



RISE UP

ADAPTED GREENCOMP FRAMEWORK

Project Consortium:



TABLE OF CONTENTS

Introduction	2
RISE UP project	3
Methodology.....	4
Findings.....	7
1. From Literature Review	8
2. From Field Research	9
3. Adaptation and Validation of the GreenComp Framework.....	11
RISE UP Adapted GreenComp Framework.....	15
Competence Area 1: Embodying Sustainability	18
1.1 Eco-emotional Literacy	18
1.2 Trauma-informed climate justice	18
1.3 Mindful Sustainability.....	19
Competence Area 2: Embracing Complexity in Sustainability	20
2.1 Crisis Literacy	20
2.2 Cognitive Resilience	21
2.3 Transformative Framing	22
Competence Area 3: Envisioning Sustainable Futures	22
3.1 Empowering Hope and Efficacy	22
3.2 Resilient Adaptability	23
3.3 Creative and transdisciplinary exploration	24
Competence Area 4: Acting for Sustainability	24
4.1 Narrative agency	24

4.2 Collective resilience practices	25
4.3 Reflective and self-caring initiative.....	26
References.....	30

List of Tables

Table 1. Skills and pedagogical approaches for climate resilience	9
Table 2. Identified gaps and needs in GreenComp Framework according to RISE UP topics	13
Table 3. Mapping Adapted Competences against GreenComp Framework.....	15

List of Figures

Figure 1. GreenComp areas and competences.....	8
Figure 2. Methodology for Adapted Framework.....	9
Figure 3. Visual representation of GreenComp.....	18
Figure 4. Adapted GreenComp Framework for Young Adults.....	19

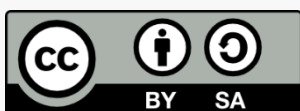
Publication date: July, 2026

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Erasmus+ National Agency for Higher Education (German Academic Exchange Service). Neither the European Union nor the granting authority can be held responsible for them.

Project No: 2024-DE01-KA220-HED-000246800

Authors: RISE UP Project

RISE UP Adapted GreenComp Framework for Young Adults © 2026 by RISE UP Consortium is licensed under Creative Commons Attribution-ShareAlike 4.0 International.



To view a copy of this license, visit <https://creativecommons.org/licenses/by-sa/4.0/>

Introduction

The RISE UP FRAMEWORK adapts the European GreenComp Framework specifically for Higher Education Institutions (HEIs), providing a comprehensive structure that integrates sustainability competences into curricula while addressing **climate anxiety** among students and young adults. The framework serves as a practical guide for HED professionals to foster environmental consciousness and action while maintaining student well-being.

The document is structured in four main parts. The **Introduction** situates the framework within the European GreenComp Framework and the RISE UP project context. The **Methodology** section describes the three-stage research process (literature review, expert consultations, and framework development) and presents the key findings from both desk and field research that informed the adaptation. The **Adapting GreenComp Framework** section maps the identified gaps against the original competences, explains the logic of adaptation, and introduces the visual overview of the adapted framework. The core of the document is then organised into **four Competence Areas** — Embodying Sustainability, Embracing Complexity in Sustainability, Envisioning Sustainable Futures, and Acting for Sustainability — each containing three adapted competences presented with a description, theoretical grounding, and illustrative example. The document closes with a **Conclusion** offering guidance on how the framework can be used in practice and what further resources are available to support implementation.

RISE UP project

The **RISE UP (Resilience, Innovation, and University Student Empowerment through reflective Climate Education and Action) project** was launched to address a critical gap in climate education within higher education. While many universities now embed sustainability into curricula, the dominant approaches emphasise technical and cognitive aspects of the ecological crisis. Students are often confronted with overwhelming climate data and catastrophic scenarios, yet they are rarely given the psychological or pedagogical support to process their emotional responses. As a result, young adults increasingly report eco-anxiety,

grief, guilt, and feelings of helplessness, which can lead to disengagement rather than empowerment.

RISE UP responds to this challenge by seeking to operationalise the European GreenComp framework for the higher education context. GreenComp, published by the European Commission in 2022, offers a comprehensive model of twelve sustainability competences. However, its original design is primarily functional and does not explicitly integrate the emotional, psychological, and relational dimensions of climate learning that have emerged as vital for student resilience.

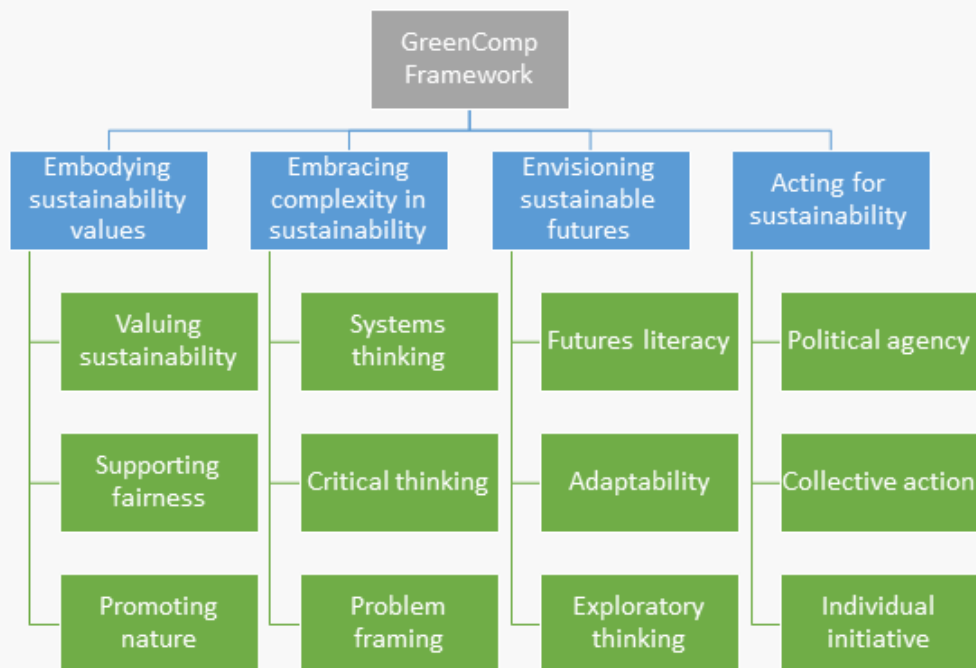
The central outcome of RISE UP is therefore the **Adapted GreenComp Framework for Young Adults**. This framework preserves the twelve competences of GreenComp enriched with insights from eco-psychology, resilience training, positive psychology, crisis management, and traditional ecological knowledge. By doing so, it bridges sustainability competences with the capacities students need to cope with climate distress, process complex emotions, and sustain constructive engagement.

