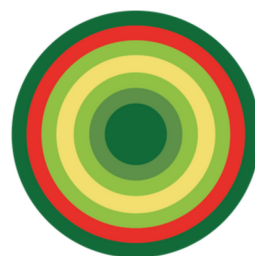


Horizon Europe Project PLANET4B

# REPORT ON ONLINE TRAINING AND EDUCATIONAL RESOURCES FOR COMMUNICATING BIODIVERSITY AND TRIGGERING TRANSFORMATIVE CHANGE



BETTER DECISIONS FOR BIODIVERSITY AND PEOPLE



PLANET4B



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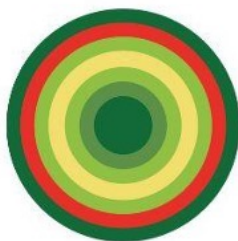
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**PLANET4B**

BETTER DECISIONS FOR BIODIVERSITY AND PEOPLE

## Key deliverable information

**Project acronym**                      **PLANET4B**

<b>Project title</b>	understanding Plural values, intersectionality, Leverage points, Attitudes, Norms, behaviour and social Learning in Transformation for Biodiversity decision making
<b>Starting date</b>	01 <sup>st</sup> November 2022
<b>Duration</b>	36 months
<b>Website</b>	<a href="https://planet4b.eu/">https://planet4b.eu/</a>
<b>Project coordination and scientific lead team</b>	Ilkhom Soliev; Alex Franklin; Agnes Zolyomi; Torsten Wähler

**Deliverable number**                      **D5.9**

<b>Deliverable title</b>	Report on online training and educational resources for communicating biodiversity and triggering transformative change
<b>Task leader</b>	Coventry University (CU)
<b>Corresponding author</b>	<a href="#">Alex Franklin</a>
<b>Dissemination level</b>	Public
<b>Status</b>	Final

### Deliverable description

This report includes an online training and educational resources for communicating biodiversity and triggering transformative change including tested methods and communicating biodiversity tips, the transformative stories and other materials.

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## List of abbreviations and acronyms

Acronym	Definition
CAC	The Climate Academy
CG	CzechGlobe – Global Change Research Institute of the Czech Academy of Sciences
CGE	Culture Goes Europe
CU	Coventry University
DC	Dadima's CIC.
ESSRG	Environmental Social Science Research Group
FiBL	Research Institute of Organic Agriculture
FUG	Forum Urban Gardening
GD	GoodIssue nonprofit Ltd.
IFZ	Interdisciplinary Research Centre for Technology, Work and Culture
MLU	Martin Luther University Halle-Wittenberg
MOOC	Massive Open Online Course
NGO	Non-Governmental Organisation
NINA	Norwegian Institute for Nature Research
OOF	Oslo og Omland Frilfutsråd – Greater Oslo Council for Outdoor Recreation
PLANET4B	understanding Plural values, intersectionality, Leverage points, Attitudes, Norms, behaviour and social IEarning in Transformation for Biodiversity decision making
RU	Radboud University
TEHRA	The Environment and Human Rights Academy
UNEP-WCMC	UN Environment Programme World Conservation Monitoring Centre
UNIFI	University of Pisa

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## Executive summary

This report presents the Biodiversity Engagement Courses and accompanying *Care-full Courses and Resources* platform developed by PLANET4B. The courses:

- Feature a range of engagement methods, including methods developed and adapted for use in the PLANET4B case studies.
- Are tailored for policy, NGOs, business, and research audiences.
- Build inclusive capacity for biodiversity decision-making across sectors.
- Support transformative change through reflexive, co-learning design.
- Are hosted on a bespoke digital platform, created to act as a lighthouse for aligned transformative learning resources.

## 1 Introduction

The biodiversity crisis refers to the rapid, human-driven loss of species, ecosystems, and genetic diversity across the planet. Current extinction rates are estimated to be tens to hundreds of times higher than natural background levels (IPBES, 2019), driven by land-use change, resource exploitation, pollution, climate change and invasive species (Keck et al., 2025). This erosion of biodiversity undermines the ecological processes that sustain life, including food production, water regulation, soil fertility, and climate stability, and threatens human well-being and planetary health (Caballos, 2017).

In addition to these direct drivers, biodiversity loss is also shaped by indirect drivers such as entrenched societal values, norms, and governance systems that mediate decision-making across civil society, business, and public policy (IPBES, 2019; Nielson et al., 2021). These interlocking power structures influence how biodiversity is perceived and prioritised, often marginalising plural knowledges and reinforcing inequalities in who gets to participate in biodiversity-related decisions (Kaijser and Kronsell, 2014). Understanding and addressing these systemic factors is essential for transformative change.

Addressing this crisis requires transformative change not only in how decisions are made about land, resources, and development, but also in the underlying societal structures, values, and institutions that shape those decisions (Díaz et al., 2019). Incremental improvements are no longer sufficient. Decision-making must become integrative, inclusive, and adaptive, aligning economic, political, and social systems with ecological limits (Díaz et al., 2019, Rockström et al., 2023). This means embedding biodiversity values into all sectors, from agriculture and infrastructure to finance and governance, and empowering diverse stakeholders, including local and Indigenous communities, to co-produce knowledge and policy (Reed et al., 2024). Only by reshaping institutions and incentives at multiple levels can societies transition toward sustainable and equitable futures that protect and restore the living systems on which we all depend.

Education and communication are central in enabling this transition. Education provides the foundation for transformation by equipping people with the knowledge, skills, and critical thinking needed to understand the interconnectedness of ecological, social, and economic systems and to engage meaningfully with biodiversity challenges

(Sterling et al., 2017; O'Brien et al., 2013). Embedding biodiversity and sustainability concepts throughout formal curricula (from primary education to universities and professional training) fosters ecological literacy and empowers future decision-makers to act within planetary boundaries. Experiential and place-based learning, alongside interdisciplinary teaching, helps bridge the gap between abstract environmental issues and lived realities, cultivating empathy and stewardship (Tilbury, 2011). Communication extends this transformation beyond classrooms to society at large. Effective communication translates scientific knowledge into accessible, actionable narratives that engage policymakers, businesses, and the public (Moser, 2016). Storytelling, media, and participatory platforms can make biodiversity loss visible and personal, helping to reframe it not as a distant environmental problem but as a direct challenge to health, livelihoods, and justice (IPBES, 2019).

Although there is a growing recognition that effective communication is critical to halting biodiversity loss, there remains a lack of accessible, inclusive training resources that reflect intersectional perspectives and build capacity in this field. Biodiversity education and communication often remain confined to technical or academic contexts, excluding many of the communities most affected by environmental change (Rose et al., 2020; Moser, 2016). Training programmes frequently privilege Western scientific paradigms, overlooking local, Indigenous, and gendered perspectives that offer essential knowledge for transformative action (Tengö et al., 2017; Smith et al., 2017). This lack of resources has real world implications, leaving a gap between aspiration and implementation. Policymakers are increasingly instructed to be more inclusive in decision-making yet lack the tools and resources to be so, while NGOs hope to call diverse actors to action, yet can lack the capacity to engage with diverse communities. There is a pressing need for practical, creative, and participatory approaches that support inclusive biodiversity engagement and decision-making.

To help address this gap, PLANET4B has developed a set of four open-access online courses focused on biodiversity engagement methods. These courses were developed as part of Task 5.5 'Enhancing the capacity of enabling players and change agents to initiate transformative change'. The courses introduce a range of participatory tools designed to support inclusive, creative, and context-sensitive approaches to biodiversity decision-making. Each version is tailored to a specific key enabling group: policy, business, NGOs, and research/academia. Together, they aim to build capacity across sectors by offering practical guidance, examples, and resources that enable diverse actors to engage meaningfully with biodiversity challenges.

The decision to focus the courses on biodiversity engagement methods was based on their central role in the empirical component of the PLANET4B project. The project's case study research evidenced the value of engagement methods as a form of intervention aimed at triggering change – including in particular in a manner capable of integrating plural values, intersectionality, and behavioural insights ([Deliverable 3.3](#)). Notably, however, the courses also extend beyond individual methods by emphasising the importance of the overall approach taken to engaging individuals in co-creative processes of change – recognising that transformative impact depends not only on the tools themselves but on the intentional, context-sensitive way in which they are applied.

In parallel to developing the set of biodiversity engagement courses PLANET4B has also created a bespoke digital educational platform – [Care-full Courses and](#)

[Resources](#) – within which the courses are hosted together with a wider range of engagement methods and materials arising from the project (see also PLANET4B [Deliverable 2.4](#): Catalogue of Methods). In addition to hosting the PLANET4B courses and resources, the platform will act as a lighthouse to curate and signpost visitors to aligned courses and resources created by other transformative change cluster projects and beyond.

The remainder of this report outlines the methodological approach used to design the Biodiversity Engagement Courses and platform (section 2), presents key features and content across the four tailored course versions (section 3), and concludes with validation activities, dissemination plans, and reflections on future development (section 4).

## 2 Designing the Biodiversity Engagement Courses and Digital Education Platform: Methodological approach

### *2.1 Biodiversity Engagement Courses: Pedagogical Framework, Target Audiences and Background Research*

Our approach to developing the PLANET4B biodiversity engagement courses is underpinned by the understanding that traditional methods of formal education are not delivering the required transformation at the either scale or speed necessary to address the current biodiversity crisis. Rather, developing inclusive and participatory biodiversity engagement requires pedagogical frameworks that move beyond knowledge transmission toward co-learning, reflexivity, and empowerment.

Particularly informative in this context, as pedagogical foundations for the PLANET4B courses are, firstly, the transformative learning framework which emphasises critical reflection and personal change, helping learners question assumptions and recognise their agency in addressing socio-ecological crises (Cranton, 2016); and, secondly, the social learning framework which focuses on collaborative, participatory learning within communities of practice (Jadallah and Ballard, 2021). The latter is already widely used in conservation and policy contexts to build trust, share tacit knowledge, and co-produce actionable solutions across stakeholder group (Reed et al., 2010). In accordance with prioritisation given within the wider PLANET4B project to environmental justice and intersectionality, our approach has also been directly shaped by decolonial and pluriversal scholarship which advocate for “knowledge democracy” and recognise multiple ways of knowing and communicating biodiversity beyond Western scientific paradigms (e.g. Tengo et al., 2017).

The corresponding set of four open access biodiversity engagement courses developed by PLANET4B (via Task 5.5) adhere to the core principles of a ‘Massive Open Access Course (MOOC): they are open-access, freely available online, and designed for self-paced independent learning. The courses are tailored to four key enabling groups: policymakers, business actors, NGOs, and research / academic communities. These audiences were identified as critical leverage points for transformative biodiversity decision-making, each with distinct roles, needs, and capacities.



The courses are designed to reflect the specific language, priorities, and operational contexts of each group of key enabling players, ensuring relevance and accessibility. For example, the policy-focused version supports inclusive governance and stakeholder engagement, while the business version introduces behavioural architecture and practical tools for sustainability leadership. The NGO version emphasises community mobilisation and participatory practice, and the academic version supports reflexive, transdisciplinary learning. By adapting content and framing to these diverse audiences, the courses aim to build capacity for inclusive biodiversity engagement across sectors and scales.

To ensure the relevance and accessibility of the courses, early-stage input was gathered from aligned stakeholders through targeted market research and testing activities undertaken in the UK.

The first round of 'market research' data collection took place via phone and online interviews between January 6<sup>th</sup> and February 27<sup>th</sup>, 2025. The focus during this round was on contacting relevant individuals within councils, local government, and NGOs. Participants were initially selected through purposive sampling, using the existing networks of the PLANET4B team and additional contacts identified by the main researcher, Claire Lyons (CU), through desk-based research. Subsequent participants were recruited through snowball sampling following the initial interviews.

Individuals were approached with the request that CU were looking to gather their input on the design and implementation of an online training course for biodiversity engagement methods, resulting in participation from respondents based in five different organisations. The interviews were recorded with the participants' consent. On average they lasted between 20–45 minutes. Each interview began with a short introduction to PLANET4B and the rationale for creating an open access course targeted at key enabling players. Participants were then asked questions about how they consult communities in biodiversity decision making, action plans, or policies; the specific groups that they find difficult to engage; and the likelihood of engaging with an online training course.

The resulting findings informed both the content and design of the PLANET4B courses. The main themes that emerged included:

- Visibility and time commitment are regarded as being key barriers to volunteering and engagement in biodiversity initiatives.
- Many noted that engagement activities tend to attract white, older, and more affluent groups, and that greater diversity remains a priority.
- Several suggested that shorter, flexible activities would make participation easier for volunteers and those with limited availability.
- Creative and interactive methods such as mapping, photography, and visual exhibitions were viewed as effective entry points for broader engagement.
- Collaboration with local equality networks, cultural organisations, and faith-based groups was recommended to reach underrepresented communities.
- Council staff highlighted that biodiversity and community engagement teams often operate separately, reducing coordination and shared learning opportunities.

- Digital exclusion, lack of green space, and limited staff resources were identified as major obstacles to engagement on biodiversity related issues, especially in more deprived areas.
- Participants emphasised that trust develops through consistent presence, informal communication, and partnerships with locally trusted intermediaries.
- Biodiversity engagement should be connected to tangible everyday benefits, such as wellbeing or financial savings, was found to increase motivation and relevance.

In March 2025 further data collection was undertaken, this time with a focus on the business community. A sample of engagement methods, pre-selected for potential use in the biodiversity engagement course for businesses, were tested by UNEP-WCMC. The testing took place during the UNEP-WCMC [Nature Action Dialogues](#) in Cambridge – a two-day event which brought together leaders from business, finance and conservation to discuss private sector contributions to the Global Biodiversity Framework. Insights from two sessions – Every job is a nature job and Directors’ duties and nature governance – informed the business course’s behavioural framing by identifying how company size, structure and leadership values influence pro-nature action. The discussions provided practical examples of behavioural tools and creative engagement methods, such as photovoice competitions, incentive schemes and cross-company governance approaches.

