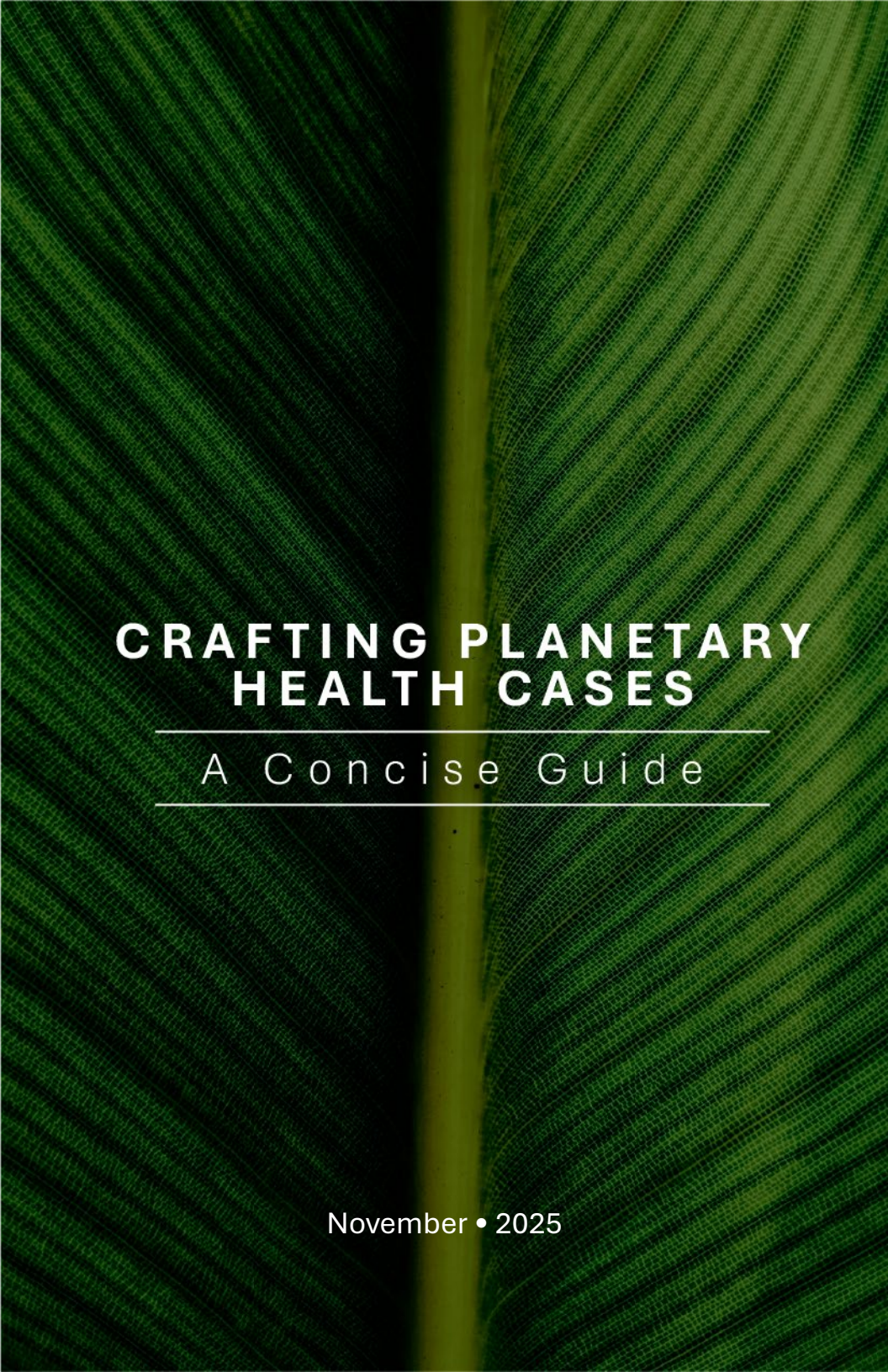
CRAFTING PLANETARY HEALTH CASES
A Concise Guide
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CATA-EARTH
Catalysing Transformative Change in Planetary Health Education

In collaboration with:

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I.Preface: How to Use This Guide?

Purpose, Frameworks, and Foundations

Purpose and Orientation

This quick guide offers a practical roadmap for designing and sharing Planetary Health case studies, whether you are teaching, conducting research, or working with community groups. Planetary Health, as both a discipline and a movement, starts from the idea that human and ecosystem health are two sides of the same coin (Whitmee et al., 2015). Planetary Health education highlights two core qualities: a transformative mindset and a transdisciplinary approach (Faerron Guzmán et al., 2021; Stokols et al., 2008).

It is transformative, as education in Planetary Health must do more than present information. They should foster change in behavior, mindsets, and values, serving as catalysts in the learning process. Learning through case studies can encourage students to reimagine social structures, question systems of power, and, most importantly,

see themselves as potential agents of change (Faerron Guzmán et al., 2021; Horton & Lo, 2015).

At the same time, it is transdisciplinary, since case studies integrate knowledge across sectors and disciplines. Understanding Planetary Health issues requires more than environmental science, public health, or economics; it also depends on social justice frameworks, Indigenous paradigms, and local practices (Stokols et al., 2008; Berkes, 2017).

In practice, this means that the case study creation process must employ diverse sets of methods, such as quantitative techniques alongside qualitative narratives and participatory approaches. This also requires engaging many stakeholders, including community members, policymakers, civil society organizations (local NGOs), and holders of traditional knowledge. Both transformative approaches and transdisciplinarity involve honoring multiple ways of knowing: academic research and science alongside oral histories, cultural rituals, and traditional knowledge (sometimes referred to, though not synonymous with, Indigenous knowledge, folk knowledge, local ecological knowledge, or community wisdom). In this way, understanding and solutions emerge from co-created collectives rather than from top-down frameworks (Berkes, 2017; Stokols et al., 2008).

As you read this guide, keep in mind that it offers a suggested route, not a rigid step-by-step template. Ideally, creating a case study begins with uncovering a compelling narrative, continues with collecting information and writing the story, and ends with embedding it into classroom instruction. Each section adds new features and concepts that build on earlier ones, so following the sequence can help move, for example, from unstructured field notes to polished teaching cases. That said, users should adapt the steps to their own context. For example, a writing team with established community relationships may be able

to start drafting the narrative without much preliminary work.

The aim of this guide is simple: to support the case study creation process, whatever form it takes, so you can produce a meaningful, classroom-ready Planetary Health case, even if your resources or timeline require a different path. At the end of this guide, users of this guide should be able to:

1. Identify a compelling story that illustrates Planetary Health challenges and solutions.
2. Gather and integrate diverse data ethically, balancing scientific information with lived experiences through storytelling.
3. Craft a coherent narrative that weaves together Planetary Health principles and multiple stakeholder voices.
4. Develop teaching materials aligned with Planetary Health principles.

Audience for the Guide

This guide is intended for anyone interested in Planetary Health education and practice, including:

- Educators and curriculum designers who are part of public health, global health, environmental science, health sciences, anthropology, social work, or vocational training programs at undergraduate or graduate levels, as well as continuing education institutes.
- Researchers and community practitioners in fields such as epidemiology, ecology, environmental engineering, sociology, and public health who wish to bring field data to life in a classroom setting, co-creating cases with NGO staff, community-based clinicians, Indigenous knowledge holders, and grassroots activists.

- Program officers and funders, such as officials from philanthropic foundations or development agencies like the World Health Organization (WHO) or the United Nations Development Program (UNDP), who are interested in supporting or evaluating educational projects focused on Planetary Health through case studies.
- Curriculum consultants and trainers of trainers who lead faculty-development workshops for NGOs or ministry-level programs, requiring sophisticated template design, flexible facilitation systems, and advanced strategies adaptable to diverse contexts.

Conceptual Foundations:

Before getting into case writing in Planetary Health, it is useful to understand the conceptual frameworks and practical tools that form the basis of this guide.
The Planetary Health Education Framework

The Planetary Health Education Framework (PHEF), explored in more detail in the following sections, outlines a set of core domains to ensure that case authors and instructors remain aligned with the evolving, interdisciplinary vision of Planetary Health. In summary, PHEF emphasizes five interrelated domains: (1) the interconnectivity between humans and nature, (2) the health challenges of the Anthropocene, (3) equity and social justice, (4) systems thinking and complexity, and (5) movement-building and transformative action (see Figure 1) (Faerron Guzmán et al., 2021).

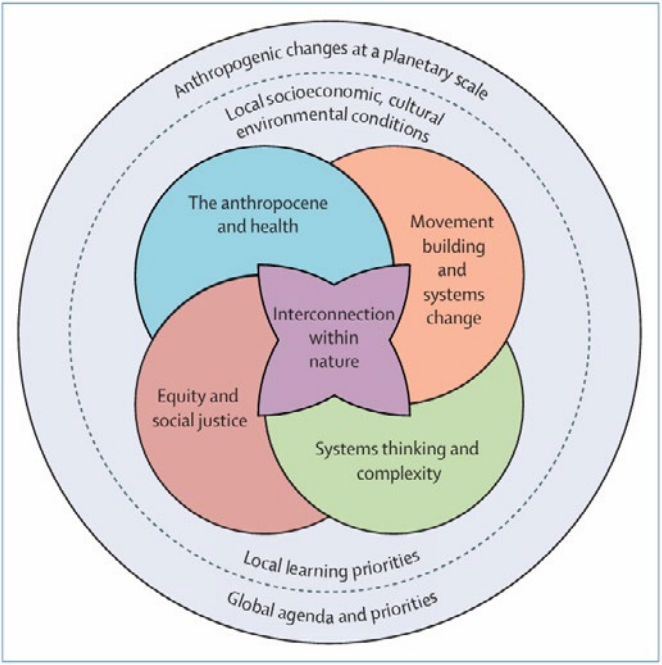


Figure 1. The Planetary Health Education Framework (PHEF). "The reality of Planetary Health demands us to understand the interdependent and interconnected nature of each domain. The division of the domains is artificial and only for didactic purposes." (Faerron Guzmán et al., 2021).

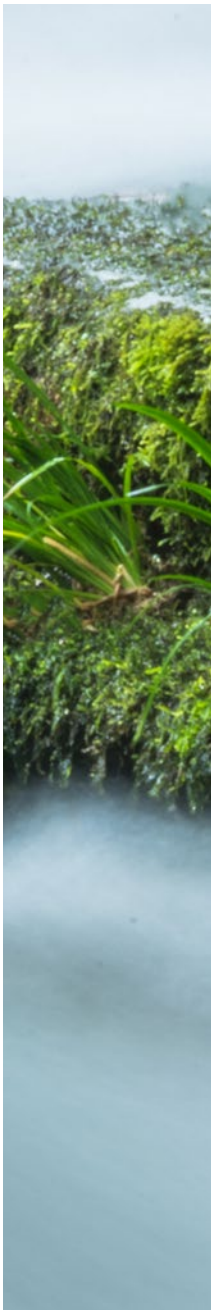
For further exploration on the PHEF, please visit https://planetaryhealthalliance.org/resources/education-framework/

The Great Transition and the context of Planetary Health

The term "Great Transition" refers to a profound shift in human values, institutions, governance, and behaviors. It intends to move us away from a world characterized by indifference and unchecked consumption toward one that prioritizes shared ecological and human well-being, as well as global solidarity (Great Transition Initiative, n.d.). Within this vision, societies are expected

to move beyond the paradigm of “more is better” and embrace a future focused on intergenerational quality of life and respect for planetary boundaries.

One way to understand this shift is as a transition from a value system focused on extraction to one centered on reciprocity. Extraction, the current status quo, implies treating nature merely as a source of resources for humans, a scenario in which forests, fisheries, minerals, among other natural “resources”, become commodities to be exploited for material gain. In a Great Transition scenario, the mindset and value systems evolve into reciprocity, recognizing that humans and ecosystems are interdependent. In practical terms, this means reorienting policies and practices to reflect these values, measuring progress not by GDP growth but by how effectively societies nurture healthy ecosystems and promote equitable communities now and into the future (Raskin et al., 2002).



In this context, Planetary Health emerges both as a discipline and as a movement, making an urgent call to action. The Planetary Health Alliance defines Planetary Health as “a solutions-oriented, transdisciplinary field and social movement focused on analyzing and addressing the impacts of human disruptions to Earth’s natural systems on human health and all life on Earth” (Planetary Health Alliance, 2025). Practically, this means recognizing that the same activities driving large-scale environmental changes, such as climate change, biodiversity loss, and pollution, are also fueling a global health crisis by increasing the risk of infectious diseases, compromising food security, and exacerbating chronic illnesses (Myers & Frumkin, 2020). However, Planetary Health is more than just a diagnosis; it also represents an ongoing search for comprehensive solutions that foster the health of both people and the planet.

The Great Transition and the Planetary Health perspective emphasize the importance of linking

global crises to local action. That means that although Planetary Health deals with challenges that span the entire planet, its most immediate impacts manifest differently and are shaped by local realities. For example, rice farmers in Bangladesh face salinity in their paddies due to rising sea levels linked to climate change, pastoralist groups in the Sahel region contend with prolonged droughts, and urban neighborhoods in Los Angeles and other cities endure extreme heat and heightened air pollution. In all these contexts, local solutions, whether mangrove restoration, drought-resistant grasses, or green roof programs, serve as cornerstones of a broader transition.

Case studies in Planetary Health, by highlighting how individuals and communities adapt and innovate while facing global environmental change, provide concrete examples of what a Great Transition could look like in practice. In this way, even the most difficult global challenges can be connected to practical, localized approaches that promote resilience, equity, and restore ecosystems, ultimately moving the needle for global impact.

Other foundational documents and references

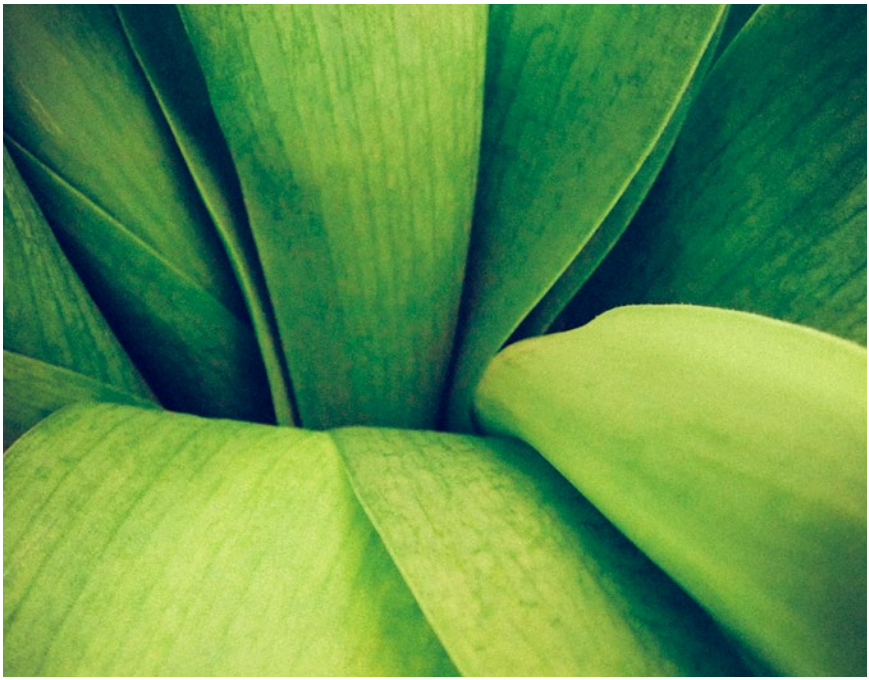
The PHEF, along with these two other companion documents, offer crucial fundamentals for Planetary Health case-study work:

- Safeguarding Human Health in the Anthropocene (Rockefeller–Lancet Commission Report): Published in 2015, this seminal report lays out the scientific and governance case for Planetary Health. It details how human activity is surpassing the planet's capacity to remain within safe operational limits and urges immediate, coordinated action to safeguard both human health and the environment (Whitmee et al., 2015).
- The São Paulo Declaration on Planetary Health:

> Published as part of the Planetary Health Annual Meeting in São Paulo in 2021, this multi-stakeholder declaration is essentially a global call to action to catalyze the Planetary Health movement. It charts concrete actions for distinct sectors and emphasizes the "Great Transition" toward a just, regenerative future (Myers et al., 2021).

Together, these few core teaching philosophies provide the foundation for case-based learning. The case-based learning approach encourages students to engage with real-world dilemmas that are often complex, data-rich, and embedded in social and political contexts, rather than focusing on abstract and simplified scenarios (McLean, 2016; Thistlethwaite et al., 2012). By placing learners in the roles of various stakeholders or as observers of complex systems, case-based methods promote critical thinking, reflexivity, and collaborative problem-solving.

Case studies may also be paired with other experiential methods, such as simulations, role-plays, or participatory mapping, to enhance student engagement (see Section III for details). Ultimately, a robust Planetary Health case study connects rigorous data and credible sources with rich human narratives, guiding learners to navigate smoothly from the micro (individual or community) level to the meso (regional or national) scale, and up to the macro (global) context. This back-and-forth "zoom lens" approach reveals how local realities shape and are shaped by broader planetary trends, helping students understand the intricate links between global forces and local solutions.

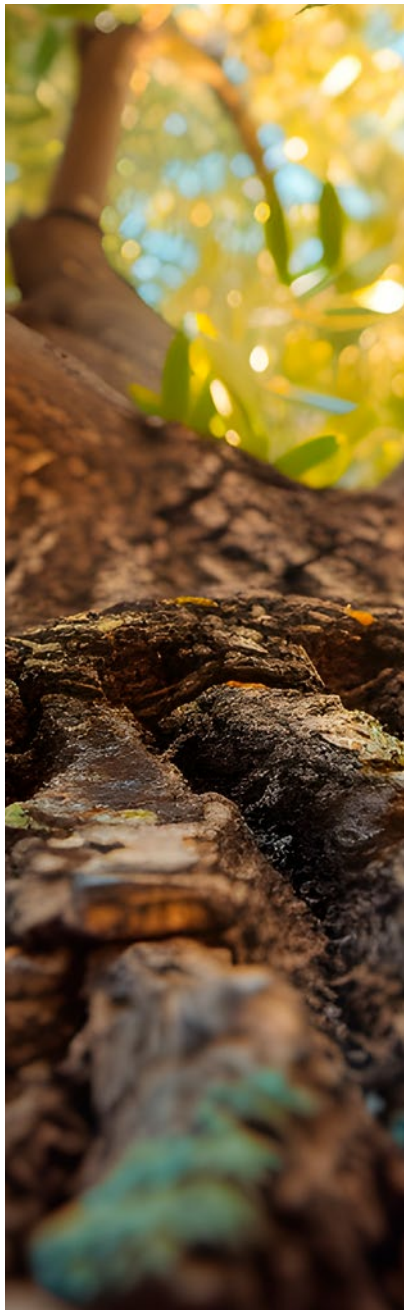


Why Case Studies?

Traditional lectures, curricula, and textbooks usually present obstacles at the nexus of health and environment in isolated and compartmentalized ways, for example, having ecology in one chapter and epidemiology in another (Faerron & Potter, 2021). This approach rarely captures the intertwined reality of today's global environmental challenges. There's no

> *If you are new to the case study format, please take the time to explore established examples, such as the Global Health Delivery Intensive case collection (Global Health Delivery, 2025) and the Planetary Health Alliance's case study library (Planetary Health Alliance, 2025). Familiarizing yourself with the structure and style of these examples is essential to crafting and successfully using case studies in your classroom. Attempting to craft your own case study without studying these models is like trying to write a novel without ever having read one; you need to see how narrative, data integration, and discussion prompts are woven together before creating your own.*

II. Typologies and Guiding Principles of Case Studies



Case Formats

single “correct” way to classify case studies; there are different formats that evolve to meet diverse learning outcomes and audiences. For the purpose of this guide, we’ll focus on three practical typologies, especially useful in the context of Planetary Health, and described here using Planetary Health examples, that you can mix and match based on your objectives. For a more detailed classification, see McLean’s review of case-based learning in health professions (McLean, 2016).

- Narrative-Driven Cases: These cases are especially useful for guiding learners through a coherent, chronological storyline. They typically begin by setting the scene: introducing the place, the people, and the environmental/health challenge at hand, followed by events as they unfold over time. Along the narrative, learners are witnessing clear cause-and-effect relationships, for example, how seasonal weather patterns exacerbate disease

outbreaks. This format is particularly effective for those new to Planetary Health, since its clear narrative arc, usually with a beginning (setting the scene), a conflict (emerging challenges), and a resolution (innovative solutions), offers a familiar structure while still accommodating complexity.

- Decision-Point Cases: Although similar to narrative-driven cases, these cases interrupt the narrative arc at critical junctures to invite learners to "step into the shoes" of various stakeholders and choose among alternative options. This format fosters empathy and enhances ethical reasoning by prompting students to weigh the trade-offs, recognizing that no choice is without consequences (Sun & Van Es, 2015). This format works best in interactive settings where debate and negotiation can occur, such as workshops or seminars.
- Exploratory Cases: This format deliberately avoids tidy endings and predefined decision points. Instead, it presents layered and complex dilemmas that reflect the often open-ended nature of real-world problems. These cases usually introduce a multifaceted scenario, such as balancing biodiversity protection with rural livelihoods, provide relevant data and stakeholder perspectives, and guide learners to identify gaps in their knowledge and formulate new deeper research questions. Through this process, the format cultivates inquiry skills and helps students become comfortable with ambiguity and uncertainty. Learners collaborate to propose policy directions and plan next steps (Thistlethwaite et al., 2012). This approach usually requires greater learner autonomy and can be invaluable in advanced courses where the goal is not resolution but the development of critical and investigative mindsets.

For Planetary Health cases, it is often useful to blend elements from different formats. For instance, a case

study addressing an ongoing and unresolved challenge might begin with a clear narrative, pivot into a decision-point exercise, and conclude with an open-ended discussion on "what comes next?".

> *Remember: Whichever mix you choose, make sure the format supports the domains outlined in the Planetary Health Education Framework. This ensures that learners develop both the analytical skills and the empathetic mindset needed to address complex health and environmental challenges.*

Educational Goals and Alignment with the Planetary Health Education Framework

Planetary Health case studies are more than just compelling stories; when designing them, they must be geared to act as educational tools designed to fulfill what is outlined in the Planetary Health Education Framework (PHEF). The PHEF consists of five core domains that help educators guide learners' transition from isolated facts toward a comprehensive understanding that supports action (as it shows in Figure 1.)

Domain 1: Interconnection Within Nature

This domain emphasizes integrating cognitive (knowing), affective (caring), and behavioral (doing) dimensions of learning to foster genuine care for the Earth, ultimately linking caring to action. Cognitively, the domain focuses on learners' conceptual understanding and knowledge, such as recognizing links between policy and personal choices and their impact on ecological processes, developing mental models to situate challenges within larger socio-ecological systems, and engaging with theoretical frameworks that help describe the challenges at hand. Affective engagement refers to the emotional and value-oriented side of learning, including dialogue to cultivate empathy for people and planet or reflective exercises to build responsibility for action. In essence,

it centers the learning process around the questions "what we care about and why?". The behavioral dimension of this domain addresses intention and practice, including skills, habits, and commitments that enable individuals and groups to translate understanding and care into sustained, tangible action (Faerron Guzmán et al., 2021).

Domain 2: Anthropocene & Health

The Anthropocene describes an era in which human activities have significantly altered Earth's natural systems, such as climate, biogeochemical cycles, land use, biodiversity, with considerable implications for the wellbeing of humans (Whitmee et al., 2015). Within this domain, case studies should clearly link specific anthropogenic factors (e.g., industrial emissions, deforestation, intensive agriculture) to health risks, while examining the mechanisms and mediating factors across different scales that shape those impacts. For example, a case study might explore connections between deforestation, vector-borne disease, and malnutrition, while showing how cultural norms, governance structures, or technological innovations can exacerbate or alleviate these effects. By applying both social and ecological perspectives, this domain equips students to devise interventions that address personal behaviors, community systems, and population-level policies (Faerron Guzmán et al., 2021).

Domain 3: Equity & Social Justice

Planetary Health respects the rights of people and nature, seeking to ensure that no group disproportionately bears the burdens of environmental harm while others thrive. The Equity and Social Justice domain highlights structural inequities that shape disproportionate and unjust exposures to risk and inequitable access to resources, leading to uneven

resilience in the face of environmental shocks. Case studies that include this domain not only encourage learners to explore how historical injustices influence current health disparities but also emphasize strategies for addressing power imbalances through legal reform, community empowerment, or reparative investments.

Domain 4: Systems Thinking & Complexity

Challenges in Planetary Health are inherently complex and are characterized by dynamic systems that are characterized by non-linear interactions, feedback loops, tipping points, and emergent behaviors (Arnold & Wade, 2015). In this domain, case studies help learners map these dynamics across different temporal and spatial scales, from household energy use to global carbon cycles. Using tools such as causal-loop diagrams or agent-based simulations, students can identify leverage points for intervention and reflect on their own cognitive and epistemological biases. By engaging with complexity rather than oversimplifying it, learners develop the fluency needed to anticipate unintended consequences and design resilient, adaptable solutions.

Domain 5: Movement Building & Transformation

Recognizing that diagnosis is only the first step toward solutions, this domain emphasizes relationships, strategic partnerships, and the leadership and communication skills essential for systemic change. Case studies that include this domain highlight successful movements and showcase how solidarity, mentorship, and clear goals can generate momentum. Learners analyze the factors that sustain engagement over time, navigate diverse stakeholder interests, and develop action plans that can potentially translate insights within the classroom into real-world impacts. Through this process, learners should be able to acquire mindsets and the tools needed to help steer

toward a just and regenerative future.

Throughout the development of case studies, the PHEF domains should guide the questions that shape the process. When planning a case study, consider questions such as: Are you illustrating how humans and nature are interconnected? Are you emphasizing the health impacts of anthropogenic change? Have you addressed and recognized power imbalances and inequities? Are you mapping dynamic systems and complex interactions rather than linear arguments? Moreover, are you highlighting examples of communities, broadly defined, mobilizing for change?

Guiding and Ethical Principles

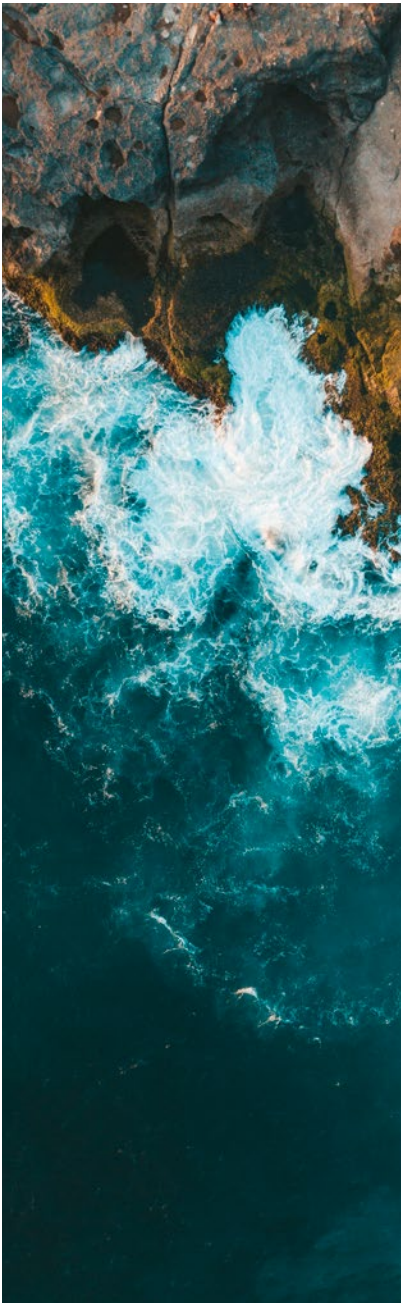
When drafting or teaching with case studies, these principles outlined below should guide your work. Some of these overlap with the PHEF, however you should think they function as ethical considerations for authors and as design priorities that ensure relevance in real-world contexts related to Planetary Health. Applied appropriately, these principles make a case study not only rigorous but also collaborative, culturally sensitive, and action-oriented.

Table I.
Ethical Principles within case studies.

Principle	Short description
Humility & Reflexivity	Acknowledge the limits of your perspective, including disciplinary, cultural, or institutional, and continually check how your assumptions shape questions, methods, and narrative framing (Mezirow, 1991).
Transgenerational Justice	Assess how present choices affect future people and ecosystems; frame case studies with an explicit view of intergenerational consequences (Gardiner, 2006).
Compassion & Care	Center case studies around human experience that foster empathy not only through scientific and data-driven approaches (Tronto, 1993).
Epistemological Diversity	Value, incorporate, and balance complementary ways of knowing, including scientific, Indigenous, and experiential (Berkes, 2017).
Reciprocity & Co-creation	Treat community partners as collaborators, co-frame questions, share analysis, and negotiate outputs and uses of data (Bergmann et al., 2005).
Equity & Power Awareness	Explicitly address who benefits and who bears disproportionate burdens; explore structural drivers (e.g., race, class, gender) and design discussion prompts that foreground justice.
Systems Thinking	Embed causal links, feedback, and scale (micro, meso, macro, meta) in the narrative so learners can trace interactions and unintended consequences (Arnold & Wade, 2015).
Data Stewardship & Sovereignty	When collecting data, respect the ownership of community data: use culturally appropriate consent, document provenance and limits, and agree on access and reuse.
Resilience & Innovation	Highlight locally grounded adaptive strategies and assess their trade-offs and scalability, avoid “romanticizing” or simplifying complexities.

Accessibility & Inclusion	Design materials and activities so diverse learners can participate (low-tech options, language support, multiple assessment modes).
Movement & Action Orientation	Create cases with realistic pathways for collective action, stakeholder engagement, policy levers, or community practice, so the case study clearly connects to change.

III. Step-by-Step Case Development



The Case Development Process

This guide presents the case-development process as a flexible framework of seven interlocking stages: Origin, Design, Feasibility & Early Validation, Data Collection, Structure, Drafting & Iteration, and Test & Revise. Rather than a rigid sequence, these stages can be viewed as overlapping workstreams, each helping to refine the focus of the case study. The process starts with a broad exploration of potential story seeds, stakeholders, and partners, then progressively refining the scope of the case study and the methodology until achieving a polished, classroom-ready case.

Across and within stages, early and repeated iteration is essential. Iterating helps avoid late-stage rewrites and ensures the case remains both rigorous and engaging for learners. What follows is a brief overview of each stage; subsequent sections will explore them in greater depth to guide your work.

It is important to remember that case studies are tools for both teaching and learning. As with any

learning tool, the overall objectives (the outcomes you want learners to achieve) should serve as a constant compass throughout each phase of case development. These objectives determine which types of stories to pursue, guide decisions about the depth of data analysis and the level of detail to include, shape the design of discussion prompts, and ensure that the narrative arc supports the intended learning outcomes.

By keeping learning objectives in mind and guiding the case creation process, whether you aim to deepen systems-thinking skills, deepen equity-based critical thinking, or encourage movement-building-oriented reflections, you will be able to maintain pedagogical alignment.

> *Note: The overview below provides a high-level roadmap. The following sections will examine each stage in detail, guiding you from the initial idea to a polished teaching resource while maintaining both depth and relevance.*

1. Origin: Identifying the "story seed" and stakeholders

Every Planetary Health case begins with a compelling "story seed" (the initial spark or question that guides the development process). The starting point may vary depending on factors such as existing connections to communities and locations, whether you and your co-authors are insiders or external collaborators, or the degree of familiarity with the science behind the challenges and solutions. It is crucial to reflect on how your own positionality influences the narrative you are going to present.

The "story seed" can be developed in several ways. One option is to begin with an issue-driven focus, where the story emerges from a pressing environmental or health challenge of particular relevance in a given moment. Another possibility is to adopt a place-based lens, rooting the narrative in a specific locale and allowing learners to explore how geography, governance, cultural norms, and ecosystem dynamics intersect. A third approach is to take an opportunity-driven angle, centering the case on a breakthrough or innovative solution and encouraging reflection on resilience and the potential for scaling such innovations. Ideally, strong cases combine these three entry points, balancing urgency and context while also showcasing local innovation.

At the same time, selecting a "story seed" also requires mapping key stakeholders. These may include community leaders whose lived experiences bring authenticity to the case study, health professionals who provide public health or clinical insights, scientists who facilitate data, and policymakers who shape the policy environment. The goal of stakeholder mapping is to clarify not only who to engage and how, but also to ensure that the case reflects multiple perspectives.

2. Design: From idea to case brief

Format Selection
Choose the format that best aligns with your objectives and audience. For more details, see the section Overview of Case Formats. Hybrid models, combining coherent narratives with detailed context, embedded decision points, and even open-ended dilemmas, can provide both continuity and opportunities for interactive reflection.

Scope Definition
Establishing a clear scope means specifying the geographic and temporal parameters of the case study. Defining this early clarifies data requirements and keeps the project on track and manageable. A well-defined scope helps prevent unnecessary expansion beyond available resources and can ensure the case can be taught within typical class periods.

Ethical Protocols
Depending on the case study, especially those involving community engagement, it is vital to document procedures early for obtaining informed consent and respecting community data rights. Begin by preparing concise consent forms that outline the purpose of interviews or surveys, how the information will be used, and participants' right to withdraw at any time. If the case involves Indigenous knowledge, integrate data-sovereignty guidelines (i.e., explicit clauses on control over access, storage, and dissemination of data). Some countries might have specific laws around this, so local consultation might be needed.

> *Case Brief: By the end of the Design stage, it is suggested to have a Case Brief, usually around 400-600 words long. The brief should clearly outline the chosen format, a well-defined scope, and documented ethical procedures. It serves as a reference point for the drafting phase and helps ensure that the narrative and data remain grounded in pedagogical outcomes, feasibility, and ethical engagement.*

3. Feasibility and Early Validation

Before investing significant time in data collection or drafting, you should conduct a brief feasibility analysis and early validation to ensure the concept is practical and aligned with pedagogical goals. At a minimum, three simultaneous assessments can guide this state:

Data Accessibility:
Create an inventory of the critical datasets needed, such as environmental measurements, health statistics, policy documents, and community-sourced information. Verify the availability of these sources early on and avoid complex permissions that could significantly delay progress. This preliminary audit of datasets helps prevent surprises later in the process if key data proves inaccessible.

Stakeholder Engagement:
Revisit the stakeholder map and reach out to key individuals for early feedback on the draft outline and concept brief. Ask whether any important perspectives are missing and confirm that the proposed data collection methods are both acceptable and appropriate.

Alignment with PHEF Domains:
Use a simple checklist to ensure the emerging case addresses all five domains of the Planetary Health Education Framework (PHEF). For each domain, check whether the draft outline includes sufficient material to engage learners and meet the framework's goals.

By the end of the Feasibility & Early Validation stage, you should have:

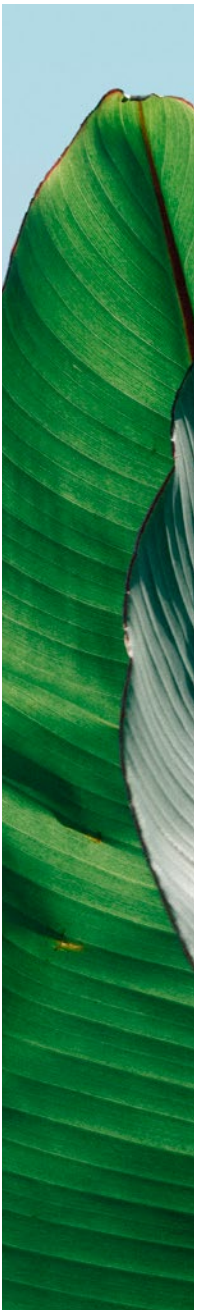
4.A clear understanding of which data sources are accessible and which proxies may be necessary.
5.Confirmation that key stakeholders support your focus and are willing to participate.
6.A balanced draft that covers all PHEF domains.

Occasionally, even promising storylines cannot be developed into full case studies. Identifying potential red flags or deal-breakers at the outset is essential, as recognizing them in time can save effort and resources for all stakeholders.

One common concern is the lack of reliable data or the presence of unresolvable factual inaccuracies. Strong cases cannot rely on anecdotal accounts or scientifically weak evidence, as vague information quickly undermines credibility.

Another critical red flag is when the case may cause harm to the community or other stakeholders. This can occur if sensitive information is disclosed, exposing participants to stigma, conflict, or political repercussions. In such situations, the ethical cost outweighs the educational value. If a case poses the possibility of harming the very people whose experiences it seeks to highlight, it is best to stop the process altogether. As a result, stakeholders may feel uncomfortable participating or may choose to withhold consent.

Finally, beware of an overly technical scope that may depend on complex legal frameworks, advanced statistical analysis, or other specialized expertise that learners might lack. Always remember that a case study must remain engaging and accessible.



4. Data Collection: Gathering Quantitative and Qualitative Evidence

The data collection stage should be adapted to fit different contexts, resources, and informational needs. In most cases, the data collection methods outlined below should be combined rather than relying on a single method. The next section of this guide provides a more detailed discussion of community-engaged data collection techniques. When collecting qualitative and quantitative data, consider the options outlined

below, adapting them to your timeline, budget, and stakeholder priorities. Table II contains a selection of methods most used in case studies.

Table II
Methods used in Case Studies

Method	Description
Desk Reviews (Secondary Research)	Establishes the foundation of a case study by mapping existing knowledge and identifying gaps. Involves systematic literature scans (e.g., PubMed, Scopus), review of gray literature (NGO reports, government documents), and critical evaluation of sources.
Key Informant Interviews	Semi-structured interviews with stakeholders (e.g., knowledge holders, clinicians, NGO staff, planners) to capture contextual insights. Requires an interview guide, informed consent, transcription, and thematic coding.
Focus Groups	Group discussions segmented by age, gender, or occupation to explore community norms and perceptions (e.g., on climate impacts). Requires semi-structured guides, recordings (if permitted), and transcripts for analysis.
Field Surveys	Household or structured community surveys to quantify practices and perceptions (e.g., water use, health impacts). Generates quantitative data that can complement qualitative insights.
Participatory Mapping	Residents annotate maps to identify hazard zones, resources, or movement patterns. Helps visualize spatial dynamics and power relations while fostering engagement.
Visual Methods (Photo-Voice, Participatory Video)	Community members document issues through photos or videos, promoting ownership and adding vivid, contextualized perspectives.
Direct Observation	Systematic noting of behaviors, practices, or environmental conditions during field visits. Offers real-time insights that may not surface in interviews or surveys.
Workshops / Community Dialogues	Facilitated sessions to co-interpret findings, validate data, and build consensus. Encourages dialogue across different stakeholder groups.

Note: Based on Creswell Clark & Plano, (2011)

Note: Triangulation and Validation

Case studies, like other forms of research, should not rely on a single source or method. Instead, the data collection and analysis process should build a multi-layered evidence base, drawing on sources such as official records, interview testimonies, survey results, scientific datasets, lived experiences, and community contributions. It is equally important to acknowledge gaps in available information and the current limits of scientific knowledge.

5. Suggested Case Structure: Crafting the Case Outline

Once the data, information, and stories have been gathered and synthesized, the Structure phase focuses on organizing this material into a coherent outline. This process is iterative: the outline evolves as you draft and as new gaps emerge. Data collection, structuring, and drafting may even occur concurrently, helping to fill gaps and improve the overall flow of the case study.

Define Major Sections:

Case studies rarely follow a static template. However, a well-structured outline supports the writing process and guides learners from understanding the challenge to analyzing potential solutions and reflecting on future directions. Below is a suggested structure that can be adapted as needed.

a. Title & Executive Summary

- Provide a concise title that signals the focus.
- Add two to four paragraphs summarizing the challenge, the intervention, and the key take-home messages.
- This section is often written last.

b. Introduction: Scene Setting & Protagonists

- Consider an opening vignette centered on an individual or organization to immerse readers in the stakes of the case and build empathy toward the main protagonists.

- Briefly explain why the issue matters now (its urgency) and who the main players are.

c. Context & Background

- Provide a geographic, historical, demographic, ecological, and socio-economic overview (including statistics, maps, and a timeline of relevant events) in an engaging way.
- Highlight upstream drivers fueling the problem, such as deforestation, urban expansion, policy gaps, or infrastructure projects.

d. Problem Narrative

- Present a chronological account of how the issue emerged or escalated.
- Weave together global and local data with qualitative testimonies and lived experiences.

e. Intervention & Response

- Describe in detail the actions taken, including policy measures (e.g., Indonesia's peatland restoration), ecological strategies (e.g., river prawn reintroduction in Senegal), or community-led programs (e.g., population–health–environment initiatives in East Africa).
- Cover who designed and implemented the intervention, as well as their motivations.
- Describe the scale of the intervention, as well as possible lessons learned in the process of design and implementation.

f. Results & Analysis

- Incorporate evidence of the impact on health, livelihoods, or ecosystems. This can be blended well with the previous section on intervention and response.
- Explore intended and unintended consequences.
- Use charts or sidebars to clarify key metrics and link findings to your learning objectives and PHEF domains.

g. Discussion & Epilogue

- Depending on objectives, include reflections on scalability, sustainability, and policy implications.
- Acknowledge remaining uncertainties, pose open questions, and suggest areas for further research or action.
- Encourage learners to envision their own roles in driving systemic change.

Detail Key Content

Under each heading, list bullet points summarizing the data, quotes, or concepts you plan to include. This step helps ensure you capture essential elements and estimate the length of each section.

Plan Visuals Strategically

Visuals are most effective when they clarify complex information. Options include maps, flow charts, causal-loop diagrams, timelines, or photos that bring the case study to life. Keep each simple, focused on one key insight, and supported by a brief caption or explanation.

Iterate and Cross-Check
As you create the outline, flag areas (gaps) where data is thin or transitions feel awkward. Share your draft with trusted colleagues or community partners to confirm clarity and completeness. Use their feedback to refine the structure before moving into full drafting.

> *By the end of this stage, you will have a working outline: a clear plan that guides your writing and teaching, highlights where more information is needed, and aligns your pedagogical objectives with the narrative flow.*

6. Drafting and Iteration: Building and Refining your Narrative

At this stage, you should have a solid outline and most of the data in hand. Start by revisiting your learning objectives and asking whether the information gathered so far truly enables students to meet them. If not, fill in the gaps or adjust the objectives, rather than forcing mismatched content into the narrative. With data and outline in place, the case should be written less like a dry technical report and more like a compelling story. This means balancing vivid scenes and first-person accounts with a clear and accurate presentation of scientific data, ideally allowing learners to connect with the people and places involved.

This approach combines storytelling with scientific rigor, bringing forward human voices and sensory details while using elements such as sidebars or callouts to keep complex methods and metrics accessible without interrupting the story arc. Reflective questions and prompts can guide learners from the human story back to the analytical frameworks underlying Planetary Health, reinforcing a deeper understanding of the health–environment nexus. By adopting a conversational yet academic voice, a well-written case can make complex systems and challenging dilemmas more approachable.

> *Note: Because writing is an iterative process, share drafts with colleagues, community partners, or subject-matter experts to spot missing context, factual inconsistencies, outdated references, or unbalanced sections.*

Most full-length case studies range from 7,000 to 10,000 words, concise enough to be read and discussed in a single seminar session or workshop. This length allows you to:

- Introduce readers to the setting and protagonists through a rich narrative.

- Provide enough background and data to ground the analysis in evidence.
- Explore interventions in depth to reveal design choices, trade-offs, and implementation challenges, sparking meaningful reflection.
- Offer thoughtful discussion questions that connect theory to practice.

The table below suggests a possible word-count distribution across the core sections. Treat these ranges as flexible guidelines and adjust them to the complexity of the case and the learning objectives.

Table III
Word distribution by Section

Section	Words Count
Title & Executive Summary	150–300 words
Introduction: Scene Setting & Protagonist	800–1,200 words
Context & Background	800–1,200 words
Problem Narrative	1,500–2,000 words
Intervention & Response	1,200–1,500 words
Results & Analysis	1,000–1,500 words
Discussion & Epilogue	800–1,000 words

Note: As you draft, combine quantitative charts with qualitative voices, placing technical details in sidebars so the narrative flow stays central. Build the story arc around one or two protagonists to humanize what is at stake, and structure the plot around tensions and turning points. Highlight ethical dilemmas that invite learners to weigh trade-offs rather than accept tidy solutions. Share interim drafts with colleagues or community partners and ask for targeted feedback on clarity, cultural appropriateness, and data quality. Revise through two or three focused cycles; at that point, the case will be ready for piloting and final refinements.

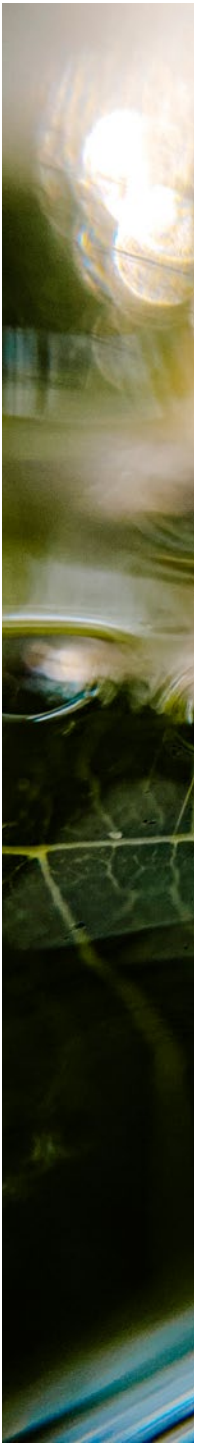
7. Test and Revise: Refining Through Classroom Pilots.

The final step in developing a case study is to test the near-final draft in a real learning environment, such as a seminar or workshop. Ideally, this involves a small, mixed group of stakeholders, not only students, where the case is presented exactly as planned for its final setting.

Ask participants to complete short questionnaires after the session to assess clarity, engagement, and relevance. Follow up with brief discussions to identify which sections were most compelling, where the narrative lost momentum, and whether the visual aids were helpful. Organize the feedback thematically and incorporate it into a final round of revisions. This cycle of testing and refinement enhances pedagogical effectiveness and reinforces the co-creation process.
Data Collection Approaches for Case Studies and the Role of Community-Based Participatory Research (CBPR)

Case study development can vary in formats and scale. From small-scale efforts that utilize secondary sources and well-established community relationships, to large, multi-year projects that require ethics approvals, external funding, and extensive fieldwork. Regardless of scale, Planetary Health case studies benefit from combining quantitative indicators (e.g., epidemiological or environmental metrics) with qualitative insights (e.g., interviews and observations). Across all methods, guiding principles should include reciprocity, humility, and justice, ensuring that community members act as collaborators rather than subjects.

One well-established framework for applying these principles is Community-Based Participatory Research (CBPR). Sometimes referred to as Participatory Action Research (PAR), Action Research, or Community-



Engaged Research (CER), CBPR incorporates values such as reciprocity and justice by involving stakeholders at every stage of the research process. While not the only available method, it provides a clear model for ethical and inclusive engagement. Depending on resources and timelines, teams may combine CBPR with other methods such as desk reviews or key-informant interviews (Creswell & Plano Clark, 2011).

> *Note: This section is not a full methods primer and does not catalog every qualitative or quantitative technique used in case-study work. Instead, it highlights CBPR because of its close alignment with Planetary Health values such as reciprocity, humility, and shared ownership. For full methodological detail, consult dedicated methods texts and CBPR training resources.*

Depending on your starting point with the communities, your path toward CBPR-driven data collection may differ (see Table IV for details). If little or no trust has been established, begin by investing in relationships and building trust. Work through trusted liaisons to enter the community respectfully, attend meetings with them, and prioritize listening before designing research (Israel et al., 2013). Once intentions are clear, move on to co-design research questions with community partners so the inquiry addresses locally relevant concerns and, where feasible, plan joint data collection. This may involve training local volunteers in activities such as sampling, mapping, or basic survey methods (Rhodes et al., 2010).

Throughout the data-gathering process, use workshops or focus groups to interpret preliminary findings together with community members. These steps help prevent misinterpretation and ground the analysis in lived experience (Cargo & Mercer, 2008; Minkler et al., 2008). Remember that CBPR is more than data collection: as you move forward, co-create the main narrative with community contributors so that quotes and images reflect local priorities and voices (Israel et al., 2013).

Table IV
CBPR: Key Principles and Practices for practices for ethical, inclusive, and impactful data collection.

Consideration	Key Practices
Informed Consent & Data Sovereignty	Use culturally tailored, iterative consent processes. Translate or explain forms orally. Consent should affirm community control over data, especially for Indigenous or marginalized groups.
Non-Extractive Engagement	Share preliminary results in accessible formats. When appropriate, extend collaboration to co-authorship and support local initiatives. Consider benefits such as stipends or training for participants.
Inclusive Knowledge Systems	Combine scientific data with Indigenous and traditional knowledge. Follow cultural protocols (e.g., seeking permission from elders or leaders) when documenting sensitive practices.
Sustainability & Exit Strategies	Plan for next steps after research ends. Avoid practices that create dependency and agree with partners on long-term data use.
Ethical Reflexivity & Positionality	Acknowledge personal and institutional positionality and reflect on how it shapes interactions. Build structured reflexivity into the process to maintain accountability.
Two-Way Communication	Keep communication open beyond initial consent or final dissemination. Use varied formats to ensure inclusivity.

Note. Based on Collins et al. (2018) and Riccardi et al. (2023)

IV. Transforming the Case into a Teaching Tool

When using case studies, it is essential to see the narrative and the teaching components as two complementary parts of a whole. The primary purpose is educational: cases should be designed not only to inform but also to facilitate learning. From the earliest stages of development, learning objectives must remain central, shaping everything from which data you highlight to how you frame discussion questions.

Equally important is developing the teaching notes alongside the case. These are two sides of the same coin: the narrative explains “what happened,” while the teaching notes guide instructors on “how to facilitate learning with it.” Creating the case and the facilitation guide together empowers both educators and learners.

A single case study should be understood as a flexible learning tool and can and should cater to multiple audiences and objectives. For example, a case on flood-affected communities may focus on strengthening systems thinking skills, but you can also create modular teaching notes tailored to different groups, such as

undergraduates, public health practitioners, or policymakers. Each set of notes can align with the same core case but highlight different learning outcomes, depending on the overarching goal of the learning process.

Teaching Notes and Active Learning Design

Well-crafted learning objectives are the foundation of any effective learning process. They go beyond stating what learners should achieve; they shape every aspect of case-based teaching, from the data you collect to the prompts you design. Using a standardized framework, such as SMART, helps ensure that objectives are Specific, Measurable, Achievable, Relevant, and Time-bound. For example, instead of a vague goal like "understand the impact of deforestation," you might specify: "By the end of this seminar, students will be able to identify distinct and reinforcing pathways through which deforestation increases the risk of vector-borne diseases." This kind of clarity enables facilitators to select precise data (e.g., incidence curves and land-use maps), design targeted activities (e.g., feedback loops or systems maps), and assess learner progress (see section on assessment).

Once objectives are defined, the next step is to map each one to the Planetary Health Education Framework (PHEF). This ensures alignment with core Planetary Health principles and helps learners see how individual goals connect to broader outcomes. Linking objectives to the PHEF creates a clear pedagogical roadmap: facilitators know which larger aims they are reinforcing, while learners gain clarity on what they are learning and why it matters within the wider Planetary Health context.

Selecting a Teaching Format

Teaching Planetary Health case studies requires adapting methods to the learning environment, the audience and the resources available. Formats can range from large lecture halls to small community workshops with limited technology, each presenting unique opportunities and challenges for engagement. Choosing the right approach ensures that learners develop the skills and perspectives needed to navigate complex Planetary Health challenges.

The table below (Table V) outlines strategies across four common teaching formats, highlighting group size, interaction style, and tools that support active learning.

Table V
Strategies across four common teaching formats

Format	Typical Group Size	Core Strategies	Interaction Style	Tools & Techniques	Special Notes
Large Lectures	50+ learners	Concise overview with multimedia; highlight key data points and system diagrams.	Mostly one-to-many with moments of reflection	Short video or narrated slides; polling tools (clickers, web apps)	Place strategic pauses for Q&A to maintain engagement (Freeman et al., 2014)
Small Seminars / Discussion Groups	10–25 learners	Pre-distributed case; assigning stakeholder roles; subgroup debates.	Highly interactive, peer-to-peer dialogue	Whiteboards/ flipcharts for systems mapping; rotating student facilitators	Role-play enhances empathy and systems perspective (Thistlethwaite et al., 2012)

Online / Hybrid Delivery	Flexible (depends on platform)	Pre-session quiz; breakout rooms; assign "pro-user" to manage screen sharing.	Virtual small-group and plenary discussions.	Video conference with breakout rooms; discussion boards; transcripts/ captions	Provide low-bandwidth alternatives (audio-only, asynchronous) for accessibility (Cook et al., 2010)
Community Workshops / Continuing Education	Varies (10–40 typical)	Start with experiential check-in; participatory mapping; co-develop action plans	Dialogic, grounded in lived experience	Large paper maps; printed summaries; visual aids	Adapt language/pacing; allow time for local constraints and solutions to emerge (Israel et al., 2013)

Scaffolding the Learning Sequence

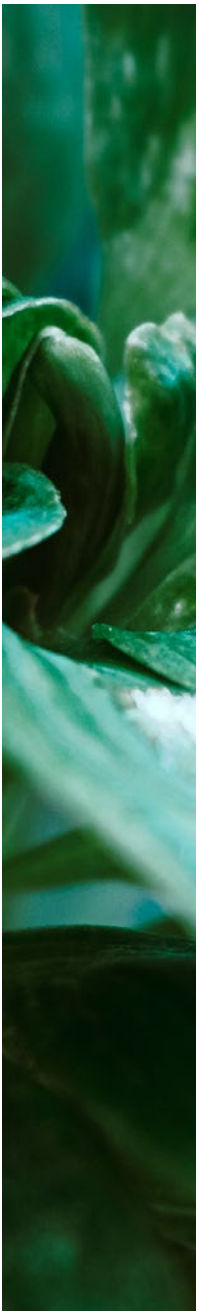
Scaffolding occurs at multiple scales throughout the learning process. In this guide, it refers to the gradual use of case studies as tools that move learners from foundational understanding toward advanced application. This progression unfolds across three phases: pre-class, in-class, and post-class. Here, "class" is understood broadly, encompassing traditional classrooms, workshops, seminars, or community-based learning spaces.

In the pre-class phase, learners receive the core case text along with a curated set of supporting materials. These may be optional or required, depending on learners' prior knowledge, and can range from concise primers on key concepts to short contextual multimedia files. The aim is to activate background knowledge and orient students to central themes, so they arrive prepared to analyze and participate rather than remain passive. A simple reflection prompt at this stage encourages early engagement and helps surface individual perspectives before group discussion begins.

During the in-class phase, activities should progressively build analytical skills while fostering dialogue and collaboration. Insights from earlier steps remain important as the discussion advances. To support continuity, avoid erasing key points; instead, use an additional board or large sheets of paper so prior information stays visible and can be revisited as the case unfolds.

Start with a brief recap of the case's key facts, focusing on important data points and factual knowledge. Then introduce interactive activities, such as small-group exercises, that prompt learners to apply relevant frameworks, like mapping cause-and-effect relationships or role-plays. These tasks should be built on one another. For example, a diagramming exercise might help students visualize the systems behind the challenge, feeding into a stakeholder debate where trade-offs are weighed, and culminating in negotiated solutions that connect back to the challenge diagram. Keeping all visuals in sequence makes it easier to close with a whole-class synthesis, linking students' insights to the learning objectives and reinforcing the connection between theory and practice.

Finally, post-class assignments consolidate learning and promote transfer of knowledge into real-world contexts. These tasks encourage students to translate their in-class analyses into practical outputs. Follow-up activities not only reinforce content mastery but also foster self-reflection. Examples include a policy memo, a short design proposal, or a reflective journal.



Active Learning Activities

Active learning transforms a case study from a passive text into an interactive learning journey. In this guide, it refers to designing activities that require

learners to engage actively with the case, through analysis, debate, mapping, or role-play. At its core, active learning prompts students to apply theoretical concepts, situate them in real-world contexts, engage with diverse perspectives, and co-construct emerging insights. Each activity should connect directly to one or more learning goals, ensuring that participation is purposeful.

In practice, active learning can take many forms, adaptable to different teaching formats. Below are examples designed for small-group discussions and for individual reflection.

Examples of small-group exercises:

- System mapping: Ask groups to identify three main drivers of the case challenge and map how they interconnect. Encourage them to highlight feedback loops and the types of relationships between these drivers.
- Stakeholder role-play: Using a short vignette, assign each participant a perspective (e.g., community leader, health official, government representative) and have them negotiate priorities in a brief simulation.

Examples of individual exercises:

- Reflective writing or journaling: Provide prompts that ask learners to connect course concepts to their own experiences and prior knowledge.
- Short-applied assignments / discussion posts: Ask students to distill their experience with the case study into 200–300 words, helping them practice synthesis, communication, and integration.
- Whatever the activity, the instructor's role is to facilitate rather than lecture (see Table VI). This involves circulating among groups, posing probing questions, and debriefing with students to connect outcomes back to the learning objectives and the PHEF.

Table VI
Tips and Applications for Active Learning Activities

Best Practice	Tips & Applications	Avoid
Adopt a Guiding Stance	Pose open-ended questions to spark inquiry (e.g., "What unintended effects might arise if this policy is enacted?"). Direct learners back to key information from the case when groups stall, helping them navigate complexity.	Overloading students with excessive data or complex statistics without framing their relevance.
Cultivate Respectful Dialogue	Establish discussion norms from the beginning: listen without interruption, use "I" statements, and ground arguments in evidence. For sensitive issues, acknowledge discomfort and use a "parking lot" (flipchart/board) for off-topic but important concerns.	Allowing louder voices to dominate stakeholder role-plays or group discussions, which risks sidelining marginalized perspectives.
Ensure Equitable Participation	Track contributions. Use "think–pair–share" to give quieter students time to prepare. Invite underrepresented voices with prompts such as, "Let's hear from someone who hasn't spoken yet."	Ignoring silence or assuming equal participation will happen naturally
Manage Time and Focus	Provide time checks (e.g., "Ten minutes left for systems mapping"). If activities overrun, capture main points in a "parking lot" and assign follow-up tasks, balancing structure with flexibility.	Rushing through activities without leaving time for debriefing, which can fragment insights.
Align to Learning Objectives	Anchor discussions to objectives and mapped PHEF domains. Redirect when conversations drift (e.g., "That's valuable, but today our goal is to analyze… let's table that debate for later.")	Skipping explicit links to PHEF competencies during debrief.
Use Visual Anchors	Keep system maps, diagrams, or key notes visible throughout the session (e.g., extra boards or large sheets). Refer back to them to reinforce continuity and connections.	Erasing visuals, which makes it harder for learners to trace connections across the discussion.
Debrief Intentionally	After activities, lead a debrief that connects outcomes to learning goals (e.g., "How might this insight apply in your own context?"). This reinforces transfer of learning beyond the classroom.	Skipping the synthesis stage.

Note. Based on Mezirow (1991), Devraj et al. (2010) and Heck et al. (2023)

Overview of Student Assessment & Evaluation in Case Studies

When using case studies, it is strongly recommended to evaluate and assess student learning, especially in formal educational settings. The following options can be adapted to your context to ensure alignment with both learning objectives and the PHEF. Keep in mind that some choices may depend on institutional assessment policies, so review and adapt as needed.

1. Designing Clear Rubrics: Translate each learning objective into observable and measurable criteria. Rubrics should include ***concrete statements such as "identifies key system drivers," "analyzes equity implications," or "articulates actionable recommendations."*** Define clear performance levels (e.g., novice to advanced) with descriptors that distinguish satisfactory work from exemplary work.
2. Formative Checks for Continuous Feedback: Use informal, low-stakes assessments throughout the learning sequence to monitor comprehension and adjust teaching strategies. Short entry quizzes or quick polls are easy to implement and serve as checkpoints to surface misconceptions early, before learners advance to more complex tasks.
3. Summative Tasks to Demonstrate Competence: Reserve larger assignments for the end of the module to capture the integration of learning. Possible tasks include policy memos, group presentations, detailed systems diagrams, or reflective essays. Summative assessments should cover multiple dimensions, ranging from factual recall to complex creation tasks that require metacognitive skills.
4. Peer Review to Cultivate Dialogue: Peer review sessions, where students provide feedback on each other's work, can serve as formative

or summative assessments. Use structured feedback forms to ensure the process is constructive and respectful. Beyond feedback, peer review also builds collaborative skills, such as active listening, that are central to Planetary Health practice.

Crafting your Teaching Notes

Effective teaching notes go beyond summarizing a case. They require pedagogical awareness and facilitation skills. If you are working in an institutional environment and have limited experience with case-based teaching, seek

Table VII
Teaching Plan and Timing Grid

Time	Activity	Example materials
10'	Icebreaker & Context	Poll cards or slide prompt
20'	Systems-Mapping Exercise (sma-ll teams)	Flipcharts, markers
15'	Stakeholder Role-Play	Role descriptions, name tags
20'	Plenary Discussion	Whiteboard, sticky notes
10'	Reflection & Debrief	Reflection prompts handout

support from teaching and learning experts to ensure alignment with curricular standards. At the same time, crafting teaching notes is also an intuitive process shaped by your own knowledge of the learners you work with.

Teaching notes can be designed for a broad audience of instructors across levels and disciplines, or tailored specifically to your own teaching practice. In both cases, the goal is to

create a practical guide that mirrors the narrative of the case study while equipping facilitators to foster meaningful analysis, dialogue, and action. Below is a recommended structure for the teaching notes. This can be adapted to different learning environments:

1. Case Synopsis & Background: Provide a concise overview of the setting, central characters, and key issues. It summarizes the problem, the intervention or response, and the main outcomes or dilemmas.
2. Target Audience & Prerequisites: Specify the ideal learners (e.g., "this case study is geared towards upper-level undergraduates in environmental health") and lists any required background knowledge or skills (e.g., "this case study requires basic knowledge in epidemiology").
3. Learning Objectives & PHEF Mapping: State the SMART objectives and show how they align with the PHEF.
4. Teaching Plan & Timing Grid: This section organizes the session into clear time blocks, specifying activities, materials, and approximate durations. Table VII illustrates one possible format that you can adapt to your context.
5. Discussion Questions & Model Responses: List 8–15 open-ended questions tied to learning objectives (e.g., "What are the potential unintended consequences of this intervention?"). Provide brief model answers, key themes, and common misconceptions to anticipate.
6. Assessment & Evaluation Strategies: Outline both formative checks and summative tasks. Include or reference a rubric template if relevant.
7. Extension Activities & Further Reading:

Suggest optional exercises and curated resources to deepen engagement.

8. "What Actually Happened" Epilogue (if applicable): Provide a brief update on real-world outcomes since the case was created (e.g., policies adopted, measured impacts, scaling efforts).

Sustaining and Evolving Your Case Study

Case studies are living documents. No matter how polished they may seem, they should remain dynamic, adapting to new research, shifting local and global contexts, and emerging community insights.

Consider a periodic review every 12 to 18 months. Revisit data sources, update key statistics A practical step is to schedule periodic reviews every 12–18 months. Revisit data sources, update key statistics, and scan recent literature. This does not require rewriting the entire case; often, a short "update note" or a revised epilogue is enough to capture new developments.

Equally important are feedback loops with instructors, learners, and collaborators. These can take the form of end-of-course surveys, open forums, or focus groups. Documenting and integrating feedback ensures the case continues to meet pedagogical goals and remain relevant.

Finally, consider sharing your work through the Planetary Health Alliance case repository. Contributing to this collaborative library helps build a collective resource for Planetary Health education while advancing the principles of transdisciplinary and community-engaged scholarship.

References

1. Arnold, R. D., & Wade, J. P. (2015). A definition of systems thinking: A systems approach. ***Procedia Computer Science, 44(C), 669–678.*** https://doi.org/10.1016/j.procs.2015.03.050
2. Bergmann, M., Brohmann, B., & Rehaag, R. (2005). ***Quality Criteria of Transdisciplinary Research: A Guide for the Formative Evaluation of Research Projects.*** https://www.researchgate.net/publication/256437773
3. Berkes, F. (2018). ***Sacred Ecology*** (Fourth Edition). Routledge, Taylor & Francis Group. https://www.routledge.com/Sacred-Ecology/Berkes/p/book/9781138071490?srsltid=AfmBOoqlMCfzSsGZIgH6zDV1OJHkbqDQFA3g0-9kVzZsM7V-RtOoAjlQ
4. Bernard, H. Russell. (2018). ***Research methods in anthropology : qualitative and quantitative approaches.*** Rowman & Littlefield.
5. Cargo, M., & Mercer, S. L. (2008). ***The value and challenges of participatory research: Strengthening its practice.*** Annual Review of Public Health, 29, 325–350. https://doi.org/10.1146/annurev.publhealth.29.091307.083824
6. Collins, S. E., Clifasefi, S. L., Stanton, J., Straits, K. J. E., Gil-Kashiwabara, E., Espinosa, P. R., Nicasio, A. V., Andrasik, M. P., Hawes, S. M., Miller, K. A., Nelson, L. A., Orfaly, V. E., Duran, B. M., & Wallerstein, N. (2018). ***Community-based participatory research (CBPR): Towards equitable involvement of community in psychology research. American Psychologist, 73(7), 884–898.*** https://doi.org/10.1037/amp0000167
7. Creswell Clark, J., & Plano, V. (2011). ***Designing and Conducting: Mixed Methods Research*** (Second Edition). SAGE Publications Inc.
8. Devraj, R., Butler, L. M., Gupchup, G. V, & Poirier, T. I. (2010). ***Active-Learning Strategies to Develop Health Literacy Knowledge and Skills.*** American Journal of Pharmaceutical Education.
9. Faerron, C., Aguirre, A. A., Astle, B., Barros, E., Bayles, B., Chimbari, M., El-Abbadi, N., Evert, J., Hackett, F., Howard, C., Jennings, J., Krzyzek, A., LeClair, J., Maric, F., Martin, O., Osano, O., Patz, J., Potter, T., Redvers, N., … Zylstra, M. (2021). ***A framework to guide Planetary Health education. In The Lancet Planetary Health*** (Vol. 5, Issue 5, pp. e253–e255). Elsevier B.V. https://doi.org/10.1016/S2542-5196(21)00110-8
10. Faerron, C., & Potter, T. (2021). ***The Planetary Health Education Framework*** (C. A. Faerron Guzmán & T. Porter, Eds.). https://doi.org/10.5822/phef2021

11. Faerron, C., & Zotova, O. (2023). ***Acting on power and health inequities: An essential approach to global environmental challenges.*** Int Public Health J, 15(4).
12. Gardiner, S. M. (2011). ***A Perfect Moral Storm: The Ethical Tragedy of Climate Change.*** Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195379440.001.0001
13. Global Health Delivery. (2025). ***Case studies.*** Harvard T.H. Chan. https://www.ghdonline.org/cases/
14. Great Transition Initiative. (n.d.). ***What is the Great Transition?*** . Great Transition Initiative Web. Retrieved May 29, 2025, from https://greattransition.org/about/what-is-the-great-transition
15. Heck, A. J., Cross, C. E., Tatum, V. Y., & Chase, A. J. (2023). ***Active Learning Among Health Professions' Educators: Perceptions, Barriers, and Use. Medical Science Educator, 33(3), 719–727.*** https://doi.org/10.1007/s40670-023-01793-0
16. Horton, R., & Lo, S. (2015). ***Planetary Health: A new science for exceptional action. In The Lancet (Vol. 386, Issue 10007, pp. 1921–1922).*** Lancet Publishing Group. https://doi.org/10.1016/S0140-6736(15)61038-8
17. Israel, B., Eng, E., Schulz, A., & Parker, E. (2013). ***Methods for Community-Based Participatory Research for Health*** (D. Satcher, Ed.; Second Edition). Jossey-Bass.
18. Kolb, D. A. (1984). ***Experiential Learning: Experience As The Source Of Learning And Development.*** Prentice Hall. https://www.researchgate.net/publication/235701029
19. Kolodner, J. L. . (1993). ***Case-based reasoning.*** Morgan Kaufmann Publishers.
20. Kukutai, T., & Taylor, J. (2016). ***Indigenous Data Sovereignty: Towards an Agenda.*** ANU press.
21. Mayers, S., & Frumkin, H. (2020). ***Planetary Health: Protecting Nature to Protect Ourselves. Island Press.*** https://doi.org/https://doi.org/10.5822/978-1-61091-966-1
22. McLean, S. F. (2016). ***Case-Based Learning and its Application in Medical and Health-Care Fields: A Review of Worldwide Literature.*** Journal of Medical Education and Curricular Development, 3. https://doi.org/10.4137/jmecd.s20377
23. Meadows, D. H. (2008). ***Thinking in Systems: A Primer (D. Wright, Ed.). EarthScan.*** https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/climate-communications/psychology-amp-behavior/Meadows-2008.-Thinking-in-Systems.pdf

24. Mezirow, J. (1991). ***Transformative Dimensions of Adult Learning*** (A. B. Knox, Ed.). Jossey-Bass Inc.
25. Minkler, M., Vásquez, V. B., Tajik, M., & Petersen, D. (2008). ***Promoting environmental justice through community-based participatory research: The role of community and partnership capacity. Health Education and Behavior, 35(1), 119–137.*** https://doi.org/10.1177/1090198106287692
26. Myers, S., Pivor, J., & Saraiva, A. (2021). ***The São Paulo Declaration on Planetary Health.*** In The Lancet (Vol. 398, Issue 10308, pp. 1299–1303). Elsevier B.V. https://doi.org/https://doi.org/10.1016/S0140-6736(21)02181-4
27. Planetary Health Alliance. (n.d.). ***What is Planetary Health?.*** . Planeatry Health Alliance. Retrieved May 29, 2025, from https://planetaryhealthalliance.org/what-is-planetary-health
28. Planetary Health Alliance. (2025). ***Case Library.*** Planetary Health Alliance. https://planetaryhealthalliance.org/cases/
29. Prof, A., Guzmán, C. A. F., Redvers, N., & Parkes, M. W. (2023). ***Towards an educational praxis for Planetary Health: a call for transformative, inclusive, and integrative approaches for learning and relearning in the Anthropocene.*** In Viewpoint Lancet Planet Health (Vol. 7). www.thelancet.com/
30. Quinn, S. C., Garza, M. A., Butler, J., Fryer, C. S., Casper, E. T., Thomas, S. B., Barnard, D., & Kim, K. H. (2012). ***Improving informed consent with minority participants: Results from researcher and community surveys.*** Journal of Empirical Research on Human Research Ethics, 7(5), 44–55. https://doi.org/10.1525/jer.2012.7.5.44
31. Rambaldi, G., Chambers, R., Mccall, M., & Fox, J. M. (2006). ***Practical ethics for PGIS practitioners, facilitators, technology intermediaries and researchers. 54, 106–113.*** https://www.researchgate.net/publication/272791571
32. Raskin, Paul. (2002). Great transition : the promise and lure of the times ahead. Stockholm Environment Institute.
33. Reynolds, M. (2011). Reflective practice: ***Origins and interpretations. Action Learning: Research and Practice, 8(1), 5–13.*** https://doi.org/10.1080/14767333.2011.549321
34. Reynolds, M., & Vince, R. (2017). ***Organizing Reflection (First Edition).*** Routledge.
35. Riccardi, M. T., Valentina, P., Marcello, D. P., Gerardo, A., Nurchis, M. C., Roberta, M., Čedomir, Š., Miodrag, S., Luca, R., & Gianfranco, D. (2023). ***Community-based participatory research to engage disadvantaged communities: Levels of engagement reached and***

how to increase it. A systematic review. In Health Policy (Vol. 137). Elsevier Ireland Ltd. https://doi.org/10.1016/j.healthpol.2023.104905

36. Stokols, D., Hall, K. L., Taylor, B. K., & Moser, R. P. (2008). ***The Science of Team Science. Overview of the Field and Introduction to the Supplement. In American Journal of Preventive Medicine (Vol. 35, Issue 2 SUPPL.).*** https://doi.org/10.1016/j.amepre.2008.05.002
37. Tekola, F., Bull, S. J., Farsides, B., Newport, M. J., Adeyemo, A., Rotimi, C. N., & Davey, G. (2009). ***Tailoring consent to context: Designing an appropriate consent process for a biomedical study in a low income setting. PLoS Neglected Tropical Diseases, 3(7).*** https://doi.org/10.1371/journal.pntd.0000482
38. Thistlethwaite, J. E., Davies, D., Ekeocha, S., Kidd, J. M., MacDougall, C., Matthews, P., Purkis, J., & Clay, D. (2012). ***The effectiveness of case-based learning in health professional education. A BEME systematic review: BEME Guide No. 23. In Medical Teacher (Vol. 34, Issue 6).*** https://doi.org/10.3109/0142159X.2012.680939
39. Tronto, J. C. . (2009). ***Moral boundaries a political argument for an ethic of care.*** Routledge.
40. Tuhiwai, L. (1999). ***Decolonizing methodologies research and indigenous peoples (Second).*** Zed Books.
41. Whitmee, S., Haines, A., Beyrer, C., Boltz, F., Capon, A. G., De Souza Dias, B. F., Ezeh, A., Frumkin, H., Gong, P., Head, P., Horton, R., Mace, G. M., Marten, R., Myers, S. S., Nishtar, S., Osofsky, S. A., Pattanayak, S. K., Pongsiri, M. J., Romanelli, C., … Yach, D. (2015). ***Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation-Lancet Commission on Planetary Health.*** In The Lancet (Vol. 386, Issue 10007, pp. 1973–2028). Lancet Publishing Group. https://doi.org/10.1016/S0140-6736(15)60901-1
42. Whyte, K. P. (2013). ***On the role of traditional ecological knowledge as a collaborative concept: a philosophical study.*** http://www.ecologicalprocesses.com/content/2/1/7

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