Methodology

The European Sustainability Competence Framework (GreenComp) was published in 2022 by the Joint Research Centre of the European Commission as a reference model to support education for sustainability across all sectors of lifelong learning (Bianchi et al., 2022). It was developed in response to the European Green Deal and the European Education Area, which both call for equipping learners with the competences necessary to contribute to the ecological transition. GreenComp is designed as a non-prescriptive framework, providing a common reference point rather than a curriculum, and it can be adapted to diverse national, institutional, and disciplinary contexts.

At its core, GreenComp identifies twelve sustainability competences, grouped into four interrelated areas: 1) *embodying sustainability values*, 2) *embracing complexity in sustainability*, 3) *envisioning sustainable futures*, and 4) *acting for sustainability*. These competences range from valuing sustainability and supporting fairness, to systems thinking, adaptability, collective action, and individual initiative. The framework provides educators and policymakers with a shared language for curriculum design and learner assessment, helping to embed sustainability into formal, non-formal, and informal education across Europe.

Figure 1. GreenComp areas and competences



The RISE UP project embraces the mission to make the GreenComp framework more adaptable to HEIs to include the psychological and emotional dimensions. The project aims to operationalise the framework in a multi-stage process:

1. Literature Review

During the initial phase a **Literature Review** was conducted to investigate and identify the specific skill domains that support climate-adaptive mindsets by focusing on eight pre-determined + one emergent area: *climate resilience, eco-psychology, crisis management and behaviour change, eco-grief and eco-guilt, positive psychology, creative and therapeutic arts, mindful and sustainable living, cognitive behavioural strategies for climate change, and climate narratives and storytelling*. These areas were selected based on their relevance in

emerging climate resilience discourses and their emphasis on internal and social transformation.

2. Field Research

In the next stage, **consultations with HED professionals and climate resilience experts** were conducted to explore awareness of the GreenComp framework, current pedagogical approaches, observed student responses, and HEIs' institutional roles in climate resilience education.

3. Adaptation and Validation

The final stage, **the Adapted GreenComp Framework for Young Adults**, operationalises and transforms the GreenComp framework into a “transformative climate resilience education framework for young adults.”

Figure 2. Methodology for Adapted Framework



Findings

1. From Literature Review

The preceding literature review examined a set of predefined themes. The objective of this narrative review was to elucidate the psychological, behavioural, and narrative competencies that underpin climate resilience. Consequently, the corresponding skills and didactical approaches associated with each thematic area were systematically identified.

Table 1. Skills and pedagogical approaches for climate resilience

Theme	Skills required	Didactical approach	Reference
Climate resilience	Critical thinking, communication, empathy, foresight, emotional self-regulation, systems thinking.	Project-based learning, collaborative learning, experiential learning, interdisciplinary learning, service learning, storytelling, culturally relevant pedagogy, critical pedagogy	Leal Filho et al. (2016, 2025); Wamsler & Brink (2018); Mochizuki & Bryan (2015)
Eco-psychology	Emotional regulation, ecological literacy, reflective awareness, nature connectedness.	Place-based learning, nature journaling, writing eco-biographies, identification of local flora/fauna, indigenous knowledge integration	Ricket (2021); Ives et al. (2020); Biswas (2022)
Crisis management and behaviour change	Leadership, decision-making, resilience, communication, analytical thinking, trust-building.	Behavioural modeling, trust-building activities, simulation exercises, socio-cultural framing	Lalonde & Roux-Dufort (2013); Webb (2012); Williamson et al. (2018)
Eco-grief and eco-guilt	Emotional regulation, meaning-making, resilience, active listening, moral reflection.	Reflect–Inform–Act model, grief circles, climate storytelling, eco-art therapy, Dual Process Model	Pihkala (2022); Nambiar & Singh (2023); Cooke et al. (2024); Comtesse et al. (2021)
Positive psychology	Self-reflection, emotional regulation, intrinsic motivation, self-efficacy,	Self-reflection practices, hopeful narratives, active listening, respectful communication	Corral-Verdugo (2012); Seligman et al. (2005);

	perseverance, civic responsibility.		Boyer Sudduth (2020)
Creative therapeutic	Artistic expression, trauma-informed facilitation, ecological empathy, creativity.	Head-hands-heart model, outdoor art-making, reflective storytelling, nature-based activities	Bentz (2020); Scheirich (2020); McLaughlin & Seabrook (2025)
Mindfulness and sustainable living	Self-awareness, focused attention, non-judgmental acceptance, compassion, ethical values.	Formal meditation, informal mindfulness in daily activities, contemplative practices in sustainability education.	Wamsler et al. (2018); Jansen et al. (2024); Barbir et al. (2025).
Cognitive behavioural strategies for climate change	Cognitive restructuring, emotional regulation, mindfulness, problem-solving, critical thinking, help-seeking.	Psychoeducation, skills training, role-playing, thought diaries, digital mental health tools.	Hofmann et al. (2012); Ojala (2012); Wang et al. (2023); Crandon et al. (2022).
Climate narratives and storytelling.	Reflective thinking, creativity, empathy, narrative persuasion, visual interpretation, trust-building.	Digital storytelling, transmedia narratives, podcasting, multilingual story creation, role-play.	Rabelista-Nijhof (2023); Macleroy & Chung (2023); Coren & Wang (2024); Harris (2020).

2. From Field Research

Based on the findings of the desk research, the field research strategy was developed to engage with climate resilience experts and higher education (HE) professionals. The aim was to explore common patterns and assess the current state of mental health and climate awareness among young adults in higher education institutions (HEIs) across Europe. Questions addressed the understanding and relevance of the GreenComp framework, climate anxiety and its psychosocial dimensions, and the development of a sustainability-competent vision for the future. The key findings are summarised below:

- There is a consistent and urgent call to embed the full spectrum of GreenComp competencies into higher education. Although awareness of these competencies varied across contexts, the framework was widely recognised as a robust foundation for integrating sustainability values into curricula. The core competencies were deemed essential for preparing students to engage with the complexity, uncertainty, and emotional demands of climate-related challenges.
- Experts provided a nuanced analysis of students' emotional responses to climate change, noting significant regional variations. In Western Europe, youth often experience climate grief, while in Eastern and Southern Europe, a lack of emotional engagement was observed. This detachment was linked to the absence of institutional policies that translate sustainability principles into daily practices.
- The importance of psychosocial competencies in developing and strengthening climate resilience was underscored. Skills such as emotional regulation, stress management, collaboration, and symbolic communication (e.g., through the arts and storytelling) were viewed as indispensable.
- The role of HEIs in providing emotional support to students was considered critical. This includes fostering psychological safety, resilience, and a sense of purpose through both formal and informal support systems. Experts described a range of institutional practices aimed at cultivating student resilience and engagement.
- There was broad consensus on the need to move away from lecture-based teaching in favour of participatory, interdisciplinary, and real-world learning. Experts advocated for the integration of interdisciplinarity across all levels of education and subject areas. In HEIs, this integration should link science, citizenship, and the arts, ensuring that ethical, social, philosophical, and artistic dimensions of climate change are addressed alongside scientific content.

- Experts identified a variety of pedagogical approaches to support the development of climate resilience competencies, addressing the three key dimensions of human functioning: emotional, cognitive, and behavioural. Suggested methods included project-based and problem/case-based learning, debates, interdisciplinary and experiential learning, storytelling and narrative practices, mindfulness and contemplative exercises, creative and expressive arts, emotional intelligence training, and mentorship.

3. Adaptation and Validation of the GreenComp Framework

GreenComp framework is constructed with an overarching design, and one of its limitations is that it addresses a wide audience with a general criteria of sustainability. RISE Up project treats GreenComp framework as a basis and reconstructs it with the *psychological, cultural, and pedagogical challenges* of the climate crisis in mind.

The research (literature review and expert consultations) showed that higher education learners increasingly experience eco-anxiety, grief, and feelings of powerlessness, which GreenComp does not explicitly address. At the same time, the RISE UP project proposed nine priority themes that are critical to building a transformative climate resilience education framework: climate resilience, eco-psychology, crisis management and behaviour change, eco-grief and eco-guilt, positive psychology, creative action and therapeutic arts, mindfulness and sustainable living, cognitive behavioural strategies, and climate narratives and storytelling.

The gaps we identified in GreenComp represent the *distance between the current EU framework and these nine project themes*. Closing these gaps allows us to enrich GreenComp with the psychosocial and pedagogical dimensions required to support young adults in higher education.

The table below illustrates this connection by mapping the identified topics against the gaps and needs uncovered in our research, and showing how each topic informs the **Adapted GreenComp Framework for Young Adults**.

Table 2. Identified gaps and needs in GreenComp Framework according to RISE UP topics

Rise Up Topic	Gap in GreenComp	Need / Requirement	Implication for HEIs
Climate resilience	GreenComp addresses adaptability but not emotional coping or wellbeing.	Integrate resilience and self-care skills (stress regulation, peer support, mindfulness).	<i>Resilient Adaptability:</i> Students gain coping tools for climate distress and uncertainty.
Eco-psychology	Emotional/psychological dimensions of sustainability are absent.	Embed eco-emotional literacy and recognition of eco-anxiety, grief, anger, hope.	<i>Eco-emotional literacy:</i> Students can name and process emotions linked to climate change.
Crisis management & behaviour change	Competences focus on individual action, not collective crisis decision-making.	Teach crisis-aware leadership, rapid decision-making, coordination, and behaviour change strategies.	<i>Crisis literacy:</i> Students build calm leadership and behaviour change competences.
Eco-grief & eco-guilt	GreenComp does not address grief, guilt, or paralysis in sustainability learning.	Introduce grief literacy and models for channelling guilt into action.	<i>Transformative framing:</i> Students learn to process grief/guilt constructively and avoid paralysis.

Positive psychology	Current focus is on problems and risks; limited attention to hope, efficacy, perseverance.	Integrate strengths-based communication, hope-building, and self-efficacy.	<i>Hope and efficacy:</i> Students sustain motivation through constructive climate engagement.
Creative action / therapeutic arts	Creativity and arts are underutilised in HE sustainability teaching.	Use arts, storytelling, and nature-based methods for reflection and action.	<i>Creative and transdisciplinary exploration:</i> Students explore sustainability through arts-based, therapeutic methods.
Mindfulness & sustainable living	Competences emphasise knowledge/skills, not daily sustainable practices for wellbeing.	Incorporate mindfulness, sustainable lifestyle practices, and reflective routines.	<i>Mindful sustainability:</i> Students link everyday life with resilience and sustainability values.
Cognitive behavioural strategies for climate change	No attention to coping strategies or constructive reframing of thoughts/behaviours.	Embed cognitive-behavioural tools (thought reframing, stress management, behavioural activation).	<i>Cognitive resilience:</i> Students learn to regulate thoughts and behaviours to counter eco-anxiety.
Climate narratives & storytelling	GreenComp does not emphasise cultural narratives or storytelling as agency tools.	Use storytelling, speculative futures, and collective narrative-building.	<i>Narrative agency:</i> Students construct empowering climate stories to support action.

Aligning the identified gaps with the RISE UP topics shows how each theme enriches and extends the GreenComp framework. This mapping demonstrates that the RISE UP topics are

not additional competences standing apart from GreenComp, but rather thematic lenses that transform and deepen the existing twelve competences. The next step, therefore, is to present the Adapted GreenComp Framework for Young Adults – a recast version where each competence is reframed to integrate resilience, eco-psychology, and other psychosocial dimensions essential for higher education learners facing the climate crisis.

Table 3. Mapping Adapted Competences against GreenComp Framework

Original GreenComp Competence	Rise up topics	Adapted Competence (enriched with Rise Up topics)
1. Valuing sustainability	Eco-psychology; Mindfulness & Sustainable Living	Eco-emotional literacy — integrating personal meaning, climate emotions, and mindfulness in everyday sustainable living.
2. Supporting fairness	Eco-grief & eco-guilt; Climate resilience	Trauma-informed climate justice — Recognising unequal climate impacts while addressing eco-guilt and promoting psychological safety.
3. Promoting nature	Mindfulness & sustainable living; Creative action / therapeutic arts; Eco-psychology	Mindful sustainability — strengthening resilience and wellbeing through experiential, creative, and therapeutic engagement with ecosystems.
4. Systems thinking	Crisis management & behaviour change; Eco-psychology	Crisis literacy — understanding climate systems as interlinked ecological, social, and psychological processes.
5. Critical thinking	Eco-psychology; Cognitive-behavioural strategies	Cognitive resilience — questioning doomist or denialist narratives, reframing challenges through resilience and CBT strategies.
6. Problem framing	Eco-grief & eco-guilt; Positive psychology	Transformative framing — Recognising and integrating eco-grief and eco-guilt in defining sustainability problems.
7. Futures literacy	Climate narratives & storytelling; Positive psychology	Hope and efficacy — envisioning hopeful, plural, and just futures through narrative, storytelling, and arts.

8. Adaptability	Climate resilience; Cognitive-behavioural strategies; Mindfulness & sustainable living	Resilient adaptability — combining flexibility with resilience training, stress regulation, and cognitive behavioural tools.
9. Exploratory thinking	Creative action / therapeutic arts; Climate narratives & storytelling	Creative and transdisciplinary exploration — using arts, design, and therapeutic practices alongside science.
10. Political agency	Climate resilience; Positive psychology	Narrative agency — Using storytelling to foster leadership that balances activism, care, and wellbeing.
11. Collective action	Climate resilience; Crisis management & behaviour change; Eco-psychology	Collective resilience practices — embedding peer support, group dialogue, and community care into sustainability projects.
12. Individual initiative	Mindfulness & sustainable living; Positive psychology	Reflective and self-caring initiative — balancing individual agency with boundaries, mindfulness, and sustainable living practices.

RISE UP Adapted GreenComp Framework

Drawing on the gaps and mapping activities in the preceding sections, the RISE UP Adapted GreenComp Framework for Young Adults preserves the four core competence areas of the original GreenComp while enriching each of the twelve existing competence units with the psychosocial and pedagogical dimensions identified through the literature review and expert consultations. Staying loyal to the interconnection principles of the GreenComp framework (Fig.3), the four core competence areas remain the same. The adapted twelve interrelated competencies are treated as part of a whole.

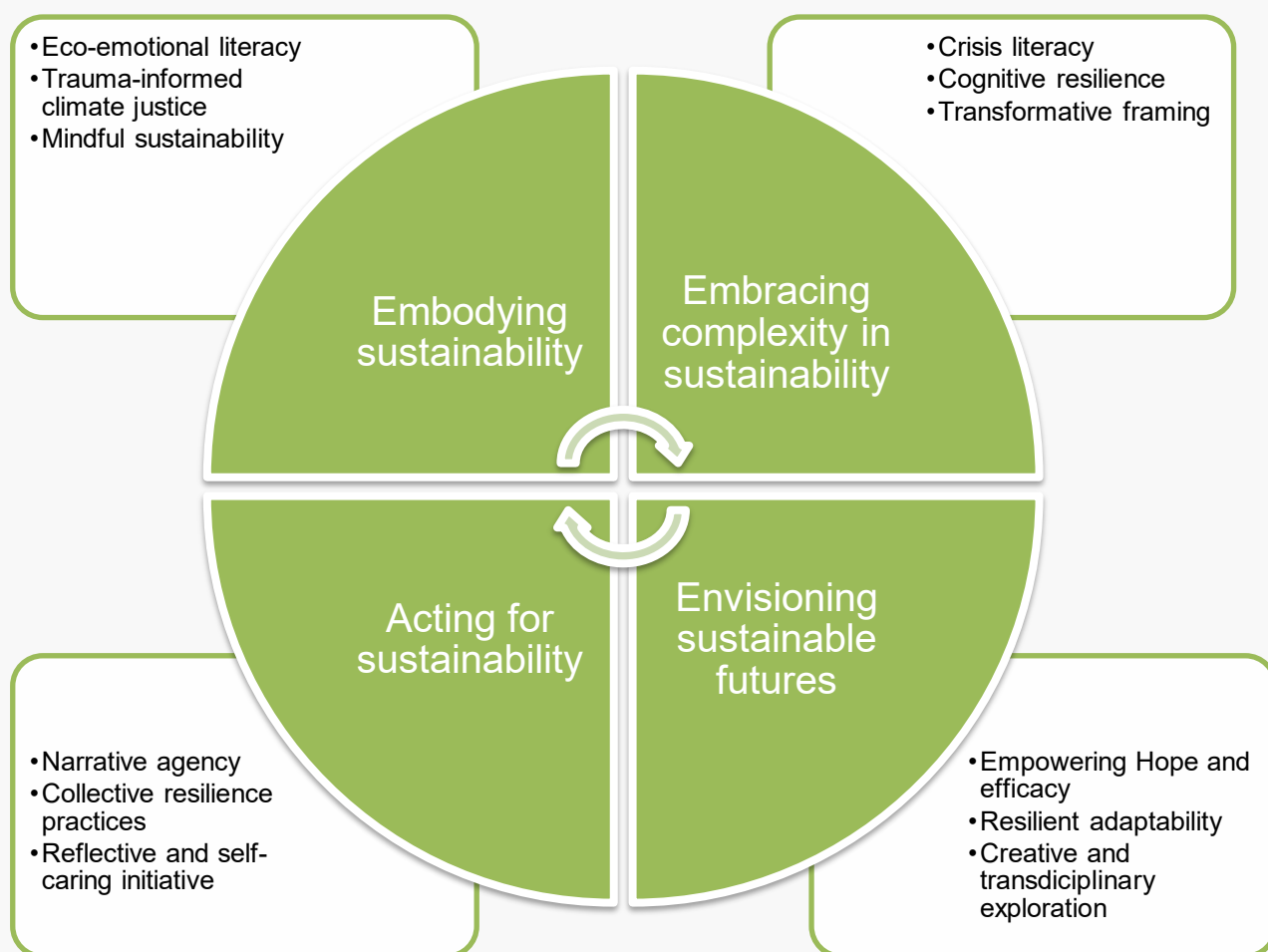
Figure 3. Visual representation of GreenComp

Note. From GreenComp, The European sustainability competence framework (p. 16) by Bianchi et al, 2022. Copyright 2022 by Publications Office of the European Union.



Rather than introducing entirely new competences, the adaptation reframes and deepens the original twelve by integrating insights from eco-psychology, positive psychology, cognitive-behavioural approaches, crisis management, and creative and therapeutic arts. Each adapted competence therefore retains its conceptual anchoring in GreenComp while gaining the emotional, relational, and resilience-oriented dimensions that higher education contexts require (Fig.4).

Figure 4. Adapted GreenComp Framework for Young Adults



Competence Area 1: Embodying Sustainability

1.1 Eco-emotional Literacy

Description: *integrating personal meaning, climate emotions, and mindfulness in everyday sustainable living.*

Sustainability values cannot be separated from the emotions that climate change provokes. Psychological resilience and ecological stability are mutually reinforced through a deep, spiritual connection with nature (Biswas 2022). Equipping students with both cognitive and affective tools fosters deeper engagement and prevents burnout. Integrating mindfulness and eco-psychology helps students recognise that feelings like anxiety, anger, or hope are integral to sustainability learning. Eco-psychology contributes to climate resilience by foregrounding the psychological capacities that support adaptive responses to ecological adversity. It is through this sustained engagement that individuals can develop a grounded sense of urgency and reduce climate anxiety (Biswas, 2022).

Example: *In consultations with experts it was noted that students often joked or went silent when overwhelmed by climate information, a defensive behaviour that revealed the need for guided emotional processing. Embedding eco-emotional values gives legitimacy to these feelings and provides safe spaces for reflection.*

1.2 Trauma-informed climate justice

Description: *Recognising unequal climate impacts while addressing eco-guilt and promoting psychological safety.*

Climate justice education requires students to critically engage with the uneven distribution of climate impacts and the ethical responsibilities of present generations toward future and marginalised populations (Gardiner, 2011). Within higher education, the emphasis is that building climate resilience must be situated within climate justice, drawing attention to how pedagogical innovations can prepare learners to face climate-related challenges (Leal Filho et al. 2025). A trauma-informed approach ensures that these justice discussions do not retraumatise students, but instead provide care-based pathways for processing eco-grief and guilt while fostering empowerment.

Example: Consultations revealed that in regions where local experiences of climate impacts were not well integrated, students often perceived climate change as “distant.” In contrast, in contexts where the toll of climate change was more present in the collective narrative, students more frequently described feelings of being “lost” or overwhelmed by despair. Experts highlighted that embedding trauma-informed approaches and creating safe spaces for dialogue can help both groups of students engage with climate justice in a constructive way.

1.3 Mindful Sustainability

Description: Strengthening resilience and wellbeing through experiential, creative, and therapeutic engagement with ecosystems.

Eco-psychology and environmental education highlight that a deepened connection with nature fosters psychological resilience, ecological responsibility, and wellbeing. Biswas (2022) describes this as a form of “healing mutualism,” where human and ecological wellbeing reinforce each other. Ives et al. (2017, 2020) argue that reconnecting with nature is central to

fostering ecological consciousness and pro-environmental behaviour. Nature-based interventions have also been shown to reduce stress and support emotional regulation (Marselle et al., 2019), while outdoor pedagogies strengthen student resilience and capacity to cope with climate anxiety (Bragg & Atkins, 2016). Relational approaches go beyond observing nature; they encourage learners to co-create meaning with the more-than-human world through embodied, sensory, and creative practices.

Example: *In interviews, experts strongly highlighted the importance of nature based activities, creative and therapeutic arts. Mindfulness walks, outdoor activities, and creative arts projects can be seen as ways for students to process their climate emotions while developing a more reciprocal relationship with nature.*

Competence Area 2: Embracing Complexity in Sustainability

2.1 Crisis Literacy

Description: *Understanding climate systems as interlinked ecological, social, and psychological processes.*

Systems thinking is a foundational competence for sustainability learning. Senge (2006) describes it as the discipline of recognising interconnections, feedback loops, and long-term patterns rather than focusing on isolated events. In GreenComp, this competence highlights the need to grasp complexity, but in higher education it is often applied only to ecological or economic systems. Building on Sterling's (2010) call for transformative learning and Leal Filho et al.'s (2025) emphasis on climate resilience in education, eco-psycho-social systems thinking (that is, understanding climate systems as interlinked ecological, social, and psychological processes) broadens the scope to include the ways climate disruption interacts with social trust, inequality, and mental health. Framing these interdependencies equips

students not only with analytical tools, but also with crisis literacy: the capacity to remain calm, critical, and adaptive in the face of systemic shocks.

Example: Experts pointed out that systems thinking must move beyond abstract modelling to include student experiences of stress, insecurity, and community vulnerability. For instance, mapping how climate shocks affect housing, mental health, and social trust can provide more realistic and empowering discussions.

2.2 Cognitive Resilience

Description: Questioning doomist or denialist narratives, reframing challenges through resilience and cognitive behavioural strategies.

Traditional critical thinking focuses on logic and evidence, but when applied to climate change it often overlooks the psychological effects of narratives of doom or denial. Eco-psychology research shows that such narratives can paralyse learners or provoke disengagement (Pihkala, 2020). A critical eco-psychology competence enables students to identify and deconstruct these narratives, and to cultivate strengths-based framings that support hope, efficacy, and perseverance (Ojala, 2016). Employing practical, evidence-based tools adapted from CBT can help students cope with climate anxiety and eco-grief.

- Cognitive reframing: teaching students how to reframe catastrophic thoughts (“we are doomed”) into constructive perspectives (“the crisis is severe, but meaningful action is possible”).
- Behavioural activation: encouraging students to take small sustainable actions when they feel paralysed, leading to reduced helplessness.
- Self-monitoring & reflection tools: helping students identify emotional triggers and develop healthier coping routines.

Example: Interviewed educators emphasises the importance of balancing sobering facts with

hopeful communication. They recommended highlighting solution-focused stories and student-led initiatives to prevent apathy and sustain engagement.

2.3 Transformative Framing

Description: *Recognising and integrating eco-grief and eco-guilt in defining sustainability problems.*

Problem framing is not a neutral process; it is shaped by emotions, values, and identities. Eco-grief and eco-guilt are common emotional responses to the climate crisis (Cunsolo & Ellis, 2018). If ignored, they may lead to avoidance or paralysis; if acknowledged, they can open constructive pathways to action. Educational models such as Reflect–Inform–Act encourage students to process emotions before designing solutions. Similarly, the Dual Process model of coping (Stroebe & Schut, 2010) demonstrates how alternating between loss-oriented and restoration-oriented coping supports resilience. By embedding these approaches, problem framing becomes an emotionally aware practice that enhances adaptive engagement.