In addition to the above, in June 2025 an outline of the course for business users, together with some of the featured methods, was presented at an [A-Track](#) (a Horizon Europe project, A-Track supports businesses to measure nature impacts and dependencies) event. The overall focus of the A-Track event was on embedding nature in business operations, with attendees including A-Track’s business project partners. The event provided a live testing phase for the Snapshot method format (a shorter introductory overview to an engagement method, compared to the more extensive Spotlight method format) and the behavioural architecture focus. Feedback from attendees informed the refinement of the business course, resulting in a focus on the shorter format Snapshot methods and on including examples of applying behaviour change methods in sustainability and biodiversity contexts.

## *2.2 Biodiversity Engagement Courses: Structure and Content Design*

The structure and content of the PLANET4B biodiversity engagement courses have been designed to balance accessibility, depth and adaptability across diverse user groups. Each course is modular, allowing learners to navigate at their own pace and engage with materials that suit their interests and time availability. The following points outline the key components and features across all four course versions (Policy, Business, NGOs, Researchers). These points are further illustrated in Section 3 (below) through screenshots and accompanying narrative, providing a visual overview of the learning experience enabled by the courses and accompanying wider platform interface.

Each course:

- opens with a User Guide – explaining how to navigate the course and giving a brief overview of the PLANET4B project.

- includes a short introductory module on biodiversity, designed as a 10–15-minute read to establish a shared understanding across audiences. An animated film accompanies the text to provide an accessible and engaging entry point for diverse users.
- contains an *Introduction to Engagement Methods* module – explaining how engagement methods were developed in PLANET4B, and their potential applications.
- features a *Working with a Learning Community* module – which draws directly on PLANET4B case study experience, explaining how collaborative learning spaces can strengthen relationships between researchers, practitioners, and citizens.
- draws to a close with a *Designing and Delivering Impact* module which focuses on how engagement activities can demonstrate tangible influence on policy, practice, and community outcomes.

The methods modules are presented in two distinct formats to reflect different levels of engagement and time commitment: Spotlight Methods and Snapshot Methods. Each presented method is featured in one format only (i.e. Spotlight or Snapshot), ensuring clarity and avoiding duplication across the course:

- *Spotlight Methods* are detailed learning units lasting between 10–25 minutes (reading time). They include partner video contributions, practical step-by-step guidance, adaptation advice, and impact relevance notes. 15 Spotlight Methods have been created for the policy, research and NGO setting, and three Spotlight methods for the business researchers.
- *Snapshot Methods* are concise 2–5 minutes summaries that provide clear overviews, skill requirements, materials lists, and links to further resources. 25 Snapshot methods have been created specifically for the business audiences, 12 Snapshot methods are featured from the methods included as proformas in [Deliverable 2.2](#), with a further two drawn from the original [Deliverable 2.1](#) list of 100 methods.

The 17 Spotlight Methods were selected (by CU) primarily from the 28 methods trialled by project partners and Learning Communities during the PLANET4B empirical research and subsequently written up as proformas for PLANET4B [Deliverable 2.2](#). These methods include both newly developed approaches created specifically for the project (e.g. Biodiversity in the Cupboard) and adaptations of existing methods, that were modified by the consortium partners leading the case studies, to serve the biodiversity and intersectionality orientation of PLANET4B.

Each Spotlight Method was made into a quickly accessible Snapshot Method (a brief one-page version). Other Snapshot Methods were initially selected from the pool of 28 engagement methods that had not been developed into Spotlight Methods. Alongside, in the case of the NGO, Policy and Researcher courses, a further 27 methods were also short-listed for suitability, from the original list of 100 methods compiled as part of PLANET4B [Deliverable 2.1](#). Whilst, for the business-focused course, a bespoke set of 25 choice architecture and nudging snapshot methods was identified and developed from existing scientific literature by Jackie Abell (CU). These methods form the Snapshot collection.

Decisions on the selection of individual methods, the length and structure of modules, and the organisation of content were shaped by the background market research evidence, along with the findings arising from the PLANET4B project (especially from the case-based empirical research) on how to deliver effective engagement for the purpose of enhancing biodiversity-related decision-making and how to maximise project impact. The process was also informed (within CU) by a review of relevant literature and other desk-based research. Accordingly, guiding criteria included the need to:

- feature methods of varying length, from short ‘doorstep’ activities to more in-depth, time-intensive approaches.
- provide clear and relevant examples, showing where and how each method has worked in practice.
- offer practical guidance on collecting and demonstrating impact, with examples of how outcomes can be evidenced.
- showcase a diverse range of approaches, including storytelling and expression, sensory and material engagement, play and game-based learning, behavioural, structural, and dialogue and reflection.
- emphasise the importance of building strong connections with communities, particularly when working in the context of policy processes to engage groups who may have limited trust in institutional processes.
- highlight that transformation takes time and often requires a combination of methods, since a single intervention rarely produces large-scale change.
- inspire confidence by offering methods suitable for all levels of experience and ability, encouraging facilitators to start small and progress to more intensive approaches.
- encourage criticality – including that engagement methods require effort and commitment, mutual respect and recognition, trust and safe spaces for co-creativity to take root; encourage learners to use biodiversity engagement methods but not take them for granted.

The outcome is a set of four open access biodiversity engagement courses – and bespoke Care-full Courses and Resources hosting platform – that distil key learnings from the PLANET4B project and beyond in the following ways:

- the courses both showcase and also extend beyond the collection of individual methods used within the PLANET4B case study research, with sufficient detail and guiding explanation such that they can be applied in a multiplicity of other social-ecological contexts, scales and settings.
- the range of different methods featured enable course users to gradually build confidence and facilitation skills, beginning with shorter and less intensive approaches (e.g. such as the *Who Am I?* game) and progressing towards more advanced methods (e.g. Participatory Theatre).
- the dual-format approach of Spotlight and Snapshot methods enables flexibility for learners, allowing a mixture of quick exploration and more immersive study, depending on their needs and available time.
- by featuring cases from the PLANET4B project, evidencing the value of establishing Learning Communities and explaining how to design-in and deliver impact, the courses demonstrate tangible routes from awareness to action, grounding systemic change in real-world practice.

- the overall design of the courses prompts critical reflexivity – through questions it encourages course users to consider their own role and agency in shaping biodiversity outcomes.

The overall development process of the above outlined course components followed a structured timeline, involving iterative design, partner collaboration, and testing phases. Table 1 (below) outlines the key activities undertaken across each stage of the course creation process.

**Table 1.** PLANET4B Biodiversity Engagement Courses Development Timeline.

Month	Key Activities
<b>November – December (2024)</b>	<b>Planning and Desk Based Research</b> <ul style="list-style-type: none"> <li>• Review PLANET4B proforma methods (Deliverable 2.2)</li> <li>• Review pre-existing MOOCs (with broad alignment to biodiversity/environment/sustainability)</li> <li>• Plan ‘market research’ phase, design interviews and reach out to relevant stakeholders</li> <li>• Identify thematic and methodological gaps and assess feasibility</li> </ul>
<b>January (2025)</b>	<b>Initial Planning, Scoping and ‘market research’</b> <ul style="list-style-type: none"> <li>• Begin market research interviews</li> <li>• Establish selection criteria for (Spotlight and Snapshot) methods – provisionally categorise PLANET4B methods as suitable for long-format (Spotlight) or short-format (Snapshot) inclusion</li> <li>• Identify relevant PLANET4B institutional partners for each method</li> <li>• Continue with market research, analyse results</li> <li>• Convene Task 5.5 consortium partner meeting (London/hybrid), inclusive of presenting preliminary plans for Deliverable 5.8 (CU/WCMC), Deliverable 5.9 (CU), and Deliverable 5.10 (TEHRA – previously CAC) for further discussion, development and refinement</li> </ul>
<b>February (2025)</b>	<b>Structure and Partner Coordination</b> <ul style="list-style-type: none"> <li>• Create outline plan / concept note of MOOCs’ aims and scope for contracting of web developer</li> <li>• Further finalise selection of methods to be featured as Spotlight, and those to be featured as Snapshot</li> <li>• Identify required consortium partner input needed to create each Spotlight method (videos and further explanation); begin contacting relevant partners to arrange interviews, and/or secure additional information</li> <li>• Finalise market research, discuss (within CU) results and how this will impact the design of the MOOCs</li> <li>• Produce structure and content sketch for each module of the MOOCs</li> <li>• Plan content for the Business MOOC – focusing primarily on nudging and choice architecture methods</li> </ul>
<b>March (2025)</b>	<b>Content Development and Prototyping</b> <ul style="list-style-type: none"> <li>• Advertising of tender to web developers</li> </ul>



	<ul style="list-style-type: none"> <li>• Create prototypes for Spotlight and Snapshot Methods</li> <li>• Design plan for modules: 'Working with Learning Communities' and 'Delivering Impact'</li> <li>• Begin recording interviews with PLANET4B partners for Spotlight method content</li> <li>• Begin work with external filmmaker to plan how videos will be included in the MOOCs</li> <li>• Selection and contraction of external web developer (Netfly)</li> <li>• Plan with web developer the user experience flow of the MOOCs, including course structure and layout</li> <li>• Concept plan introductory 'keynote' video for biodiversity, to include live doodle drawing with voice over</li> <li>• Convene follow-up meeting (online) with PLANET4B partners to discuss progress of Task 5.5</li> <li>• Conduct business user research and preliminary testing: Nature Action Dialogues (UNEP-WCMC)</li> </ul>
<b>April and May (2025)</b>	<b>Course Content Creation, Design, Testing and Dissemination</b> <ul style="list-style-type: none"> <li>• Conduct interviews with PLANET4B partners for Spotlight methods</li> <li>• Draft content for Spotlight methods</li> <li>• Draft modules 'Working with Learning Communities' and 'Designing and Delivering Impact'</li> <li>• Draft introductory modules</li> <li>• Draft script and plan for 'keynote' biodiversity introduction video</li> <li>• Draft manuscript for Club of Rome 'No Limit to Hope' book chapter (to disseminate work)</li> <li>• Work with web developer on navigation, accessibility, and layout across all MOOCs</li> <li>• Commence EC BOOSTER sessions</li> </ul>
<b>June, July and August (2025)</b>	<b>Content Refinement, Finalisation and Upload Testing</b> <ul style="list-style-type: none"> <li>• Conduct interviews with PLANET4B partners for Spotlight methods</li> <li>• Draft and begin finalising content for Spotlight methods</li> <li>• Draft additional Snapshot methods for businesses</li> <li>• Present and invite feedback at A-Track meeting – showcasing businesses Snapshot methods</li> <li>• Implement script and plan for 'keynote' biodiversity introduction video</li> <li>• Work with film maker to edit video content</li> <li>• Submit draft manuscript to Club of Rome 'No Limit to Hope' publication</li> <li>• Attend EC Booster sessions</li> <li>• Begin uploading content to care-full courses platform and test with web developer</li> <li>• Prepare for presenting MOOCs and Platform at PLANET4B final event and consortium meeting</li> </ul>

<b>September (2025)</b>	<b>Finalising and Launch of Content</b> <ul style="list-style-type: none"> <li>• Showcase MOOCs Platform at PLANET4B final event and consortium meeting (Brussels/hybrid)</li> <li>• Finalise content for all modules</li> <li>• Record and work with film maker to finalise remaining videos</li> </ul>
<b>October (2025)</b>	<b>Post-Launch Refinement, Finalisation, Upload and Reporting</b> <ul style="list-style-type: none"> <li>• Implement revisions following consortium feedback (including additional interview and film work)</li> <li>• Finalise content for all modules</li> <li>• Refine platform layout and navigation</li> <li>• Finalise Deliverable 5.9 reporting</li> <li>• Prepare for public dissemination and ongoing (5+ years) platform maintenance</li> </ul>

### *2.3 Care-full Courses and Resources Platform: structure and design*

After consideration of existing online platforms that could potentially host both the D5.9 training materials and the D5.10 adjusted materials for educators, it was decided that a bespoke website would give more control of project branding and organisation of the materials. While the existing PLANET4B website provides a dynamic page for the project, a new website allowing more interactions and having extra capacity with the potential for future expansion – as a lighthouse transformative change educational platform – was deemed necessary. The PLANET4B project website directly links to the *Care-full Courses and Resources* site and visa-versa. Working closely with a web developer, the platform was developed on Webflow to host a variety of biodiversity engagement methods and materials tailored to the key target audiences (policymakers, civil society, business and researchers). The site could also host the adjusted materials for educators (D5.10) side-by-side the other courses. Organising materials in this way enables the most efficient and intuitive user experience – a policymaker (for example) accessing the website can immediately select the area of the website designed with policymakers in mind and find all the courses and methods best tailored for them.

From the homepage, users can navigate directly to Care-full Resources (a database of page-long methods, Transformative Change Stories, PLANET4B case study examples and other related resources, or Care-full Courses (including closely aligned courses created via other projects (e.g. RECOMS, DAISY)).

Each course landing page begins with optional introductory modules:

- User Guide
- Introduction to Biodiversity
- Introduction to Engagement Methods
- Working with a Learning Community
- Developing and Delivering Impact

No part of a course is mandatory, and users can navigate to any part they wish; so if, for example, they are already familiar with biodiversity, and have some experience of

using engagement methods within Learning Communities, they may wish to scroll down the page to reach the engagement methods directly. There is deliberately no sign-up requirement so the websites resources can be as accessible as possible.

