

Modes of mobilizing values for sustainability transformation

1. Introduction

The IPBES Values Assessment (VA) makes a compelling case that if we want to bring about more profound progress towards sustainability (i.e., sustainability transformation) we need to address the set of values that shape decisions with impacts on nature [1] [see also 2–5]. The IPBES VA relies on the broader scientific literature on sustainability which has given increasing prominence to the potential role of values to incite transformative change. But **how** this can be done remains a big question, for which this article aims to provide some clarification and guidance. It might be partly achieved by enabling people to express and act on values they hold already, such as product labeling that allows one to choose a greener option. But it might also require changing the values that people hold, such as a shift towards valuing holistic well-being over economic growth and consumption. Whilst changing values may be hard to initiate and guide, doing so would ultimately support profound and system wide progress [6–8]. For example, widespread internalization of an ethic of care and responsibility towards nature might support the transformation of individual consumption choices [9].

This paper conceives values in the context of sustainability transformations. Sustainability transformations are “fundamental, system-wide reorganization across technological, economic and social factors, including paradigms, goals and values, needed for the conservation and sustainable use of biodiversity, long-term human wellbeing and sustainable development” [10:1]. With regard to values, different academic disciplines and theoretical traditions have conceptualized values in various ways [11,12]. One distinction can be made between values as people’s guiding principles or goals in life that transcend contexts (e.g., ideas about what rights of nature should always be recognized) and values as the importance attached to things in particular situations and contexts (e.g., the worth of a forest to particular humans due to ecosystem services) [13]. For the present paper, we consider both conceptualizations. Values as principles correspond to interpretations in Western philosophy and psychology. It is also in line with the most common use in the sustainability transformations literature and in systems thinking, with various representations of values as places of potentially deep interventions for system transformation [2,14,15]. For example, when considering the practical, political and personal spheres for deliberate transformation, values are considered as part of the latter [4]. Values as importance mainly corresponds to interpretations in economics, including work on environmental economics, ecosystem services and inclusive wealth, and to the ways valuation processes are performed in practices where different measurements allocate levels of importance to characteristics or states of the world [16]. In addition, the VA introduces the notion of ‘sustainability-aligned values’ (SAVs) which concern “those human-human relationships and human-nature relationships that are often associated with transformations to just and sustainable futures” [8]. Whilst this notion remains relatively unexplored, it reflects a widespread assumption in scenarios literature that sustainable futures are associated with greater prominence for particular principles for how we should live together and with nature, and with a move away from purely economic and anthropocentric ways of attaching importance to nature [1,5,17].

In spite of considerable research on values related to sustainability, most of the progress made to date has been on understanding, measuring and describing values [11], rather than exploring how to intentionally engage with values in ways that mobilize them as a force for sustainability. Indeed, while both the IPBES Global Assessment [7] and VA [6] assert that values are part of the answer to how to reach a just and sustainable future, there is a knowledge gap in terms of how to purposefully unleash the transformative potential of values [7,14]. However, there is no proposed heuristic that considers how to mobilize values for sustainability transformation especially in the context of very diverse decision-makers. Moreover, there are fractures in the literature linking values to sustainability transformation. Some emphasize the need to change people’s values [18], some emphasize the need for institutional change to enable pro-environmental values to be realized through market transactions [19], and others emphasize the need for political change or social movements to liberate values that are currently suppressed or marginalized [20].

52 The main contribution of this paper is to identify and classify different modes of mobilizing values that are
53 present across the sustainability transformations literature. By clarifying these modes, and by structuring some
54 of the key tensions that arise from their variation, we also hope to advance the agenda of actively incorporating
55 values-based interventions into building pathways for sustainability. We use ‘mobilizing’ as the generic term to
56 describe deliberate interventions to ‘unleash values’ [7] for sustainability transformations. We use the term
57 ‘modes’ to describe conceptually distinct ways of mobilizing values. For describing these modes, we
58 purposefully adopt a more functionalist vocabulary partly grounded in systems thinking. The modes of
59 mobilizing values are alternatives to the dominant treatment of values as part of an underlying explanation or a
60 causality, in the sense of a behavioral predictor, as in the majority of established theoretical traditions. By using
61 a novel vocabulary, we emphasize the complementary perspective of values as a purpose, something that can be
62 consciously engaged with, mobilized, activated, leveraged for the sake of sustainability. To an extent, this
63 vocabulary allows us to place values at the epicenter of an intervention, and to suggest and initiate a thinking
64 whereby values are becoming more accessible and not just underlying.

65
66 We identify four modes: *enabling* (the removal of barriers to SAVs gaining traction in decision-making),
67 *including* (affirmative actions to overcome the marginalization of some people’s values), *shifting* (change in the
68 values held individually and socially towards alignment with sustainability), and *reflecting* (transparent and
69 critical reflection and deliberation over the values underpinning decision-making). In the following sections we
70 establish an agenda for more rigorous analysis of ways of mobilizing values for sustainability, beginning with
71 further description of the four modes of mobilization, and then by exploring key tensions and insights that
72 emerge through this classification.

73

74 **2. Modes of mobilizing values for sustainability transformation**

75 Chapter 5 of the IPBES Values Assessment (VA) recognized based on a structured literature review that
76 mobilizing values for sustainability contains two distinct (but related) modes of working [8]. Actions designed
77 to mobilize latent or marginalized SAVs are referred to as enabling values and primarily involve changing social
78 and economic contexts in ways that enhance the motivation, opportunity, and capability to act in accordance
79 with such already existing values. Actions that seek to weaken and replace values linked to unsustainability, or
80 strengthen the SAVs, are referred to as shifting values. This may involve slower and ‘deeper’ changes to
81 individual and social norms, principles and goals. For this paper, we reanalyzed the data from the structured
82 literature review of the VA to further elaborate the different modes of mobilizing values. Building on the main
83 distinction between enabling and shifting values, we introduce two further modes of working with values:
84 including values as a sub-category of enabling values that specifically addresses the marginalization of some
85 people’s values through domination by others [21,22]; reflecting on values as a transversal set of actions that
86 typically prefigure enabling and shifting values by providing the movement towards individual and community
87 consciousness of the values challenge, a necessary step for developing the agency to confront and disrupt the
88 status quo [22,23]. Following this logic, we consider individuals to have the most agency, defined as deliberate
89 exercise of will [24], when they reflect on their values, when they are able to express and act upon their values,
90 and when their values are included and represented in collaborative decision-making. In comparison, shifting
91 values might often be considered as a more top-down process of outside steering or engineering social values,
92 for example through state-led education campaigns. But also here education is more likely to be
93 transformational when it goes hand in hand with personal reflection involving critical consciousness of values
94 [25,26]

95

96 When elaborating on the distinctive features of the four modes, we consider (a) the extent to which they relate to
97 values as people’s guiding principles and/or values as the importance attached to things in specific contexts, (b)
98 the mix of agency and conversely of outside steering needed for each mode of mobilization, and (c) how they
99 apply at the level of individuals, community, and wider society. The individual level often links to inner worlds
100 [27], internal transformations [23,28], personal attitudes or actions that can be taken to express a certain value.
101 The intermediate community level bridges between the individual and the societal and refers to any sub-group
102 of individuals within society. The societal level refers to large territorial constituencies such as states, bounded

103 by political, institutional, and cultural relations.



104 Fig.1 Four modes of mobilizing values, creating a multi-mode (enabling, including, shifting, reflecting) and
105 multi-level (individuals, community, society) pathway for sustainability transformation. The four modes differ
106 in terms of the mix of agency and conversely of outside steering needed for mobilizing values.
107
108

109 **2.1 Enabling values** refers to promoting conditions that enable SAVs to be expressed, acted upon and
110 institutionalized in decision-making, often by addressing social, economic, political or physical constraints [8].
111 This assumes that people already hold values as guiding life principles that motivate sustainable behavior, but
112 do not act upon them. Enabling values encompasses building capacity and agency, creating opportunities for
113 behavior that is more aligned with existent values, and finally empowering people to demonstrate behavior that
114 is consistent with their values [24]. Enabling mechanisms can come from both top-down steering (changing
115 societal, system or local conditions) and bottom-up initiatives. For example, a change in taxation can support
116 individual consumers to express pro-environmental values by removing price conflicts; provision of
117 infrastructure such as bike lanes and green infrastructure can enable people to act on pro-environmental values;
118 or a shift towards participatory democracy might enable individuals to vote on environmental decisions. At
119 community level, establishing a 'triple-bottom-line' sustainability mission can give companies the rationale to
120 act upon SAVs in their operations. Within rural economies, enabling conditions such as the opportunity to set
121 local rules to overcome a lack of resources supports the enactment of members' moral obligations towards their

122 communities [29]. More indirectly, enabling values can involve acknowledging and tapping into existing
123 community values of land-based identity, stewardship and nature connectedness [30].
124

125 2.2 A sub-category of enabling values that is highlighted in the literature are ways of **including values** in the
126 sense of recognizing inequalities in *whose* values currently gain voice and how this undermines the twin
127 objectives of justice and sustainability. It refers to methods for opening decision-making to the values of people
128 of diverse social strata, cultures, worldviews, knowledge systems, and positions of power, including
129 marginalized groups of people. The VA [6] found that the dominance of a narrow set of (materialistic and
130 individualistic) values in decision-making is a major obstacle towards sustainability and justice. Recognizing
131 and incorporating the value plurality held across peoples, agencies and cultures is therefore promoted as a key
132 agenda for mobilizing values for transformation [31]. At societal level, this involves tackling power
133 asymmetries, in order to include the values of underrepresented groups of people. This might include assurance
134 of the political freedoms necessary for a flourishing civil society, including the emergence of social movements
135 that are critical for enabling under-represented values to gain voice. It can also involve more technical or
136 steering interventions such as use of methods that incorporate a wider set of values into decision-making [32–
137 35]. For example, socio-cultural valuation can integrate relational and intrinsic values of nature in addition to
138 methods for evaluating instrumental values [36–38]; the inclusion of a wider set of values in assessments may
139 be relevant to building more inclusive institutions [39,40]. In parallel, place-based participatory and knowledge
140 co-production approaches are striving for a stronger representation of marginalized stakeholders and
141 communities (e.g., indigenous peoples and local communities) in multi-actor decision-making processes [41].
142 Attempts to make knowledge production more inclusive have also been seen in the governance of global
143 environmental policy, diplomacy and science platforms [42,43], such as recent efforts to better represent
144 indigenous peoples in negotiating the Global Biodiversity Framework.
145

146 2.3 **Shifting values** refers to changing the values that underpin people’s understandings and beliefs about how
147 the world is and should be. Such broad principles shape the kind of knowledge about the world that people
148 prioritize [44], and shifting these can therefore produce deep-rooted changes to decision-making processes. This
149 mode of mobilizing values is often dependent on outside steering. It argues that a societal sustainability
150 transformation needs to be accompanied by fundamental shifts in values, including in development paradigms:
151 “Shifts in paradigms, norms, worldviews, interests and values by decision makers and practitioners are needed
152 to foster changes in societal rules relating to [...] the emergence of innovative governance systems for
153 transformative adaptation” [45:90]. Shifting values assumes that currently dominant values in a given system or
154 setting are not aligned with possible pathways to the achievement of Sustainable Development Goals [46]. It
155 therefore becomes necessary to reduce the dominance of certain guiding principles such as individualism and of
156 the importance attached to material and instrumental use, and to shift the balance of values towards SAVs such
157 as stewardship [9,47], care [48], or relational values [49]. Often placed in a top-down context, the shifting of
158 values is suggested to happen at individual level through formal and informal education, strategic messaging, or
159 through the normative power of incentives over time. For example, taxes on plastic bags initially change
160 behavior through sanction, but may ultimately, under certain conditions, shift values in relation to waste and
161 pollution [9]. Shifting values may also be directed through message framing, whereby strategic communication
162 is used to influence values towards e.g. conservation [50]. Societal level shifts may be engineered through high
163 level policy, such as changes to educational curricula or to environmental agendas. The transformations
164 literature sometimes accompanies this mode of mobilizing values with debates about the stability of values and
165 the permanence of values change [51]. A less top-down approach is to shift values through reflection,
166 deliberation, and contestation at a societal level. This requires empowered individuals aware of and capable of
167 exercising their agency through e.g., social movements often rooted in communities or collectives where those
168 who seek alternatives to dominant ways of living and thinking struggle to gain a place in society for their valued
169 ways of living. For many indigenous peoples, pervasive forms of coloniality and modernization have eroded
170 cultures in complex ways. In such cases, agendas for ‘shifting’ values are often articulated as restoring and
171 revitalizing values as a foundation for decolonizing and living well [52].
172

173 2.4 **Reflecting on values** refers to engaging in active awareness, contemplation, and examination of the values
174 that underpin our understandings of how the world is and should be, and makes them transparent in decision-
175 making processes and beyond. Some authors problematize how values inform (scientific) understandings of the
176 world in order to disclose implicit values and unveil the values that are currently influencing or missing from
177 key decisions at different scales and contexts [42,53]. Explicitly revealing the values embedded in knowledge
178 production, problem framings and solution advocacy enables greater transparency about the role of power
179 asymmetries in determining what kinds of knowledge gain traction in decision-making. This may be a basis for
180 more constructive dialogue and help overcome conflicts between advocates for different sustainability pathways
181 [54]. At societal level, this way invites a reflexive examination of the values embodied in different formal and
182 informal institutions, including the economic, political, legal, cultural, and scientific institutions that shape
183 everyday decisions around issues such as land use planning, mobility, or community development. At the
184 community level, undertaking specific activities within civil society groups or businesses, such as ‘participatory
185 power analysis’ workshops, can be effective at raising consciousness and agency relating to enabling and
186 including values [55]. At an individual level, this way of engagement is often coupled to the importance of
187 personal development. Conscious and deliberate surfacing of one's own values, through for example, self-
188 reflection practices such as mindfulness and psychotherapy, is seen as part of inner transformations [28].
189 Personal transformation can then be sourced to incite desirable change. Both at an individual and community
190 level, such reflections on the kind of values that are foregrounded or rendered invisible, if applied regularly,
191 have the potential to become transformative [28]. This might involve efforts to enhance “value literacy”, a term
192 used to describe the ability to verbalize the different ways in which nature matters [56]. Spaces for reflection to
193 increase value literacy can happen on the individual level, but also be institutionalized in community or societal
194 settings.

196 3. Discussion: tensions and ways forward

197 Several tensions and insights became evident when looking at the literature discussing values and sustainability
198 transformation, which affect the ways values are mobilized for transformative change. Below we reflect on these
199 tensions to help outline ways forward for science and practice.

200
201 **Inter-dependencies between enabling, shifting and reflecting on values.** A key observation derived from our
202 analysis is that transformations to sustainability require all modes of values mobilization, often operating in
203 tandem. Although not yet well researched, mechanisms of enabling and shifting values can be mutually
204 constituting. For example, enabling people to express pro-environmental values can over time foster a change in
205 values, for example where rules against littering have, gradually, instilled strong social norms against it.
206 Conversely, shifting dominant values that determine societal goals can provide the context in which
207 marginalized groups are able to express and act according to their valued ways of living, for example where
208 emergent norms of care for future generations have empowered calls for divestment from fossil fuel industries.
209 Moreover, both enabling and shifting values are facilitated by forms of agency supported by critical reflection
210 on values.

211
212 **Tensions between shifting versus enabling and including values.** The VA [6] defines transformative change
213 as systemic in scope. It elaborates that today's societies tend to be dominated by a capitalist system within
214 which people have internalized values aligned with profit-seeking and growth. A fundamental transformative
215 action would be to create opportunities so that people's values can change, away from such materialism, in a
216 direction that aligns with biodiversity conservation and sustainability (i.e., *shifting*). At the same time, the
217 assessment highlights that different people and communities may already have SAVs (i.e., *enabling*) or hold
218 multiple values that need to be better integrated into decision processes (i.e., *including*). In this sense, the modes
219 of enabling or including values imply that the right values are already there, albeit latent, and need the right
220 conditions to be expressed and/or to be included more prominently in societal decision-making. Although this
221 may seem contradictory at first, shifting values and including/enabling values is not a question of “either-or”,
222 but of recognizing that both modes need to happen for sustainability transformations to occur and may even
223 overlap.

224

225 The tension between shifting and enabling/including values may be explained by different assumptions about
226 human agency, in relation to external and structural constraints. The shifting mode assumes a weaker agency at
227 the levels of individuals and communities and may imply the existence of outside steering from a central social
228 planner or through social norms. The enabling mode adopts a more integral perspective where agency and
229 power can reside within both external and internal worlds, i.e., both within the policy sphere and within the
230 interiorities and mindsets of people [57]. The internal capacity to care and effect change [23] often gets lost
231 because of structural outside constraints [24,57]. To encourage an untapped potential of individual and
232 community agency for systems change it is important to create enabling conditions. Sustainability science and
233 education literature allude to the empowering of individual agency by removing structural and institutional
234 barriers. Creating enabling conditions for SAVs is inherently linked to the dismantling of asymmetric power
235 relationships, in ways that can foster individual agency to become the “building block” of community action
236 [58].

237
238 **Tensions between which values to shift and which values to enable.** One apparent contradiction in the
239 literature discussing values and sustainability transformation arises from not distinguishing which values require
240 shifting (values we want to change) and which require enabling. Although not explicitly stated in some of the
241 reviewed literature, the shifting of values generally refers to moving away from values such as consumerism,
242 profit-seeking, or short-termism, while the enabling mode targets SAVs such as solidarity, responsibility, and
243 respect for nature. In a review of 460 scenario studies [17], the VA confirmed that the sustainability
244 transformations research community, who largely developed these scenarios, is in broad agreement about this
245 implicit distinction between desirable and less desirable values. Scenarios that depict worsening environmental
246 crises are built on values such as individualism and materialism, whilst scenarios of just and sustainable futures
247 are rooted in values of togetherness and non-material values [4].

248
249 There seems to be a tension here between including a greater diversity of values on the one hand and being
250 selective about which values to include on the other. It also poses important questions about the strength of
251 evidence, the trade-off between diversity and selectivity, and to what extent desired values ought to displace less
252 desired ones (e.g., it would make no sense to say that all materialism is undesirable). We acknowledge this
253 tension raises significant ethical and legitimacy concerns regarding a certain implied righteousness of SAVs and
254 regarding who decides on the "right" values". It is here perhaps that the importance of the reflecting mode
255 comes to the fore, as a means of revealing values intentions and assumptions to promote open dialogue and thus
256 foster social production of SAVs rather than a top-down process. These ethical dilemmas also point to the
257 importance of emphasizing matters of individual and community consciousness and interiorities, and that all
258 individuals can play a role in the weaving of shifting, enabling, including, and reflecting on values.

259
260 In practice, research into effective deliberative processes has found that diversifying values (‘opening up’) goes
261 hand in hand with selecting values (‘closing down’). Striving to shift values too quickly in order to reach
262 consensus can lead to premature exclusion of values, especially in contexts of asymmetric power, leading to
263 homogenization of ideas and poor solutions [59]. It is therefore common to advocate and allow for inter-
264 dependencies between enabling, shifting and reflecting on values, without having consensus as sole dominant
265 goal. In order to permit shifting and enabling values to co-exist, beyond open dialogue and hearing diverse
266 societal groups, as for example aspired by citizen assemblies, it is useful to organize a collaborative process that
267 alternates between plurality and convergence towards consensus [40].

268
269 **Tensions between levels of values intervention.** There is no consensus on the best level to engage with or
270 mobilize values for sustainability transformations. For example, leverage points models tend to identify societal
271 and systems level norms as the most powerful place of intervention [2]; behavioral sciences focus on the
272 individual level and the interaction with societal structures; and multi-level transitions models are based on the
273 importance of niche-level change [60] amenable to a community level. For future clarity, it will be helpful for
274 research to distinguish whether engaging with values is meant at the individual, community, or societal level.
275 For example, efforts to enable SAVs could target individuals (e.g., a subsidy for an ecologically produced
276 product), communities (participatory process designed to engage the values of diverse stakeholders within

277 governance decisions), or society as a whole (changing overarching societal goals away from material growth).
278 Interventions rooted in all modes of mobilizing values can take place at multiple levels and could be, in fact,
279 necessary for pathways towards sustainability due to possible cross-levels synergies [9].
280

281 There is currently an individual-society disconnect threatening the transformative potential of values-based
282 interventions. A first promising means to bridge this divide is focusing interventions at the community level
283 which allows for their contextualization or contestation [61]. A community level is also more likely to avoid the
284 pitfalls of linear up-scaling, such as obscuring inequalities and power imbalances, happening at higher levels of
285 aggregation. For example, social-ecological systems research and practice allows to purposefully define a
286 community level bounded to a real-world political, institutional, socio-economic, and ecological context or
287 system (e.g., farmers in a cultural landscape) [62]. Consequently, interventions for mobilizing values as well as
288 other intervention options are focused on specific conditions of sustainability problem constellations with less
289 emphasis on geographies or administrative confines.

290
291 A second way to reconcile the individual and the societal level is examining and disclosing the goal of the
292 relevant system. Being transparent about how intent and normative goals tacitly operate in a system makes it
293 easier to recognize the breadth of differences in intent between e.g., the individual versus the societal level. For
294 example, a societal intent focused on a consumption growth-centered economy may discourage individual
295 lifestyles and community choices aligned with sustainability. Pragmatic interventions designed within the
296 bounds of such a societal intent may partly inform sustainability pathways, but their limitations need to be
297 acknowledged [51]. On the one hand, individuals are influenced by what they perceive others (the community,
298 the society) see as socially desirable, but on the other hand individuals' behavior can shape the social norm
299 perceptions of others. By increasing the visibility of socially desired behaviors (e.g., recycling) and publicly
300 reinforcing them, through for example an intentionally aligned economic system (e.g., circular economy), social
301 norms can be modified to induce behavioral change on multiple levels [63].
302

303 **4. Conclusion**

304 There is growing agreement that values are important for sustainability transformation. There is considerably
305 less knowledge about how to capitalize on the transformative potential of values as intervention points. Drawing
306 on a relatively fragmented multi-disciplinary knowledge base, we unpacked four modes to mobilize values:
307 enabling, including, shifting, and reflecting on values, differentiated in terms of the mix of agency and
308 conversely of outside steering needed for mobilizing values. We outline the four modes and how they can
309 operate at different levels (individual, community, societal), covering both the internal personal dimensions and
310 the external political dimensions of transformation.

311
312 Through these modes we would like to inspire academia and practice to go beyond seeing values as
313 deterministic causes or predictors of behavior and instead recognize the different ways in which values can be
314 mobilized to represent suitable intervention points for sustainability transformations. Further, we reflect on the
315 interdependency and co-constituency between the four modes. We also highlight tensions between those modes
316 that diversify values and modes that select values, by reflecting on the ethical aspects involved in selecting and
317 steering "desirable" SAVs. These tensions and interdependencies highlight a demand for more research on the
318 role of SAVs as normative notion. The four modes can thus help understand how to mobilize values for
319 sustainable futures, but also past and present situations where the enablement and shifting of values has led to
320 unsustainable directions, where for instance capitalistic systems and mainstream discourses disable or
321 undermine SAVs, promote values favoring unsustainable behaviors, or even exclude certain values from societal
322 decision-making. Future research could assess how governance structures can both mobilize SAVs and prevent
323 the mobilization of unsustainable values.

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328 **References with DOIs**

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Enabling Values

Promoting conditions that enable sustainability-aligned values to be expressed, acted upon and institutionalized in decision-making, often by addressing social, economic, political or physical constraints.




Including Values

Opening decision-making settings and giving weight to the values of people of diverse cultures, worldviews, and knowledge systems as well as positions of power, thus including marginalized groups.



Shifting Values

Changing the values underpinning our understandings of how the world is and should be, thereby also changing which values shape decision-making processes.



Reflecting on Values

Engaging in open reflection about the values that underpin our own and others' understandings of how the world is and should be, and make them transparent in decision-making processes.



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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: