environmental impacts generated by urbanisation, such as habitat destruction, pollution, and disturbance to sensitive ecosystems.

PRO-COAST Targets: To address these challenges, the PRO-COAST project has outlined several targets. These include addressing the social dimension of this challenge, where the project will focus on understanding and leveraging the interests of different stakeholder groups, creating high-quality public spaces, enhancing accessibility, promoting the development of recreational ecosystem services, and fostering a sustainable economy. The team will also integrate the positions and interests of local and central government authorities to ensure effective coastal management and conservation. Throughout the entirety of the initiative, the project will support evidence-

based governance to ensure high-quality decision-making processes and facilitate stakeholder involvement. The project will also raise awareness through multiple public engagement events.

Name of Change Agent: Kadri Tillemann (TalTech)

Role of Change Agent: Tillemann plays a crucial role in driving the implementation of PRO-COAST targets within the community. She works to bridge the gap between different stakeholder groups, facilitate collaboration between local and central authorities, and ensure that decision-making processes are informed by scientific evidence and stakeholder input. Through her leadership and advocacy, Kadri will empower stakeholders to actively take part in coastal management and conservation efforts, fostering sustainable development and biodiversity preservation in Kloogaranna-Laulasmaa, Estonia.

EU CS9 Corbu | Romania | Virginia Beach.



Figure 10 Corbu, Virginia Beach, Romania.

PARTNER: TOTALPR

Biodiversity Challenges: The coastal ecosystem, consisting of sandy shores, riparian forests, dystrophic lakes, and sandbanks, faces significant challenges due to the non-existence of a supervisory body with knowledge about the coastal ecosystem. There is a lack of responsible approach to development in the region, combined with a construction industry and a deprived local community that seems to be solely motivated and driven by the prospects of financial gain from construction. This lack of oversight poses threats to the delicate balance of biodiversity in the region.

PRO-COAST Targets: To address these challenges, the PRO-COAST project focuses on several targets. The project will engage the local community through activities such as photo documentation and surveys to raise awareness about environmental issues and promote conservation efforts. Furthermore, the team will support senior stakeholder involvement processes to facilitate collaboration and participation in coastal management and conservation initiatives. Throughout the project, the initiative will raise awareness through emphasising the environmental importance of local flora and fauna, with the aim of garnering increased support from the local community, stakeholders, and policymakers for ecosystem conservation.

Name of Change Agent: Emanuel Baltag (University of Iasi and Marine Biological Station)

Role of Change Agent: Baltag plays a crucial role in driving the implementation of PRO-COAST targets within the community. He works to engage and empower the local community, facilitate stakeholder involvement processes, and advocate for the conservation of coastal biodiversity in Romania. Through his leadership and advocacy, Emanuel inspires collective action, raises awareness, and mobilises support for ecosystem conservation efforts in the region.

3.3 Theoretical approach for engagement

The Bristol Approach and Extreme Citizen Engagement (ECE) are innovative methodologies that aim to empower local communities and drive meaningful change through inclusive participation and collaboration (Chiaravalloti et al. 2022; English et al., 2018). These approaches prioritize community involvement, using the collective wisdom and expertise of residents to address complex challenges and foster sustainable

development, in particularly when it comes to mitigate the risks of biodiversity loss (Pocock et al.; 2018; Boakes et al.; 2016).

Bristol Approach:

- **Community-Centred Solutions**: The Bristol Approach emphasizes the importance of community-led initiatives and grassroots action. It recognizes that local communities possess invaluable insights and knowledge about their own needs and challenges.
- **Partnership and Collaboration**: It promotes partnerships between local government, civil society organizations, businesses, and residents to co-create solutions. By working collaboratively, stakeholders can leverage diverse resources and expertise to address complex problems effectively.
- **Empowerment and Capacity Building**: The approach focuses on empowering communities by building their capacity to identify issues, develop solutions, and implement projects. This empowerment fosters a sense of ownership and accountability among residents, leading to more sustainable outcomes.
- **Long-Term Sustainability**: By prioritizing community engagement and participation, the Bristol Approach ensures that solutions are tailored to local situations and have long-term relevance and sustainability. This approach fosters resilience and adaptive ability within communities, enabling them to respond effectively to future challenges.

Extreme Citizen Engagement (ECE):

- **Radical Inclusivity**: ECE goes beyond traditional forms of citizen engagement by actively seeking out and involving marginalized or underrepresented groups in decision-making processes (English et al., 2018). It aims to ensure that the voices of all community members, including those traditionally excluded from decision-making, are heard, and valued.
- **Open and Transparent Communication**: ECE advocates for open and transparent communication channels between residents and decision-makers. It promotes dialogue, information sharing, and active listening to foster mutual understanding and trust between stakeholders (Nienaber, Spundflasch & Soares, 2023).
- **Citizen-Led Initiatives**: ECE encourages citizens to take the lead in identifying issues, setting agendas, and driving change within their communities, empowering residents to become active agents of change rather than passive recipients of decisions made by others. However, a significant conflict exists between the need to create genuinely transformative change and the desire to be citizen-led. While citizens can advocate for good decisions, it is crucial that this advocacy occurs within the context of extensive expert advice. Experts play a vital role in explaining why transformative change is in the citizens' own interests. Although initiatives like Citizens' Assemblies are highly valuable, there is a concern that these procedures often do not sufficiently emphasize the importance of expert guidance. **Democratic Innovation**: ECE embraces innovative approaches to democratic governance, such as participatory budgeting, citizen juries, and deliberative forums. These methods enable residents to directly influence decision-making processes and shape public policies.

Advantages for Driving Change:

- **Inclusivity and Diversity**: Both approaches prioritise inclusivity and diversity, ensuring that all community members have a seat at the table and their voices are heard. This leads to more comprehensive and equitable solutions that reflect the needs and priorities of the entire community.
- **Local Ownership and Empowerment**: By empowering communities to lead change efforts, the Bristol Approach and ECE foster a sense of ownership and agency among residents. This increases community buy-in and commitment to long-term solutions.
- **Innovative Problem-Solving**: These approaches encourage creative thinking and innovative problem-solving by tapping into the collective intelligence of communities. By engaging diverse perspectives and expertise, they generate fresh insights and novel solutions to complex challenges.
- **Resilience and Sustainability**: Community-led initiatives supported by the Bristol Approach and ECE are often more resilient and sustainable in the long run (Pocock, et al., 2018). By building local capacity and fostering collaboration, they create a solid foundation for ongoing development and adaptation to changing circumstances.

In summary, the Bristol Approach and Extreme Citizen Engagement offer powerful frameworks for driving behavioural change within local communities by prioritising inclusivity, empowerment, and collaboration- to mitigate the risks of biodiversity loss (Boakes et al., 2016). By harnessing the collective wisdom and energy of residents, these approaches enable communities to address complex challenges effectively and create a more sustainable and resilient future.

3.4 Three-fold Engagement Strategy in PRO-COAST

The communication protocols between WP6 and change agents are structured around a **three-fold engagement strategy**.

Firstly, a formal approach involving monthly meetings to discuss governance, stakeholder groups, and other pertinent themes. The change agents have the autonomy to invite additional experts to enrich these discussions, enhancing the depth of knowledge and insights shared. Each meeting will be guided by specific themes relevant to the ongoing behavioural change initiatives, ensuring focused and productive interactions.

Secondly, regular email exchanges will supplement the monthly meetings, facilitating ongoing communication and addressing immediate needs as they arise. The frequency of email exchanges will be tailored to the requirements and preferences of the change agents, ensuring timely support and responsiveness.

Additionally, a series of workshops will be organised to foster knowledge exchange and collect best practices. These workshops will provide a platform for change agents to come together, share experiences, and collaborate to address common challenges. Cross-learning groups established by WP6 will further facilitate knowledge transfer and collaboration among change agents.

The themes for the monthly meetings will encompass a range of topics aimed at fostering collaboration, enhancing awareness, and addressing barriers to change. These themes include expectations and goals, collaboration / engagement approaches, stakeholder awareness, resistance, building transformative communities, governance and management, climate change impacts, and measuring behavioural change.

Table 2 Overview of themes for monthly discussion with change agents.

Themes	Expectations
Making Transformative Change	
1. Expectations and Goals:	Define aspirations and objectives for the change initiative, including success criteria in terms of environmental sustainability, political engagement, and social well-being.
2. Stakeholders and Awareness:	Assess the level of community awareness about biodiversity conservation and evaluate support for significant behavioural changes.
3. Barriers and Resistance:	Identify potential resistance from specific community groups and explore strategies to address resistance effectively.
4. Collaboration/Engagement Approach:	Determine preferred collaboration methods and support mechanisms to ensure effective partnership throughout the project.
Biodiversity Impacts and Governance	
5. Biodiversity Impacts and Drivers:	Discuss documented consequences of biodiversity loss and identify primary drivers, whether economic, social, or political.
6. Governance and Management:	Provide insights into current biodiversity management practices, including its scale, the actors involved, and the effectiveness of existing laws and policies.
7. Building a Transformative Community:	Identify stakeholders who may have been overlooked and ensure inclusivity and representation of all relevant voices in community-building efforts.
8. Measuring Change:	Determine the availability of baseline data and select appropriate methods for tracking progress, establishing clear metrics and indicators to assess the success of conservation initiatives.

Furthermore, four workshops are planned throughout the project duration to provide targeted support and facilitate collaboration between change agents and key stakeholders. These workshops will focus on developing change champions, implementing local biodiversity programs, promoting knowledge exchange, and reviewing progress and plans.

Table 3 Planned Workshops with Change Agents and Stakeholders

Workshop	Timeline	Objective
Workshop 1 DEVELOPING CHANGE CHAMPIONS*	Around month 18	Develop change champions: Engage key partners and local change agents to build trust, reduce resistance, and facilitate the adoption of new behaviours.
Workshop 2 LOCAL BIODIVERSITY PROGRAMMES FOR COASTAL ECOSYSTEMS	Around month 21	Implement local biodiversity programs: Collaborate with stakeholders to address challenges in coastal ecosystems, biodiversity conservation, and restoration in each case study.
Workshop 3 SWAP SHOP	Around month 24	Knowledge exchange: Facilitate face-to-face meetings for stakeholders from different learning sets to exchange ideas and support each other.
Workshop 4 REVIEW, REFRESH, RESET	Around month 27	Review and refine: Evaluate progress, review plans, and make necessary adjustments in collaboration with stakeholders to ensure the success of conservation initiatives.

**Change champions are key stakeholders and members of the community who assist the change agents. They will be recognized as knowledgeable and trusted by members of the community and can help spread awareness and knowledge.*

Prior to the workshops, a **training session** will be conducted to equip change agents with the necessary knowledge and skills to drive behavioural change within their communities.

Drawing from the **Bristol approach and the extreme citizen engagement model,** the project aims to ensure inclusivity and empower all stakeholder groups, including those traditionally marginalized, by providing them with a voice and fostering meaningful participation in the change process.

4 REFERENCES

Boakes, E. H., Gliozzo, G., Seymour, V., Harvey, M., Smith, C., Roy, D. B., & Haklay, M. (2016). Patterns of contribution to citizen science biodiversity projects increase understanding of volunteers' recording behaviour. Scientific Reports, 6(1), 33051. https://www.researchgate.net/publication/308085942_Patterns_of_contribution_to_citizen_science_biodiversity_projects_increase_understanding_of_volunteers%27_recording_behaviour

Chiaravalloti, R. M., Skarlatidou, A., Hoyte, S., Badia, M. M., Haklay, M., & Lewis, J. (2022). Extreme citizen science: Lessons learned from initiatives around the globe. Conservation Science and Practice, 4(2), e577. https://discovery.ucl.ac.uk/id/eprint/10144603/1/Conservat%20Sci%20and%20Prac%20-%202021%20-%20Chiaravalloti%20-%20Extreme%20citizen%20science%20%20Lessons%20learned%20from%20initiatives%20around%20the%20globe.pdf

English, P. B., Richardson, M. J., & Garzón-Galvis, C. (2018). From crowdsourcing to extreme citizen science: participatory research for environmental health. Annual Review of Public Health, 39, 335-350. https://pubmed.ncbi.nlm.nih.gov/29608871/

Fulmer, C. A. (2018). Antecedents and outcomes of trust at different levels. The Routledge companion to trust, eds Searle, R.; Nienaber, A. & Sitkin, S. (2018): 143-160.

Nienaber, A. M. I., Holtgrave, M., & Romeike, P. D. (2018). Trust in teams: A review across levels. The Routledge Companion to Trust, 105-128.

Nienaber, A. M., Romeike, P. D., Searle, R., & Schewe, G. (2015). A qualitative meta-analysis of trust in supervisor-subordinate relationships. Journal of Managerial Psychology, 30(5), 507-534. https://www.semanticscholar.org/paper/A-qualitative-meta-analysis-of-trust-in-Nienaber-Romeike/f85930315a7abdf83023bad8933b22fba6c819b3

Nienaber, A. M., & Schewe, G. (2011). What's important for trustful communication with customers? An Empirical Analysis. Journal of General Management, 37(2), 1-21.

Nienaber, A., Spundflasch, S., & Soares, A. (2020). Sustainable Urban Mobility in Europe: Implementation needs behavioural change. SUITS Policy brief 3. SUITS funded from the European Union's Horizon 2020 research and innovation programme under grant agreement no 690650. Mobility and Transport Research Centre, Coventry University. https://www.researchgate.net/publication/341072780_SUITS_Policy_Brief_3_Sustainable_Urban_Mobility_in_Europe_-_Implementation_Needs_Behavioural_Change_Statement_of_issue

Nienaber, A. M., Spundflasch, S., & Soares, A. E. (2023). Behavioural change in local authorities to increase organisational capacity. In: Capacity Building in Local Authorities for Sustainable Transport Planning (pp. 81-98). Singapore: Springer Nature Singapore. https://link.springer.com/chapter/10.1007/978-981-19-6962-1_6

Nienaber, A. M., Woodcook, A., Soares, A. E., Searle, R., & Tietmeyer, J. (2023a). The role of women as change agents in a male-dominated context: Empirical findings from the transport and mobility industry. *Work*, (Preprint), 1-13. https://eprints.gla.ac.uk/300977/2/300977.pdf

Pocock, M. J., Chandler, M., Bonney, R., Thornhill, I., Albin, A., August, T., ... & Danielsen, F. (2018). A vision for global biodiversity monitoring with citizen science. In: Advances in Ecological Research (Vol. 59, pp. 169-223). Academic Press.

van den Berg, J., Zijp, M. C., Vermeulen, W. J., & Witjes, S. (2019) Identifying change agent types and its implications for corporate sustainability integration based on worldviews and contextual factors. Journal of Cleaner Production, 229:1125-1138. https://www.sciencedirect.com/science/article/abs/pii/S0959652619313630