Within the biodiversity engagement courses each Spotlight Method has its own tile, designed by the web developer, to make the visual experience more appealing, alongside the more practical user experience. Each Spotlight Method is organised into Units and Lessons to make the information easily digestible, and to allow the user to skip ahead to more relevant sections as required.

The Care-full Resources area of the site can also be accessed directly from a button beneath the tiles of Spotlight Methods.

The platform has been designed to allow any required future edits and updates to be made to existing pages by non-experts from CU, without the need for the web developer to be involved in minor changes. It is hoped this platform will host future related courses and resources, and the web developer is engaged for five years post-project to ensure smooth running for these PLANET4B courses as well as the addition of any future ones.

## 2.4 Validation Activities and Future Dissemination Plans

In September 2025 the series of biodiversity engagement courses, together also with the lighthouse *Care-full Courses and Resources* platform were showcased at the final PLANET4B consortium meeting in Brussels. They were presented and discussed across two sessions: firstly, during the internal consortium-only part of the meeting (day 2); and secondly during the public-facing external meeting day (day 3). During both sessions feedback was invited on all aspects of the courses and platform, including any suggestions for additional material to be added, in order to strengthen their overall impact and effectiveness.

The feedback received across both days was predominantly very positive, both regarding the content and the graphic design of the courses and platform. However, only gap identified, in relation to the courses, was a perceived need for greater emphasis to be placed on 'social biodiversity' in the Introduction to Biodiversity module. This has since been addressed: an interview was filmed (October 2025) featuring a dialogue between experts Prof. Cristina Aoki Inoue (RU) Ms Juliana Lins (doctoral candidate, RU), on social biodiversity. The interview opened with a discussion on the notion of biodiversity and its application in all contexts, and then moved onto the following questions:

- How does thinking in terms of socio-biodiversity change the questions scientists and policymakers ask?
- Could you share examples where recognising socio-biodiversity has reshaped how ecosystems are managed or valued?
- How does recognising socio-biodiversity influence the way empirical science understands and studies ecological systems?
- What kinds of knowledges need to be valued to meaningfully engage with socio-biodiversity?

The final produced film of the interview has been added to the Introduction to Biodiversity module, together with accompanying text.

A second notable aspect of feedback received during the event (day 3) raised the importance of ensuring that the *Care-full Courses and Resources* platform does not exist as only a (another) standalone output from an EC project; rather it is important that it serves as a connected and complementary component of a wider ecosystem of educational resources. It was explained that the platform has been specifically created with the intention that it will ultimately act as a lighthouse, linking users to aligned courses developed by other Horizon Europe projects (particularly those within the Transformation Cluster), thereby supporting cross-project learning and coherence. Structurally, the modular architecture allows for the integration of external content, enabling users to navigate between PLANET4B materials and related offerings from sister initiatives and beyond. As the next stage of development, the platform and courses will be strategically publicised to maximise visibility and uptake across sectors. This will include targeted outreach and integration with existing networks to ensure the platform fulfils its role as a lighthouse for transformative learning.

To ensure the long-term relevance and uptake of the courses and platform, a multi-pronged dissemination strategy has been developed, informed by stakeholder feedback and aligned with broader Horizon Europe collaboration goals, benefiting greatly from the support of the Horizon Results Booster service. Planned next steps, across both the short and medium term include:

- During October and November 2025, the set of courses and wider platform resources will be shared with those who contributed to the market research phase to maintain engagement and demonstrate how their feedback shaped the final design.
- A CU (Centre for Agroecology, Water & Resilience research centre) seminar is planned for December 2025 to present the completed MOOC, share lessons from testing and piloting, and gather reflections on usability and future adaptation.
- The courses and platform will be shared with other Horizon Europe sister projects working on related themes to encourage collaboration, cross-project learning, and wider application of the materials. Co-ordinating individuals within the PLANET4B CU team will prioritise being available to present about the courses wherever they are requested to do so.
- An open source web analytics tool (<https://umami.is/>) will be integrated into the site to provide insights into website traffic, including page views, visitor information, bounce rate (how long people spend before leaving a particular page), traffic sources, location, etc. to help monitor reach/impact. Some of these metrics will also guide the design of any future courses and resources (including e.g. [DAISY](#)).

## 2.5 Limitations

In selecting methods for inclusion, we prioritised those that had been applied within the case studies. At the same time, we sought to balance the inclusion of these core project methods with a broader range of approaches potentially suitable across the full spectrum of key enabling players targeted through the courses; it was this logic which led to the format of combining Spotlight and Snapshot methods. This approach does

mean, though, that some Spotlight methods may have more limited appeal or feasibility in certain settings – for example, participatory theatre, while powerful in supporting engagement and relationship building between a wider range of actors, may be too resource-intensive or complex for routine uptake by policy audiences. However, in line with the ambition that the platform becomes a lighthouse hub for transformative biodiversity engagement (including by way of sign-posting to aligned outputs developed by other Horizon Europe projects (and beyond)), we will continue to expand its scope over time (e.g. during the CU-led DAISY Horizon Europe project). The inclusion of an integrated digital catalogue of methods (see [Deliverable 2.4](#)), which itself will also be treated as a ‘living resource’ (i.e. with ongoing review and development of the curated collection over time) further supports this ambition.

While the development of the MOOCs was guided by a commitment to accessibility and flexibility, several considerations emerged that may shape future iterations. As with many open-access platforms, user engagement can be difficult to predict and track in consistent ways. Learners participate independently, which means levels of interaction, completion, and reflection naturally vary. This autonomy supports broad reach but can also make it challenging to ensure that complex or practice-based content is fully absorbed and applied. Additionally, we would welcome the opportunity to translate the courses tailored for business, policymakers, civil society and researchers into other languages beyond English (as has been done with the educator-facing resources). Expanding language accessibility remains a priority for future development to better support diverse user groups. By targeting specific groups, there is always the risk that someone arrives at the site who does not feel represented by any of the pre-defined categories, however, the benefits of targeting courses and resources to particular groups outweigh the disadvantages of being too generalist. Categories such as Civil Society can be interpreted broadly, so it is hoped most users will find a suitable route to useful materials.

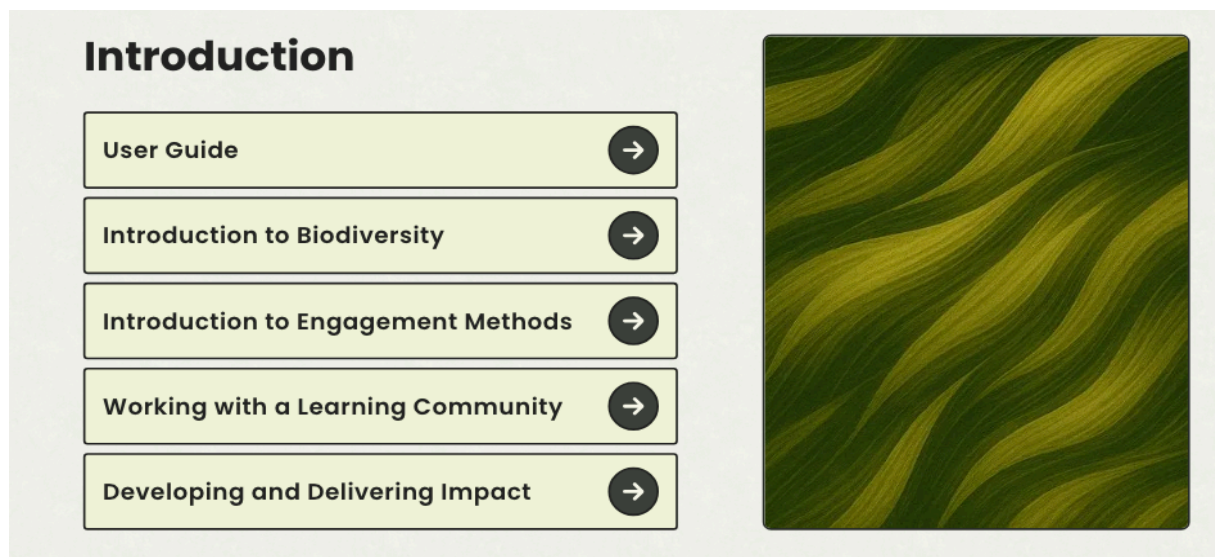
## 3 Results: Overview of the Biodiversity Engagement Courses and Platform

### 3.1 Biodiversity Engagement Courses


This section provides illustrative examples from the PLANET4B biodiversity engagement courses. The examples are presented in accordance with the structure of the MOOCs and are intended to illustrate key features, modules, and design elements. To explore the full set of courses and resources, users are invited to visit the platform directly at [care-full-courses.com](https://care-full-courses.com).


The introductory modules (*User Guide; Introduction to Biodiversity, Introduction to Engagement Methods, Working with a Learning Community, Developing and Delivering Impact*) have been designed to be consistent across all four courses, introducing the core values and key learnings of the PLANET4B project. These modules are relevant to all participant groups and focused on broad, foundational themes. For example, the *Introduction to Biodiversity* module outlines the basic concepts of biodiversity and explained how these were understood and applied within the project.





**Figure 1.** Biodiversity Engagement Course – course introduction menu, showing five introductory modules consistent across all five courses.




Introduction

# Introduction to Biodiversity

Unit 1
Understanding Biodiversity

Go to... ▼





Lesson 1


## Defining Biodiversity

Biodiversity is a contraction of biological diversity. The term is usually attributed to Walter Rosen of the National Academy of Sciences, who co-organised the National Forum on Biodiversity in Washington D.C. in 1985. It was later popularised by the biologist E. O. Wilson, who defined biodiversity as the **'totality of variation' in life**, encompassing **genetic diversity** within species, the **variety of species**, and the **diversity of ecosystems** (Wilson, 2000).

The Convention on Biological Diversity gives a widely used definition, describing biodiversity as 'the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems'. The Convention clarifies that an **'ecosystem'** is a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a **functional unit**.

Underpinning these definitions of biodiversity is a central concept: scale. At one level, biodiversity can refer to species richness, the number of species in a given area. This can range from a microscopic scale, such as the number of fungal species in a spoonful of soil, to the diversity of plants and animals in a forest, the range of species in the world's oceans, or even the total species across the biosphere, a figure that may never be fully known.



**Figure 2.** Biodiversity Engagement Course – example extract from *Introduction to Biodiversity* Module *Defining Biodiversity* Lesson.



Introduction

# Introduction to Biodiversity

Unit 2

Recording Biodiversity

Go to... ▾

## Lesson 1

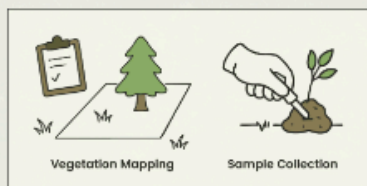
### Traditional methods of recording biodiversity in Western science

Before the development of modern technologies such as DNA metabarcoding or satellite imaging, biodiversity in Western science was recorded through field observation and manual techniques. These approaches remain widely used and continue to provide the foundation for biodiversity monitoring.



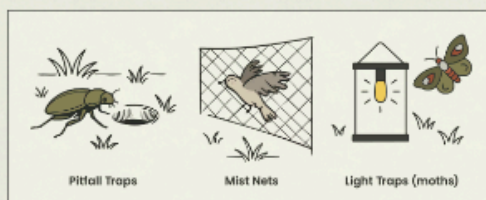
#### Field surveys and species inventories

Experts identify and record species within a defined area using methods such as transects, quadrats, timed walks or point counts. Although time-consuming and reliant on taxonomic expertise, they provide highly specific, species-level data.

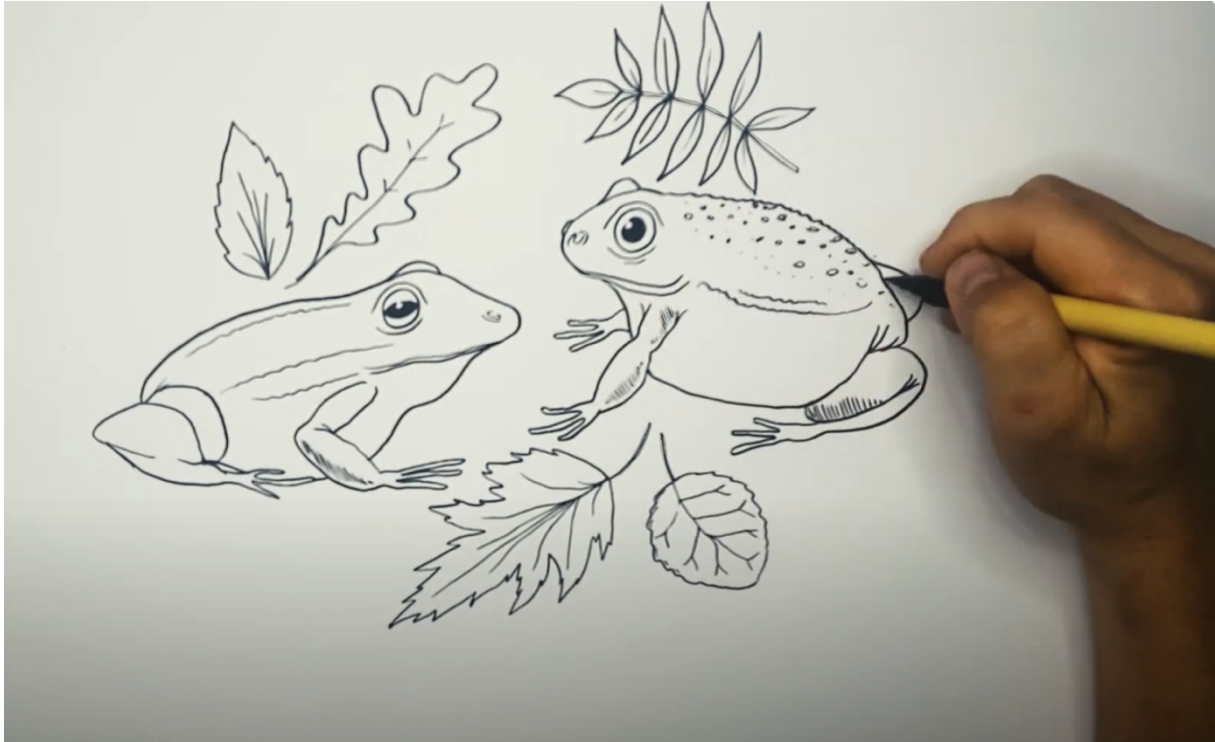


#### Vegetation mapping

Plant composition is systematically recorded in plots or along gradients. This provides detailed community-level data and supports habitat classification. Botanists and entomologists may also collect specimens for identification and preservation. Such collections provide valuable reference material, although the method can be destructive and is not appropriate in sensitive habitats.



**Figure 3.** Biodiversity Engagement Course – example extract from *Introduction to Biodiversity* Module, *Traditional Methods of Recording Biodiversity in Western Science* Lesson.





**Figure 4.** Biodiversity Engagement Course – Still from Keynote Introduction to Biodiversity Video.

The video featured in the Introduction to Biodiversity Module introduces biodiversity as the fabric of life that connects every species, habitat, and ecosystem on Earth. It traces the intricate relationships that keep a forest alive, showing how plants, animals, fungi, and people all depend on one another. As species decline and connections unravel, the film explores the human causes of this crisis and the urgent need for collective action. It invites viewers to imagine new ways of living and working with nature, where restoration, care, and shared responsibility become the path forward.

The subsequent *Working with a Learning Community* and *Developing and Delivering* modules (also universal across all four courses) draw on insights from across the PLANET4B project. The module explains how working with these groups supported collaboration, co-creation, and various forms of community engagement for understanding – and enhancing – biodiversity-related decision-making. In follow on, the *Developing and delivering impact* module explains strategies for evidencing impact within an engagement method, how to tell an impact story and how to ensure participants are included and represented in impact.






Introduction

# Working With a Learning Community

Unit 1
Introduction

Go to... ▾


Lesson 1

## What is a Learning Community?

This module offers guidance from building and working with a Learning Community based on the work of the PLANET48 project, however much of the content offers transferable skills for working in any capacity with any community, building effective, trusting relationships and ensuring encounters are mutually meaningful and beneficial for both participants and facilitators. To begin with a simple definition, a Learning Community a Learning Community is a group of people brought together by a shared interest in a particular issue, challenge, or opportunity. Learning Community can offer a dynamic, evolving space for mutual learning, collective inquiry, and collaborative action. Depending on the topic of inquiry, members might include researchers, community members, civil society organisations, farmers, educators, business representatives, policy actors, and local authorities. The recommended group size is 8 to 12 members. Members are not only connected by a single identity, but a shared commitment to deepening understanding and shaping more inclusive responses to complex issues.


Learning Community might be known by other names – for example, communities of practice, learning networks – but can be understood to have similar guiding principles:


- Learning Community generate value through relationships, trust, and shared purpose.** By bringing people together with different perspectives and experiences, they foster meaningful connections that sustain long-term engagement.
- Learning Community support the sharing, testing, and challenging of knowledge.** Rather than transferring expertise from one group to another, they create the conditions for diverse forms of knowledge to be exchanged, refined, and applied in practice.
- Learning Community are grounded in co-creation.** They enable collaborative thinking and doing, supporting the development of more grounded, inclusive, and adaptive responses to complex challenges.
- Learning Community centre on real-world problems and context-specific challenges.** Whether rooted in a particular place, focused on a specific method, or shaped by a policy concern, they offer space for people to engage with issues that matter to them and their communities.
- Learning Community build collective understanding through action.** Members learn by working on shared questions, designing and testing interventions, and reflecting on what works and why.
- Learning Community evolve over time.** Participation is shaped by relevance, trust, and shared commitment, with new pathways for collaboration and change emerging as understanding deepens.



**Figure 5.** Biodiversity Engagement Course – example extract from *Working with a Learning Community* Module, *What is a Learning Community?* Lesson.






Introduction

# Developing and Delivering Impact

Unit 1
Introduction

Go to... ▼

Lesson 1


## What is Impact – and Why is it Important

Impact can be understood as the changes that emerged from a research intervention. To fully capture the impact of creative, participatory and engaging interventions – especially those aimed at increasing the capacity of individuals and whole communities to engage in pro-biodiversity behaviour and decision-making – it is useful to look beyond quantifiable performance targets, such as how many people attended an event, and encompasses a wider range of effects. These changes may include:

- Increased confidence among participants to engage in decision-making that may affect their communities and environments
- New forms of collaboration between community members and relevant institutions such as government bodies, civic associations, NGOs, and businesses
- Enhanced understanding of biodiversity and its relevance to everyday life
- A greater sense of connection to local places or species
- The development of more inclusive or sustainable ways of working

Rather than asking only what was quantifiably achieved, to assess impact you could ask:

- What kind of difference did this make for the people involved?
- What changed in the way people relate to each other, to nature, or to their community?
- How do we notice and value these kinds of change?



**Figure 6.** Biodiversity Engagement Course – example extract from *Developing and Delivering Impact* Module, *What is Impact and Why is it Important?* Lesson.

Following on from the five standardised introductory modules, the courses then feature a range of methods tailored to each specific target audience. The Policymaker, NGO / Civil Society, and Researcher Courses feature the same Spotlight and Snapshot methods, but with the content adapted to align with the potential needs and contexts of each audience. The decision for these three groups to share methods was informed by the market research phase, during which comparable interests were expressed in the kinds of engagement tools, applications, and outcomes they valued. Using a common set of methods also enabled more a greater range of material to be developed and shared across these audiences.

Whilst the method instructions are consistent across all courses, the main adaptations appear in sections explaining how the methods could be applied beyond the project context. For example, in the Participatory Theatre module, Unit 1, Lesson 2 (Why Use the Method) presents different examples tailored to [Policymaker](#), [Civil Society](#), and [Researcher](#) audiences. Figure 7 shows the version contextualised for Policymakers.

## Lesson 2

### Why Use Participatory Theatre

Participatory theatre can foster critical thinking, emotional literacy, and moral reasoning within a playful, fictional environment, enabling conversations that might be more difficult in real-world contexts. In the PLANET4B project, the method was used to connect the social, practical, and ecological dimensions of biodiversity loss. Through their participation students:

- Confronted intergenerational tensions, unpacked the trade-offs, tensions, and ethical dilemmas embedded in biodiversity decision-making
- Connected personal behaviours and systemic structures through imaginative scenarios
- Expressed difficult emotions such as anxiety, grief, or frustration in a safe and supportive space
- Explored the relationship between individual agency and collective action
- Imagined alternative futures rooted in care and collaboration.

In policy contexts, Participatory Theatre has often been adapted into **Legislative Theatre**, which involves community members, campaigners, and policymakers collaboratively identify issues, act them out, and propose solutions through interactive performance. [The People Hub](#) offers resources for developing a Legislative Theatre Project and successful examples. A project in [Chimanimani, Zimbabwe](#) brought together youth climate activists, community members, and local council staff to explore stalled climate and watershed policy after Cyclone Idai, using storytelling and performance to open dialogue. Beyond policy settings, Participatory Theatre has also been applied in a wide range of contexts, including:

#### 1. Theatre of the Oppressed

Theatre of the Oppressed, developed by Brazilian director Augusto Boal, now has branches across the world. It is a participatory theatrical form that empowers marginalised communities and supports social and political change through interactive performance. Spectators become 'spect-actors,' actively intervening in and rehearsing alternative outcomes to situations of oppression.

#### 2. Theatre for a Change – Malawi and Ghana

Theatre for a Change trains educators and young people to use participatory theatre to challenge gender-based violence and promote sexual and reproductive rights. Performances include active audience participation and intervention.

#### 3. Jana Sanskriti – India

Jana Sanskriti is India's leading Theatre of the Oppressed organisation, using participatory theatre in collaboration with NGOs to address caste discrimination, gender inequality, and rural poverty. Their model invites community members to step into scenes to change oppressive situations.

#### 4. Phosphoros Theatre – UK

Phosphoros Theatre has used participatory theatre with refugee youth to support wellbeing, cultural identity, and inclusion. Performances often address themes of displacement, belonging, and resilience.

#### 5. Ergon Theatre – UK

Ergon Theatre, based in Manchester, UK, creates performance work in response to the climate and ecological crisis. Alongside their productions, they run participatory workshops that engage communities in exploring environmental issues, co-creating stories, and imagining collective responses to climate change.



**Figure 7.** Biodiversity Engagement Course for Policymakers – example extract from the Why Use Participatory Theatre lesson.

Similarly, in the Vegetable Exhibition module, Unit 1, Lesson 2 (Suitability and Applicability) outlines a range of purposes depending on whether the audience is [Policymaker](#), [Civil Society](#), or [Researcher](#). See Figure 8 below for the version contextualised for Civil Society and NGOs.

## Lesson 2

### Suitability and Applicability

A vegetable exhibition can serve many potential purposes, these include:

#### Education

The event can serve as an engaging public platform to educate people about the importance of agrobiodiversity in farming (and/ or, in the case of other forms of biodiversity exhibition, issues around conservation, restoration and biodiversity loss more broadly). In the case of a vegetable exhibition, such as the one organised within the PLANET4B agrobiodiversity case study, it provides a practical example of where people can buy heritage varieties, support growers, and cook with diverse ingredients. The exhibition fosters an opportunity to support local food culture and raises awareness about the value of crop diversity in sustainable agriculture.

#### Networking

The exhibition creates opportunities for growers to exchange ideas, knowledge, and seeds, strengthening networks of mutual support. It also fosters a sense of collective action towards growing practices that enhance biodiversity and sustainability. In the case of vegetable exhibitions, it may also encourage direct sales, and connect small scale producers with retailers, chefs, and local food initiatives that prioritise sustainable sourcing.

#### Celebrating Sustainable Agricultural Practices

A vegetable exhibition offers a space to showcase, taste, and enjoy heritage varieties, giving them greater visibility and cultural relevance. By celebrating traditional and ecological farming methods, it helps to validate and promote sustainable agricultural practices that support biodiversity and climate resilience.

#### Advocacy and Campaigning for Small-Scale Producers

A vegetable exhibition can serve as a platform to advocate for policies that protect small-scale farmers and seed sovereignty. It can help raise awareness about the challenges faced by growers, from corporate control over seeds to access to land and resources, while mobilising public and institutional support for a more sustainable and just food system, and an opportunity to discuss the climatic challenges of growing food.



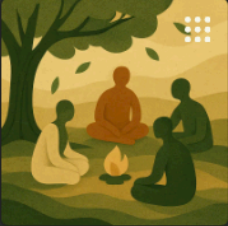
**Figure 8.** Biodiversity Engagement Course for NGO / Civil Society – example extract from the Vegetable Exhibition – Suitability and Applicability lesson.


Each Spotlight method includes explanatory videos embedded within lessons. The videos feature members of the consortium that were involved with designing and implementing the relevant method. The videos in the Policymaker, NGO and Civil Society, and Researcher courses are the same across all Spotlight methods. The Photovoice Spotlight method, which also appears in the Business course, likewise uses the same video content as the other audiences. The consistency in videos reflects the focus of the videos on how each method was applied within the PLANET4B project and on sharing overall best practice guidance.

The two Spotlight methods that only appear in the Business course – iNaturalist and Systems Mapping – feature videos developed specifically for these modules. The videos complement the written content and provide additional insight into how the method was applied within the PLANET4B project.

The intention behind the inclusion of the videos is to add depth to the courses, by sharing participants' reflections on what made the method meaningful and what they discovered through its use. Through these personal accounts, the videos thereby create a sense of connection and authenticity, helping viewers to see how each method unfolds in practice and to imagine how it might be applied within their own settings.






Spotlight Methods

# Debriefing

Unit 3
Reflection, Impact and Next Steps

Go to... ▾

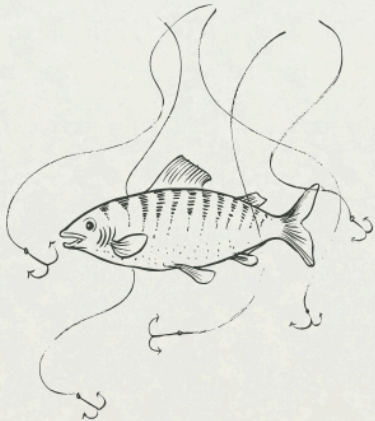
Lesson 1


## Impact Potential

### Data Collection


In the PLANET4B educational case study debriefing, discussions were not audio-recorded to avoid disrupting the atmosphere of trust. Instead, detailed notes were taken, including direct quotes, group dynamics, and moments of interaction. In other PLANET4B case studies debriefings were recorded both via digital audio recorders and note-taking on flipchart paper, with the consent of participants.


Photography may be used sparingly, and only with consent, to visually capture elements of the session without undermining the safe space.





The Impacts of a Debriefing Session

Watch later
Share





The Impacts of a Debriefing Session

Watch on

YouTube

**Figure 9.** Biodiversity Engagement Course for Policymakers – example extract from the Debrief Method – The Impacts of a Debriefing Session Video in the Impact Potential lesson.

### Lesson 3

## The Discussion

The impact of the 'Who am I?' game lies in the post-game conversation, which encourages participants to reflect on their connection to biodiversity. Depending on how much time you have and the group you are working with the discussion could last between 5 and 40 minutes.

In the PLANET4B case study, the game was used to bridge conversations between cultural interactions, personal experience and biodiversity. This contextualised biodiversity, taking it beyond a scientific concept – 'out there' and encouraging players to think about how it connected with their everyday lives:

### Potential Topics to Guide the Discussion:

- **Knowledge and Discoveries** – What did you already know about the species you represented? Did you learn anything new? Was anything surprising or particularly interesting?
- **Cultural and Personal Associations** – Does this species have cultural significance, traditional uses, or feature in folklore, stories, is it sacred? Does its meaning or importance vary across different communities?
- **Personal Experiences** – when have you encountered this species? How do you feel about the species?
- **Human Perception and Interaction** – Is this species generally liked or disliked? Why? What role does it play in ecosystems and human society?
- **Conservation and Responsibility** – What challenges does this species face? How can individuals, communities, or policymakers contribute to its protection?


Facilitators can use **prepared biodiversity fact cards** to guide the conversation.


- These can include information about conservation status, habitat, ecological role, and human interactions with the species.
- It might be beneficial to link the species to a **local conservation effort** (e.g., 'This species is protected in this area—what impact does that have?').



**Figure 10.** Biodiversity Engagement Course for Researchers – example extract from the Who Am I? method – The Value of 'Who am I?' Method – What Participants can Gain video in the The Discussion lesson.

The methods are enriched with selected examples from their use within the PLANET4B case studies.

 CARE-FULL COURSES
 ☰

 Spotlight Methods
 

# PATHBREAK a Biodiversity-Food-Governance game


Unit 2
Planning and Recruiting


Go to... ▾

Lesson 1

## Recruiting Players

In the PLANET4B project, PATHBREAK was initially piloted with a group of master's-level students studying environmental policy and planning. The group brought a mix of disciplinary backgrounds, perspectives, and motivations, which enriched the gameplay and the reflections that followed. The players were familiar with sustainability issues, but had not all engaged with biodiversity decision-making in depth, making the game an effective entry point for critical discussion. The game was then played with a case study Learning Community, Urban Youth, which worked to involve young people in biodiversity decision-making in Germany.





PATHBREAK: A Biodiversity-Food-Governance game was played with PLANET4B's Urban Youth Learning Community in Germany.

**Figure 11.** Biodiversity Engagement Course for Policymakers – example extract from the PATHBREAK: A Biodiversity-Food-Governance Game – Recruiting Players lesson.

The impact sections were also adapted for each group. For instance, in Participatory Filmmaking, the descriptions of potential impact vary across the [Policymaker](#), [Civil Society](#), and [Researcher](#) Courses. The version contextualised for Researchers is shown in Figure 12 below.





**Figure 12.** Biodiversity Engagement Course for Researchers – example extract from a Participatory Filmmaking – Impact lesson.

In addition to the above aspect of adaptation, the Researcher Course includes specific lessons on adapting methods to academic and research settings, such as in the [Participatory Theatre](#) and [Vegetable Exhibition](#) modules. See Figures 13 and 14 below.

#### Lesson 4

## Research Considerations and Preparation

When using Participatory Theatre as a research method, attention should be paid to methodological rigour and ethical sensitivity. Some key points to consider include:

**Data generation:** Participatory Theatre produces multiple forms of data, including scripts, recorded performances, observational fieldnotes, and reflective discussions. These can be coded thematically (e.g. grounded theory), examined through discourse analysis, or interpreted using multimodal approaches that combine embodied action with spoken narrative.

**Positionality:** Because the method invites participants to re-enact lived experiences or imagine alternative futures, it is important for researchers to acknowledge their own positionality and the dynamics of co-presence. Researcher participation, such as joining warm-up activities, can help reduce distance and foster trust.

**Theoretical framing:** Participatory Theatre connects to debates in performance studies, participatory action research, and social practice theory. It offers tools for exploring relational understandings of power, agency, and voice, and links to scholarship on critical pedagogy, particularly Freire and Boal.

**Ethics:** Sensitive issues, such as trauma, social exclusion, or political marginalisation, may surface in performance. Researchers should prepare clear consent processes, allow participants control over how their contributions are documented, and adapt activities where necessary (for example, working with anonymised scenarios rather than personal testimonies).

**Analysis:** Data can be analysed inductively (e.g. thematic coding of narratives), deductively (e.g. framing analysis in relation to policy discourses), or through practice-based methods that foreground performance itself as data. Reflexivity is vital, recognising that meaning emerges through co-production and embodied interaction.

**Figure 13.** Biodiversity Engagement Course for Researchers – example extract from a Participatory Theatre – Adapting methods to academic and research settings lesson.

### Lesson 3

## Supporting a Vegetable Exhibition as a Researcher

A vegetable exhibition can serve as a research setting, providing opportunities to observe, document, and analyse how people engage with agrobiodiversity in practice. That said, the success of such an event often relies on collaboration, since its richness emerges through collective input, shared responsibility, and diverse expertise. As a researcher you might work with community groups, growers, or cultural organisations to co-design and deliver the exhibition. It is important to be aware of your role in shaping the event and to think carefully about what you want to include on the day. Consider the following:

### Define research objectives

Start by clarifying what the exhibition is intended to investigate. For example:

- How do visitors perceive and value agrobiodiversity?
- What narratives do growers use to frame heritage varieties?
- How do social interactions at exhibitions shape collective understandings of food and sustainability?

### Design the exhibition with research built in

**Layout as method:** Organise displays not only for aesthetics but to test research questions. For example, place heritage and commercial varieties side by side and study how visitors respond.

**Interactive stations:** Build in spaces that double as data collection tools – tasting corners with feedback cards, storytelling walls where visitors leave reflections, or QR codes linking to short surveys.

**Discussion areas:** Facilitate structured conversations (mini focus groups) at the exhibition, which can be recorded and later transcribed.

### Data generation

**Observational:** Use ethnographic fieldnotes to capture visitor and grower interactions, paying attention to gestures, tone, and patterns of engagement.

**Discourse:** Record exhibitor presentations and informal conversations, with consent, to capture how biodiversity is framed.

**Material:** Collect artefacts such as annotated catalogues, recipes, or photos of displays as cultural texts.

### Ethics and consent

Prepare clear information sheets displayed at entry points, explaining that the exhibition is part of a research study.

Offer opt-in consent for recorded conversations or photographs.

Consider anonymisation strategies for public contributions, e.g. using codes for feedback wall notes.

### Analytical strategies

**Thematic analysis** of conversations and written contributions to explore values, metaphors, or tensions around agrobiodiversity.

**Discourse or narrative analysis** to examine how growers link seeds, food, and identity.

**Visual/multimodal analysis** of exhibition design and visitor engagement. Triangulate findings across data types to strengthen rigour.

### Researcher role

Decide how visible you are. You may act as:

**Facilitator-researcher**, co-designing with community partners but also gathering data.

**Observer-researcher**, stepping back during the event and focusing on systematic documentation.

**Participant-researcher**, joining in conversations, tastings, or even contributing your own display to reduce distance.

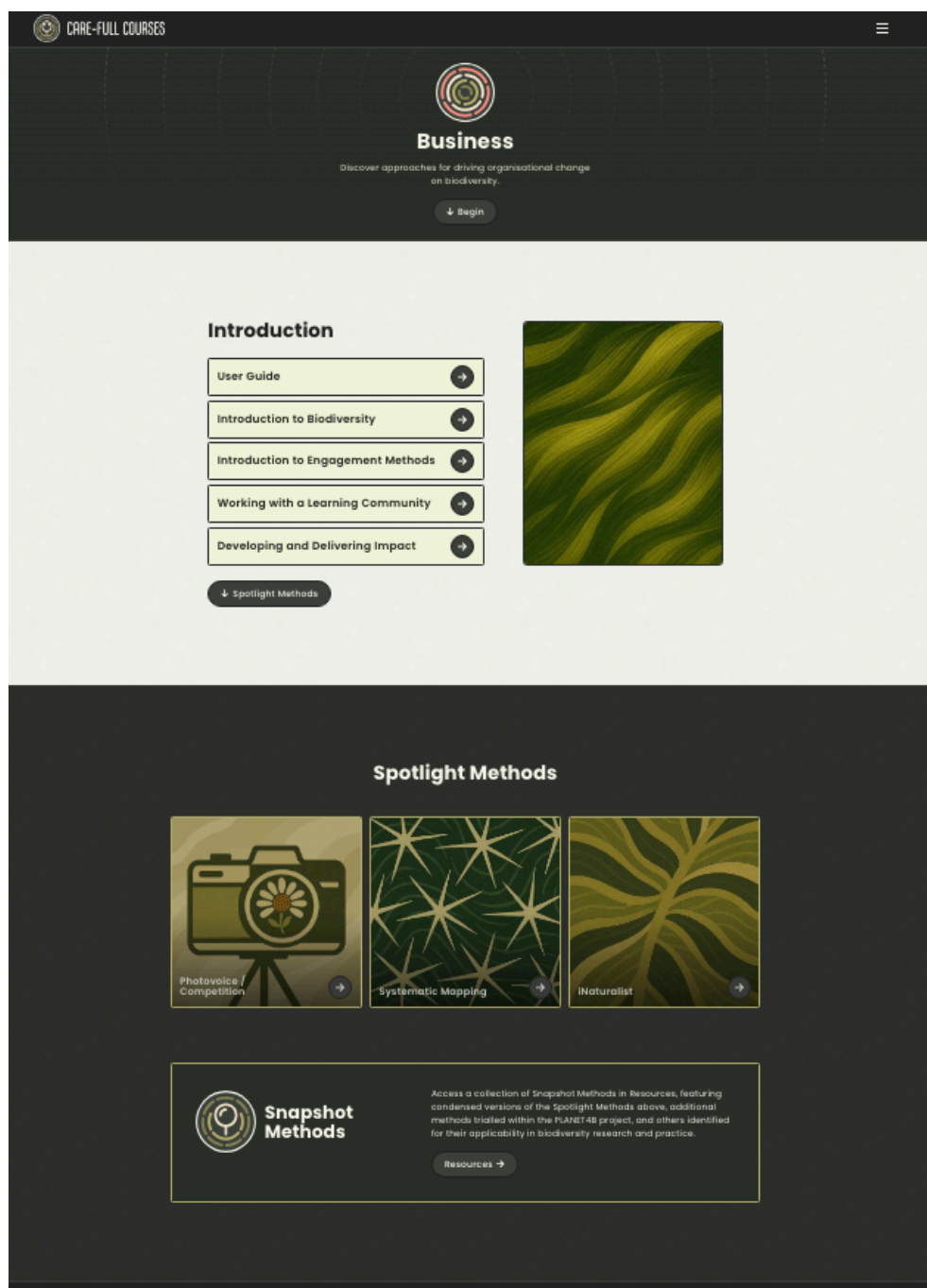


**Figure 14.** Biodiversity Engagement Course for Researchers – example extract from a Vegetable Exhibition – Adapting methods to academic and research settings lesson.

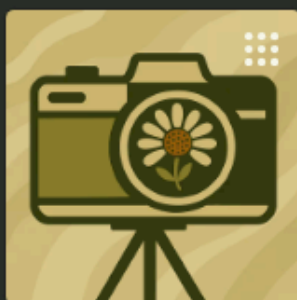
For the Course aimed at private sector businesses, a separate selection of Spotlight and Snapshot methods was designed. These were more closely aligned with principles of choice architecture, behavioural change, and practical feasibility for business contexts. The final selection was also shaped by feedback gathered through the



market research process with support from UNEP-WCMC, ensuring that the methods reflected both business priorities and realistic opportunities for biodiversity engagement. See Figures 15, 16, 17, and 18 below.



**Figure 15.** Biodiversity Engagement Course for Businesses – example extract from Business Course homepage featuring three Spotlight methods.



Spotlight Methods

# Photovoice

Unit 1

Introduction and Key Features

## Lesson 1


### What is Photovoice

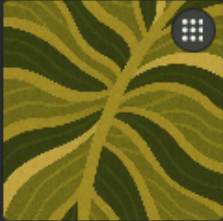
Photovoice is a creative method that uses photography to show how people experience their environment. This visually appealing method has the potential to surface perspectives that are often unseen, and to identify opportunities for change.


Photovoice is different from other photography-based approaches, such as photo journals, competitions, or exhibitions. This is because:


- Photovoice involves working with a group of people, asked to reflect on a shared question or theme and respond to it through photography, over a set time period.
- Photovoice is not just about visual content, it offers a structured, reflective process, in which the photographs are a starting point for group dialogue, reflection, and potentially, change.
- Photovoice is traditionally a method for people whose perspectives have often been overlooked or marginalised, examples can be found on the [\*\*Photo Voice Projects website\*\*](#). In an organisational setting this might include junior staff, contract workers, cleaners, maintenance teams, or others who are not usually invited to shape workplace strategy or culture.


**Figure 16.** Biodiversity Engagement Course for Businesses – example extract from Photovoice – What is Photovoice lesson.


CARE-FULL COURSES




**Spotlight Methods**




**iNaturalist**

Unit 1
**Introduction and Key Features**

Lesson 1

## What is iNaturalist?

iNaturalist is a free, open, and global citizen science platform. It enables users to observe, identify, and share wildlife sightings, feeding directly into real-time biodiversity data. The platform offers a way of observing, reflecting, and contributing while embedding employees in ecological learning. Companies such as [Oracle](#) have used iNaturalist to host global [BioBlitz](#) events (an intensive event where participants work together to identify and record as many species as possible in a specific area over a set period of time) fostering collaboration, playful competition, and a visible commitment to the environment. From a simple 'car park safari' to a lunchtime BioBlitz, the approach encourages people to pause, look closely, and experience their surroundings in new ways. This method can be used to:

- Encourage employees to notice nature in everyday settings
- Support environmental commitments through accessible data and storytelling
- Strengthen wellbeing, presence, and curiosity in the workplace and beyond

### Key Features

**Contributors:** Anyone who can take digital photos and upload them online can take part. The more people who contribute, the greater the visibility and momentum your iNaturalist project can achieve.

**Timeframe:** You can create an ongoing iNaturalist account for your business, with contributions remaining open at any time. If preferred, you can also run a focused campaign within a set period, such as a BioBlitz over the course of a month.

**Budget:** This is a low budget method as people can participate using their own smartphones and is free to sign-up to – it can be accessed via an app or the web browser. You might want to budget for the following:

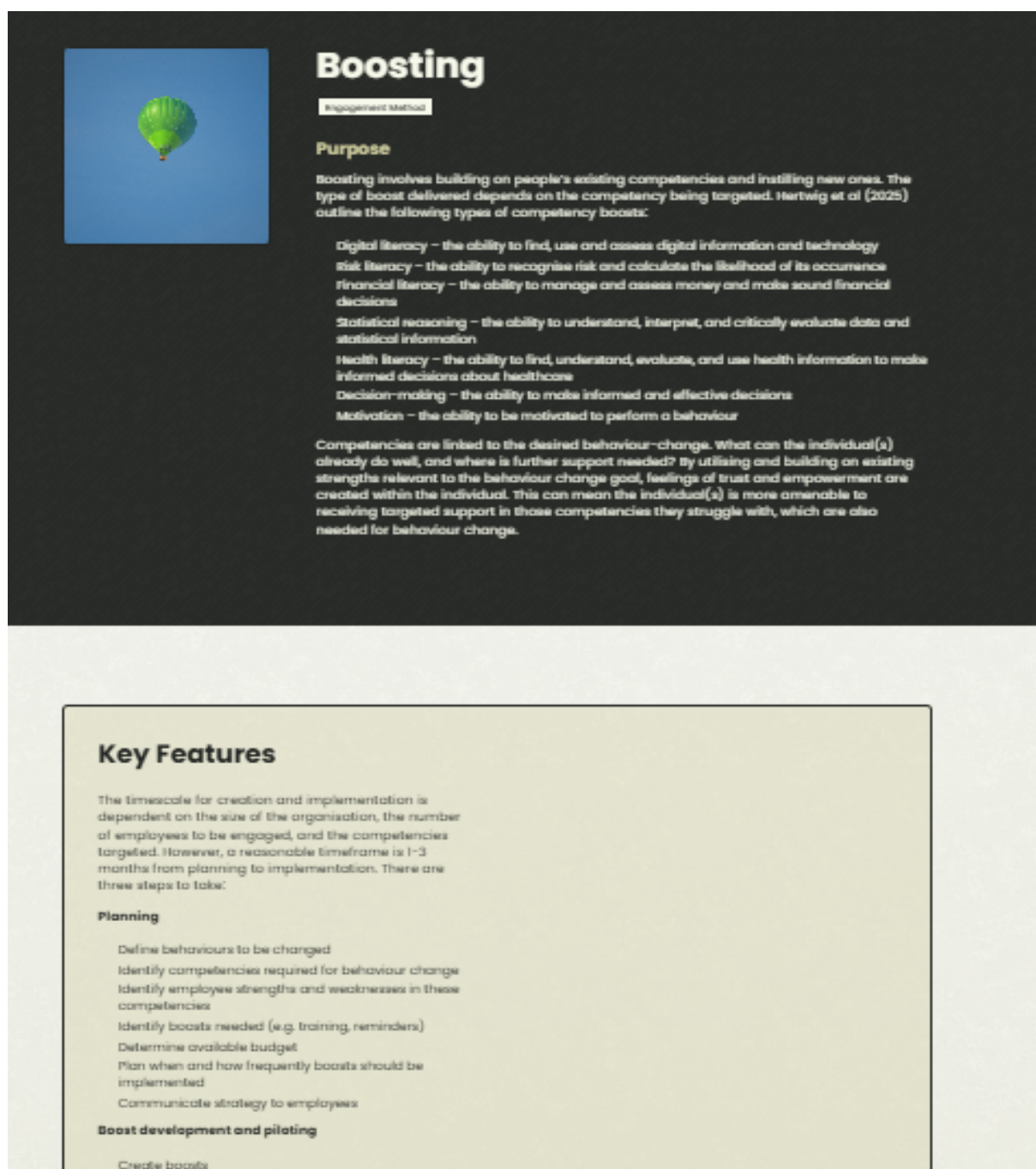
- Cameras for contributors to borrow, if they do not have access to their own
- A prize/ or prizes for the team or an individual in certain categories, e.g. most species, most identified species, best picture etc.
- Exhibition materials, if you want to display photos

**Adaptions:**

SEEK does not require users to sign-up to access the platform, making it suitable for younger audiences or those less comfortable with digital platforms.

**Figure 17.** Biodiversity Engagement Course for Businesses – example extract from iNaturalist – What is iNaturalist? Lesson.





**Figure 18.** Biodiversity Engagement Resource for Businesses – example extract from Boosting Snapshot method.

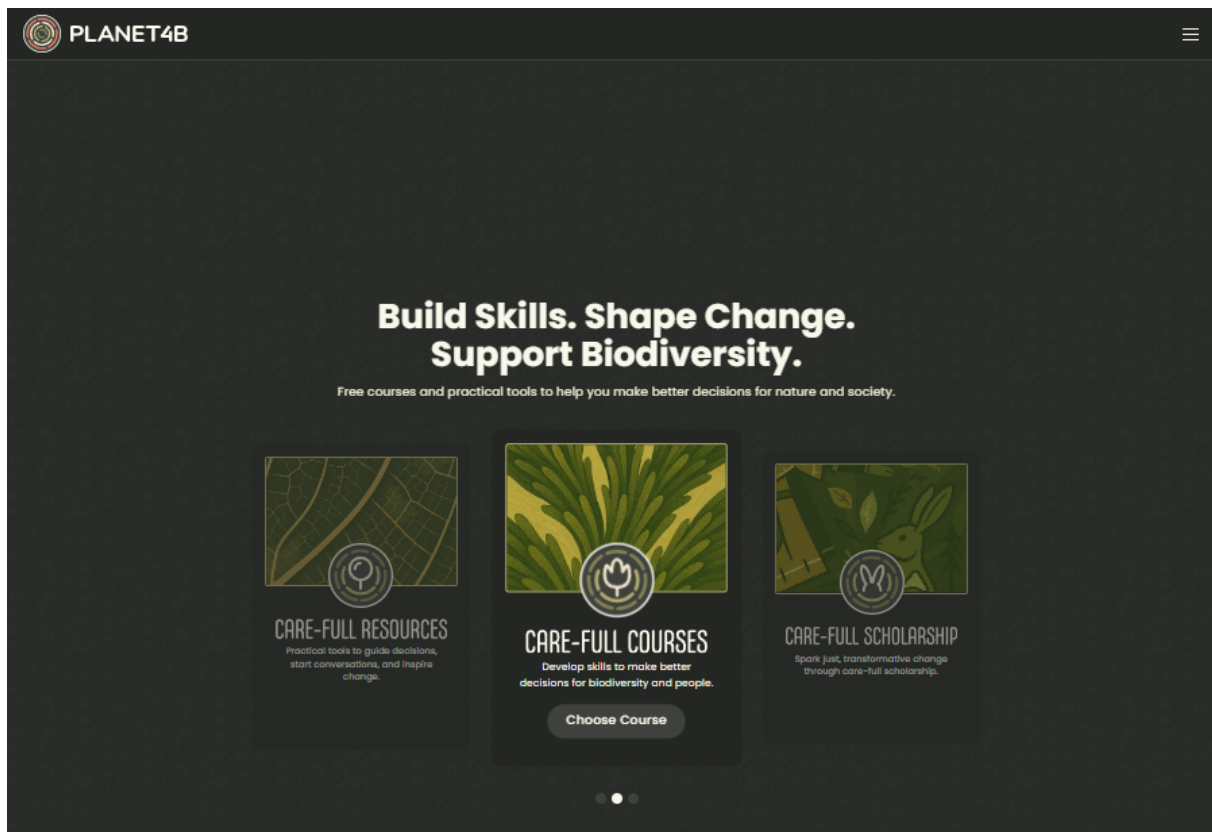
### 3.2 Care-Full Courses and Resources Platform

This section provides illustrative examples of the *Care-full Courses and Resources* Platform. The examples are presented in accordance with the structure of the Platform, illustrating key features such as user navigation, tailored course layouts, spotlight and snapshot method formats, and the platform's role as a lighthouse for aligned transformative learning resources. To explore the full set of courses and resources, users are invited to visit the platform directly at [care-full-courses.com](https://care-full-courses.com).

A site map was developed to provide overview of and organise all the necessary information in the most user-friendly way. Netfly (the web developer) worked with CU to put together the site map ahead of the website build.

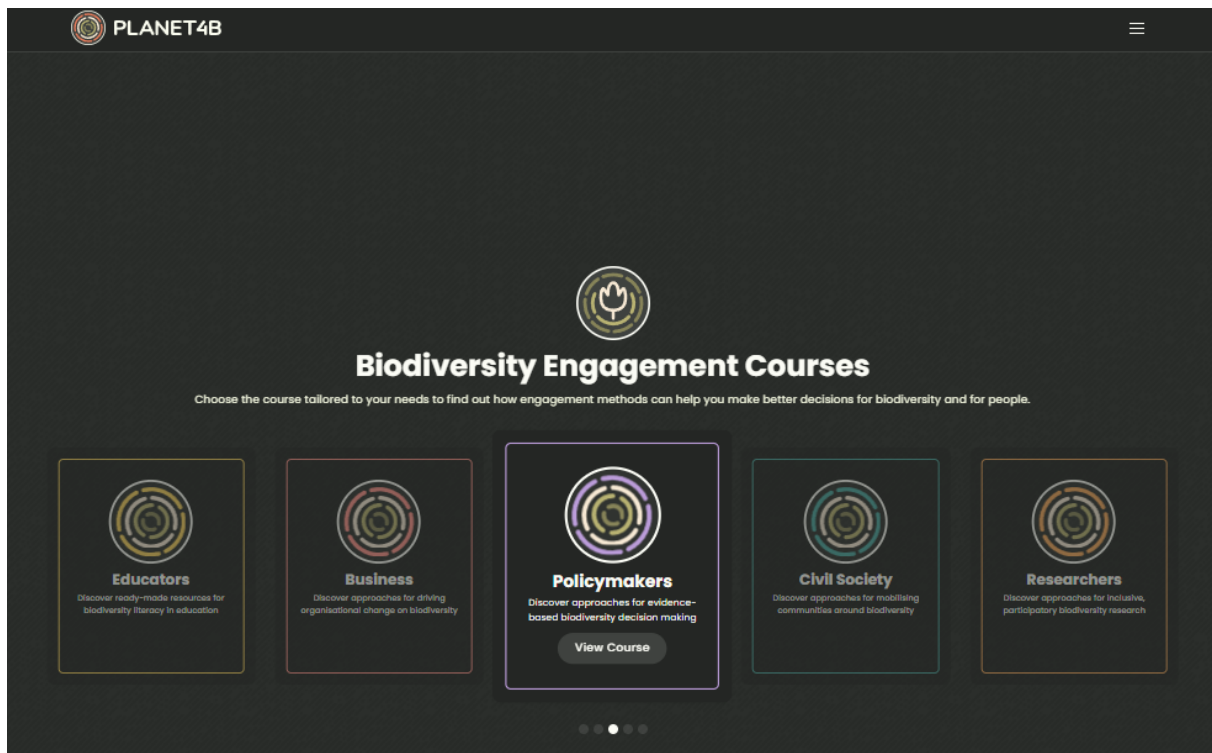


Users of the site arrive at a landing page inviting them to 'Build Skills. Shape Change. Support Biodiversity.' From here they can navigate to Care-full Resources, Care-full Courses, or (ultimately) to other aligned courses (currently the site features also 'Care-full Scholarship' – a transformational journey engaging with care theory developed as part of the RECOMS project; in the coming months and years additional courses will also be featured (including from other Horizon Europe Transformative Change projects, and beyond).



**Figure 20.** Care-full Courses and Resources landing page.

Selecting 'Care-full Courses' from the three options, brings users to the Biodiversity Engagement Courses page, where users can then select from Course versions tailored for Educators (D5.10), Business, Policymakers, Civil Society, or Researchers.



**Figure 21.** Biodiversity Engagement Courses page, with five scrollable options, Policymakers currently selected.

The user then selects which of the tailored courses they wish to access. Below, for example, is the page they will arrive at should they click on the 'View Course' button under 'Policymakers'. At the top of the page are links to the introductory modules. A benzo grid displays the fifteen spotlight methods, each with its own tile designed by Netflix. Snapshot methods are collated in the Resources section. Users can navigate to these directly from the button at the bottom of the page. The Biodiversity Engagement Courses for civil society / NGOs and researchers follow the same display pattern.

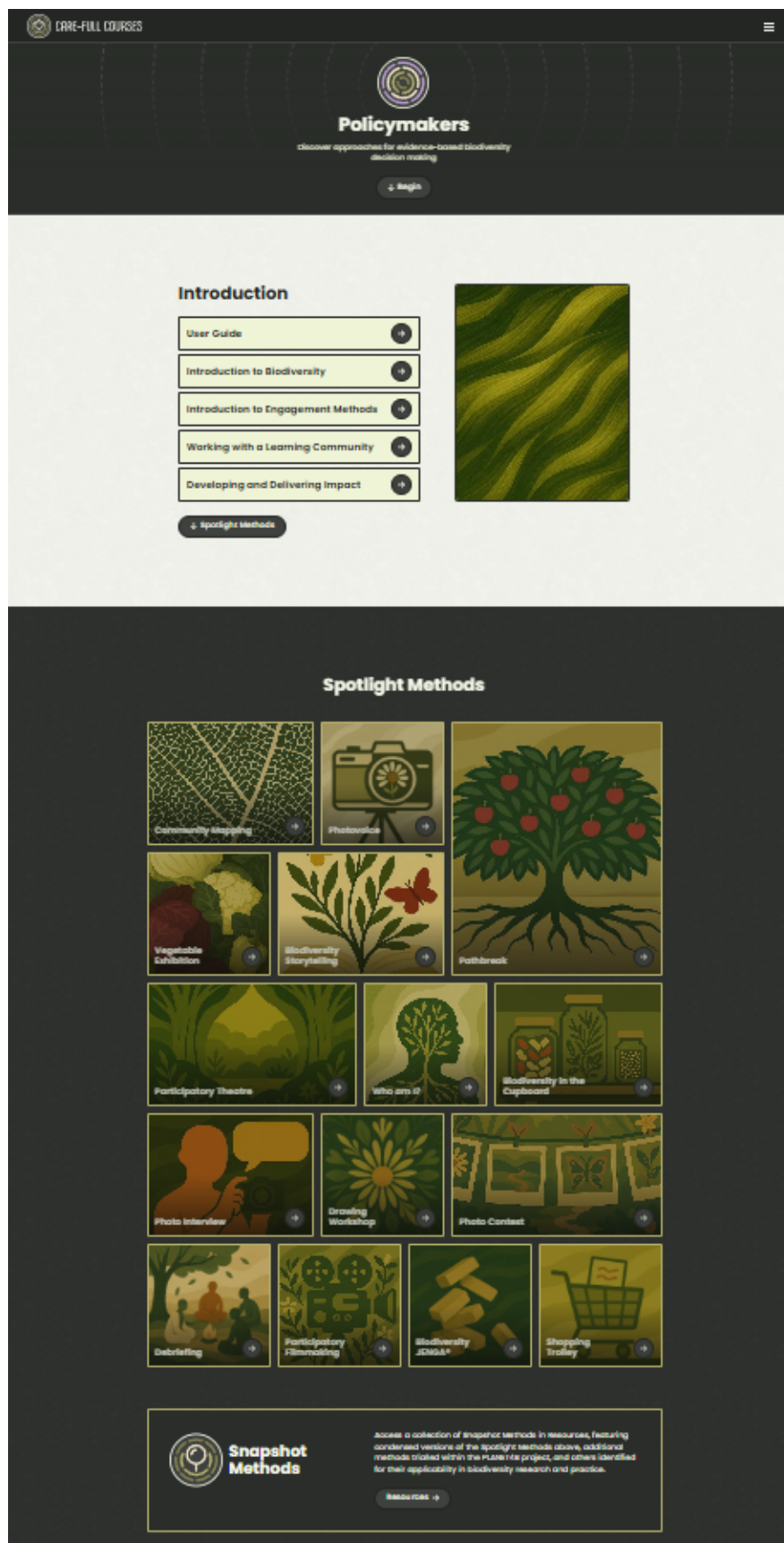
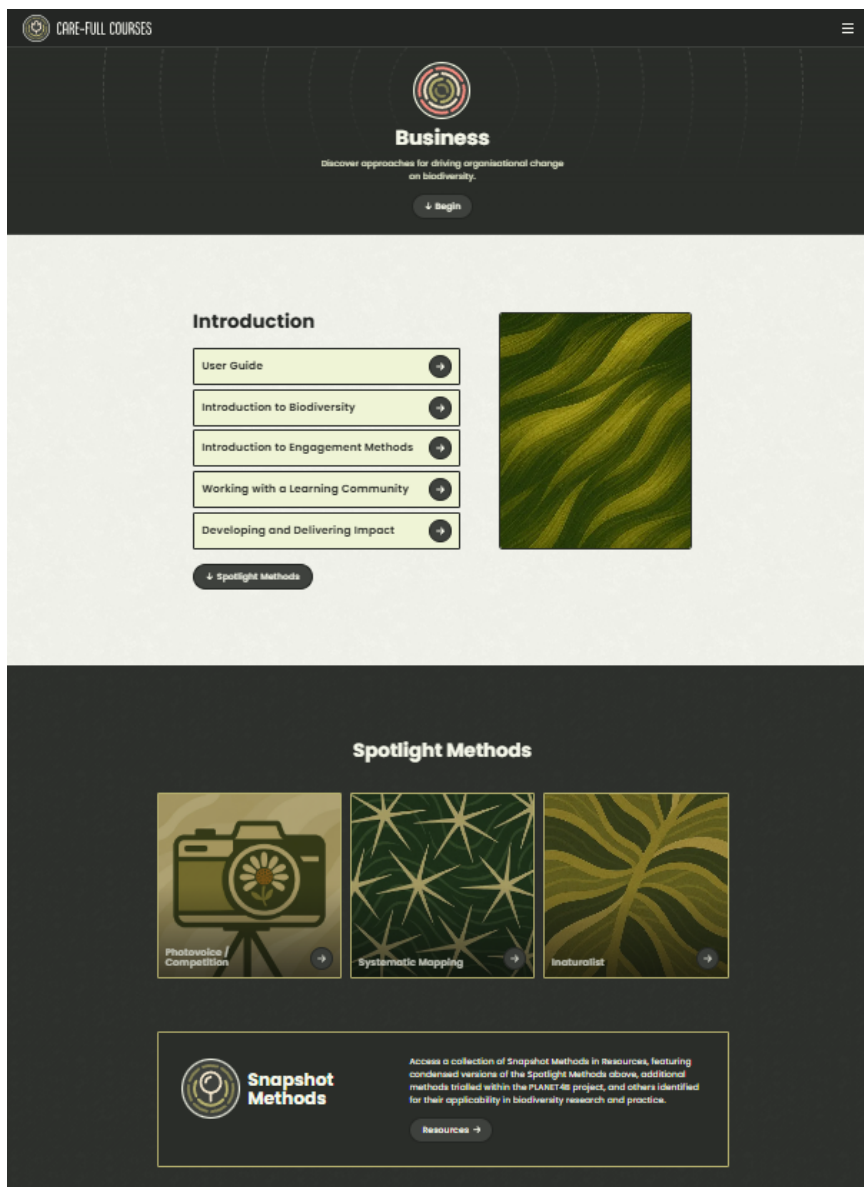


Figure 22. Everything for Policymakers in one place.

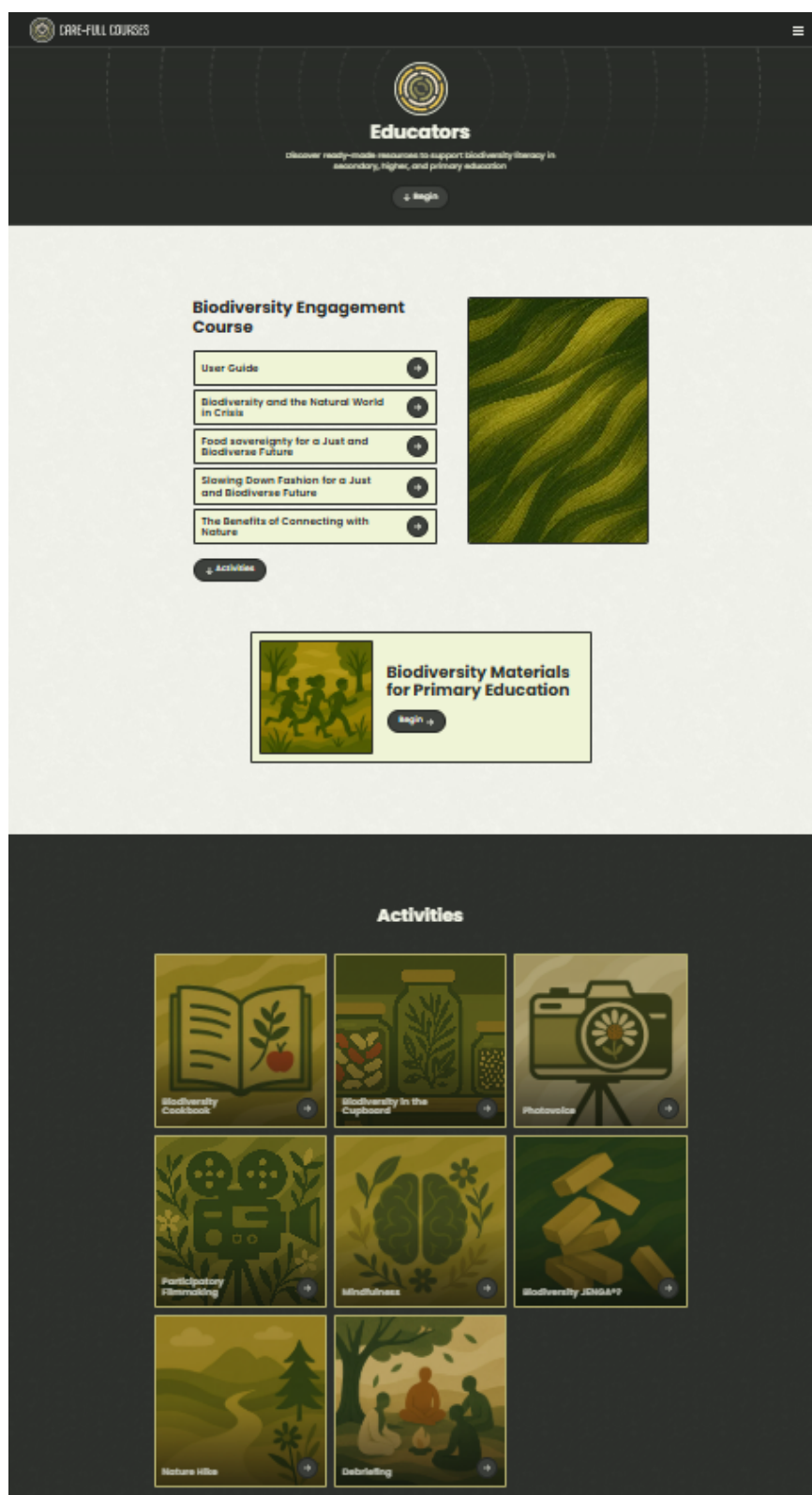


Biodiversity Courses for Business follow a similar pattern but there are fewer Spotlight Methods, and these are different from the Spotlight Methods selected for the other Courses.



**Figure 23.** Everything for Business in one place.


The *Adjusted Materials for Educators* ([Deliverable 5.10](#)) are also accessible from the Biodiversity Engagement Courses page. In their case (in accordance with the independent structure followed by these Courses), rather than commencing with a suite of introductory modules, the first part of the page contains a User Guide, and four education modules. There is a clear link to materials developed for Primary Education, and a grid of 'Activities' – Engagement Methods adapted for education settings.




**Figure 24.** Everything for Educators in one place.

Below (Figure 25) is an example of Course content from one of the optional Education modules – for further detailed overview and examples of the material developed for Educators, please see [Deliverable 5.10](#).

CARE-FULL COURSES


 Biodiversity Course



# Food Sovereignty for a Just and Biodiverse Future

Lesson 1
Biodiversity: the cornerstone of food systems

Go to...



Food sovereignty refers to 'the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems' (La Via Campesina, n.d.).

Please note that some of the activities in this online course require watching a video in English. You can select subtitles in your own language, if they are available. If they are not available, you can select auto-translation of subtitles into your language from each video's settings on YouTube.


## Learning objectives:

- Understand the given definitions of biodiversity, nature and ecosystems
- Understand that there are different definitions and ways of valuing biodiversity and nature
- Understand the different kinds of ecosystem services and how they highlight the many ways in which biodiversity supports human life

### 1.1 Food is more than fuel

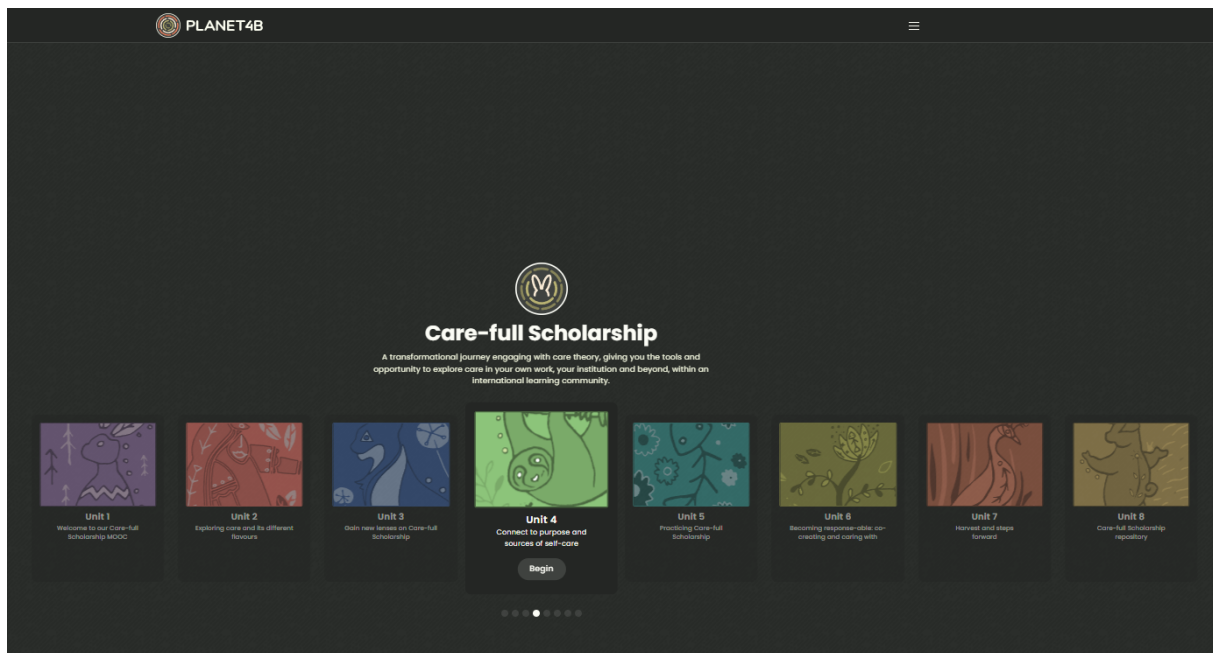
Alongside water and air, food is one of the building blocks of human life. We source the nutrients and energy that we need from a variety of foodstuffs.

But food is not just about nutrients and calories: food also plays an important socio-cultural role. Food brings us together, and reflects the local ecological context, cultural values, and history. It connects us to prior and future generations through the transmission of seeds, land, agricultural practices, recipes and memories.



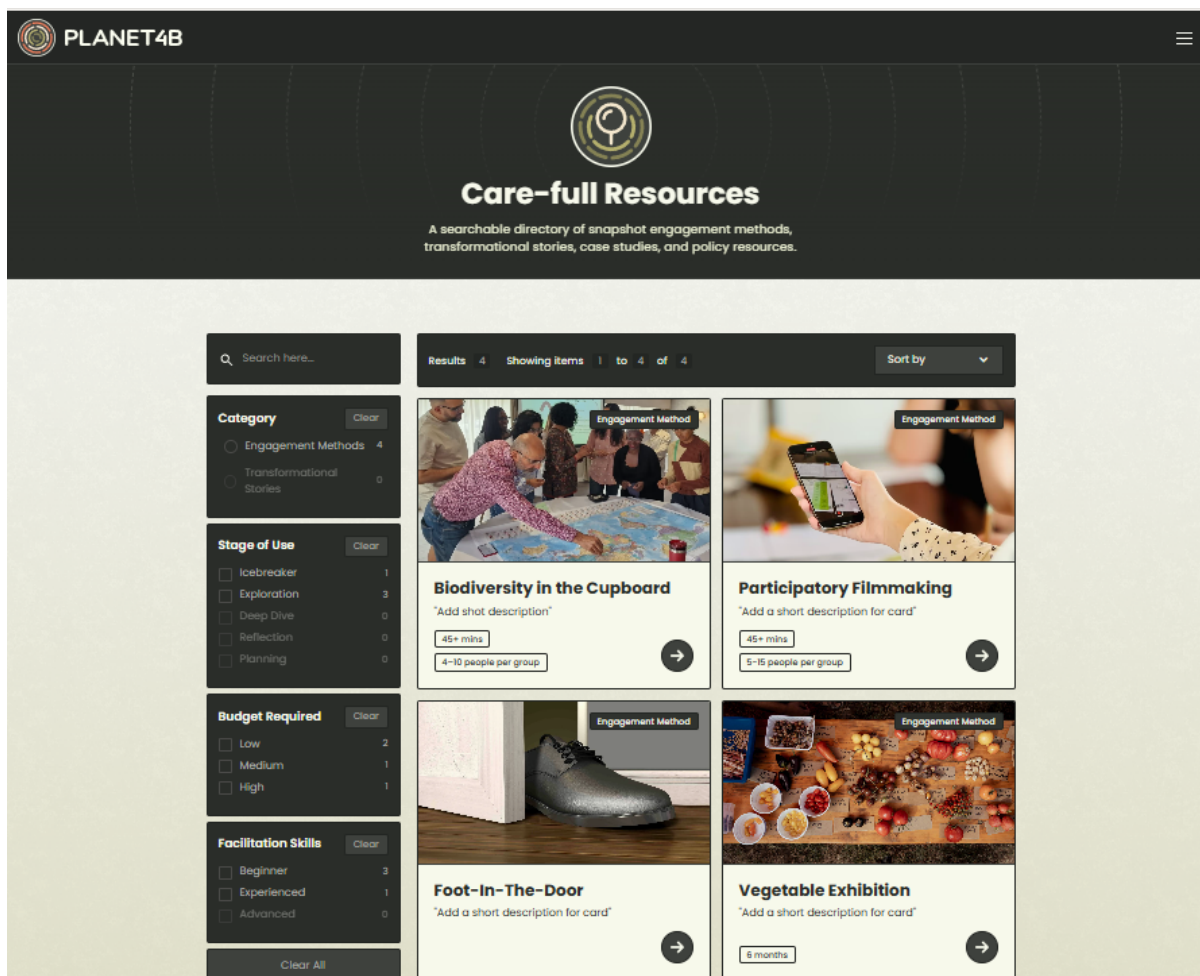
**Figure 25.** Biodiversity Engagement Course for *Educators* – example extract from *Food Sovereignty for a Just and Biodiverse Future* module.

In the platform's role as a lighthouse to curate and signpost visitors to aligned courses and resources, it will also ultimately host and/or signpost users to other aligned courses. The inclusion of the *Care-full Scholarship Course* (RECOMS) is one such example of this. See Figure 26.



**Figure 26.** The Care-full Scholarship Course hosted on the platform.


Finally, selecting *Care-full Resources* from the *Care-full Courses and Resources* landing page, will navigate the user to a searchable directory of Snapshot engagement methods, transformative change stories, and PLANET4B case studies. The resources (particularly the methods) can be filtered via options down the left-hand side. The four filters were chosen from a longer list of potential filters, to best represent the variety across method types, and be most useful for users looking for potential methods. Large thumbnails of each method also contain useful information such as how long a method might take, and how many people it works well for, enabling users to dismiss methods that are not appropriate for the time or numbers they have. All Spotlight Methods have a Snapshot version in the Directory of Resources (Figure 27).




**Figure 27.** The searchable directory of Care-full Resources.

Clicking on one of the resource boxes will open the relevant page (e.g. a Snapshot of the Vegetable Exhibition – see Figure 28 below).




CARE-FULL RESOURCES



## Vegetable Exhibition

Engagement Method

### Purpose

To celebrate agrobiodiversity through a public event that showcases diverse vegetable varieties, promotes sustainable agricultural practices, and fosters community engagement around food and biodiversity.

### Method in Practice – PLANET4B Example

**Context of Use:**

Organised in Hungary as part of the PLANET4B agrobiodiversity case study. The exhibition featured heirloom and exotic vegetable varieties, with growers offering tastings and sharing stories about cultivation and biodiversity.

**How It Worked:**

Growers prepared and transported produce to the exhibition, where they engaged with visitors through tastings, presentations, and informal conversations. The event included interactive games, recipe challenges, and cultural storytelling activities.

**Engagement & Participation:**

Participants included small-scale farmers, chefs, researchers, and local residents. The exhibition was designed to be inclusive, with multilingual materials, children's activities, and partnerships with community leaders and organisations.

**Outcomes & Insights:**

- Raised awareness of agrobiodiversity and sustainable farming
- Strengthened local food networks and grower collaboration
- Encouraged biodiversity-friendly purchasing and cooking habits
- Fostered cultural exchange and appreciation of heritage varieties

**Strengths & Considerations:**

**Strengths:**

- Highly engaging and sensory
- Supports education, advocacy, and community building
- Adaptable to different settings and scales

**Considerations:**

- Requires significant planning and resources
- Dependent on seasonal timing and grower availability
- Needs careful accessibility and inclusivity planning

### Key Features

**Participants:**

- Growers, community members, chefs, NGOs, and the general public

**Timeframe:**

- Planning begins at the start of the growing season; exhibitions typically last 1 day but can be extended

**Budget Level:**

- Medium to high

**Materials Needed:**

- Venue and equipment hire
- Travel support for exhibitors
- Promotional materials
- Tasting stations and utensils
- Interpretation services
- Waste management and insurance
- Educational games and signage

**Skills Required:**

- Event planning and coordination
- Community outreach and facilitation
- Knowledge of agrobiodiversity and food systems
- Inclusive communication and accessibility planning

**Figure 28.** Care-full Resources – Snapshot of *Vegetable Exhibition*.

## 4 Conclusion and outlook

The biodiversity crisis reflects systemic failures in how societies value and manage nature. Despite decades of conservation policy, global wildlife populations have declined by nearly 70% since 1970 (WWF, 2024). These declines are not simply ecological problems – they signal the *limits* of incremental reform within dominant social, economic, and governance systems. The Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019, 2024) calls for deep, system-wide shifts in how we produce, consume and conceptualise human–nature relationships.

Provisioning of, and a commitment towards, education and engagement is central to enabling this transformation (UNESCO, 2022). For NGOs, inclusive education and engagement empowers communities to co-design locally relevant solutions and hold decision-makers accountable. For business, sustainability education supports corporate cultures that move beyond compliance toward regenerative practices and transparent supply chains (Dasgupta, 2021; WBCSD, 2023). For policymakers, the combining of education and engagement serves to bridge scientific knowledge and public values, aligning biodiversity goals with economic and social priorities.

Open access collaborative learning platforms (spanning universities, NGOs, business, and government) are increasingly recognised as catalysts for systemic change (IPBES, 2022; Fazey et al., 2020). They enable experimentation, participatory governance, and the mainstreaming of biodiversity values across sectors.

The PLANET4B biodiversity engagement courses directly contribute to capacity building and systemic transformation, offering open-access learning resources that integrate wide-ranging transdisciplinary expertise and know-how (including from practice, and from the humanities, social sciences, behavioural science and natural sciences). They equip key enabling players – across civil society, business, policy and research – with tested methods and insights to prioritise biodiversity in decision-making. Alongside, they contribute to advancing understanding of behavioural drivers and intersectional vulnerabilities, while also supporting the amplification of PLANET4B's transformative change stories and sectoral interventions.

Together with the *Care-full Courses and Resources* hosting platform the biodiversity engagement courses provide a dynamic space for reflection, co-creation, and upskilling – supporting the development of leverage points and pathways for biodiversity mainstreaming, and enabling accelerated uptake of transformative practices across a full range of sectors, as well as geographic and thematic social-ecological contexts. They offer scalable tools and frameworks that can be adapted for other Horizon Europe projects, policy processes and educational contexts. Furthermore, their open-access nature together with their hosting on a bespoke 'lighthouse' education platform help to ensure their continued uptake beyond the project's lifespan, reinforcing PLANET4B's commitment to long-term systemic change.

To conclude, transformative change, is not only about policy reform or technological innovation but about reshaping worldviews – through inclusive education and open, trust-based communication and engagement that reconnects people and institutions with the living systems that sustain them. In this way, the PLANET4B biodiversity engagement courses actively foster the kinds of inclusive, reflective, and cross-sectoral learning environments that are essential for reimagining and reshaping human-nature relationships at the heart of transformative change.

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## Statement on data availability

Training materials on biodiversity engagement methods are available at [care-full-courses.com](https://care-full-courses.com).

Data arising from background research undertaken with civil servants and NGOs is available within the PLANET4B community of resources uploaded to the [Zenodo](https://zenodo.org) platform. Further information relating to the development, adaptable and testing of individual methods during the case study research is available via the [PLANET4B](https://planet4b.org) website and via [Zenodo](https://zenodo.org) (see, in particular, Deliverables [2.1](#), [2.2](#), [2.3](#), [3.1](#), [3.2](#), [3.3](#)).

## Statement on ethics

Ethical approval was granted for all research undertaken within Task 5.5 of PLANET4B by Coventry University on 17.06.23 – ethical approval project reference number: P160041.

For the background market research all participants were fully informed about the PLANET4B project and the purpose of the research through oral explanations and/or

written participant information sheets. For the CU-led market research written informed consent was obtained before participation. Data collected was primarily used for internal review purposes only. Raw data collected by CU was accessible only by CU PLANET4B research staff. Personal data collected included participants' names, email addresses, and job roles. This information was securely stored and managed in compliance with data protection regulations. Research data collected by UNEP-WCMC during the Nature Action Dialogues was gathered through facilitated group discussions. Participants were orally informed about the aims of the PLANET4B project and the intended use of their contributions to inform behavioural change guidelines in business contexts. While written information sheets and signed consent forms were not provided at the time, participants were made aware of the research purpose and their voluntary involvement. Personal data collected was limited to names and job roles (excluding contact details) and was securely stored and managed in accordance with data protection regulations.

With the exception of the above data, the rest of the material contain in this deliverable report is limited to secondary analysis, synthesising findings from previously conducted method development/adaptation and empirical case study research (via WPs 2 and 3) and a broader review of relevant academic and grey literature.

Given that the course material is focused on practicing engagement methods, the subject of research ethics is addressed explicitly within each of the courses. In the Introduction to Engagement Methods module, there is a specific section on ethics. The section highlights that effective engagement for the purpose of enhancing biodiversity-related decision-making depends not only on what is done but on how it is carried out, with attention to safety, respect and inclusion being essential. Course users are encouraged to apply care-full research practices that prioritise trust, transparency and accessibility, ensuring all contributions are voluntary and that people feel valued and protected throughout the process. Additionally, each engagement method includes tailored guidance on ethical considerations specific to that method (for example, managing ongoing consent in photo interviews).