Into the Fray:
A Call for Policy-engaged and Actionable Environmental Humanities

Steven Hartman
Mälardalen University, Sweden
steven.hartman@mdh.se

DOI: HTTPS://DOI.ORG/10.37536/ECOZONA.2020.11.2.3547

Abstract

As European countries strive to meet their targets in support of the Paris Agreement on Climate Change and the 17 Sustainable Development Goals adopted by UN member states in 2015, the importance of integrating all knowledge communities in coordinated responses to sustainability challenges becomes an increasing priority. The creativity and depth of knowledge within philosophical, cultural, aesthetic and historical disciplines of the humanities has been underutilized in coordinated international assessment initiatives that aim to inform policy and facilitate solutions of sustainability governance. The Environmental Humanities (EH) is a field of growing significance internationally. While it can no longer be called an emerging field, EH still holds only the promise of bringing knowledge of social and cultural systems to coordinated international efforts to address the human dimensions of global environmental change. The significant knowledge and expertise on the human dimensions of environmental change available within the EH field should be regarded as an indispensable resource to policymakers and to those on the ground who work to achieve the Sustainable Development Goals. This essay makes a case for actionable, policy-engaged environmental humanities, an ambition that should certainly extend to the domain of the humanities more generally.

Keywords: Environmental humanities, Sustainable Development Goals, science-policy interface, knowledge assessment, global environmental change.

Resumen

A medida que los países europeos se esfuerzan por cumplir sus objetivos para apoyar el Acuerdo de París sobre el Cambio Climático y los 17 Objetivos de Desarrollo Sostenible adoptados por los estados miembros de la ONU en 2015, la importancia de integrar a todas las comunidades de conocimiento en sus respuestas coordinadas a los desafíos de sostenibilidad se convierte en una prioridad cada vez mayor. La creatividad y la profundidad del conocimiento dentro de las disciplinas filosóficas, culturales, estéticas e históricas de las humanidades no se han aprovechado lo suficiente en las iniciativas coordinadas de evaluación internacional que tienen como objetivo informar las políticas y facilitar soluciones de sostenibilidad para los gobiernos del mundo. Las Humanidades Ambientales (HA) son un campo de creciente importancia a nivel internacional. Si bien, ya no se le puede llamar un campo emergente, todavía se presenta solamente como campo promisorio pero capaz de contribuir con su conocimiento de los sistemas sociales y culturales a los esfuerzos internacionales coordinados para abordar las dimensiones humanas del cambio medioambiental global. El conocimiento y pericia significativos dentro del campo de las HA sobre las dimensiones humanas del cambio ambiental deberían considerarse un recurso indispensable para los legisladores y para aquellos que trabajan en el terreno con miras a alcanzar los Objetivos de Desarrollo Sostenible. Este ensayo presenta argumentos a favor de las humanidades medioambientales factibles y comprometidas con las políticas, una ambición que ciertamente debería extenderse al campo de las humanidades en general.

Palabras clave : Humanidades ambientales, Objetivos de Desarrollo Sostenible, interfaz ciencia-política, evaluación del conocimiento, cambio medioambiental global.

This essay makes an argument for actionable, policy-engaged environmental humanities (EH). The argument is intended for ecocritics and environmental historians, for environmental justice and sustainability education scholars, as well as for other epistemic communities concerned with the intersections of nature, environment, history, ethics, aesthetics and diverse modes of cultural production. Many of the scholarly communities of interest that have converged within the field of EH over the past decade may already see their work as policy-relevant. But how actionable is most of that work? Where and how can we see it addressed and acted upon at meaningful scales of impact in wider societal efforts to improve the general good of communities, ecosystems, the earth? It is not enough for our work to be policy-relevant if policymakers are not aware of that work, if they are not drawing on the knowledge it makes available to set agendas that legislators, judges, state and municipal authorities, corporations and industries, or educational, scientific and cultural institutions rely upon to guide their own coordinated efforts to ameliorate or avert social-ecological crises. In the pivotal decade of the 2020s, are those of us representing EH doing as much as we can to make our knowledge, agency and force felt beyond the boundaries of our own communities of interest and outside our university curricula and classrooms, where the bulk of our scholarly production is directed? Environmental humanists as a scholarly community must be prepared to do more outside our comfort zones: the hour is late and there is enormous ground to cover.

In a steady series of high profile studies and reports, the international scientific community (and its analogues within intergovernmental policymaking and diplomacy) have been emphasizing for at least five years that the decade we have now embarked upon in 2020 will likely be the last in which we have a fighting chance to avert tipping points leading to catastrophic climate, biodiversity and other ecological crises across the earth (Lenton). Reports from the Intergovernmental Panel on Climate Change (IPCC), the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), the U.S. National Climate Assessment (USNCA) and other large-scale scientific assessments over the past decade have acknowledged the need to ameliorate a number of dangerous trends in the earth system by the end of the present decade. The UN's 2030 Agenda for Sustainable Development, the Paris Climate Agreement, and the Sustainable Development Goals, all formalized in 2015, have codified global strategies, endorsed by virtually every sovereign nation on the planet, to address these global challenges by committing to mitigation pathways. The studies underlying the one-decade (2020-2030) window of opportunity now widely acknowledged as crucial for achieving substantial global warming mitigation to avoid devastating consequences for many of the earth's inhabitants have since been reconfirmed in the scientific literature. Now, just a few short years after these agreements were finalized, the Paris Agreement's targets are widely considered "woefully insufficient" (Hartman and Oppermann 8) in light of subsequent data, analyses and findings from climate science, though the international community is

ECOZON@ | *Vol 11, No 2*

nowhere close to meeting even the original (now obsolescent) ambitions set for the end of the present decade.

Where are the humanities in this science-policy-society interface? More specifically, where are the *environmental humanities* in formal policy-advisory processes organized internationally in different contexts and at various scales to inform and prepare the way for the kind of transformative societal actions required to mitigate global anthropogenic climate change and biodiversity loss? In light of the accelerating rates at which these catastrophes are unfolding around the Earth, what role can and should the aggregated field of environmental humanities play in major international assessments of the state of knowledge informing international agreements and national policies on the issues (risks and realities) of greatest concern facing social and ecological systems around the world?

The best known of these processes is the climate change assessment carried out by the IPCC at six or seven year intervals. There are others that fulfill equally vital functions, such as the *World Ocean Assessment I* (2016) carried out under the auspices of the UN General Assembly; the *2019 Global Assessment Report on Biodiversity and Ecosystem Services* carried out by IPBES**;** and an ever-expanding corpus of social-environmental policy briefs, reports and other gray literature produced continuously by programs, councils and cooperating national academies of science convened largely (if sometimes indirectly) under the aegis of the UN. One example is the *Global Sustainable Development Report 2019* (GSDR 2019) produced every four years "by an independent group of scientists appointed by the United Nations Secretary-General and comprising 15 experts representing a variety of backgrounds, scientific disciplines and institutions, with geographical and gender balance" (ii). The 2019 report is characterized by its authors as an "assessment of assessments" that tracks "existing knowledge across disciplines," "highlights state-of-the-art knowledge for transformations towards sustainable development and identifies concrete areas where rapid, transformational change is possible" (19). Above and beyond input from the earth sciences or other environmental science disciplines, these assessments increasingly aspire to take account of the human (i.e. economic, social and sometimes also cultural) dimensions of global environmental change. Such large-scale assessments are among the principal means by which the current state of knowledge on global change is made intelligible, and potentially actionable, for the international negotiating representatives whose hard-won agreements feed into national policy agendas that inform and effectively guide thousands of state, provincial, county, and municipal environmental management (prevention, mitigation, recovery and adaptation) efforts worldwide.

The most significant international milestones in the advancement of *sustainable development* (SD) policy have always been in the wheelhouse of the United Nations, beginning with the formation of the Brundtland Commission in 1983 and extending through the UN resolution ratified by 193 countries in 2015 that formalized the *Sustainable Development Goals* (SDGs) within the *2030 Agenda for Sustainable Development*; in addition to the 17 SDGs, this international agreement includes 169

ECOZON@ | Vol 11, No 2

associated targets and 232 indicators. Additional developments of the past 15 years that are noteworthy in the context of my discussion here include: 1) the launch of the *UN Decade of Education for Sustainable Development* (ESD) (2005-2014), which played a major role in reorienting educational targets and actions internationally to address the challenges of sustainability; 2) UNESCO's endorsement of the *Global Action Programme on ESD* (GAP) (2015-2019) directly following the UN Decade on ESD; and 3) the *Education for Sustainable Development for 2030* framework (2020-2030), also organized under the auspices of UNESCO to build on the momentum and gains of the previous two UNESCO ESD programs. One of the most recent publications in the UNESCO series "Education on the Move," which is linked to all of these global ESD programs, is *Issues and Trends in Education for Sustainable Development* (UNESCO 2018). That volume characterizes the ambitions and purpose of ESD as empowering learners

> to take informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. ESD promotes holistic and transformational education. This type of education addresses learning content and outcomes, innovative pedagogy and 'learning by doing', and uses a whole-school approach to engage communities in achieving sustainable change. (3)

At face value these goals would seem to be entirely in line with the interests and priorities of the environmental humanities (especially the cognate disciplines of ecocriticism and environmental education). However, in the 272 pages of this volume the word "humanities" appears only once in the title of a referenced paper, while "history" and "philosophy" get mentioned a couple of times in passing, and "literature" is not mentioned at all. A handful of scholars who come out of humanities traditions do get referenced in the works cited (also very much in passing), but there is no meaningful engagement of humanities approaches to environmental learning and education anywhere in the volume and there are no contributing environmental humanities scholars.

This circumstance is not an anomaly. The *Global Sustainable Development Report 2019* referenced above was actually one of five major progress reports published in 2019 concerning international achievement in the sustainability arena. Three of these reports were published by the United Nations Department of Economic and Social Affairs (UNDESA): the GSDR 2019, *the Sustainable Development Goals Report 2019*, and *Financing for Sustainable Development 2019*. A fourth international report was published by the EU: *Sustainable Development in the European Union.* The fifth major report, covering international progress in achieving the SDGs, was published by the Sustainable Development Solutions Network (SDSN)[1] in close cooperation with Bertelsmann Stiftung, a private foundation: this was the *Sustainable Development Report 2019* (SDR 2019), including the SDG Index and Dashboards for all UN member states.

Together these five reports amount to more than 1,500 densely formatted pages (or approximately 570,000 words) of descriptive and analytical text, visualizations and

[1] https://www.unsdsn.org/

infographics charting the progress of regional, national and international efforts to achieve the Sustainable Development Goals. In all of those printed materials the word "humanities" occurs only three times, all in the same report (GSDR 2019). In one instance the term occurs in a clarification of the concept of *science* (which the report notes should be understood to "encompasses the natural sciences and engineering, life sciences and medicine, social sciences and humanities, law and more" [111]). Elsewhere the report notes that the achievement of the SDGs has highlighted the need to address "the web of challenges facing humanity, with interdisciplinary research focused on coupled human-environment systems or socio-ecological systems" (xxxii). The word "humanities" occurs a second time in this context when the report notes that acknowledgement of this need "has given birth to a new, more engaged academic discipline—sustainability science—that draws on all scientific disciplines, including social sciences and humanities, in a problem-solving approach" seeking "to shed light on complex, often contentious and value-laden nature-society interactions, while generating usable scientific knowledge for sustainable development." Compared to these first two (aspirationally inclusive) mentions of "humanities," the third occurrence (211) is positively anticlimactic, as the term appears merely as part of the name of the home institution for a social science researcher mentioned in passing in one of the report's annexes. Those are the only three mentions of the term "humanities" out of more half a million words of text in the five most comprehensive international assessment reports published in 2019 concerning the world's progress toward achieving the goals and targets of sustainable development. Other humanistic disciplinary identifiers—such as "philosophy," "history," "art" and "literature"—fare no better, and some of them fare worse through their complete omission. Even the term "culture" (in one or another of its lexical forms—*cultural*, *culturally*, etc.) appears only a few dozen times in the 1,500+ pages of text in these five reports (excluding its appearance in formal names, such as the full name of UNESCO, the United Nations Educational Scientific and Cultural Organization, and similar occurrences), and that term is one of the best represented proxies for the humanities in these five reports.

The brief analysis undertaken here is admittedly a crude metric for measuring humanities content in intergovernmental scientific/knowledge assessments (a more comprehensive corpus study and discourse analysis of this variety of literature would be a valuable contribution). However, it is not a misleading indicator. The situation is enough to make one reconsider the received wisdom bound up in the adage that "absence of evidence is not evidence of absence." For all intents and purposes, consultations with and direct contributions from environmental humanities specialists (indeed from *any* humanities scholars) are not actually involved in these reports to any degree that can be considered representationally significant. Moreover, these examples are entirely typical of the massive production of assessment reports, programmatic guiding documents, and other forms of gray literature incorporating expert knowledge, perspectives, analysis and findings related to sustainability and the environment that derive every year, directly or indirectly, from intergovernmental or UN-affiliated organs where policy connects with

ECOZON@ | *Vol 11, No 2*

science, education and action. Those materials, in turn, become key points of reference in international policy work and agreements, which have real influence on national, regional and local policy agendas throughout the world.

It is deeply problematic that content from the academic domain of the humanities in general, and the "crisis field" of environmental humanities (Castree 36) more specifically, is wholly absent in major knowledge-assessment and science-policy-society interfaces internationally.[2] This does not mean at all that EH scholars have not sought for some time to contribute. One of the problems is that there is no ready entry point in scientific assessment and governance processes to accommodate the kinds of knowledge, expertise and methods that EH specialists bring with them.

Without question examples can be found in numerous national, local, or institutional contexts of efforts to link the results of funded research projects to particular policy agendas, including sustainability. The focus of the present discussion on the potential for impact of EH research and knowledge production in policy-advisement or policy-setting at the highest levels (especially internationally) precludes discussing more localized examples in this article. In the large picture, projects that make noteworthy contributions at more limited institutional scales are apt to be the exceptions that prove the rule that EH knowledge contributions currently have little impact on policy formulation, especially when compared to contributions from the sciences. This is largely the case because there are no meaningful mechanisms that connect required statements of impact in funding applications or voluntary policy briefings as dissemination outputs of particular projects with the processes by which policy setting is actually carried out at national and international scales. Contributions and impacts at these scales are visible and more readily traceable through governance efforts set in motion by international agreements and official policy-setting measures (not to be confused with efforts to ensure policy *relevance*), as well as through the various forms of progress and compliance reporting involved in governance and implementation.

An assortment of key networks, associations and institutions that have played leading roles over the past decade in the rapid development of the EH field (alongside comparable domains in the fine arts and qualitative social sciences) have been driving research, educational engagement and community-action projects at significant levels of ambition and potential scales of impact for many years, in some cases going back decades. However, many of these activities have taken place *in parallel to* the major knowledge assessment and science-policy-society interfaces unfolding in intergovernmental contexts, where EH remains missing in action.

Bruno Latour is a well-known proponent of bridging work that has connected theoretically orientated social science, philosophy, and the arts around key ecological and sustainability concepts in such crossover interventions as "Gaia Global Circus" (in

[2] There are complicated reasons why this situation has developed historically, and neither the EH community nor the various organizing bodies of national and international scientific assessment are wholly at fault (or wholly faultless) for the situation. However, that history lies beyond the scope of this article, deserving a full treatment of its own.

collaboration with theater director Frédérique Aït-Touati and playwright Pierre Daubigny), as well as in his 2015 COP 21 simulation executed with 200 students brought together at Sciences Po in Paris, which gave voice and agency to entities not able to be represented at the actual COP21, such as endangered species, oceans, the atmosphere, young people, climate refugees, and the Internet (see Coppola). Such work raises awareness concerning elided knowledge and stakeholder communities/entities in the science-policy-society interface. However, just how much influence such experimental approaches may have on the actual knowledge assessment and science-policy work taking place in intergovernmental contexts is very difficult to ascertain. Assuming such work has any influence at all on these formal processes, it would likely be indirect, even diffuse, and extremely limited.

As individual authors, EH scholars can likewise connect with large audiences and thereby influence popular, political and academic debate on issues of sustainability. Rob Nixon's concept of "slow violence" in his 2011 book of the same name comes to mind as one that has exerted a major influence in environmental humanities and social sciences discourses. For their part the compelling case studies documenting the fossil-fuel industry's well-organized promotion of climate denial in Naomi Oreskes and Erik M. Conway's *Merchants of Doubt* (2010) have significantly increased understanding of the corrupt tactics entrenched carbon-polluting industries employ to obfuscate the findings of climate science on which governments and societal stakeholders depend. Nevertheless, the kinds of evidence considered earlier in this essay suggest that these and most other individual contributions from EH, however groundbreaking they may be in their own disciplinary landscapes, still are not exerting any notable influence on science-policy work at the highest levels internationally. Moreover, the piecemeal introduction of individual cases or concepts is very different from comprehensive knowledge assessment or systemic (*and* systematic) approaches to applying knowledge and best practices in governance work.

It is crucial for those of us working in the environmental humanities to become meaningfully involved in policy-engaged work related to environmental challenges and questions that may be illuminated by our research and expertise, just as many other fields of research (from the natural sciences, quantitative social sciences, educational sciences, law, engineering, economics, etc.) have been doing for decades now, if not uniformly across the board. Somewhere in the world work of this nature is taking place every day under the auspices of (or in some meaningful connection to) UN programs. It is unacceptable for the EH field to be sitting out this vital work.

One effort to build new capacities in humanities-driven, policy-engaged research, education, knowledge dissemination and public action is the initiative BRIDGES[3], co-led by UNESCO[4], the International Council for Philosophy & Human Sciences (CIPSH)[5], and

[3] https://unesdoc.unesco.org/ark:/48223/pf0000372656
[4] https://en.unesco.org/news/toward-establishment-bridges-action-promote-sustainability-science
[5] http://www.cipsh.net/web/channel-7.htm

the global network of Humanities for the Environment (H*f*E)[6] observatories. Building directly on UNESCO's "Guidelines for Sustainability Science in Research and Education" (2017), BRIDGES is poised to launch in 2020—presumptively within UNESCO's Management of Social Transformations (MOST)[7] program—not simply as a new global coalition in sustainability science, but as one vigorously promoting a humanities-centered transdisciplinary approach to sustainability. An overriding ambition behind the establishment of BRIDGES is to build an international community, platform and project-driven network of networks that is capable of becoming a significant agent of change in the global landscape of sustainability science, education and action.

BRIDGES' principles and strategic priorities were framed in the outcome documents of three high-level international workshops organized in 2019, based on the premise that the humanities must play a leading role both in strengthening sustainability science research and in forwarding educational and societal action for sustainability. BRIDGES is not oriented solely toward the environmental humanities, nor indeed solely toward the humanities in general. Nevertheless, throughout the coalition's establishment process in 2019-2020 EH has emerged as a key academic community of practice anchoring BRIDGES. This is fitting not only because of the breadth and depth of knowledge relevant to questions of social, economic, cultural and environmental sustainability available in the EH field, but also because EH is arguably one of the few significantly growing fields within the humanities, bucking the trends of cutbacks and austerity affecting humanistic disciplines more generally in recent years. This situation gives EH a broad cultural, geographical and institutional base to build upon in coordinated national, regional and international efforts to engage social-environmental policy and governance. Anchoring a new humanities-centered sustainability initiative in one of UNESCO's intergovernmental science programs (MOST) will serve not only to underscore the value of knowledge and critical perspectives encompassed by humanities disciplines; it will emphasize the vital relevance of long under-resourced humanistic contributions to natural-science and social science research at the center of sustainability science. As it launches officially in late 2020, the BRIDGES Coalition will be developing a portfolio of place-based demonstration projects around the world, carried out in transdisciplinary collaborations with specialists from academic disciplines and knowledge domains across the spectrum of the arts, humanities, social sciences and natural sciences, as well as with local stakeholders (indigenous communities, youth, and other non-academic participants) as equal co-producing partners in sustainability research, education and community action for transformative change:

> The ambition of the emerging BRIDGES Coalition is to introduce exemplary transsectoral and transdisciplinary projects connecting humanities and social sciences disciplines with natural sciences, applied scientific fields and the arts. [….] In these efforts the unfolding BRIDGES community is expected to work in parallel with other efforts led by UNESCO programmes and UN-affiliated scientific councils to promote effective sustainability science through collaborations among member states. BRIDGES aims to achieve these ends

[6] https://hfe-observatories.org/observatories/circumpolar-observatory/
[7] https://en.unesco.org/themes/social-transformations/most

> through the development, assessment and demonstration of model pilot projects. (CIPSH, et al.)

There is more than one way to be actionable, of course. My arguments and examples here are largely directed to one crucial sector that our field can no longer work apart from. Large-scale knowledge assessments and interfaces of science, policy and societal action coordinated through (or in partnership with) UN programs are capable of influencing the design of new research and educational programs, dissemination of knowledge across a range of publics and stakeholders, and models for action and intervention on social-environmental challenges at a scale globally that we simply cannot otherwise hope to reach in our local institutional roles or even internationally within the limits of our respective EH disciplines.

Within our disciplinary and institutional contexts there is already an impressive range of work taking place in the environmental humanities that is also highly actionable in other ways, such as the ambitious community-partnered projects of the Penn Program in Environmental Humanities in Philadelphia (see, for example, Futures Beyond Refining[8] and My Climate Story[9]). The Humanities for the Environment[10] global network likewise showcases a wide range of projects contributing to transdisciplinary co-production of knowledge with a diversity of academic and non-academic partners in many of the local environments spanned by the network's eight regional observatories, all with clear relevance to the SGDs. Finally the Future Earth core project Integrated History and Future of People on Earth (IHOPE)[11] has been far ahead of the curve in the co-design and execution of numerous multi-century to millennial scale systems-based historical ecology research projects integrating humanities, social sciences and environmental sciences in its ambition to apply lessons from the past to present and future sustainability challenges. There are, in fact, too many high-quality place-centered projects that have unfolded in recent years in EH programs and networks around the world to list here in any comprehensive way. These few examples are meant to be indicative of the rich research, education and transdisciplinary public partnerships that are already happening within the EH field. There are *many* other examples. Collectively they constitute a deep reservoir of knowledge for policymakers and societal stakeholders working to achieve sustainable social, economic, cultural and environmental transformations.

Noel Castree has suggested that "the notion of a 'crisis discipline' put forward by biologist Michael Soulé back in 1985" to characterize the then emerging field of conservation biology can be applied similarly to the environmental humanities as "a new mission-orientated endeavor with pressing timelines" (36). This is an apt take on the EH field. But if EH is to be effective as a crisis field, ecocritics and environmental historians and other epistemic communities within the EH domain may need to rethink the viability

[8] https://ppeh.sas.upenn.edu/experiments/futures-beyond-refining
[9] https://ppeh.sas.upenn.edu/experiments/my-climate-story
[10] https://hfe-observatories.org
[11] https://ihopenet.org

of at least some of our own (business-as-usual) practices. EH disciplines (and indeed the humanities domain in general) are too bound to an outmoded economy of individual prestige and erudition—what I would call *the personal performance of knowledge*—as opposed to an ethos of collectively advancing knowledge (for example, through the kinds of integrated team-based approaches that have long been hallmarks of research in the social and natural sciences). Given the crises that must be addressed urgently within the earth system, and within our societies, the need has never been greater for environmental humanists to shake free of 19th and 20th century models of humanistic knowledge production, fetishizing the idea of the romantic lone scholar laboring in relative isolation for years to produce the definitive tome on a narrow patch of intellectual turf. I would even argue that the model of knowledge production on which many of today's humanities projects rests is unsustainable. The very obsolescence of those projects is baked into this hyper-individualistic model of research. If our disciplines do not adapt to the rapidly changing conditions of life on earth, and the corresponding realities (political, cultural, societal) of a human world that is dangerously compromising its own future, our fields will fossilize and cease to serve as vital resources of knowledge that can be drawn upon to help shape and safeguard any number of sustainable futures.

Such adaptation requires significant adjustment to how we work and how we measure the impacts of our work as scholars, researchers, educators, disciplinary practitioners, institutional members and public servants. This implies paradigmatic, structural changes to our institutions. Such changes are not self-realizing, nor self-incentivizing. They require advocacy at many levels throughout our disciplines and in our profession, which is also in crisis. In our public role as scholars and researchers we have to stop speaking primarily to each other and expand the scope of the communities we engage. Perhaps as much as half of our effort should be devoted to communicating our specialist knowledge in applied ways to address questions and challenges of social-environmental sustainability that people encounter in their everyday lives. This means expanding our repertoire of rhetorics and registers to a wider range of discourse communities than the ones we address in our specialized academic discourses. That is only part of the retooling we may need to undertake while we still have time to make a meaningful difference. We also need to become more involved, as a number of scholars in the field already are, in continuous public outreach efforts that are also essential and valuable forms of *inreach*. The colonialist posture of the benevolent expert bestowing knowledge on the uninitiated (ostensibly a once-necessary fiction that no longer fits our world, not even as a fiction) must give way to our own continuous (lifelong) learning from community partners who have at least as much to teach us as they may have to learn from us. Inspiring and *activating* cultural change for the earth and for the goals of environmental justice are among the ambitions environmental humanities scholars are already especially well qualified to help realize in wider collective contexts without having to immerse ourselves in wholly new discourses.

These and other focuses that follow from greater transdisciplinary engagement in policy-engaged work can open up new advances in education and pedagogy. The numbers

ECOZON@ | Vol 11, No 2

are on our side here. The relatively small community of environmental humanists a decade ago has now bloomed into a field of thousands active in institutions all over the world. By developing a more agile approach to research, scholarship, study—*science* in an outmoded but recoverable sense (as knowledge)—it is no great leap to revitalized iterations of scholarship that illuminate culture as an indispensable component of science and science as its own form of culture (narrativizing science, approaching its epistemic traces and artifacts as discourses that a much wider segment of society can participate in, enabling new agencies). Such approaches have been among the most compelling tools of ecocritics since their field took shape in earnest in the early 1990s. We can illuminate the power of metaphor in public communications and in the process realize that power in practice in potentially transformative ways, in collaboration not only with fellow scholars of literature, but with chemists, physicists, archaeologists, economists, computer scientists, statisticians, climatologists, ethicists, poets, artists and those living along the front lines of climate change impacts. These different approaches and focuses are already central to the practices of ecocritics, sustainability educators, climate historians, posthumanities theorists, and environmental communications specialists who meet each other and the wider world as environmental humanists. We must do more to leave our comfort zones and join the fray in policy and governance arenas, both internationally and on the ground in our own communities. The hour is late and we have enormous ground to cover, but we are equal to the task.

Submission received 21 January 2020 Revised version accepted 4 October 2020

Works Cited

Bertelsmann Stiftung and Sustainable Development Solutions Network. *Sustainable Development Report 2019*. https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf

BRIDGES. Proposal for the establishment of Bridges as a MOST Sustainability Science Coalition, 2020. https://unesdoc.unesco.org/ark:/48223/pf0000372656

Castree, Noel. "Speaking for the Earth and Humans in the 'Age of Consequences'." *Ecocene: Cappadocia Journal of Environmental Humanities*, vol. 1, no. 1, June 2020, pp. 32-43. https://doi.org/10.46863/ecocene.2020.4.

CIPSH. The International Council for Philosophy and Human Sciences. http://www.cipsh.net/web/channel-7.htm

CIPSH, Humanities for the Environment, NIES and UNESCO. "Framework for the 3rd BRIDGES Establishment Workshop, Sigtuna, Sweden 5–7 October 2019." *Bifrost Online*, 2019. https://bifrostonline.org/framework-for-the-3rd-bridges-establishment-workshop-sigtuna-sweden-5-7-october-2019/

Coppola, Al. "Latour and Balloons: Gaïa Global Circus and the Theater of Climate Change." *Configurations*, vol. 28 no. 1, 2020, p. 29-49. *Project MUSE,* doi:10.1353/con.2020.0001

Eurostat. *Sustainable Development in the European Union*. Publications Office of the European Union, 2019. https://ec.europa.eu/eurostat/documents/3217494/9940483/KS-02-19-165-EN-N.pdf

Futures Beyond Refining. https://ppeh.sas.upenn.edu/experiments/futures-beyond-refining

Hartman, Steven, and Serpil Oppermann. "Seeds of Transformative Change." *Ecocene: Cappadocia Journal of Environmental Humanities* vol. 1, no. 1, June 2020, pp. 1–18. https://doi.org/10.46863/ecocene.2020.1.

H*f*E. Humanities for the Environment Observatories. https://hfe-observatories.org/observatories /circumpolar-observatory/

IHOPE. Integrated History and Future of People on Earth. https://ihopenet.org/

Lenton, Timothy M., Johan Rockström, Owen Gaffney, Stefan Rahmstorf, Katherine Richardson, Will Steffen and Hans Joachim Schellnhube. "Climate Tipping Points: Too Risky to Bet Against." *Nature*, vol. 575, 28 Nov. 2019, pp. 592–95. https://www.nature.com/articles/d41586-019-03595-0

MOST. Management of Social Transformations (MOST) Programme. https://en.unesco.org/themes/social-transformations/most

My Climate Story. https://ppeh.sas.upenn.edu/experiments/my-climate-story

Sachs, Jeffrey, Guido Schmidt-Traub, Christian Kroll, Guillaume Lafortune, and Grayson Fuller. *Sustainable Development Report 2019*. Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019_sustainable_development_report.pdf

SDSN. Sustainable Development Solutions Network. https://www.unsdsn.org/

UNESCO. "Guidelines on Sustainability Science in Research and Education." 2017. https://unesdoc.unesco.org/ark:/48223/pf0000260600

---. *Issues and trends in Education for Sustainable Development*, 2018. https://unesdoc.unesco.org/ark:/48223/pf0000261445

---. "Toward the establishment of Bridges: action to promote sustainability science", 2019. http://en.unesco.org/news/toward-establishment-bridges-action-promote-sustainability-science

United Nations. *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development*. https://sustainabledevelopment.un.org/content/documents/24797GSDR_report_2019.pdf

United Nations. *The Sustainable Development Goals Report 2019.* https://unstats.un.org/sdgs/report/2019/The-Sustainable-Development-Goals-Report-2019.pdf

United Nations, Inter-agency Task Force on Financing for Development. *Financing for Sustainable Development Report 2019*. https://developmentfinance.un.org/fsdr2019.

ECOZON@ | *Vol 11, No 2*