Example: *Experts described how students often withdrew from class discussions after being presented with catastrophic projections. Structured reflection sessions are recommended before solution design to transform emotional overload into constructive agency.*

Competence Area 3: Envisioning Sustainable Futures

3.1 Empowering Hope and Efficacy

Description: *envisioning hopeful, plural, and just futures through narrative, storytelling, and arts.*

Futures literacy is the capacity to imagine multiple possible futures and use them to inform present choices. In higher education, this is often narrowed to technological or economic scenarios, overlooking cultural, psychological, and justice dimensions. Miller (2018) emphasises anticipation as a key competence for navigating uncertainty and preparing learners to cope with disruptive change. Integrating storytelling, speculative methods, and participatory scenario planning helps students to rehearse uncertainty, strengthen hope, and cultivate agency.

Example: Experts suggested futures workshops where students co-created speculative stories of climate-resilient societies. Such exercises helped students move from despair to hope, showing them that alternative futures are possible.

3.2 Resilient Adaptability

Description: combining flexibility with resilience training, stress regulation, and cognitive behavioural tools.

Adaptability is a core GreenComp competence, but it is often framed only in behavioural terms. Resilient adaptability expands this to include psychological capacities such as emotional regulation, mindfulness, and peer support. Pihkala (2020) shows that practices like cognitive reframing of catastrophic thoughts, mindfulness, and behavioural activation can reduce eco-anxiety and restore a sense of agency. By embedding these tools into higher education, students are better equipped to cope with uncertainty and sustain engagement with sustainability challenges.

Example: Educators noted that resistance to lifestyle change was not a matter of ignorance but of emotional overload. Training students in micro-resilience practices, such as mindfulness and reframing, can make them more open to sustainable action.

3.3 Creative and transdisciplinary exploration

Description: using arts, design, and therapeutic practices alongside science.

Exploratory thinking in sustainability education often remains confined to disciplinary approaches. Creative and transdisciplinary exploration broadens this scope by integrating arts, therapeutic practices, and storytelling into sustainability curricula. Wals (2015) argues that education for sustainability must cultivate socio-ecological awareness through experiential and participatory learning. Similarly, Sipos, Battisti & Grimm (2008) propose the head–hands–heart model, emphasising intellectual, practical, and emotional engagement. These approaches allow students to process emotions, imagine alternatives, and engage with complexity in ways that strengthen empathy and systems understanding.

Example: Expert consultations emphasised the importance of creative and therapeutic arts in higher education. For instance, collaborative theatre and art workshops were described as effective spaces for students to express eco-emotions and imagine new possibilities.

Competence Area 4: Acting for Sustainability

4.1 Narrative agency

Description: Using storytelling to foster leadership that balances activism, care, and wellbeing.

Political agency in GreenComp is framed in terms of empowerment and civic participation, but it rarely considers the emotional risks of burnout and disillusionment. Research in positive psychology suggests that sustainable activism requires self-efficacy, perseverance, and empathy (Ojala, 2016). The adapted competence *Narrative agency* emphasises the power of stories in shaping how students see themselves as actors in the climate crisis. Storytelling and climate narratives are not only tools for sense-making but also for leadership development: they help students frame collective challenges, mobilise peers, and sustain motivation. When combined with empathic leadership, narrative agency ensures that activism is rooted in care, inclusion, and well-being. Literature highlights the role of positive psychology and narrative practices in sustaining agency and preventing burnout (Ojala, 2016; Biswas, 2022). Empathic narrative climate agency integrates these insights, promoting leadership that cares for peers and community as well as for environmental goals. By embedding empathy and care into civic action, higher education can train resilient leaders.

Example: A proposal for “activism labs” where students practice campaign design while learning peer-support techniques and safe space protocols to sustain long-term engagement.

4.2 Collective resilience practices

Description: embedding peer support, group dialogue, and community care into sustainability projects.

Collective action in sustainability education is most effective when it is reinforced by social and emotional support structures. The literature highlights that resilience is strengthened through community-building, peer relationships, and participatory approaches (Leal Filho et al., 2025; Sterling, 2010; Pihkala, 2020). Such practices help students process eco-anxiety,

foster empathy, and build shared capacity for action. By embedding group dialogue, mentoring, and safe spaces in higher education, institutions can create supportive environments that enhance adaptive problem-solving and long-term engagement.

Example: Experts stressed that peer-support groups, community building, and interdisciplinary project teams were essential for student resilience. They noted that students engaged in such collective settings can become more confident, less anxious, and more committed to sustained climate action.

4.3 Reflective and self-caring initiative

Description: balancing individual agency with boundaries, mindfulness, and sustainable living practices.

While individual initiative is crucial, an over-emphasis can lead to eco-guilt and over-responsibilisation (placing an unsustainable weight of moral responsibility on individuals for systemic problems), especially among young adults. Pihkala (2020) stresses that eco-anxiety and guilt must be addressed in ways that prevent burnout and paralysis. Other research highlights the role of positive psychology and reflective practices in sustaining long-term engagement (Ojala, 2016; Biswas, 2022). A reflective and self-caring approach reframes initiative as a balance between meaningful action and personal wellbeing. Practices such as mindful consumption, boundary-setting, and journaling help students remain active without exhaustion.

Example: Expert consultations stressed the need for higher education institutions to provide clear care pathways. It needs to be clear when educators can support students and when they

should refer them to counselling. This ensures students remain active without carrying unsustainable burdens.

Conclusion

The RISE UP Adapted GreenComp Framework for Young Adults represents a substantive and timely development in European sustainability education. By enriching the twelve competences of the European GreenComp Framework with insights drawn from eco-psychology, cognitive-behavioural theory, positive psychology, arts-based pedagogy, and resilience research, the framework responds to a gap that higher education institutions across Europe have increasingly recognised but have lacked the conceptual tools to address: the need to equip students not only with knowledge about the climate crisis, but with the psychological and emotional capacities to engage with it constructively, sustainably, and without being overwhelmed.

The framework does not replace GreenComp. It builds upon it, treating the original four competence areas and twelve competences as a robust and widely recognised foundation, and deepening each of them with the psychosocial and pedagogical dimensions that are essential for climate resilience education at the higher education level.

The Adapted GreenComp Framework is designed as a reference and planning tool rather than a prescriptive curriculum. Different users will engage with it in different ways.

Curriculum designers may use the framework to audit existing module portfolios against the twelve adapted competences, identifying which psychological and emotional dimensions are already addressed, which are absent, and where targeted additions — whether a single reflective exercise or a fully integrated module — would be most impactful. The mapping in Table 3 (p. 14) provides a structured starting point for this process.

Individual educators may use the framework as a conceptual guide when designing or revising learning activities, linking specific competences to the learning objectives of an existing course. The framework is intentionally modular: educators need not address all twelve competences within a single course. Selecting two or three competences and engaging with them in depth is both appropriate and effective.

Institutional leaders, quality assurance bodies, and programme directors may use the framework to inform strategic decisions about how sustainability and wellbeing are integrated at the institutional level, and how the resulting policies align with European frameworks and accreditation standards. The companion Policy Brief provides targeted guidance for this audience.

Student support services and wellbeing units may draw on the framework to situate their work within a broader competence-development logic, demonstrating to academic colleagues that emotional and psychological support is not separate from learning but constitutive of it.

It is important to note that the framework is not a therapeutic protocol. While several competences engage directly with psychological processes — including eco-anxiety, grief, cognitive reframing, and mindfulness — their application in educational settings should remain pedagogically framed. Educators working with emotionally sensitive content are encouraged to establish clear boundaries and refer students experiencing significant distress to appropriate professional support.

The RISE UP Three-Part Resource Package

This framework forms one component of a coherent three-part resource package developed by the RISE UP consortium. The three outputs are designed to be used together and to reinforce one another.

The **Adapted GreenComp Framework** (this document) provides the theoretical and conceptual foundation: it defines what the competences are, why they matter, how they relate to the original GreenComp, and what research and expert consultation underpins them.

The **Transformative Climate Resilience Educators' Toolbox** operationalises the framework into a set of ready-to-use teaching activities. Each activity is linked to one or more of the adapted competences and provides detailed facilitation guidance, learning objectives, suggested formats, and ethical considerations. Educators seeking to move directly from the framework to classroom practice will find the Toolbox the most practical entry point.

The **Policy Brief** translates the framework's implications for institutional and national policy audiences. It provides a concise evidence base, a set of targeted policy recommendations, and an argument for why integrating psychosocial sustainability competences into higher education is a matter of institutional quality and student wellbeing, not only a question of curriculum design.

Together, these three outputs provide higher education institutions with a coherent pathway from policy commitment, through curriculum planning, to teaching practice.

References

- Barbir, J., Baars, C., Eustachio, J.H.P.P., Sharifi, A., Demarzo, M., & Leal-Filho, W. (2025). Observing sustainability through the mindfulness lens: a conceptual framework based on a bibliometric review analysis. *Sustain Sci* 20, 251–267. <https://doi.org/10.1007/s11625-024-01581-8>
- Bianchi, G., Pisiotis, U. and Cabrera Giraldez, M., GreenComp The European sustainability competence framework, Punie, Y. and Bacigalupo, M. editor(s), EUR 30955 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-46485-3, doi:10.2760/13286 , JRC128040.
- Biswas, R. (2022). Ecopsychology – An introspection. In N. Mitra & S. Pal (Eds.), *Environmental Management*
- Bentz, J. (2020). Learning about climate change in, with and through art. *Climatic Change* 162, 1595–1612. <https://doi.org/10.1007/s10584-020-02804-4>
- Boyer Sudduth Environmental Consultants (2020, May 20). How to use positive psychology for better climate conversations. Retrieved May 12, 2025, from <https://boyersudduth.com/articles/try-positive-psychology-for-better-climate-conversations?>
- Bragg, R., & Atkins, G. J. N. E. C. R. (2016). A review of nature-based interventions for mental health care. *Natural England Commissioned Reports*, 204, 18. <https://publications.naturalengland.org.uk/publication/4513819616346112>
- Comtesse, H., Ertl, V., Hengst, S. M. C., Rosner, R., & Smid, G. E. (2021). Ecological grief as a response to environmental change: A mental health risk or functional response? *International journal of environmental research and public health*, 18(2), 734. <https://doi.org/10.3390/ijerph18020734>
- Cooke, A., Benham, C., Butt, N., & Dean, J. (2024). Ecological grief literacy: Approaches for responding to environmental loss. *Conservation Letters*, 17(3), e13018. <https://doi.org/10.1111/conl.13018>
- Coren, E., & Wang, H. (Eds.). (2024). *Storytelling to Accelerate Climate Solutions*. Springer Nature. <https://doi.org/10.1007/978-3-031-54790-4>
- Corral-Verdugo, V. (2012). The positive psychology of sustainability. *Environ Dev Sustain* 14, 651–666. <https://doi.org/10.1007/s10668-012-9346-8>
- Crandon, T.J., Scott, J.G., Charlson, F.J., & Thomas, H. (2022). A social–ecological perspective on climate anxiety in children and adolescents. *Nat. Clim. Chang.* 12, 123–131 (2022). <https://doi.org/10.1038/s41558-021-01251-y>

- Cunsolo, A., & Ellis, N. R. (2018). Ecological grief as a mental health response to climate change-related loss. *Nature Climate Change*, 8(4), 275-281. <https://doi.org/10.1038/s41558-018-0092-2>
- Gardiner, S. M. (2011). A perfect moral storm: The ethical tragedy of climate change, environmental ethics and science policy series. <https://doi.org/10.1093/acprof:oso/9780195379440.001.0001>
- Harris, D. M. (2019). Telling Stories about Climate Change. *The Professional Geographer*, 72(3), 309–316. <https://doi.org/10.1080/00330124.2019.1686996>
- Hofmann, S. G., Asnaani, A., Vonk, I. J., Sawyer, A. T., & Fang, A. (2012). The Efficacy of Cognitive Behavioral Therapy: A Review of Meta-analyses. *Cognitive therapy and research*, 36(5), 427–440. <https://doi.org/10.1007/s10608-012-9476-1>
- Ives, C. D., Giusti, M., Fischer, J., Abson, D. J., Klaniecki, K., Dorninger, C., Laudan, J., Barthel, S., Abernethy, P., Martín-López, B., Raymond, C. M., Kendal, D., & von Wehrden, H. (2017). Human-nature connection: a multidisciplinary review. *Current opinion in environmental sustainability*, 26, 106-113. <https://doi.org/10.1016/j.cosust.2017.05.005>
- Ives, C.D., Freeth, R. & Fischer, J. Inside-out sustainability: The neglect of inner worlds. *Ambio* 49, 208–217 (2020). <https://doi.org/10.1007/s13280-019-01187-w>
- Jansen, P., Rahe, M., & Wolff, F. (2024). How does mindfulness relate to sustainable attitude and behavior? The role of possible mediators. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, 43(22), 19708–19720. <https://doi.org/10.1007/s12144-024-05741-y>
- Lalonde, C., & Roux-Dufort, C. (2013). Challenges in teaching crisis management: Connecting theories, skills, and reflexivity. *Journal of Management Education*, 37(1), 21-50.
- Leal Filho, W., Kim, E., Palau-Salvador, Aranguiz-Mesias, P., Oyedele, S., Molera, L., Semitiel-García, M., Ruiz-de-Maya, S., Moradi, A., & Trevisan, L., V. (2025). Climate justice: The contribution of higher education institutions. *Discov Sustain* 6, 278 (2025). <https://doi.org/10.1007/s43621-025-01090-3>
- Leal Filho, W., Shiel, C., & Paço, A. (2016). Implementing and operationalising integrative approaches to sustainability in higher education: the role of project-oriented learning. *Journal of cleaner Production*, 133, 126-135. <https://doi.org/10.1016/j.jclepro.2016.05.079>
- Macleroy, V., Chung, Y. (2023). How can digital storytelling open up spaces for activist citizenship where young children create stories of hope and resilience across the world?. *IJEC* 55, 441–461 (2023). <https://doi.org/10.1007/s13158-023-00371-0>

- Marselle, M. R., Warber, S. L., & Irvine, K. N. (2019). Growing resilience through interaction with nature: Can group walks in nature buffer the effects of stressful life events on mental health? *International Journal of Environmental Research and Public Health*, 16(6), 986. <https://doi.org/10.3390/ijerph16060986>
- McLaughlin, H., & Seabrook, D. (2025). The creative arts therapies and the climate crisis: Toward a framework for intentional engagement. *Arts in Psychotherapy*, 92. <https://doi.org/10.1016/j.aip.2025.102255>
- Miller, R., Poli, R., & Rossel, P. (2018). The discipline of anticipation: Foundations for futures literacy 1. In *Transforming the future* (pp. 51-65). Routledge.
- Mochizuki, Y., & Bryan, A. (2015). Climate change education in the context of education for sustainable development: Rationale and principles. *Journal of Education for Sustainable Development*, 9(1), 4-26. <https://doi.org/10.1177/0973408215569109>
- Nambiar, V., & Singh, S. (2023, December). Understanding the prevalence of eco guilt and eco grief among adolescents: A Salutogenic approach towards building 'pro-environmental behaviour'. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1279, No. 1, p. 012019). IOP Publishing. <https://doi.org/10.1088/1755-1315/1279/1/012019>
- Ojala, M. (2012). Regulating worry, promoting hope: How do children, adolescents, and young adults cope with climate change? *International Journal of Environmental and Science Education*, 7(4), 537–561.
- Ojala, M. (2016). Facing anxiety in climate change education : from therapeutic practice to hopeful transgressive learning. *Canadian Journal of Environmental Education*, 21, 41-56.
- Pihkala, P. (2020). Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, 12(19), 7836. <https://doi.org/10.3390/su12197836>
- Pihkala, P. (2022). The process of eco-anxiety and ecological grief: A narrative review and a new proposal. *Sustainability*, 14(24), 16628. <https://doi.org/10.3390/su142416628>
- Rabelista-Nijhof, A. (2023). Narrative transportation, identification, and storytelling in environmental (science) communication: Immersing audiences in a story. *ScienceOpen Preprints*.
- Ricket, A. L. (2021). Teaching land as an extension of self. *The Radical Teacher*, (119), 14-20. <https://radicalteacher.library.pitt.edu/ojs/radicalteacher/article/view/706/713>
- Scheirich, C. (2020). Coping with the Climate crisis: exploring art therapy for sustainable mental health. <https://spectrum.library.concordia.ca/id/eprint/986936/>
- Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *The American psychologist*, 60(5), 410–421. <https://doi.org/10.1037/0003-066X.60.5.410>

- Senge, P. (2006). *The Fifth Discipline: The Art and Practice of the Learning Organization* (2nd ed.). New York: Doubleday/Currency.
- Sipos, Y., Battisti, B., & Grimm, K. (2008). Achieving transformative sustainability learning: Engaging head, hands and heart. *International Journal of Sustainability in Higher Education*, 9(1), 68–86. <https://doi.org/10.1108/14676370810842193>
- Sterling, S. (2010). Transformative learning and sustainability: Sketching the conceptual ground. *Learning and teaching in higher education*, 5(11), 17-33.
- Stroebe, M., & Schut, H. (2010). The Dual Process Model of Coping with Bereavement: A Decade on. *OMEGA - Journal of Death and Dying*, 61(4), 273-289. <https://doi.org/10.2190/OM.61.4.b>
- Wals, A. E. J. (2015). Beyond unreasonable doubt. Education and learning for socio-ecological sustainability in the Anthropocene. Wageningen University. <https://edepot.wur.nl/365312>
- Wamsler, C., & Brink, E. (2018). Mindsets for sustainability: Exploring the link between mindfulness and sustainable climate adaptation. *Ecological Economics*, Elsevier, vol. 151(C), pages 55-61.
- Wang, H., Safer, D. L., Cosentino, M., Cooper, R., Van Susteren, L., Coren, E., Nosek, G., Lertzman, R., & Sutton, S. (2023). Coping with eco-anxiety: An interdisciplinary perspective for collective learning and strategic communication. *The Journal of Climate Change and Health*, 9, 100211. <https://doi.org/10.1016/j.joclim.2023.100211>
- Webb, J. (2012). Climate Change and Society: The Chimera of Behaviour Change Technologies. *Sociology*, 46(1), 109-125. <https://doi.org/10.1177/0038038511419196>
- Williamson, K., Satre-Meloy, A., Velasco, K., & Green, K. (2018). Climate change needs behavior change: Making the case for behavioral solutions to reduce global warming. Arlington, VA: Rare <https://rare.org/wp-content/uploads/2019/02/2018-CCNBC-Report.pdf>



Project Partners:

