



## PROVOCATION

# Making the Environmental Humanities Consequential in “The Age of Consequences”

## The Potential of Global Environmental Assessments

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**Abstract** This article suggests that global environmental assessments (GEAs) may be a potent means for making the environmental humanities more consequential outside universities. So far most GEAs have been led by geoscientists, with mainstream social science in support. However, there is no reason why the concept of assessment cannot be elasticated to include the concerns of interpretive social science and the humanities. Building on the forty-year history and authority of GEAs as a means to bridging the gap between the research world and the wider world, this article identifies the potential that reformatted assessments hold for more impactful work by environmental humanists. It suggests some next steps for rethinking the means and ends of assessment toward a new paradigm that bridges geoscience, mainstream social science, and humanistic thinking about the nonhuman world. This paradigm would explore the human dimensions of environmental change fully. The timing is propitious: independently GEAs are undergoing change at the very moment that the “What next?” question is being asked by many environmental humanists. This article is intended to inspire debate and, ultimately, action. It both makes the case for more humanistic GEAs and offers examples of potential work packages.

**Keywords** environmental humanities, global environmental assessment, expertise, global environmental change, Anthropocene

The efficacy of the environmental humanities will depend on their ability to address contemporary problems that cannot be fully addressed by other configurations of knowledge production.<sup>1</sup>

1. Neimanis et al., “Four Problems, Four Directions for Environmental Humanities,” 73 (hereafter cited as “FPFD”).

1 The environmental humanities are burgeoning. Though their origins precede the  
 2 coining of the term by at least thirty to forty years, since the turn of the millennium  
 3 they have grown prodigiously in size, scope, and sophistication. In an intellectual, insti-  
 4 tutional, and international sense, rarely have coincident (though hitherto largely sepa-  
 5 rate) developments across several disciplines been knitted together with such speed  
 6 and purpose. The environmental humanities are here to stay: as a collective enterprise  
 7 they now possess considerable weight and momentum within the academy. But how  
 8 can such a large and complex endeavor be steered, and to what ends?

9 Unsurprisingly this two-part question is preoccupying many of those who advo-  
 10 cate for the environmental humanities. In the last few years numerous book chapters  
 11 and journal articles have been published identifying possible next steps in light of prog-  
 12 ress to date.<sup>2</sup> These contributions often convey a sense of real urgency. In large part this  
 13 is because the environmental humanities have come of age in a period when teams of  
 14 geoscientists have been sounding the planetary alarm ever more loudly. A recent article  
 15 published by Timothy Lenton and colleagues in *Nature* offers a graphic example. Titled  
 16 “Climate Tipping Points—Too Risky to Bet Against,” it warns that “the stability and resil-  
 17 ience of our planet is in peril” because political leaders continue, perversely, “to err on  
 18 the side of danger rather than precaution.”<sup>3</sup> Among other things the environmental  
 19 humanities speak to the so-called **human dimensions** of this looming crisis (even as  
 20 many people regard the term as far too anemic to be appropriate). As we look ahead  
 21 a key challenge is to ensure that more of the speaking occurs outside the universities  
 22 where most environmental humanists ply their trade—that is, a humanities *for* the  
 23 environment not simply *of* it.<sup>4</sup>

24 In this article I suggest one high-level and achievable way to rise to this challenge. It  
 25 relates to global environmental assessments (GEAs)—one of the most institutionalized  
 26 mechanisms for rendering research about people-planet relationships globally visible  
 27 and influential. If recent publications about the future of their field are anything to go by,  
 28 precious few environmental humanists have spotted the potential to make their work  
 29 more impactful beyond academia by way of GEAs. This is no doubt because assessments  
 30 have so far been dominated by geoscience and the “scientific” parts of social science—so  
 31 much so that GEAs may seem an unlikely milieu for environmental humanists to inhabit  
 32 in the future. However, as Poul Holm and colleagues assert in a fairly recent manifesto,  
 33 environmental humanists now “need a concentration of effort and clarity of focus” to  
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 37 2. Adamson, “Introduction”; Heise, “Introduction: Planet, Species, Justice” (hereafter cited as “PSJ”); Lit-  
 38 tle, “Connecting Environmental Humanities”; Neimanis, Åsberg, and Hedrén, “FPFD.”

39 3. Lenton et al., “Climate Tipping Points,” 595.

40 4. Humanities for the environment (HfE) is the name of a consortium of universities and an international  
 41 network of people committed to making the EH more than academic studies of the environment. I will discuss  
 HfE below. It has made a serious effort to de-academicize the EH.

1 “achieve economies of scale and impact.”<sup>5</sup> That being so, my argument here is that GEAs  
2 might, in fact, offer a viable way forward compared to other current options.

3 GEAs are now entering their fifth decade—the first was undertaken back in 1976–  
4 77 (it was the OECD-commissioned assessment of Long Range Transportation of Air Pol-  
5 lutants [LRTAP]). There have been more than 140 assessments so far, the most promi-  
6 nent being those conducted by the Intergovernmental Panel on Climate Change (IPCC).  
7 To date GEAs have been predominantly problem focused. But there are growing de-  
8 mands for them to become solution focused: metaphorically the question now is “Can  
9 GEAs help humanity contain the fire before it gets out of control?” Answering this ques-  
10 tion implies the need for a larger and sharper focus on human dimensions. After all  
11 global environmental change is an anthropogenic problem (a wicked one at that) requir-  
12 ing coordinated and concerted action by many of the world’s 190-plus countries. Legiti-  
13 mate, credible, and salient information, argument, policies, and visions are needed to  
14 underpin any effective human response. As GEAs begin a transition away from problem  
15 identification it seems to me that environmental humanists have a signal opportunity  
16 to shape the means and ends of future assessments.

17 This article is organized as follows. First, I rehearse the environmental humanities’  
18 definition, focus, and growth, before briefly surveying recent stock-takes of this large  
19 multidisciplinary field. I note the common wish in these stock-takes to exert extra-  
20 academic influence, but also the consistent oversight of specific mechanisms to achieve  
21 this in a coordinated way. I speculate as to why this oversight occurs. Second, I then  
22 identify the potential of GEAs to be such a mechanism. I sketch their evolution, noting  
23 the relative (though by no means absolute) paucity of humanists involved so far but  
24 the opportunities afforded by the recent turn toward solutions. Third, I then engage the  
25 most elaborate proposal for solution-focused GEAs—one formulated by analysts situ-  
26 ated outside humanities disciplines in a major report and set of published papers. For  
27 all its merits this proposal for “assessments 2.0” ultimately replays the exclusion of  
28 humanities work characteristic of problem-focused GEAs. It is symptomatic of an epi-  
29 stemic deficit that, while it could and should be addressed outside GEAs, needs also to  
30 be addressed in and through assessments. Fourth, I then suggest how including human-  
31 istic work could usefully reformat the means and ends of GEAs in the immediate future  
32 (a paradigm shift toward assessments 3.0). The time is ripe for such a reformatting: a  
33 world population suffering a pandemic against the background of geopolitical tensions,  
34 chronic social inequality, and incessant, deep environmental change cannot afford to  
35 avoid serious reflection, leading to practical actions. The fifth section suggests some  
36 work programs for reformatted assessments, where environmental humanists are cen-  
37 ter stage (or at least coequal with other experts).

38 We live in an “age of consequences,” the current COVID-19 crisis being an especially  
39 graphic illustration of this long-standing fact. In this context environmental humanists  
40 need, quickly, to find ways to make their own work consequential beyond the seminar  
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5. Holm, “Integrative Platform for the Humanities,” 979 (hereafter cited as “IPH”).

1 room and lecture theater. Fine sounding words and exhortations will not be enough, and  
 2 nor in the end will a smattering of local interventions (crucial though such interventions  
 3 may be).<sup>6</sup>

### 4 **The Environmental Humanities: Progress and Prospect**

#### 5 *Defining the Environmental Humanities*

6 The term “environmental humanities” (hereafter EH) has become part of the academic  
 7 lingua franca since about 2010. It describes research and teaching in various humanities  
 8 disciplines that foregrounds the world of plants, animals, rivers, mountains, ice sheets,  
 9 coral reefs, and microbes. It also encompasses environmentally focused work by inter-  
 10 preterive social scientists across several other disciplines, such as sociology and human  
 11 geography.<sup>7</sup> Broadly speaking the shared concern is with how the nonhuman realm  
 12 takes on various registers of significance for people in a world that is: (1) culturally di-  
 13 verse, (2) increasingly interconnected both spatially and temporally, (3) changing rap-  
 14 idly, (4) yet marked by forces of inertia and also by (5) numerous inequities and injus-  
 15 tices (variously defined).

16 I use the word significance in the dual sense of signification (or sense-making) and  
 17 importance—importance being a relative question of both meaning and matter, semiosis  
 18 and physicality. As Astrida Neimanis and colleagues phrase it, “environmental humani-  
 19 ties work has always challenged the idea that nature or the environment simply ‘is.’”<sup>8</sup>  
 20 Tweaking Greg Garrard’s<sup>9</sup> neat formulation we can say that the EH “ecologize society”  
 21 and “socialize ecology,” semantically and materially. They work productively between  
 22 constructionist and realist approaches to the world. They ask how our humanity is en-  
 23 abled by the nonhuman world and what our humanity (in its various, often dissonant  
 24 forms) can and should contribute to that world through symbolic and material practices.  
 25 The environmental humanities largely eschew the objectivism and nomothetic preoccupa-  
 26 tions of social science (e.g., economics) even as they are committed to faithful accounts  
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 30 6. This article is one of two on the subject of future GEAs. Castree, Bellamy, and Osaka, “The Future of  
 31 Global Environmental Assessment,” makes the general case for what we call GEAs 3.0. It is directed at geoscientists  
 32 and environmental social scientists, as much as environmental humanists. It presents a comprehensive argument  
 33 for a new assessment paradigm. The present article makes a specific case about the potential role of the environ-  
 34 mental humanities for the benefit of environmental humanists. It touches only quite briefly on the wider case for  
 35 GEAs 3.0. The tables are reproduced from Castree, Bellamy, and Osaka and were created by the present author.

36 7. For this reason some prefer the broader term “environmental social science and humanities” or ESSH for  
 37 short. The environmental humanities also intersect with the arts (for instance, see Tyszczyk and Smith, “Culture  
 38 and Climate Change Scenarios”), though the term “environmental humanities and arts” has not yet caught on,  
 39 let alone the acronym ESSHA. Somewhat confusingly for those not already in the know, some work in the environ-  
 40 mental humanities designates itself as posthumanities scholarship. In many ways both environmental social sci-  
 41 ence and the environmental humanities have emerged from what is called environmental studies—a multidisciplinary  
 field that was distinguished from environmental science in part because it focused on people, in part because it  
 was not science-dominated in its approach. Today environmental studies are thought to encompass all branches  
 of academia, as with *The Companion to Environmental Studies* edited by myself, Mike Hulme, and Jim Proctor.

8. Neimanis, Åsberg, and Hedrén, “FPFD,” 73.

9. Garrard, “Notes towards a Summary for Policy Makers.”

1 of the world. More precisely they do so in the context of the abovementioned alarm bells  
 2 sounded by scientific analysts of the atmosphere, biosphere, hydrosphere, pedosphere,  
 3 and cryosphere. Indeed, several environmental humanists define their field as one of “cri-  
 4 sis response.”<sup>10</sup> Relatedly many expressly reference it to the epochal geoscientific concept  
 5 of the Anthropocene.<sup>11</sup> A sense of urgency animates the field in our “no analogue” times.

6 The value added by the EH is to shed light on what the geoscientists typically  
 7 leave in the dark: namely the complex societal causes, interpretations, and impacts of  
 8 global environmental change as well as actual and possible human responses to them  
 9 at various scales—all this in a range of registers (cognitive and normative; explanatory  
 10 and prescriptive; historical and contemporary; comparative and future focused; eviden-  
 11 tial and evaluative; moral, emotional, and aesthetic). While social scientists such as  
 12 Nicholas Stern—lead author of a famous review of the economics of climate change<sup>12</sup>—  
 13 have likewise examined causes, impacts, and responses, environmental humanists at-  
 14 tend more to the hermeneutic, contextual, value-laden, affective, evaluative, and idio-  
 15 graphic elements of all this. Critique, the identification of alternate past and present  
 16 realities, and the visioning of futures are key. Unconventional thinking abounds, at  
 17 least by the standards of everyday life outside universities. What is more, environmen-  
 18 tal humanists are not simply reacting to, and building on, the insights of global change  
 19 scientists, such as Timothy Lenton. They often question these insights on ontological,  
 20 epistemological, and political grounds, recognizing that science shapes the world as  
 21 much as it represents it (thereby belying its purported neutrality). In sum the EH both  
 22 fill the vacuum left by scientific approaches to society-environment relations and some-  
 23 times push back against aspects of these approaches (such as the scientization of envi-  
 24 ronmental politics and policy). Together environmental humanists do not proffer general  
 25 solutions to problems of society and nature. Instead they open up thinking about how  
 26 problems should be defined and thus what sort of responses are appropriate.

### 27 Evolution

28 There is no need to recount the history of the EH here.<sup>13</sup> Over the last decade the term  
 29 “environmental humanities” has served to retrospectively designate environment-  
 30 focused work in several humanities (and social science) disciplines. It has also given  
 31 real impetus to this work, fostering a greater sense of shared identity and purpose.  
 32 Metaphorically the term has placed a roof over a large but half-built house, in the  
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 36 10. For instance, see Oppermann and Iovino, *The Environmental Humanities and the Challenges of the Anthropocene*.

37 11. See, for example, Horn and Bergthaller, *The Anthropocene*.

38 12. Stern, “Stern Review on the Economics of Climate Change.”

39 13. Several accounts of its geographic and subdisciplinary origins now exist. For instance an early and  
 40 quite comprehensive overview was provided by Nye et al., *The Emergence of the Environmental Humanities*.  
 41 More recently detailed accounts have been published focused on parts of the larger story (e.g., Rigby, *Weaving the Environmental Humanities*). As yet there is no definitive history written. The more time passes, the harder the history will be to write since the environmental humanities is growing larger quite rapidly.

1 process allowing stairways and corridors to be constructed and, increasingly, some  
 2 extensions too. It has thereby promoted a powerful feeling of, if not family, then cer-  
 3 tainly community and solidarity. As the house is upgraded and enlarged more people  
 4 choose to become long-term residents (often disagreeing productively among them-  
 5 selves). This has occurred on the heels of scientific parts of social science playing a grow-  
 6 ing role in analysis and policy relating to the human dimensions of global environmental  
 7 change (for instance, in Working Group III of the IPCC).

8 Today, as most readers of this journal know, environmental humanists number in  
 9 the tens of thousands worldwide (even if not all of them claim the moniker). There are  
 10 now professorships in the EH, peer review journals (published by Duke University and  
 11 the University of Nebraska), degree programs, research centers and institutes, a book  
 12 series (published by Routledge), introductory texts,<sup>14</sup> research-level edited books,<sup>15</sup> mono-  
 13 graphs,<sup>16</sup> special journal issues (e.g., of *Humanities* and *Global and Planetary Change*, both in  
 14 2017), advanced seminar series, institutional nodes (for instance, in Sydney and Stock-  
 15 holm), interdisciplinary publishing outlets that welcome EH work (e.g., *Anthropocene Re-  
 16 view*), a panoply of key thinkers recognized across the disciplines (e.g., Deborah Bird Rose,  
 17 Dipesh Chakrabarty, Bruno Latour, Timothy Morton, and Anna Tsing), attempts at public  
 18 communication<sup>17</sup> and international networks of scholars—most notably, those organized  
 19 into eight observatories that began life as three in 2013, courtesy of a grant to the Consor-  
 20 tium of Humanities Centers and Institutes by the Andrew W. Mellon Foundation (the  
 21 grant was for a transcontinental “Humanities for the Environment” (HfE) project).<sup>18</sup> The  
 22 observatories are a first attempt to emulate the long-standing global change research  
 23 networks created by geoscientists and some social scientists (e.g., via the International  
 24 Geosphere-Biosphere Program, 1987–2015). More pointedly, and in the words of two  
 25 insiders, the observatories’ creation reflected a “concern that the humanities were  
 26 not playing what we thought could be a vital part in global change scholarship and in-  
 27 deed politics.”<sup>19</sup>

#### 28 *Speaking for the Environmental Humanities: Visions of the Future*

29 Given this surge of institutional and intellectual effort it is no surprise that several at-  
 30 tempts have been made to map the evolving terrain and chart paths forward for envi-  
 31 ronmental humanists worldwide.

32 In 2015 Paul Holm and colleagues published “Humanities for the Environment—A  
 33 Manifesto for Research and Action.” It emerged from phase one of the Mellon-funded  
 34 observatories. It cites global environmental change as the key reference point for the  
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 37 14. See, for example, Emmett and Nye, *The Environmental Humanities*.

38 15. See, for example, Adamson and Davis, *Humanities for the Environment*.

39 16. See, for example, van Dooren, *Flight Ways*.

40 17. For example, by Carolyn Merchant in *The Anthropocene and the Humanities*.

41 18. See also Adamson, “Networking Networks and Constellating New Practices.”

19. Holm and Brennan, “Humanities for the Environment 2018 Report,” 1.

1 EH and wishes to harness them to the cause of “pro-environmental behaviour.”<sup>20</sup> A  
 2 broad five-part agenda is proposed to this end—for instance one part involves collating  
 3 humanistic insights into why many people resist green behavior change, so as to improve  
 4 future environmental policy interventions by governments. The intellectual agenda is  
 5 followed by an argument that humanities scholars should now get out of their comfort  
 6 zones and engage scientists, publics, politicians, and business leaders alike.<sup>21</sup> The article  
 7 concludes with a report on the observatories and a set of next steps for them. The ex-  
 8 tended family of eight observatories (which now exists) will, so hoped Holm et al., to-  
 9 gether “seek a range of evidence-based, reasoned, scaled and culturally diverse re-  
 10 sponses to the complex problems under examination.”<sup>22</sup>

11 The same year Neimanis et al. published a more general survey of the EH in the  
 12 journal *Ethics and the Environment*. Titled “Four Problems, Four Directions for the Environ-  
 13 mental Humanities,” it outlines a quartet of future pathways—two academic/investiga-  
 14 tive, two about reaching into nonacademic domains. Exploring the cognitive, normative,  
 15 and affective potential of “environmental imaginaries” is an example of academic direc-  
 16 tions, while engaging the public is an example of nonacademic engagement. Unlike the  
 17 Holm et al. article, Neimanis et al.’s claims are not anchored in the trajectory of any  
 18 specific institutional form, such as the global observatories. Instead their argument is  
 19 more declaratory and thereby hopeful. For instance at one point they assert that the  
 20 “environmental humanities must . . . directly engage . . . diverse publics both within and  
 21 outside of academic institutions so as to renew their ethical experience of environmental  
 22 embeddedness.”<sup>23</sup> Implicitly it is left to humanists to determine quite how to engage in  
 23 light of their circumstances.

24 Two years later Ursula Heise threw her own net over the EH when introducing *The*  
 25 *Companion to the Environmental Humanities*. At the core of this substantial edited book are  
 26 papers emerging from an international seminar held in 2014–15 in Los Angeles. Heise  
 27 references the environmental crisis and the Anthropocene proposition as twin contexts  
 28 for the EH as well a fact of humans’ unavoidable embeddedness in the nonhuman world.  
 29 After a quick survey of the EH’s origins the chapter focuses on narrative and use of aes-  
 30 thetic media as key to the EH contribution to understanding and affect. The chapter  
 31 concludes with a call for public engagement, echoing Holm et al. and Neimanis et al.  
 32 To quote Heise, environmental humanists need to devise “experimental strategies for  
 33 generating new narratives and images, grounded in an understanding of ecological crises  
 34 as fundamentally cultural processes, [to] . . . help . . . create a more sustainable world for  
 35 humans and the species that coinhabit the planet with us.”<sup>24,25</sup>

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 37 20. Holm et al., “Humanities for the Environment,” 980.

38 21. On this, see also Castree, “The Anthropocene and the Environmental Humanities.”

39 22. Holm et al., “Humanities for the Environment,” 989.

40 23. Neimanis, Åsberg, and Hedrén, “FPFD,” 89.

41 24. Heise, “PSJ,” 9.

25. Heise rather overlooked some of the HfE project work that has indeed been experimental from the  
 get go.

1 Writing in the same year as Heise, Joni Adamson introduced another major edited  
 2 collection arising from the Mellon-funded seminars and observatories—*Humanities for*  
 3 *the Environment*.<sup>26</sup> She frames the EH with reference to the United Nations document  
 4 “The Future We Want” (2012), an outcome of the second Earth Summit (Rio+20). Noting  
 5 the alarming messages conveyed by geoscientists, like Holm et al. she speaks of the  
 6 “sense of urgency, relevance and need for action among a fast growing number of  
 7 humanists.”<sup>27</sup> Yet her overview seeks to respect the great diversity of the EH, as do  
 8 Neimanis et al. and Heise. She urges environmental humanists to find various ways  
 9 to shape public understanding by “seeing, observing, moving, walking and paddling  
 10 toward knowledge.”<sup>28</sup> Likewise in their conclusion to *The Environmental Humanities*—  
 11 the first student textbook about the field—Robert Emmett and David Nye balance the  
 12 need for the EH to urgently shift broad public discourse about people-planet relation-  
 13 ships with a concern it maintain internal diversity and be attuned to various local-  
 14 level challenges.<sup>29</sup>

15 Finally Greg Garrard<sup>30</sup> has expressed a concern that the public face of the EH re-  
 16 mains, in fact, indistinct (cf. LeMenager,<sup>31</sup> who is far more sanguine). In an overview  
 17 chapter subtitled “Notes towards a Summary for Policy Makers,” he calls for more mus-  
 18 cular attempts to frame EH for those not already in the know. In this he shares Holm  
 19 et al.’s desire for collective action. “What we need,” he suggests, “is a Janus-faced char-  
 20 acterization: recognizable and acceptable to those working in the field, but concerned  
 21 primarily to tell people who have no idea what we do and no prior commitment to the  
 22 humanities, why we deserve their attention.”<sup>32</sup> He proposes the twin-frame of “ecolo-  
 23 gizing humanity” and “humanizing ecology,” concluding that “a coherent, legible ac-  
 24 count of the things we agree about and the difference they might make to environmen-  
 25 tal sustainability is, in my view, the most vital work for the environmental humanities  
 26 right now.”<sup>33</sup> Yet he refrains from suggesting particular vehicles for making this account  
 27 public internationally or efficacious politically.

28 Reading across these six contributions are some common themes. One is that the  
 29 work of the EH is urgent and essential; another is that practitioners need “to speak *from*  
 30 their disciplines not [just] to them”;<sup>34</sup> a third is that “many flowers should bloom,” yet  
 31 the EH somehow need to be coordinated; a fourth is that the EH are both inspired by  
 32 geoscientific warnings yet need to work more closely with scientists so as to reframe  
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 34

35 26. Adamson and Davis, *Humanities for the Environment*.

36 27. Adamson and Davis, *Humanities for the Environment*, 7.

37 28. Adamson and Davis, *Humanities for the Environment*, 7.

38 29. Emmett and Nye, *The Environmental Humanities*.

39 30. Garrard, “Notes towards a Summary for Policy Makers.”

40 31. LeMenager, “The Humanities after the Anthropocene.”

41 32. Garrard, “Notes,” 462.

33. Garrard, “Notes,” 471.

34. LeMenager, “The Humanities after the Anthropocene,” 474.



scientific questions and issues about the Earth to capture the extra-scientific dimensions; and a final theme is that the EH can provide nonacademics with vital food for critical thought about human relations with the nonhuman world.

#### *The Missing Mechanisms to Steer Change*

However, as already intimated, what is striking is the lack of specific guidance on how to make the EH more consequential in the age of consequences. For instance consider one early overview I did not mention above, by Hannes Bergthaller et al. The authors noted that “for the majority of humanities scholars, the classroom will probably remain the most important venue for [their] . . . work, but we should also collaborate with partners outside the academy. Museums are well-placed in this regard. In the short term, they can sponsor dialogue and host public forums.”<sup>35</sup> A notable example of collaboration with a museum is the Rachel Carson Centre at the Ludwig-Maximilians-Universität in Munich, which has worked closely with the Deutsches Museum of Science and Technology for some years. But Bergthaller et al.’s mention of museums immediately narrows the field of nonacademic engagement to something rather familiar; and it suggests a somewhat piecemeal, place-by-place, university-by-university approach. Strikingly it belies their hope (one hardly exclusive to them) that “by bringing scholarly work from across a broad spectrum of disciplines together under a new conceptual umbrella, the environmental humanities may finally allow that work to acquire the critical mass and popular appeal it needs to have an impact in the public sphere.”<sup>36</sup>

Relatedly, in her overview of the EH Australian historian Libby Robin at one point urges public scholarship as a way forward<sup>37</sup>—a most conventional and largely individualistic means of making the EH count (via book writing, TED talks, etc.). Notwithstanding the existence of the global observatories advice like this suggests there’s a fear among those speaking of (and for) the EH of being prescriptive or else an implicit skepticism that sustained, international coordinated action is really achievable.

This situation looks decidedly suboptimal when seen in two related contexts. The first is the considerable coordination of both research and communication achieved by thousands of geoscientists and a smaller number of environmental social scientists in the global change research programs launched twenty-five to forty years ago. Few humanists have been involved in these programs, and where they have it has been a concentrated rather than distributed involvement.<sup>38</sup> The programs such as DIVERSITAS,

35. Bergthaller et al., “Mapping Common Ground,” 267.

36. Bergthaller et al., “Mapping Common Ground,” 262.

37. Robin, “Environmental Humanities and Climate Change,” 10–11.

38. A prime example is the long running IHOPE research network and project. The acronym stands for integrated history and future of people on Earth. It began life in 2003 and was linked both to the International Geosphere-Biosphere Program and the International Human Dimensions Program. It draws heavily on humanities expertise, interfaces with geoscience, and connects to stakeholders too. For more details, visit <http://www.ihope-project.org/>

1 launched in 1991, have often enjoyed institutionalized means for research translation,  
 2 notably the IPCC (linked to the World Climate Research Program). They thus set a high  
 3 bar for the EH to reach. Second, for some years a contingent of geoscientists and social  
 4 scientists in the world of global change research have actively called for greater involve-  
 5 ment by humanists in their endeavor. They are looking for full spectrum collaboration  
 6 and to have their expertise supplemented by historians, philosophers, media studies spe-  
 7 cialists, and so on. Examples of these calls abound,<sup>39</sup> with some humanists strongly urging  
 8 their colleagues to dive in.<sup>40</sup> What's more the new platform for global change research, Fu-  
 9 ture Earth ([futureearth.org](http://futureearth.org/)), has created clear space for environmental humanists to be in-  
 10 volved in its research projects and knowledge-action networks—notably through its aspi-  
 11 rations to transdisciplinarity and the coproduction of knowledge with stakeholders (e.g.,  
 12 Indigenous peoples).

#### 13 14 **Toward a Globally Consequential Environmental Humanities: 15 Recognizing the Potential of GEAs**

16 The EH, it seems to me, have arrived at a fork in the road (and, in fact, first did so a few  
 17 years ago as one reviewer of this article pointed out). After a decade of growth there are  
 18 two options. One is to continue on the present path, more or less. The other option is to  
 19 innovate and design the equipment needed to move in a new direction, while taking all  
 20 the useful baggage of the recent past along. Though the overviews of the EH discussed  
 21 above offer some sense of that direction, they largely fail—as we have seen—to identify  
 22 suitable equipment. Without it the road ahead looks pretty similar to the one just trav-  
 23 eled, not to mention a road likely to be traveled quite slowly. In the remainder of this  
 24 article I want to suggest that GEAs—or something akin to them—offer strong potential  
 25 for rapid and effective change. In the next section I begin to explain why.

#### 26 27 *The Past Is Not the Future: GEAs as Malleable Resources*

28 Often produced by boundary organizations (such as the IPCC and IPBES), GEAs take the  
 29 form of boundary objects<sup>41</sup>—that is, major reports (with associated communications  
 30 through the news media) that bridge between the world of academic research and the  
 31 wider society. A recent example of a GEA is the IPBES (2019) global assessment. To date,  
 32 with varying degrees of success, GEAs have allowed systematic review and dissemina-  
 33 tion of peer review research to occur, in the process strengthening academic networks  
 34 (e.g., among climate scientists) and rebounding on the research base (e.g., integrated

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37 \_\_\_\_\_  
 38 [ihopenet.org.preview.binero.se/](http://ihopenet.org.preview.binero.se/). IHOPE partly inspired the Humanities for Environment project to come into  
 39 being. IHOPE also lives on within the recent Future Earth framing of global change research.

40 39. See, for example, Bai et al., “Plausible and Desirable Futures in the Anthropocene”; Mauser et al.,  
 41 “Transdisciplinary Global Change Research.”

40. See, for example, Palsson et al., “Reconceptualizing the ‘Anthropos’ in the Anthropocene.”

41. Star and Griesemer, “Institutional Ecology.”

1 assessment models would arguably not have developed in the ways they have without  
2 the IPCC). Up to this point GEAs have had a strongly natural science flavor in both con-  
3 tent and tone, as noted above.

4 It is thus no surprise that few of those speaking about the future of the EH have  
5 seen the potential of GEAs. In one of the few comments made about them Garrard at  
6 one point offers the rousing injunction: “If the IPCC can do it, so can we.”<sup>42</sup> But his essay  
7 refrains from saying more. Poul Holm and collaborators aimed “to ensure that future  
8 IPCC reports be informed by humanities’ perspectives on the New Human Condition.”<sup>43</sup>  
9 Yet IPCC reports have not been systematically informed by EH insights and evidence,  
10 notwithstanding Holm et al.’s aspirations. The Panel’s author teams continue to include  
11 few humanists, even as Working Group III assumes greater importance over time.<sup>44</sup> As  
12 Holm notes, writing with Charles Travis, “this fact . . . illustrates the huge opportunity  
13 cost to the world’s societies by not engaging . . . scholars in these [humanities] disci-  
14 plines to address what is essentially a ‘human problem’ [of climate change].”<sup>45</sup>

15 Like Holm I see a real potential for environmental humanists to harness GEAs. The  
16 potential lies in the history, globality, and cognitive authority of assessments as well in  
17 some (albeit rare) precedents. Firstly, GEAs are a highly established boundary mecha-  
18 nism with a forty-plus-year track record. There’s something very real to build-on and  
19 modify. The thing is both the concept of assessments as well as the current process  
20 and organizations that are used to deliver reports like the *Global Environmental Outlook*s.  
21 Assessments involve systematic surveys of a huge first-order knowledge base, thereby  
22 bringing a mass of expertise and experts together so as to distill key information and in-  
23 sight for nonacademic audiences. Notwithstanding their science-led character so far  
24 there’s nothing intrinsically exclusionary about the assessment idea for environmental  
25 humanists. It’s the means and ends of assessment that is at issue, not the process of  
26 taking stock of knowledge and information.

27 Secondly, GEAs have a ready-made global visibility by virtue of their aims, their  
28 geographically inclusive author teams, and wide reporting in the news media. It’s tell-  
29 ing that it currently requires an individual of rare cultural authority, the Catholic Pope,  
30 to get global exposure for a serious treatment of humanistic themes—as he did in  
31 2015.<sup>46</sup>

32 Thirdly, GEAs possess considerable epistemic authority. To be sure it’s been hard  
33 won and there have been setbacks, such as the “climate-gate” affair that cast doubt on  
34 the IPCC more than a decade ago. It is also an authority based on the perception that  
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36 42. Garrard, “Notes towards a Summary for Policy Makers,” 462.

37 43. The reference here is to the Anthropocene, where people have the collective power to alter the Earth  
38 System and thus the weighty responsibility to act as planetary stewards.

39 44. See Holm and Winiwarter, “Climate Change Studies and the Human Sciences.”

40 45. Travis and Holm, “The New Human Condition and Climate Change,” 112.

41 46. The encyclical was published by the Vatican, Rome and authored by Pope Francis. It received serious  
critical attention in the news media, the social sciences, and the humanities.

1 environmental science is being assessed in most GEAs, not social science or humanities  
 2 research. Even so the authority exists as a symbolic resource to build on for environ-  
 3 mental humanists seeking ways to make their research more consequential. Finally,  
 4 there are some precedents for humanistic involvement in GEAs. More than a decade  
 5 ago there was the International Assessment of Agricultural Science and Technology  
 6 for Development (2008). It was novel in that it broached value-laden human dimen-  
 7 sions, such as the merits of peasant farming versus high-tech commercial food pro-  
 8 duction.<sup>47</sup> Most GEAs, until recently, sought to scientize such dimensions and keep  
 9 the politics out.

10 These four reasons should instill some belief that an environmental humanist  
 11 like Holm is not wrong see potential in GEAs or something akin to them. But there's an  
 12 important additional reason too. As it turns out GEAs are taking a turn of their own at  
 13 just the moment when the EH needs to chart its own path forward. This makes them  
 14 more malleable than heretofore as they approach their own fork in the road.

#### 15 *The Turn to Solutions in GEAs*

16 A number of well-informed observers and participants have argued that GEAs need to  
 17 change.<sup>48</sup> The current IPCC chairman, Hoesung Lee, has been quite vocal about this.<sup>49</sup>  
 18 Where the existing GEA paradigm is founded on problem-identification and tracking  
 19 there is a fast-growing demand for information and proposals pertaining to (1) ame-  
 20 liorating problems and (2) mitigating their impact on people and the environment.  
 21 The demand arises for at least three powerful reasons.

22 First, during the four decades when GEAs have grown in number and frequency  
 23 the environmental challenges they identify have multiplied in complexity, scale, scope,  
 24 and intensity. Secondly, this state of affairs has arisen despite the messages contained  
 25 in numerous GEAs. The evidence—sifted, sorted, and synthesized in numerous GEAs—  
 26 has so far been insufficient to change much at all in the arenas of government, busi-  
 27 ness, and civil society. There are missing links in knowledge-action, is-ought chains.  
 28 Thirdly, though, political action is not entirely absent. The world's governments have  
 29 agreed on various goals designed to reduce the human impact on the Earth System. In-  
 30 deed the environment is, after trade, now the second most common area of interna-  
 31 tional rule making and target setting. Accordingly some GEAs are already moving in  
 32 lockstep with things such as the Paris Accord by providing evidence on whether nations  
 33 are fulfilling their declared commitments and by projecting future socio-ecological sce-  
 34 narios relating to weak, moderate, and high policy success.

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 38 47. See Scoones, "The Politics of Global Assessments"; and Feldman and Biggs, "The Politics of Interna-  
 39 tional Assessments," for insights into its somewhat turbulent operation.

40 48. See, for example, Hellegatte and Mach, "Make Climate Change Assessments More Relevant"; Ko-  
 41 worsch et al., "A Roadmap for Global Environmental Assessments."

49. Lee, "Turning the Focus to Solutions."

1 To summarize in light of the demands of a world much changed since 1977, “the  
2 GEA enterprise now finds itself at a crossroads.”<sup>50</sup> As the introduction to a recent journal  
3 collection about GEAs puts it, “contemporary assessments have been undergoing a trans-  
4 formational shift . . . towards . . . analysing the suitability of specific response options and  
5 policy pathways that range from technologies and behavioural changes to . . . regulatory  
6 measures and market-based instruments.”<sup>51</sup>

### 8 **Current Proposals for Future GEAs and Their Truncated Approach** 9 **to Human Dimensions**

10 If environmental humanists are to realize the potential contained in GEAs, and if fu-  
11 ture GEAs are going to make real space for the EH, then a new concept of assessment  
12 is required in my view. The concept, in turn, can inspire new concrete assessment prac-  
13 tices. The concept needs to make space for the wide and deep understanding of human  
14 dimensions found in the environmental humanities. What is assessed, in this broader  
15 concept, is a diverse set of descriptive, explanatory, prognostic, and normative accounts  
16 of people-environment relations, informed by evidence and reasoned argument. These  
17 accounts cannot converge on a rational position or even an optimal one, and nor can  
18 some objective truth or body of value-free evidence adjudicate among them. Yet we need  
19 such accounts if citizens, politicians, and business leaders are to confront the profound  
20 challenges of global environmental change.

21 Currently the most developed concept for solution-focused assessments—let’s call it  
22 the concept of GEAs 2.0, to distinguish it from the original ideas animating the LRTAP of  
23 1977 and most of the other 140 GEAs since then—has been presented in a report and  
24 series of peer review papers by Martin Kowarsch and collaborators.<sup>52</sup> The approach of  
25 Kowarsch et al., codified in an “objectives-means-consequences” model, would involve  
26 assessors doing the following things: (1) broaching value questions about what people be-  
27 lieve they need and want from the physical environment; (2) recognizing and balancing  
28 diverse value positions in society; (3) exploring, with stakeholders, a range of policy goals  
29 and mechanisms in light of value pluralism; and (4) attending to the likely real world  
30 effects of possible policy goals and mechanisms with a view to revisiting some of them  
31 (the well-known maxim “the means do not justify the ends” would apply here; feasibil-  
32 ity would also be a key consideration). Assessments 2.0 would, in this light, be highly  
33 complex yet committed to closing the knowledge-action gap evident in many GEAs 1.0.  
34 As Kowarsch and Ottmar Edenhofer express it, future assessments would help to “map  
35 the solution space,” leaving political leaders to “navigate” their societies toward desired  
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38 50. Jabbour and Flachsland, “Forty Years of Global Environmental Assessments,” 194.

39 51. Kowarsch and Jabbour, “Solution-Oriented Global Environmental Assessments,” 188.

40 52. Edenhofer and Kowarsch, “Cartography of Pathways”; Kowarsch et al., “The Future of Global Envi-  
41 ronmental Assessment Making”; Kowarsch et al., “Scientific Assessments to Facilitate Deliberative Policy Learn-  
ing”; Kowarsch et al., “Solution-Oriented Global Environmental Assessments.”

Table 1. The differences and commonalities between GEAs 1.0 and 2.0\*

<i>Characteristics</i>	<i>1.0</i>	<i>2.0</i>
Key goal	Understanding human impacts on the global environment and the effects of a changing environment on people	Identifying options for impact reduction and human adaptation to a changing global environment
Principal forms of expertise	STEM and the science end of the social science spectrum	STEM plus a broad section of social science, including policy science, resource management and planning
Stakeholder engagement?	Usually not	Yes, in a representative manner
Core assessment values	Honesty, accuracy, and integrity; achieving consensus about the first-order knowledge base; truth oriented	Honesty, accuracy, and integrity; avoidance of advocacy of particular proposals for problem-solutions; recognition of is-ought entanglements
Cognitive or normative focus?	Largely cognitive	Cognitive and normative
Policy relevant?	Yes, indirectly (informing)	Yes, directly by shaping policy discourse (forming)
Main epistemic content	Factual knowledge, predictive knowledge	Factual knowledge, predictive knowledge, reasoned and evidenced arguments about solution options
Main epistemic activities	Description, explanation, prediction, identification of solution possibilities	Description, explanation, prediction, evaluation, identification of solution possibilities alone and in relation to each other (nexus solution assessment)
Approach to first-order knowledge base	Quest for consensus	Acknowledgement of dissensus; disagreement seen as a resource

outcomes.<sup>53</sup> Much of this solution space would be geared to long-term, intergovernmental action framed by things such as the United Nations' Sustainable Development Goals.

GEAs 2.0 would differ from assessments 1.0 as outlined in {Table 1}. However, as with assessments 1.0, assessors would aim to behave in an honest and rigorous way as they survey the first-order research base and as they consult citizens, businesses, and civil society actors. GEAs 2.0 would be more policy relevant than most previous assessments, but still nonprescriptive. Indeed, they would inspire much more research into policy issues, thereby enriching the first-order knowledge base that assessments survey and synthesize. Additionally, much more interdisciplinary activity would occur in and around GEAs 2.0. For instance, consider the assessment of potential geoengineering technologies. Conventional techno-scientific assessment would need to conjoin an assessment of how different societies might react to a range of human dimensions such as the cost, risk levels, and negative impacts on people of these technologies.

53. Edenhofer and Kowarsch, "Cartography of Pathways."

1 If the arguments of Kowarsch et al. were to be widely actioned, while being tailored  
2 to the specifics of different assessments, then GEAs would experience something like a  
3 paradigm shift. They would adapt to a context that's very different to the one prevail-  
4 ing back in 1977. As we know this current context is marked by more numerous and  
5 acute global environmental problems caused by human activity. It is also marked by a  
6 growing recognition that practically achievable and socially legitimate solutions are a  
7 sine qua non.

8 Compared to present assessment practice the proposals of Kowarsch et al. are  
9 fairly radical. They seek to institutionalize a more useful, people-focused model of  
10 assessment—after all people are both causes of and the solutions to the problems iden-  
11 tified in the GEA 1.0 paradigm. They pivot on an expanded sense of assessment: not  
12 only will factual, cognitive knowledge of real-world problems be assessed, but argument-  
13 based, value-laden, normative positions will be too, informed by evidence. Kowarsch  
14 et al.'s vision of future assessment is highly democratic and takes seriously represen-  
15 tation in the political sense of allowing people to be heard. However, logistically GEAs  
16 2.0 would be forbiddingly difficult to undertake and involve huge assessment teams  
17 requiring skillful coordination. Politically they would be contentious. Almost certainly  
18 special interests would question assessors' integrity or suitability and challenge elements  
19 of the assessment process.

### 20 **Humanizing GEAs: Toward a New Paradigm**

21 From the perspective of much work ongoing in the EH the human dimensions that GEAs  
22 2.0 would focus on are nonetheless truncated. Their solutions orientation implies an  
23 immediate attention to action: that is, to what seems practical in light of current re-  
24 sources, knowledge, and threats. While this may seem reasonable given the urgent cri-  
25 sis of global environmental change, it entails two risks. One is that impractical thinking  
26 gets written off because it exceeds the frontiers of conventional thinking. The other is  
27 that solutions are abstracted from the deeper question whose answer ultimately lends  
28 them significance: namely, how should we live? This venerable existential question,  
29 whose relevance has perhaps never been greater as we face a pandemic and escalat-  
30 ing environmental change, requires thinking that goes beyond Kowarsch et al.'s con-  
31 ception of GEAs 2.0.

32 Joni Adamson candidly asks, "Can the humanities, which typically are character-  
33 ized as weakly tooled to address social and environmental crises, catalyze the imagina-  
34 tion of new ideas, narratives, frameworks, alternatives, demands, and projects that will  
35 enable people to envision different, livable futures?"<sup>54</sup> But this "weak tooling" is not nec-  
36 essarily a weakness at all. In fact it is a strength when considering the significance of pol-  
37 icy, action, and practice in the dual sense of the term mentioned earlier in this article. EH  
38 comprise a dynamic, expanding storehouse of concepts, ideas, arguments, propositions,  
39  
40

41 54. Adamson, "Networking Networks," 348.

1 insights, and evidence that could help assessments grapple with the profundity of what  
2 global environmental change means for humanity today. The challenge is to organize  
3 the storehouse and ensure its contents have wider impact.

4 We might envisage assessments 3.0 that go beyond Kowarsch et al.'s otherwise  
5 commendable proposals. They would explore human dimensions that are political in the  
6 widest sense of that term. These dimensions are the panoply of cultural norms, social  
7 values, religious beliefs, moral and aesthetic dispositions, explanations of lived reality,  
8 and visions of the good (or necessary) life and criticisms of present-day realities that vie  
9 for attention in a world that is both hyper-integrated yet highly differentiated. In every-  
10 day life these worldviews exist in often incoherent, shallow, dogmatic, or contradictory  
11 ways as people navigate the complexities of the early twenty-first century. In social  
12 movements, political parties, think tanks, religious organizations and—most especially—  
13 in social science and the humanities, they usually approach something more system-  
14 atic and sophisticated. Philosopher John Rawls famously called them “comprehensive  
15 doctrines”<sup>55</sup>—a mix of logical arguments, critical assessments, axiological defenses,  
16 evidence-based claims (descriptive and explanatory), and normative positions predi-  
17 cated on certain ontological and epistemological axioms. Others call them VMEPs (values-  
18 means-ends packages) that are secular (e.g., Marxist political economy) or religious.<sup>56</sup>

19 Worldviews, doctrines, and VMEPs stake claims about the world (1) as it seen to be in  
20 the past and present and (2) as it ought to be in the future. They are always in the making  
21 as they respond to an ever-changing reality. They are fashioned, and held, collectively.  
22 Some are consistent with science (as conventionally understood), others less so. Some  
23 are felt by their adherents and advocates to be under assault (for instance, aboriginal Aus-  
24 tralian lived conceptions of Country). They can be presented in a range of genres, includ-  
25 ing stories. Regardless, they form the intellectual and affective basis to answering the  
26 existential questions arising from humanity's (mis)use of the global environment.

27 It is only in the context of worldviews, comprehensive doctrines, or VMEPs that  
28 workable solutions to things like our current mass extinction event make sense. Like-  
29 wise it's only in the context of them that factual evidence about environmental change  
30 assumes significance. Pope Francis understood this well when he issued his encycli-  
31 cal during the period when the UN brokered the Paris Agreement. Many researchers  
32 and resource managers understand this well in countries such as Canada, New Zealand,  
33 and Australia: there, indigenous cosmologies impinge on Western environmental policy  
34 practices. Worldviews, doctrines, and VMEPs breathe life into the political debates that  
35 should, ideally, underpin policy debates about how for instance to prevent global warm-  
36 ing of more than 2 degrees Celsius above preindustrial levels. As English philosopher  
37 David Runciman puts it, “politics is about the collective choices that bind groups of  
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55. Rawls, *Political liberalism*.

56. See Castree et al., “The Anthropocene and the Environmental Humanities.”



1 people to live in a particular way. . . . Without real choice there is no politics.”<sup>57</sup> “Real  
2 choice” involves not only having the mechanisms and resources to effect political change  
3 but also a set of alternative frames that define the very parameters of choice as well as its  
4 substantive content. Together these frames mean that in proper politics “nothing is fun-  
5 damental and nothing can be taken off the table.”<sup>58</sup> While GEAs are hardly the only place  
6 where important political choices can be presented to the world’s 190-plus countries and  
7 billions of inhabitants, they could in future be among the most credible places—building  
8 on the hard-won authority of GEAs to date.

9 GEAs 3.0 would thus be solutions focused, but they would (1) take a wider and  
10 deeper view of the normative component of assessment; (2) engage with stakeholders  
11 as fully political animals; (3) involve social science and the humanities in the widest pos-  
12 sible sense; (4) thereby involve assessment of the best research in fields such as environ-  
13 mental sociology, political theory, moral philosophy, theology, and heterodox economics;  
14 and (5) embrace dissensus all the way down, thus mirroring sharp (though often mis-  
15 understood and frequently caricatured) differences of perspective existing in the wider  
16 world (Table 2).

17 GEAs 3.0 would thus help to politicize global environmental change in a balanced,  
18 mature, well justified, and transparent way. They would operate at one remove from the  
19 formal political sphere and the public sphere where the quality of political debate is  
20 today often very low. They would embody a cosmopolitan ethos and give epistemic and  
21 political representation equal billing. They would be politically relevant so as to be policy  
22 relevant—all the while being studiously nonprescriptive. They would take what’s impor-  
23 tant in GEAs 1.0 and 2.0 but add in the missing human dimensions, without which at-  
24 tempts to consider our planetary future will be undemocratic and narrow—leading, al-  
25 most certainly, to dangerous decisions that will sow the seeds of future human conflict.  
26 We might say that assessments 3.0 are suitably wicked, whereas Kowarsch et al.’s vision  
27 for assessments 2.0 is insufficiently so. The integration of knowledge across the geosciences,  
28 social sciences, and humanities would not be the aim, unless it is plural forms of  
29 integration we are talking about.<sup>59</sup> For singular integration would presume a one-world  
30 ontology where objective realities somehow trump intersubjective meanings (making it a  
31 scarcely human world at all).

### 32 **Assessing What Matters: Possible Work Programs for Environmental Humanists**

33 GEAs are here to stay. I have suggested that an expanded concept of assessment offers a  
34 way to make the EH more visible and consequential in human affairs. Put differently I  
35 have suggested that meaningful inclusion of the EH in future GEAs requires a shift in  
36  
37  
38

39 57. Runciman, *Politics*, 6

40 58. Wingenbach, *Institutionalising Agnostic Democracy*, 21.

41 59. Klenck and Meehan, “Climate Change and Trans-disciplinarity.”

Table 2. Making room for the environmental humanities: The key elements of GEAs 3.0\*

Key goal	To identify a range of possible responses to global environmental change, framed by an understanding of diverse comprehensive doctrines, political world views, or VMEPS and in light of evidence about biophysical change past, present, and future. Wide angle desire to be credible, legitimate, and salient
Principal forms of expertise	STEM, wider social science and the humanities; the exact combination depends on the assessment task in question. Parity of esteem among expertises
Stakeholder engagement?	Yes, pertaining both to policy options and political world views/doctrines/VMEPs (the balance depends on the assessment task in question). Representativeness an important goal, so too deep engagement
Core assessment values	Honesty, accuracy, and integrity; avoidance of advocacy of particular proposals for problem-solutions; no advocacy of specific comprehensive doctrines, world views, or VMEPs
Cognitive or normative focus?	Both, in equal measure
Policy relevant?	Yes, directly but with policy situated in a much wider, non-consensual understanding of socioeconomic, cultural, and political actualities, probabilities, and possibilities
Main epistemic content	Factual knowledge, predictive knowledge, reasoned and evidenced arguments about solution options, reasoned and evidenced arguments about society and its likely and wished for trajectories
Main epistemic activities	Description, explanation, prediction, evaluation, identification of solution possibilities, identification of different diagnostic-normative framings of reality
Approach to first-order knowledge base	Recognition of dissensus about the nature of social reality, about the value of the non-human world, about normative visions of the future, and thus about the meaning of scientific evidence and technology
Approach to interdisciplinarity	Agonistic rather than functional and integrative. Eschews a one-world ontology and recognizes epistemic variety and normative plurality within the expert community and in the wider world

thinking about the means and ends of assessment. Periodic assessments in my enlarged sense would focus collective effort in what's a sizeable, diverse, and lively field of inquiry. They would thicken and expand international networks within the EH, while enabling sustained, high-level engagement with assessors in mainstream social science and in geoscience. Periodic assessments would sharpen critical discussion of philosophical, theoretical, methodological, and evidential issues in the EH. They would foster synthesis and cross-fertilization of research insights. They would oblige environmental humanists to render their work communicable across the academy and beyond it. And they would also react back on research activity in the EH, according to the real-world issues that seem most pressing at any given moment. In short, if it could be institutionalized, a new assessment paradigm could be the single most important translational device between university-based work in the EH and the wider world. Assessment could operate in parallel with, or be substantively linked to, global citizen assemblies that convene worldviews and consider existential questions.

1 Before I consider some of the important practical issues let me offer an illustrative  
2 sense of potential future work programs for environmental humanists seeking to opera-  
3 tionalize an expanded definition of assessment.  
4

- 5 1. *Global assessment of human progress*: Building on the existing work of the  
6 still young International Panel of Human Progress ([www.ipsp.org/](http://www.ipsp.org/)), one  
7 can envisage an assessment that foregrounds more or less different inter-  
8 pretations of the human past, present, and future (that is, both a likely  
9 and a desirable future). By opening up the loaded question of progress  
10 fully, the assessment could allow everything from ecomodernist, Marxist,  
11 deep green, Buddhist, feminist, and other perspectives to be given full con-  
12 sideration. Each perspective offers descriptions, explanations, and criti-  
13 cisms of the world past and present, along with various prescriptions for  
14 change geared to achieving certain goals.
- 15 2. *Global assessment of the needs and rights of (what we call) nature*: While hu-  
16 mans are undoubtedly transforming the biosphere, atmosphere, cryo-  
17 sphere, and hydrosphere, societies have very different views on whether  
18 the nonhuman world has needs and rights (and if so what obligations  
19 they impose on people). Countries such as New Zealand and Ecuador have  
20 broken new ground compared to countries such as Germany or Brazil. One  
21 can envisage an assessment that examines evidence and argument in  
22 favor of a range of bio-centric and anthropocentric perspectives on local,  
23 regional, and global nature.
- 24 3. *Global assessment of obligations toward future generations*: The past and pres-  
25 ent always influence the future. However, specific sections of humanity  
26 (e.g., Americans, Chinese, and West Europeans) now have the power to  
27 influence the long-term future in ways that will be significant to our  
28 grandchildren and their successors globally. One can envisage an assess-  
29 ment of concepts, principles, and arguments for different sets of actionable  
30 responsibilities owed to the unborn. These responsibilities would need to  
31 be assessed relative to the short- and medium-term costs (and benefits)  
32 they might create for those presently alive. The meaning of costs and bene-  
33 fits would be opened up fully.
- 34 4. *Global assessment of environmental in/justice*: Global environmental change is  
35 clearly an issue of justice, and not just for nature (according to bio-centrists)  
36 or the unborn. Questions of procedural and substantive justice arise that  
37 have a social and geographic component in the present and near-term fu-  
38 ture. Understanding the answers requires an assessment of concepts of  
39 justice, of the merits of the arguments they are based on and imply, and  
40 of how—if at all—common ground can be found between them. Open  
41

1 thinking about in/justice might allow useful evaluation of our current  
 2 intergovernmental architecture (institutions, laws, protocols, etc.). It  
 3 could also help frame future technology assessments, so too assessments  
 4 of emerging internationally recognized issues like the loss and damage  
 5 attendant on anthropogenic global change.

- 6
- 7 5. *Global assessment of sustainability transitions*: There is a fast-growing re-  
 8 search focus on the nature and pace of socioeconomic and technical tran-  
 9 sitions away from fossil-fueled capitalism. This extends across econom-  
 10 ics, business studies, economic sociology, and beyond. Transition is an  
 11 attractor topic that allows ideas such as green Keynesianism, de-growth,  
 12 ecological modernization, the circular economy, postenvironmentalism,  
 13 the green new deal, and others to be compared and contrasted systemati-  
 14 cally. Attempts to compare and contrast transition thinking, so too trans-  
 15 formation thinking, are already well advanced in parts of social science  
 16 and the humanities. Relatedly there is ample research into social tipping  
 17 points that can feed into any assessment of how to trigger coordinated,  
 18 paradigm-shifting action across the whole of society.
- 19 6. *Global assessment of environmental crisis*: The GEAs suggested above all  
 20 highlight worldviews, doctrines, and VMEPs as a necessary precursor to  
 21 discussion of solutions and policies. But the worldviews and doctrines  
 22 themselves have certain conceptual preconditions. The merits and valid-  
 23 ity of these could be assessed. The idea of crisis is one. Linked to notions  
 24 of risk and loss it animates the discourse of many a global change scien-  
 25 tist, never mind a socialist-feminist like Naomi Klein. It circulates widely  
 26 in society through the news media and the blogosphere. But are crises  
 27 objectively given or are they relative? Is there serious moral hazard at-  
 28 tached to presuming we are in the grip of a global environmental crisis?  
 29 Or is it seriously remiss not to recognize this putative crisis, even if it is a  
 30 slow one in human terms? What are the emotional stakes in terms of fear,  
 31 hopelessness, and motivation attendant to crisis talk? One can envisage  
 32 an assessment of perspectives on what counts as a crisis and what a cri-  
 33 sis, when recognized, ought properly to entail. Assessment like this could  
 34 be preparatory for the assessments above. If crisis was deemed too  
 35 loaded a word for an assessment, risk would be an alternative semantic  
 36 vehicle for undertaking a similar sort of interpretive assessment.

37

38 These examples would, of course, in various ways involve experts beyond the EH.  
 39 But each one would also foreground the work of environmental humanists, showing  
 40 powerfully that their work is not merely academic. They could take the lead in ways  
 41 that geoscientists have done in successive GEAs to date.

1 There are many other conceivable assessment tasks for the EH. For instance gen-  
2 eral assessments like those above could inform specific assessments of options for  
3 changing energy systems, agriculture, transportation systems, manufacturing, water  
4 management, animal husbandry, fisheries management, common pool resource man-  
5 agement, global governance regimes, multilevel governance, and so on.<sup>60</sup> All of them  
6 are consistent with the focus on so-called grand challenges, as promoted by many na-  
7 tional research funding organizations. All of them implicate the question of the future  
8 we want. Importantly the illustrative examples above imply no fundamental erosion of  
9 the diversity or identity of work by environmental humanists. Instead they suggest a  
10 way to channel and coordinate that work over time through structured engagement  
11 with other areas of academia and the world beyond universities.<sup>61</sup>

### 12 **Next Steps for the Environmental Humanities**

13 As we have seen this is a moment of opportunity for the EH. Change is afoot in the  
14 world of GEAs. Consequently there's a chance to chart new paths for environmental  
15 humanists and assessments simultaneously. I have outlined a notion of GEAs that can  
16 accommodate work in the EH to the benefit of those whose thoughts and deeds stand  
17 to be influenced by assessments. While the notion is general and can no doubt be signif-  
18 icantly improved upon, the point is that some well elaborated notion needs to be devel-  
19 oped and advocated prior to any change in assessment practices. Compared to other  
20 current options, modified assessments seem to be an especially good vehicle to travel  
21 down a new road.

22 How to begin the journey? It would be perfectly possible for environmental human-  
23 ists to organize a series of workshops, symposia, and conferences to do what I have done  
24 here only briefly. A clear, expanded, and robustly justified concept of assessment is re-  
25 quired that can link the EH to mainstream social science and geoscience, such that  
26 each domain of inquiry has an important role to play. This concept development could  
27 be enabled by the Global Observatories or by several national academies working in  
28 concert. While the humanities lack a global academic body to speak in their name,<sup>62</sup>  
29 the sort of interpretive social science that forms part of the EH does have some repre-  
30 sentation through the International Science Council. Currently led by a social scientist,  
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35 60. And there are already topical subfields emerging within the EH to support specialist assessments,  
36 such as the energy humanities – on which, see Szeman and Boyer, *Energy Humanities*.

37 61. Steven Hartman wrote an essay “Into the Fray” whose content echoes this one. I read it just as I was  
38 revising this article. Hartman makes a useful distinction between EH that is “policy (or solution) relevant” and  
39 one that is “policy (or solution) engaged.” GEAs need increasingly to be engaged and the EH could spur this—  
40 so I am arguing here.

41 62. The closest organization to fulfilling this role is the International Council for Philosophy and Human  
42 Sciences (<http://cipsh.net/web/aboutus.html>). It is a nongovernmental organization initiated by UNESCO back in  
43 1947. However it appears to lack the visibility and clout, at least in global change research circles, of the Interna-  
44 tional Science Council.

1 Heide Hackmann, it is possible the Council could play a key role in catalyzing a new,  
2 wider approach to assessment.<sup>63</sup> One related option might be to work through the Fu-  
3 ture Earth platform's Earth Commission and create a new project focused on rethink-  
4 ing assessments. A further possibility arises from the new BRIDGES—a UNESCO MOST  
5 Sustainability Science Coalition. The coalition foregrounds humanities approaches within  
6 an expanded sustainability science agenda.<sup>64</sup> Whatever the vehicle used, lengthy and  
7 wide consultation would be required (e.g., with the UNEP and the Belmont Forum of  
8 global change research funding organizations) to lend any fresh approach legitimacy  
9 prior to implementation.

10 One key challenge is that the approach will necessarily have to be mindful, as part  
11 of its development, of the difficulties of operationalizing it. A purely cerebral, principle-  
12 based conception will rapidly run up against hard realities. Only by addressing the is-  
13 sues at the level of both concept and practice can modified assessments eventually  
14 achieve legitimacy, credibility, and relevance. For instance, as noted in passing earlier,  
15 humanistic expertise could readily be politicized in a highly polarizing way by parties  
16 external to the assessment process. In fact these parties will challenge the very idea  
17 that assessment can rightly involve normative reasoning. Somehow a balance has to be  
18 struck between breaking new ground and being pragmatic.

19 While important gains have been made by incorporating humanistic perspectives  
20 in existing GEAs, are path dependencies built in to current GEA practices that arguably  
21 limit the capacity to reform them from within? For instance, Working Group III of the  
22 IPCC has gone a long way to incorporate social science. However the analytical and sci-  
23 entific flavor of its work on climate mitigation and adaptation makes it hard for many  
24 humanists to feed in on their own terms.

### 25 **Conclusion**

26 Fundamentally this article is inspired by the notion that thinking differently can make a  
27 real difference in the world, given an opportunity. To use Joni Adamson and Steven  
28 Hartman's felicitous distinction, the EH is a "community of interest,"<sup>65</sup> but the question  
29 is: Can it become a "community of purpose" too? How can the EH exert greater societal  
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33 63. For instance this would dovetail with the ISC's Transformations to Sustainability (T2S) program ([transformationstosustainability.org](http://transformationstosustainability.org)).

34 64. Thanks to Steven Hartman for alerting me to this important and exciting initiative just as I was com-  
35 pleting this article in July 2020. The acronym stands for Building Resilience in Defense of Global Environments  
36 and Societies, but is also a metaphor for joining knowledge and people together. The major output of the project  
37 is a recent UNESCO policy document *Guidelines for Sustainability Science in Research and Education* ([unesdoc](https://unesdoc.unesco.org/ark:/48223/pf0000260600)  
38 [.unesdoc.org/ark:/48223/pf0000260600](https://unesdoc.unesco.org/ark:/48223/pf0000260600)). Exploratory discussions in 2018 led by the UNESCO Management of  
39 Social Transformations program, the International Council for Philosophy and Human Sciences (CIPSH), and  
40 the Humanities for the Environment Circumpolar Observatory resulted in a multistakeholder process during  
41 2019 to establish the BRIDGES–UNESCO MOST Sustainability Science Coalition (MOST stands for manage-  
ment of social transformations). At the time of writing formal approval for this global initiative has been granted.

65. Adamson and Hartman, "From Ecology to Syndemic."

1 influence without losing their identity as an academically situated interdisciplinary  
 2 field? I have answered this question by making the case for revised GEAs as a possible  
 3 vehicle. Beyond the immediate impacts that more humanistically inflected assessments  
 4 could have over time, there are also wider ones for universities. GEAs 3.0 could, to quote  
 5 Lauren Rickards and Tamson Pietsch, help promote universities' "unique role as embed-  
 6 ded, future-regarding, ethical generators of crucial knowledge and skills, well-equipped  
 7 to handle coming contingencies and helping others do the same."<sup>66</sup> There's nothing  
 8 easy about this, but the rewards are considerable. To revisit a metaphor I used earlier: if  
 9 the EH is a house of many rooms, corridors and stairways, GEAs might allow it to sit in a  
 10 place where the traffic in and out gets multiplied and directed to the benefit of all who  
 11 pass through it, within a much wider ecology of thought and action.

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 17 academic Left, can exert cognitive and normative force in civil society, government, and the com-  
 18 mercial sphere.

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