sustainability

MDPI

Article

Sustainability within the Academic EcoHealth Literature: Existing Engagement and Future Prospects

Aryn Lisitza [1] and Gregor Wolbring [2,*]

[1] Cumming School of Medicine, University of Calgary, Calgary, AB T2N4N1, Canada; ablisitz@ucalgary.ca
[2] Department of Community Health Sciences, Cumming School of Medicine, Stream of Community Rehabilitation and Disability Studies, University of Calgary, 3330 Hospital Drive NW, Calgary, AB T2N4N1, Canada
* Correspondence: gwolbrin@ucalgary.ca; Tel.: +1-403-210-7083

Academic Editor: Md Saidul Islam
Received: 11 December 2015; Accepted: 18 February 2016; Published: 25 February 2016

Abstract: In September 2015, 193 Member States of the United Nations agreed on a new sustainable development agenda, which is outlined in the outcome document *Transforming our world: the 2030 Agenda for Sustainable Development*. EcoHealth is an emerging field of academic inquiry and practice that seeks to improve the health and well-being of people, animals, and ecosystems and is informed in part by the principle of sustainability. The purpose of this study is to investigate which sustainability terms and phrases were engaged in the academic EcoHealth literature, and whether the engagement was conceptual or non-conceptual. To fulfill the purpose, we searched four academic databases (EBSCO All, Scopus, Science Direct, and Web of Science) for the term "ecohealth" in the article title, article abstract, or in the title of the journal. Following the search, we generated descriptive quantitative and qualitative data on n = 647 academic EcoHealth articles. We discuss our findings through the document *Transforming our world: the 2030 Agenda for Sustainable Development*. Based on n = 647 articles, our findings suggest that although the academic EcoHealth literature mentions n = 162 sustainability discourse terms and phrases, the vast majority are mentioned in less than 1% of the articles and are not investigated in a conceptual way. We posit that the 2030 Agenda for Sustainable Development gives an opening to the EcoHealth scholars and practitioners to engage more with various sustainability discourses including the 2030 Agenda for Sustainable Development.

Keywords: EcoHealth; sustainability; sustainable development; 2030 Agenda for Sustainable Development

1. Introduction

1.1. Sustainability

According to Gooden, the term "sustainability" first showed up in 1714, in the book *Forest Economy or Guide to Tree Cultivation Conforming with Nature* by Hans Carl von Carlowitz [1]. The term was employed to discuss how the use of timber as a natural resource could be managed for continued long-term use [1]. The 1980 World Conservation Strategy: Living Resource for Sustainable Development report, which was prepared by the International Union for Conservation of Nature and Natural Resources (IUCN), coined the term "sustainable development" amidst the use of other phrases such as "sustainable utilization of species or ecosystems", "to maintain resources sustainably", "sustainable wildlife utilization" and "sustainable system" [2]. In 1987, the World Commission on Environment and Development (WCED) released the report *Our Common Future*, also known as the Brundtland Report after the chair of the Commission [3] with its vision of what

sustainable development signifies. The report used the term "sustainable development" 189 times applying sustainability to over 16 areas [3]. The 1987 Brundtland report altered the discourse of sustainable development to encompass three main dimensions: environmental, economic, and social sustainability [4]. The expansion of the topic of sustainable development has enabled it to become a conceptual model, which "encompasses complex changes in society in order to achieve the ends of economic development, environmental protection and social justice" [5]. However, despite the expansion of the topic, the conceptualization of the term "sustainable development" has also been widely debated and criticized [6–12]. Since these two pioneering reports, several discourses encompassing divergent views of sustainability have appeared including sustainable future, sustainable lifestyle, sustainability science, or sustainable consumption, (for articles on these and other aspects of sustainability discourses see [13–30]).

In the latest chapter on the topic of sustainable development, 193 Member States of the United Nations agreed on a new sustainable development agenda, which is outlined in the document *Transforming Our World: the 2030 Agenda for Sustainable Development* [31]. This document seeks to build off of the Millennium Development Goals and to shift the world onto a sustainable and resilient path, while tackling peace, poverty, and equity [32].

EcoHealth is one field of academic inquiry and practice that is informed in part by the principle of sustainability [33,34].

1.2. EcoHealth and Sustainability

EcoHealth is an emerging field [35–37] that seeks to make a positive difference in the health and well-being of people, animals, and the ecosystems [38] by studying the impact that changes in the biological, physical, social, and economic environments have on such health and well-being [39]. The field of EcoHealth relies on transdisciplinarity, participation, and equity as their three methodological pillars [39,40]. In 2012, Charron proposed to expand the three pillars of field of EcoHealth to six principles: systems thinking, transdisciplinary research, participation, gender, social equity, knowledge to action and, finally, sustainability [34]. The first principle, systems thinking, holds that the component parts of a system, in this case humans, animals, and the environment, should not be understood in isolation, but rather they should be understood within the context of the interactions and linkages between each of the components that make up a system and affect other systems [39]. Transdisciplinary research demands an inclusive vision of ecosystem-related health issues encountered within EcoHealth and relies on a common framework of blended concepts and theories taken from multiple disciplines and stakeholders such as researchers, community representatives, and decision-makers [39]. Participation refers to the aim of cooperation and collaboration both within and across the scientific realm, decision-making groups, and the community [39]. Social and gender equity seeks to "address unequal and unfair conditions impinging on the health and well-being of women and other disadvantaged groups in society" [34]. Knowledge-to-action is the idea that knowledge generated by research is then implemented and applied to improve the environment and the health and well-being of humans [39]. Finally, importantly, the last principle is sustainability, which refers to EcoHealth's goal to protect ecosystems and improve degraded environments to maintain the health and well-being of today's people and future generations [34]. The identification of sustainability as one of six key principles is in line with Leung *et al.*'s work that says that the thinking and practice of EcoHealth has been "heavily shaped by the sustainable development movement of the 1980's" and various aspects of the Brundtland Report [33]. Indeed, the principle of sustainability is seen to inform the field of EcoHealth "to make ethical, positive, and lasting changes which are environmentally sound and socially acceptable" [34]. EcoHealth research is seen to contribute to the improvement of people's health while also advancing sustainable development [41]. According to Kingsley *et al.*, "EcoHealth involves research and practice to promote sustainability of individuals, animals and biodiversity by linking the complex interaction of ecosystem, socio-cultural and economic factors" [42]. It is

expected that the six principles including systems thinking, transdisciplinary research, participation, sustainability, gender, social equity, and knowledge to action [34] influence each other.

Given the linkage between the field of EcoHealth and the concept of sustainability as well as knowledge that sustainable development and other sustainability terms and phrases are still being debated and critiqued, the purpose of this study is to understand how the academic EcoHealth literature engages with sustainability terms and phrases. We generated descriptive quantitative and qualitative data to identify which sustainability related terms and phrases are present in the academic EcoHealth literature and if the engagement is conceptual or non-conceptual. We discuss the results through the lens of (a) the vision of the 2014 [43] and 2016 [44] EcoHealth conference, (b) the paper *EcoHealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health* which expands on sustainability as a principle for EcoHealth [34], and (c) the recent outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] of the United Nations.

2. Experimental Section

2.1. Framing Analysis Through Three Lenses

The analytical framework of this paper is a framing analysis, which is typically used to investigate differing interpretations of a topic or an issue [45]. According to Entman, the basis of framing is to "select some aspects of perceived reality, and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described" [46]. Given the diversity of sustainability discourses and concepts, there are numerous ways that sustainability could be framed within the EcoHealth field.

2.2. Data Source

Four academic databases (EBSCO All, (an umbrella database that consists of over 70 other databases), Scopus, Science Direct and Web of Science) were searched on 4 May 2015 for the term "ecohealth" in the article title, article abstract, article keyword, or in the title of journal ("topic" in the case of Web of Science). The article hits were exported as RIS files and imported into Endnote software where all duplicate articles were identified and eliminated. After the elimination of duplicates, a total of n = 647 academic articles were downloaded and imported into the ATLAS-ti7© software [47], a qualitative analysis software, to produce both quantitative and qualitative data.

2.3. Data Analysis

Step 1: We auto-coded for the term "sustain" in all n = 647 articles within ATLAS-ti7©. All terms that contained the word "sustain" were analyzed for the context in which the term "sustain" and all other terms containing the term "sustain" were used. From this, we generated a list of all of the different sustainability terms or phrases that were associated with or containing the term "sustain" throughout the n = 647 articles.

Step 2: In ATLAS-ti7©, we then auto-coded for each of the sustainability terms or phrases that we had generated (in Step 1) from the original "sustain" code in order to obtain quantitative hits.

Step 3 All n = 647 articles were searched for the sustainability terms and phrases that were present in [3,31] using the auto-coding function within ATLAS-ti7©.

Step 4: Tables were generated for the results of Steps 1–3. The hit counts indicate how many times each term was present in the n = 647 articles, while article count indicates the number of the articles that the term appeared in, which did not include the reference section of each article (Section 3.1 and the Supplementary Materials).

Step 5: Of the list of sustainability terms and phrases generated in Steps 1–3, we chose those that were present in more than one percent of the n = 647 articles (excluding the generic terms sustain* or sustainable or sustainability) for qualitative analysis. We analyzed the context in which each of these

sustainability terms and phrases were used, focusing on whether or not the phrases and terms were engaged with in a conceptual way. Conceptual engagement for our purposes is seen as the special attention, interest and exploration or questioning of term or phrase that goes beyond a simple mention or fact about the term or phrase (Section 3.2.1).

Step 6: We performed proximity searches for content containing the term "sustain", reflecting the EcoHealth principle of sustainability, and each of the Ecohealth principles: "systems thinking", "transdisciplinary" "participation", "gender", "equity", and "knowledge to action" reflecting the other five EcoHealth principles (Section 3.2.2).

2.4. Limitations

Only articles written in the English language were downloaded, which means the study has excluded viewpoints present in academic literature written in other languages. Articles were drawn from only four academic databases. Given that databases reflect a certain focus, this could have led to a biased collection of EcoHealth articles. Likewise, only articles that had the term "ecohealth" in the article title, abstract, list of keywords or in the title of a journal were downloaded. Other similar discourses and terms such as "ecological health" were not included and this, too, could have led to a selection bias within the EcoHealth discourse. Finally, we investigated whether or not sustainability terms have been engaged with conceptually by looking for the explicit mention of certain terms. It is possible that we could have missed articles that deal with terms conceptually, although in an implicit way.

3. Results

3.1. Quantitative Data

To obtain an overview of how the n = 647 EcoHealth articles engage with sustainability as a topic, we searched the n = 647 articles for words containing "sustain" (Step 2). The sustainability terms and phrases that emerged from Step 2 and that are present in more than one percent of the n = 647 articles are presented in Table 1. Table S1 lists all the sustainability terms and phrases we found in the n = 647 articles and specifies which sustainability terms were present or not in the Brundtland report and the 2015 United Nations outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [3,31].

Table 1. The sustainability discourse terms present in more than 1% of the n = 647 articles as well as the number of hit counts and the number of articles that each term appears in, using ATLAS-ti7© software.

Term	Hit Counts (ATLAS-ti7©)	Number of Articles (ATLAS-ti7©) (n = 647)
sustain	2313	305
sustainable	985	207
sustainability	1002	176
unsustainable	40	32
sustainable development	105	28
ecosystem sustainability and sustainable ecosystems	34	20
environmental sustainability | environmental sustainable	23	16
sustainable use	25	15
health and sustainability	26	13
sustainable management	14	11
long-term sustainability | longer-term sustainability	12	10
sustainable health	11	10
ecological sustainability/ecological sustainable	13	10
sustainable solutions	12	9
sustainable future	8	6

Table 1 reveals that excluding the three generic terms (sustain*, reflecting every word that contained sustain; sustainability and sustainable), only n = 12 sustainability related terms and phrases were present in more than one percent of the n = 647 EcoHealth articles that we covered. Of the n = 12 terms, "sustainable development" was the concept that was mentioned the most showing up in n = 28 or 4.32% of the n = 647 articles.

Table S1 (Supplementary Materials) reveals that a further n = 142 sustainability related terms and phrases were present in less than one percent of the n = 647 articles; n = 35 that were present in [3,31] were not present in the n = 647 articles.

3.2. Qualitative Data

To gain further insight in how the n = 647 EcoHealth articles engaged with the sustainability terms and phrases, we looked at the context or way in which the n = 12 terms, that were present in more than one percent of the n = 647 articles, were covered within the academic EcoHealth literature. We focused our analysis on whether or not the terms were engaged with conceptually, meaning the terms were explored or questioned, as opposed to being mentioned without further engagement.

3.2.1. Conceptual Engagement with Sustainability Terms or Phrases

3.2.1.1. Sustainable Development (SD)

n = 28 articles mentioned the term "sustainable development" in the body of their text. Of these n = 28 articles only n = 7 articles [41,48–52] mentioned sustainable development more than twice in the body. Of the n = 28 articles, only n = 8 engaged with the term conceptually. Two of the nine articles talked about the issue of stakeholder participation [41,53]. Another two articles thematized transdisciplinarity [41,54], one of the six principles of EcoHealth. Two articles spoke about water issues [52,53], another on risk discourses [55], and one other on indicators [48]. One article reflected specifically on the 2012 EcoHealth conference in China [56] and two more articles mentioned the usefulness of EcoHealth [41,50]. One article outlined the shortcomings of Rio+20 extensively [50].

In regards to stakeholder participation, Boischio *et al.* argue that sustainable development requires "many forms and areas of knowledge to guide practical actions on the ground" [41], a sentiment that is also reflected by Lam *et al.* when they state that "sustainable development decision-making requires the perspectives of all segments of society" [53]. Boischio *et al.* give voice to Christens *et al.*'s [57] critiques and responses surrounding the application of participatory methods in development and highlight the problem of power distribution [41]. Two articles thematize transdisciplinarity [41,54]. Boischio *et al.* argue that transdisciplinarity might help to achieve multi-stakeholder engagement as the authors see transdisciplinarity as an effort "to create a common vision and language to overcome differences in perspective and priorities" between empirical, normative and technical disciplines [41]. Orozco makes the point that transdisciplinary research can contribute to sustainable development [54] without further thematizing the issue.

Bringing transdisciplinarity and stakeholder participation together, Boischio *et al.* contend that EcoHealth approaches can respond to the call by different groups "for a more pluralistic and transdisciplinary exploration of sustainable development alternatives based on multi-stakeholder participation approaches" [41].

Two articles focused on the topic of water [52,58]. Bunch *et al.* argue that addressing both biophysical and social environments at the same time can improve human health while promoting sustainable development, and that working on water issues "can overcome the missed opportunity to focus on the commonalities between health promotion and sustainable development" [52]. Lipchin focuses on sustainable water management options, arguing that solutions for sustainable development will not be based on more water for more development, but will come "from a new land and water management system that is sensitive to social, cultural and ecological resources". Lipchin contends that their Dead Sea Basin project has to answer many questions, one of which asks how sustainable

development plans to provide incentives to promote local forms of environmental security and equitable access to goods and services [58].

One article focused on risk discourses [55]. Rao contends that "one of the key success factors in the path towards sustainable development is the ability to manage transitional risks", "especially in the context of adopting newer technologies and economic upheavals" [55]. For that, he says, it is important to understand risk culture and risk related behavior of the population [55]. Rao presents this idea in his paper *A Conceptual Framework Outlining Key Components of Risk Culture and Their Interrelationships* [55].

As to indicators, Rapport and Singh argue that a "comprehensive system for State of Environment Reporting (SOER) must take into account indicators of stress on ecosystems, indicators of the state of the system (*i.e.*, ecosystem structure and function), and indicators of social response (policy interventions)". In addition, Rapport and Singh quote Agenda 21, Principle 1 to make the point that SOER framework should allow for more positive, harmonious relations with nature [48].

One article by Custer reflected on the 2012 EcoHealth conference in China and its engagement with the sustainable development goals. The article stated that the desire of EcoHealth practitioners to contribute to future Sustainable Development Goals (SDGs) "may best be represented by a similar balance in the consideration of human health and the environment" and that "a symmetry between the ecosystem approach to health and the health approach to ecosystem may best meet the desires and challenges of current and future EcoHealth advocates" [56]. In the article, it is argued further that "the EcoHealth lens, or the ecosystem approach to health, could be applied to issues such as "environmental sustainability and food security; central to future SDG" [56].

One article thematized that "Rio+20 fell short of promoting a balanced integration of the social, economic, and environmental pillars of sustainable development" [50] and that "the way toward the post-2015 SDGs will likely be more effective if it highlights the full gamut of linkages between sustainable development, global environmental change, health, and well-being" [50]. It is argued in the article that a strengthening of knowledge on the linkages between ecosystem processes, anthropogenic changes, socio-economic changes, and human health and well-being is needed, which is provided by the "development of more integrated research, linking together medical, veterinary, natural, economic, and social sciences, as well as working at multiple scales (local, regional, and global scales)" [50]. This is an endeavor that the author saw as being strongly supported by the One Health and EcoHealth initiatives [50]. Indeed, the author argues that outcomes of One Health and EcoHealth research show a way toward more sustainable ecological, economic, and social development outcomes, including global health equity [50]. The author concluded that "health and ecosystems are inextricably linked to all development sectors and that the inter-linkages should be recognized as a cross-sectoral issue within the sustainable development goals [50].

3.2.1.2. Ecosystem Sustainability or Sustainable Ecosystems

n = 16 articles covered the phrase "ecosystem sustainability" or "sustainable ecosystems" once and n = 4 articles covered it twice, none more than twice. All articles cover some context around the concepts. Five articles used the Adaptive Methodology for Ecosystem Sustainability and Health to engage conceptually with ecosystem sustainability [37,52,59–62]. One article argued that "situating human health within a theoretical framework of ecological thinking enables health professionals to see that the determinants of health are components of a complex adaptive system" which, in turn, allows "the potential for ecological thinking and settings approaches to be applied to understand, advance, and indeed maintain both population health and ecosystem sustainability" [63]. One argued that an EcoHealth approach is the most appropriate way to address communicable diseases because the EcoHealth approach "strives for improved human health and well-being, based on sustainable ecosystems, with more equitable development and less poverty" [64]. One article covered the Millennium Ecosystem Assessment [65]. Another article highlighted a special issue of EcoHealth which had "explicit interest in (re)integrating indigenous perspectives on ecosystem sustainability and health" [66].

One article voiced the sentiments that Indigenous peoples have the same goal of understanding the complex interrelationship between human health and ecosystem sustainability [67]. Water was linked to the concept of ecosystem sustainability in three articles. An editorial in the journal EcoHealth *Water, Ecology, and Health* stated that "no environmental issue is so profoundly critical to human health and ecosystem sustainability" as water is [68]. Although the editorial did not cover the term "ecosystem sustainability" beyond its engagement with the linkage between ecology and water [69]. A second article argued that research on the costs of diseases and disabilities that can be attributed to environmental contaminants is "relevant to ecosystem sustainability because environmental, human and economic health are all indicators of sustainability" [70]. The third article argued that the goal of ecosystem sustainability, which is resilience and health for humans and all species, challenges the EcoHealth community to consider all forms of knowledge in order to increase our understanding of complex problems affecting health, ecosystems, and society and to mobilized actions [69]. One article highlighted the need to deal with the relationships between population health and ecosystem sustainability [71]. Finally, one article stated that "the ecosystem and health relationship can be measured by indicators of environmental health-risk exposure, human morbidity or mortality, or human well-being and ecosystem sustainability approaches" [72].

3.2.1.3. Sustainable Use

One article thematized sustainable use in relation to medicinal plants of the Maya, highlighting the decrease in knowledge and its impact on sustainable use, while arguing that "modeling the geographical distribution of a medicinal plant species is a key issue when considering its conservation and "Sustainable use" [73]. Most articles, however, just used the term "sustainable use" as a goal. One article for example made the link that the experience of the ecosystem approach to health is that "a participatory process can directly and indirectly encourage stewardship of resources for sustainable use, empower marginalized groups through knowledge sharing and capacity building, and empower communities to take charge of environmental management actions based on research evidence" [59].

3.2.1.4. Health and Sustainability and Sustainable Health

n = 13 articles covered the phrase "health and sustainability", n = 5 mentioning it more than once. Of the ones mentioning it more than once, Bunch *et al.* makes the case that the concept of resilience bridges health and sustainability [52] and that "focusing on watersheds as a setting for health and sustainability encourages a view of health–water relationships that goes beyond the traditional focus of water management on drinking water supply, sanitation, and contaminants" [52]. At the same time, Bunch *et al.* identifies the "evaluation of the role of watersheds as a place based context in which to govern for both health and sustainability" as a governance challenge [52]. Charron makes the case that in order to respond to the Lancet special commission on the MDGs health and sustainability challenge, more work has to be done on the ecological dimensions of health [37]. Connell *et al*. concluded that "the overarching goals of health and sustainability facilitate collaboration among disciplines" but "that differences arise from how each approach operationalizes systems as variables and indicators" and, therefore, that "the concepts of health and sustainability can be used to study ecosystems and livelihoods at various scales" [74]. Patrick *et al.* outline that the individual competencies inherent to health promotion that are useful for engaging with health and sustainability are "individual behavior, organization and social change, partnership development, advocacy for policy and legislative change, and community engagement" [75]. In their study they performed interviews that revealed the sentiment that the "absence of a comprehensive framework to guide action on health and sustainability" is a main barrier for "incorporating sustainability into healthcare practice" [75]. The interviews revealed further that the local agenda 21, healthy cities, Ottawa Charter for Health Promotion, environments for health, the Climate Change Adaptation: a Framework for Action, and the Social Model of Health were identified as facilitators to the "congruence between health and sustainability goals" [75].

One article simply stated that "ecosystem health is as much about our own health and sustainability as it is about the health and sustainability of the other species with which we coexist, and of the entire system as a whole" [48].

n = 10 articles used the phrase sustainable health, two mentioning the phrase twice and none more than two times. The phrase was mostly used to highlight a goal, although one article stated that Laos goals of modernizing its social systems, people's lifestyles in terms of socioeconomic development, and the conservation of culture and the social and natural environment should be harmonized with the pursuit of sustainable health [76].

Three articles simply stated that EcoHealth promotes "the sustainable health of people, animals, and ecosystems by formally connecting [the] social and ecological determinants of health" [77] (see also [78,79]). One article argued that the International Association for Ecology for Health's focus is "to promote sustainable health through scientific discovery and understanding at the confluence of disciplines" [80]. Harris *et al.* argued that the settings approach to health promotion is one way to ensure sustainable health gains for the elderly, thereby reducing local and global burdens of disease [63]. The settings approach is described as "an ecological model of health promotion that focuses on the whole system or organization as the context for introducing changes that promote health" [63]. Leung *et al.* argued that community engagement strategies are essential in the creation of "sustainable health outcomes that could be replicated across neighborhoods and communities" [33]. Finally Stephen *et al.* argued for the involvement of indigenous perspectives in the discourses that foster sustainable, healthy prospects for future generations [66].

3.2.1.5. Sustainable Solution

Only one article mentioned the phrase sustainable solution more than once. The authors of this article questioned whether highly-pathogenic avian influenza HPAI control policies in Southeast Asia are generally within the confines of solitary disciplines rather than long-term sustainable solutions, which could integrate truly transdisciplinary approaches [81]. The authors call "for more research directed to ecosystem approaches to health management in order to inform development of sustainable solutions that improve the health and livelihoods of communities" and they posit that "clear guidance from EcoHealth research is needed to identify primary areas of investigation that will yield sustainable solutions of high impact on poverty, livestock and human health, and environmental management" [81]. Returning to the concept of sustainable solution(s), one article thematized that "eroded social infrastructure along with market-oriented ideologies may serve to promote short-term interventions over longer term sustainable solutions" [82]. One article argued that the transdisciplinary approach is critical to building sustainable solutions [83] and two others argue that true community involvement is needed for sustainable solutions [49,84]. The idea that the failure to appreciate how complex systems interact has ultimately prevented sustainable solutions from being adopted is being questioned [85]. Lastly, indigenous research is highlighted as an essential activity that needs to take place within each region of the world if sustainable solutions are to be found [86].

3.2.1.6. Sustainable Management

Only one article mentioned sustainable management more than once. This article argued that sustainable management of water resources is seen to be achieved by applying Dublin principles which includes ecological principles, institutional principles, and instrument principles [87]. Another article highlighted the divergent views of stakeholders: "while most, if not all, stakeholders agreed with the need to manage the industry and individual farms in a sustainable way, we found divergent opinions and approaches to sustainability among critics, supporters, and managers of salmon farming, such that there was no shared foundation from which to define measurable criteria or indicators for sustainable management programs" [88].

3.2.1.7. Ecological Sustainability

Ecological sustainability was mentioned in n = 8 articles; however only three articles mentioned what one could conceive as conceptual coverage of ecological sustainability. In one article, it is argued "that enhancement of ecological sustainability will be followed by enhancement of social sustainability" [57]. Another looked at the Millennium ecosystem assessment [89], stating that the role of the health community "in safeguarding ecological sustainability is still a matter for debate" [89] and, lastly, one argued that nexus between Indigenous health and natural ecosystem conservation is a prerequisite for achieving global ecological sustainability [90].

3.2.1.8. Environmental Sustainability or Environmental Sustainable

The phrases "environmental sustainability" or "environmental sustainable" were mentioned in n = 16 articles. Most articles mentioned the phrases to indicate an outcome. One article questioned the "proper role of the government in ensuring environmental sustainability under China's changing systems of private enterprise" [91]. Another argued that although 180 nations signed the Millennium Development Goals declaration, an enhanced focus on the role of the environment appears necessary; the Millennium Ecosystem Assessment concluded that global marine systems including coastal habitats are overharvested and in decline [92] (see also [93] covering Millennium Ecosystem Assessment and environmental sustainability). One article argued that innovative ideas and paradigms, in the "real world" and in research, are needed to address the challenge of how human communities can avoid compromising human health while meeting growing demands on resources and ecosystem services, while at the same time promoting thriving, resilient communities and environmental sustainability [76]. Another article reflected on the coverage of environmental sustainability at the 2012 EcoHealth conference [56]. In one article, it is argued that low adoption of restructuring livestock-keeping methods and strategies may be due to "the focus on a single species outcome rather than an integrated outcome that balances environmental sustainability with community partnership and free choice of economic activities" [81]. Another article argued that "simultaneously and systematically embracing environmental sustainability, transdisciplinarity, social justice and gender equity, as well as stakeholder participation provides a pathway, not only to understand complex problems in public health but also to translate that knowledge into effective policy and action at the local, national and global levels" [33].

3.2.1.9. Long-Term Sustainability

The phrase "long-term sustainability" appeared in n = 10 articles, although it mostly consisted of non-conceptual engagement. Two articles talked about the inability to produce long-term sustainability, although these too are non-conceptual in that there is no further questioning of the material. The first article stated that "at the local scale, the management of ecosystem resources tends not to take (a) sufficient account of the needs for long-term sustainability [93] and the second stated that conventional economic growth is incompatible with long-term sustainability [94].

Two terms have no conceptual engagement.

3.2.1.10. Unsustainable

The term "unsustainable" was mentioned in n = 32 articles. No article engaged with the term "unsustainable" conceptually. The term was used to outline unsustainable practices, which included agriculture (n = 4), (ignoring) local characteristics, harvest (n = 4), human society, human development, food production (n = 2), technical solutions (n = 3), livestock production, management of resources, land use patterns, urban waste management, economic growth (n = 2), increased use of cars, unregulated water use, unsustainable social norms and values, rainforest destruction, hunting practice, healthcare material source use, and unsustainable development.

3.2.1.11. Sustainable Future

The term "sustainable future" was only mentioned as a goal but no article engaged with the concept further to discuss what a sustainable future should be, or who should decide that and how. One article stated that "further integration of health impact assessments with the environmental impact assessment process can provide [a] more meaningful cost-benefit analysis and better decision making for sustainable futures" [95]. One simply stated that "the first years of this century have seen significant advances in integrating the many perspectives on what it will take to achieve a healthy and sustainable future" [93]. Another stated that there are "unique opportunities provided by the continuation of this project in these slum settlements with regard to post-tsunami community development and rebuilding towards a socially and ecologically sustainable future" [96]. One highlighted that "the founding Editorial of EcoHealth encouraged the emerging field to be seen in the context of parallel and complementary efforts", and described the collective endeavor as a "transdisciplinary imperative for a sustainable future" [97]. Finally, one article noted that "EcoHealth 2012 was the latest in a series of reminders—suggesting that revisiting, challenging, and rediscovering long-standing questions are a treasured part of our collective journey, and offer fertile ground for the transformative changes required to realize a healthy, just and sustainable future" [98].

3.2.2. Linking Sustainability to the Other Five Principles of EcoHealth

To deepen our understanding of how the n = 647 academic EcoHealth articles have engaged with the sustainability terms and phrases, we applied a second strategy whereby we investigated how the sustainability terms and phrases were mentioned in relation to the other five principles of EcoHealth as proposed by Charron [34].

3.2.2.1. "Sustain" and "Equity"

n = 23 documents covered "sustain" and "equity" in the same paragraph (we used equity rather than just social equity). Of those, n = 14 articles did not have coverage beyond simply listing each EcoHealth principle.

Of the n = 9 articles which did not simply list the six principles, two articles made the point that the natural environment is related to health based on the eight prerequisites for health—peace, shelter, education, food, income, a stable eco-system, sustainable resources, and social justice and equity—of the Ottawa Charter for Health Promotion [99] (see also [100]). One article argued that prioritizing sustainable watershed management for the improvement of human health fosters, among others, sustainable livelihoods, and equity [101]. Another article questioned the discourses around Rio+20 and argued that participatory approaches that encourage rather than suppress negotiation and debate generate benefits "related to equity, sustainability, democratic accountability, and managing uncertainty" [102]. In a fifth article *Towards a Better Integration of Global Health and Biodiversity in the New Sustainable Development Goals Beyond Rio+20*, it is argued that sustainable development efforts over the last 20 years have not resulted in health equity despite being considered a goal of the global health field, and that the discussions around SDGs offer an opportunity to "show the way toward more sustainable ecological, economic, and social development outcomes including global health equity" [50]. The sixth article posits that "implementation issues encountered when working across disciplines, using participatory approaches, ensuring equity in the process, and building capacity for the sustainability of interventions, may apply more generally across EcoHealth projects [103]. Orozco *et al*. in their article *Development of Transdisciplinarity Among Students Placed with a Sustainability for Health Research Project* highlights that students generate the term "social–ecological balance" to link "concepts such as agricultural sustainability (more agronomy students), social equity (more health education students), and environmental justice (the law student)" [54]. Patrick *et al.* gives voice to Hanlon and Carlisle who "suggest a new ideology; one that emphasizes the rights of global citizens while seeking a sustainable solution to current and future ecological challenges . . . a reprioritization

of society towards values which promote well-being, health and equity, while reducing inequalities and over-consumption" [75]. Hanlon and Carlisle "infer the need for leadership, systems thinking and social change, which are the essential features of health promotion practice" [75]. Finally, one article outlined that EcoHealth connections that enable a world that supports social and gender equity, ecosystem sustainability, and health for humans and other species allows its participants to be agents of change and "to challenge the dogma of neutral science" [69].

3.2.2.2. "Sustain" and "Knowledge-to-Action"

n = 8 documents covered "sustain" and "knowledge to action" within the same paragraph. n = 6 simply listed all the EcoHealth principles. Aside from Charron's 2012 article that outlines the six principles including knowledge-to-action and how it relates to the other principles [34], Spiegel *et al.* in their article *Barriers and Bridges to Prevention and Control of Dengue: The Need for a Social–Ecological Approach* investigated the effectiveness of dengue fever control program that lacked an integrated approach but included other EcoHealth principles, and they found that it was particularly sustainability that was a challenge in all programs investigated [85].

3.2.2.3. "Sustain" and "Systems Changes"

n = 7 documents covered "sustain" and "systems change" within the same paragraph. Similar to the other principles, n = 5 simply listed all the EcoHealth principles. One article outlined the synergy between the EcoHealth and the One Health movement in regards to EcoHealth principles such as "systems thinking, inter- and trans-disciplinary research and collaborative participation" [79]. One article used "EcoHealth as a transdisciplinary lens" to investigate the linkage between sustainable livelihoods and ecosystem health" [74]. One article applied the Driving forces–Pressures–State–Impact–Response (DPSIR) framework "for integrating social, cultural, and economic aspects of environmental and human health into a single framework" [104].

3.2.2.4. "Sustain" and "Participation"

n = 26 documents covered "sustain" and "participation" within the same paragraph. n = 21 simply listed the two as part of the EcoHealth principles or mentioned the terms without further elaboration. Two articles outlined the synergy between "the EcoHealth and the One Health movement[s]", which is through their use of the main EcoHealth principles including systems thinking, disciplinary research and collaborative participation [33,79]. One article argued that EcoHealth should represent a globally inclusive community of researchers and practitioners covering real world issues such as climate change, biodiversity loss, land use change, emerging infectious diseases, global toxification, ecological health, and sustainability [105]. Spiegel *et al.* covered the term "sustain" together with participation [85] coming to the same conclusion as stated under Section 3.2.2. Yacoop *et al*. in their article *The EcoHealth System and the Community Engagement Movement in Foundations: A Case Study of Mutual Benefits from Grants Funded by the United Nations Foundation* concluded that donors and governments ignore the critical link between and alignment of control and responsibility for long-term sustainability when discussing civil society and participation [49].

3.2.2.5. "Sustain" and "Disciplinary"

n = 48 documents used the terms "sustain" and "disciplinary" within the same paragraph n = 211 times. The term "multidisciplinary" was used in n = 6 articles n = 10 times, "cross-disciplinary" n = 2 articles four times, "transdisciplinary" n = 31 articles 106 times and "interdisciplinary" n = 11 articles 26 times. As to the linkage between "sustain" and "transdisciplinary", only n = 7 articles mentioned the linkage more than once. Aside from the 2012 Charron article [34], the linkage appeared with sustainable livelihood [74], long term sustainable solutions [81], policies around sustainable futures in northern Australia [90], sustainability science [94,106], transdisciplinary education on sustainability for health [54] and sustainable dengue control [85].

3.2.2.6. "Sustain" and "Gender"

n = 21 documents covered "sustain" and "gender" within the same paragraph. Only one article mentioned it more than twice, covering the linkage between poverty, food security, food production sustainability, and gender equality as four determinants of health. The same paper stated that all of these determinants were covered by the Millennium Development Goals and that all coverage contained aspects of environmental sustainability, leading them to argue that they could capture the environmental determinants of health with these determinants [107].

4. Discussion

Words containing "sustain" were present in 47.9% of the n = 647 articles, while 40.18% of the articles contained the term "sustainable" or "sustainability". Excluding the three generic terms, only n = 12 sustainability related terms and phrases were mentioned in more than one percent of the n = 647 articles (Table 1). Of those n = 12 sustainability terms and phrases, n = 10 were engaged with conceptually. We found that n = 142 sustainability related terms and phrases were mentioned in less than one percent of the n = 647 articles and that n = 35 sustainability terms and phrases that were present in the Brundtland report or the 2015 outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [3,31] were not present in the n = 647 articles (Table S1, Supplementary Materials). Our findings suggest that the n = 647 articles mention many sustainability related terms and phrases but do not engage with most of them extensively or in a conceptual way.

We found further that few articles engaged substantially with the linkage between sustainability concepts and the other five principles of EcoHealth, although many articles listed each of the principles of EcoHealth. This finding may be predictable given that the EcoHealth field has a diverse group of actors (see for example the exchange of views in [97,98]). Moreover, the field of EcoHealth is in constant flux, which can be observed in the recent interactions between EcoHealth and One Health [44,79]. Some actors find Ecohealth's engagement with sustainability, whether that be generally or with specific sustainability terms and concepts, practically or conceptually, to be more important than other actors in the field. In the next three sections we discuss our findings through the lens of (a) the vision of the 2014 [43] and 2016 [44] EcoHealth conference and (b) the paper "EcoHealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health" which expands on sustainability as a principle for EcoHealth [34]. We also discuss our findings through the lens of the recent outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] of the United Nations which is an opportunity to increase the visibility of the EcoHealth field by contributing to the 2030 Agenda for Sustainable Development discourses.

4.1. What Was Not Covered? The Issue of Linking Sustainability to the Other Five EcoHealth Principles

Few articles engaged substantially with the linkage between sustainability concepts and the other five principles of EcoHealth. Two articles highlighted the synergy between the EcoHealth and the One Health movements regarding some of the EcoHealth principles, which included systems thinking, transdisciplinary research, and collaborative participation [79], and that the outcomes of both One Health and EcoHealth research show a way toward more sustainable ecological, economic, and social development outcomes, including global health equity [50]. Given this sentiment, it seems to fit that the 2016 EcoHealth conference brings together both the One Health and EcoHealth community [44]. It will be interesting to explore the synergies that might arise between the two movements from the 2016 EcoHealth conference and whether it will generate new linkages between sustainability and the other five EcoHealth principles.

We posit that the 2030 Agenda for Sustainable Development, which is to be addressed within the next few years, might be an opportunity for the EcoHealth discourse to infuse their principles within the discourse based on the outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] in two different ways. On the one hand the outcome document *Transforming Our*

World: The 2030 Agenda for Sustainable Development did not mention the terms "equity", "systems changes", "transdisciplinary", and "knowledge-to-action", suggesting that the ecosystem focus of the EcoHealth field, which is linked to these terms, may be beneficial for the 2030 Agenda for Sustainable Development discourse. On the other hand the outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* highlights the need for political participation, full participation in society, participation of developing countries, participation of local communities, and participation of stakeholders, which is in line with the EcoHealth field.

In the next section we discuss the three sustainability terms and phrases that were present in less than one percent of the n = 647 articles and why more coverage is warranted.

4.2. Which of the Sustainability Terms and Phrases Were Not Covered?

Many of the sustainability terms and phrases were not mentioned or were poorly mentioned. To comment further on just three of the sustainability terms and phrases that were not covered, bearing in mind (a) the 2014 EcoHealth conference [43], (b) the paper "*EcoHealth Research in Practice: Innovative Applications of an Ecosystem Approach to Health*", which expands on sustainability as a principle for EcoHealth [34], and (c) the 2015 outcome document "*Transforming Our World: The 2030 Agenda for Sustainable Development*" [31] of the United Nations.

4.2.1. Sustainable Consumption

The term "sustainable consumption" was mentioned once (Table S1), stating that examples of sustainable consumption should be used as a basis for advisable harvests [108]. According to the *A/CONF.216/5–10-year Framework of Programmes on Sustainable Consumption and Production Patterns*, sustainable consumption "enhances the ability to meet the needs of future generations and conserves, protects and restores the health and integrity of the Earth's ecosystems" [109]. Therefore, sustainable consumption plays a role in the past, present and future trajectories of change within the Earth's ecosystems, which according to the 2014 EcoHealth conference, is one of three topics that EcoHealth seeks to address [43]. The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] mentioned sustainable consumption in various places. In one example, it talks about "implement[ing] the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries" [31]. In addition, the outcome document asks for "support (for) developing countries, to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production" [31]. Although the outcome documents seem to focus mostly on sustainable consumption in relation to natural resources, there are many areas outside of natural resources where sustainable consumption plays a role, such as healthcare [109]. A recent article [110] showed that if one searches Google Scholar™ (Mountain View, CA, USA) for "sustainable consumption" that the target for sustainable consumption mentioned the most was natural resources (n = 109) [110]. However, the same article mentioned that other targets of sustainable consumption are also covered such as food (n = 108), environment (n = 72), water (n = 66), products for households and people (n = 48), energy (n = 46), economics/income (n = 15), shrimps, living sea resources and forests (n = 11), tourism and electronics/technology and employees (n = 10). Two targets were mentioned (n = 8); one target (n = 6) and one target (n = 5); six targets were mentioned (n = 4) and six (n = 3) [110]. There were 14 targets that were mentioned (n = 2) and 29 targets that were mentioned (n = 1) [110]. Many of the targets for sustainable consumption influence the field of EcoHealth's ability to fulfill their vision. According to the 647 articles we covered, it seems that EcoHealth as a field of practice and academic inquiry has an opportunity to investigate sustainable consumption beyond the limited focus on natural resources, thereby taking into account the triangle of human-animal-nature relationships and to contribute this knowledge to the 2030 Agenda for Sustainable Development discourses.

4.2.2. Sustainability Indicators

Another term that was poorly covered, with n = 4 hits within n = 3 articles, was "sustainability indicators" (Table S1). The n = 647 articles we covered mentioned that the purpose of sustainability indicators to assess sustainability levels [60], environmental conditions [53], and ecosystem health [111]. There was also mention of some applications of the indicators including the use of a DPSEE model by UN agencies [111]. According to the WHO indicators employed in sustainable development discourses are often used to transform raw data into synthesized information, which then enables decision-makers and stakeholders to interpret the data and reach a decision, typically in policy development [112]. The outcome document *Transforming Our world: The 2030 Agenda for Sustainable Development* [31] now gives concrete indicators and goals. We posit that this is a chance for the EcoHealth field to engage with the now agreed upon indicators and goals; to highlight how the EcoHealth field and the human-animal-environment relationship could engage with them as well as to monitor the progress of the indicators and goals that are important in fulfilling the vision of EcoHealth.

4.2.3. Social Sustainability

Finally, the phrase "social sustainability" appeared in n = 5 articles (Table S1). The coverage of "social sustainability" included the need for the evaluation of social sustainability, the need to use particular models such as the socioeconomic modeling approach [60], and the need for social sustainability alongside economic development in order to attain global health [37], and to enhance social sustainability and achieve sustainability enhancement [60]. Two articles linked social sustainability to the field of EcoHealth by stating that social sustainability underpins the field of EcoHealth and that the field of EcoHealth addresses issues that are related to social sustainability [37,113]. According to Vallance, social sustainability has three facets: "(a) 'development sustainability' addressing basic needs, the creation of social capital, justice and so on; (b) 'bridge sustainability' concerning changes in behavior so as to achieve bio-physical environmental goals and; (c) 'maintenance sustainability' referring to the preservation—or what can be sustained—of socio-cultural characteristics in the face of change, and the ways in which people actively embrace or resist those changes" [114]. According to Vallance's three-fold schema, social sustainability has aspects that can be linked to all six pillars of the EcoHealth field systems thinking, transdisciplinary research, participation, sustainability, gender, and social equity, and knowledge to action [34]. However, the 647 articles we covered only address social sustainability in relation to the fourth of the six pillars. The sustainability pillar maintains that social sustainability "is part of the change sought through EcoHealth research and action" [34], which suggests that more coverage and conceptual engagement with the phrase might be warranted.

The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* which constitutes the new global sustainable development agenda makes it clear that the 17 Sustainable Development Goals and 169 targets are "integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental" [31]. The outcome document covers the linkage between the social, economic and environmental dimensions of sustainable development in numerous areas: it talks under prosperity that "economic, social and technological progress occurs in harmony with nature"; it talks about achieving "economic growth, social development, environmental protection and the eradication of poverty and hunger"; that "social and economic development depends on the sustainable management of our planet's natural resources"; to recognize "the link between sustainable development and other relevant ongoing processes in the economic, social and environmental fields"; that by 2030 "the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters" should be built; that to "empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status" by 2030 and to "support positive economic, social and environmental

links between urban, peri-urban and rural areas by strengthening national and regional development planning" [31].

We see the outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* as an opportunity for the field of EcoHealth to incorporate the balance between the economic, social and environmental aspects of sustainable development within the triangle of human-animal-environment relationships more visibly.

According to the outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* "each country has primary responsibility for its own economic and social development and that the role of national policies and development strategies cannot be overemphasized" [31]. This suggests that the role of national EcoHealth research and practice on the ground is important. The international EcoHealth conferences could be a platform to discuss ever-changing problems of such a global outcome, which is based on national actions. Indeed, the EcoHealth 2014 [43] and 2016 [44] conferences suggest a different focus in the discussion on EcoHealth.

The terms "sustainable consumption", "sustainability indicators", and "social sustainability" are just three sustainability terms that were inadequately mentioned in the 647 articles from our sample of the academic EcoHealth literature. It would be useful to engage with more sustainability terms and phrases in a conceptual way because the discourse around any given sustainability term or phrase could impact the ability of EcoHealth researchers and practitioners to fulfill their aim to make environmentally-stable and socially-appropriate changes [34,43].

In the next section we discuss three sustainability terms and phrases that were present in more than one percent of the n = 647 articles and why more coverage is warranted.

4.3. What Sustainability Terms and Phrases Were Covered but Could Have Had More Coverage?

There were n = 12 terms that were present in more than one percent of the n = 647 articles and n = 10 of these were dealt with conceptually. However, the coverage was still lacking as the term that was mentioned most—sustainable development—was still covered in less than 5% of the n = 647 articles. To discuss the three terms with the most hit counts further.

4.3.1. Sustainable Development

"Sustainable development" was used as a phrase n = 105 within n = 28 articles (Table 1). This coverage included the foundations and goals of sustainable development such as human health and biodiversity [41,50], and specific issues and applications of sustainable development, including pollution in China and the environmental action plan of the European Commission respectively [91,115]. The coverage of sustainable development within the 647 articles indicated that EcoHealth seeks to determine how (un)sustainable development impacts health and in turn, EcoHealth contributes to the goals outlined by the sustainable development discourse through their consideration of human health and the environment [37,56]. According to Charron, the term "sustainable development" takes into account the social and economic development needed to improve human lives as well as the irreversible ecosystem degradation this is causing [34]. This dilemma and the resulting desire to change the way in which people interact with the environment in order to achieve sustainable change in human health and well-being is the very basis of the field of EcoHealth and is demonstrated in the three main themes of the 2014 EcoHealth conference [43]. Given that the 2016 conference [44] aims to increase the collaboration between One Health and EcoHealth, it may be useful to investigate what this could mean and how to engage with the concept of sustainable development.

The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] gives guidance on the focus of sustainable development in the next 15 years. The document is an opportunity for the EcoHealth field to critically engage with that vision and explore what it means for its three constituencies (human, animal, and environment). Indeed animals are, for example, only mentioned once in the outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development*, which could be challenged by the EcoHealth community.

4.3.2. Ecosystem Sustainability

The term "ecosystem sustainability" was mentioned n = 34 times in 20 articles (Table 1). The term was used to look at the aspects that benefit ecosystem sustainability, such as the recognition of the interdependence between long-term human existence and the health of ecosystems, as well as the aspects needed for ecosystem sustainability including scientists and the interconnections between them [63,67,69]. The coverage of ecosystem sustainability also highlighted many applications and programs including the Adaptive Methodology for Ecosystem Sustainability and Health (AMESH) [59], The Millennium Ecosystem Assessment [65], and The Network for Ecosystem Sustainability and Health [96], which utilize or work towards ecosystem sustainability. The coverage of the term "ecosystem sustainability" in the 647 articles indicates that the field of EcoHealth attempts to address issues pertaining to ecosystem sustainability, in particular the interrelationship between conservation medicine, human health and ecosystem sustainability [80,105]. However, given the importance of the concept for the fulfillment of the EcoHealth vision according to our guiding documents, to mention the term only 34 times in 20 articles seems to be insufficient. The coverage could have included agro-ecosystem sustainability in more depth, for example, given that according to Charron, farmer's health and agro-ecosystem sustainability is a major challenge that the field of EcoHealth seeks to tackle [34].

The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] mentions the term "ecosystem" n = 11 times; for example, the term ecosystem is used in Goal 15 as follows: "protect, restore and promote sustainable use of terrestrial ecosystems", "ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems", "water-related ecosystems", "integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts", and "mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems" [31]. The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* mentions various sustainability terms that are hardly visible in the n = 647 articles we covered and as such the outcome document is an opportunity for the EcoHealth community to look at whether or not their view and focus on the ecosystem is in sync with the ecosystem use within the outcome document.

4.3.3. Environmental Sustainability

The coverage of environmental sustainability highlighted the environmental sustainability framework or approach, which employs many goals, including poverty reduction and universal education [64,93]. In addition, the literature touched on competing priorities such as meeting the growing demands on resources and ecosystem services [76], as well as several application examples including Japan's desire for both industrial development and environmental sustainability [76], and the choices involving environmental sustainability made by water resource departments [116]. We see the coverage of environmental sustainability as an essential in order to elucidate the fundamental principles in the field of EcoHealth as outlined by Charron [34,37]. However only n = 6 articles engaged with environmental sustainability on a conceptual level, which we posit to be low given the importance of the term for the EcoHealth field.

The outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development* [31] mentions the term "environmental" n = 19 times and the term "environment" n = 15 times, often as part of the three dimensions—social, economic, and environment of sustainable development. This is another opportunity for the EcoHealth field to compare their vision of environment (and environmental) with the vision of the outcome document.

5. Conclusions

Sustainability is seen as one principle that is used to inform the field of EcoHealth to make "ethical, positive and lasting changes (to environment-human interactions) which are environmentally sound and socially acceptable" [34]. Our findings suggest that within our sample of n = 647 articles, the academic EcoHealth literature has not yet engaged with many sustainability discourse terms. Furthermore, the sustainability terms that are mentioned are hardly interrogated in a conceptual way. This finding may be predictable given that the EcoHealth field has a diverse group of actors, many of whom do not necessarily prioritize EcoHealth's engagement with sustainability. As to future opportunities, Parkes mentioned the important influence of international conventions, declarations and assessments on the field of EcoHealth in 2012 [97]. The recent international outcome document *Transforming our world: the 2030 Agenda for Sustainable Development* [31] is an opportunity for the actors in the EcoHealth field that see sustainability as an important area of engagement to increase the theoretical and practical engagement with sustainability discourses and terms, and to increase the visibility of the EcoHealth field by contributing to the 2030 Agenda for Sustainable Development discourses.

Supplementary Materials: The following are available online at www.mdpi.com/2071-1050/8/3/202/s1, Table S1: Total hit count and number of articles for all sustainability terms and phrases we found in the 647 articles as well as sustainability terms that were present or not in the Brundtland report and the 2015 United Nations outcome document *Transforming Our World: The 2030 Agenda for Sustainable Development*.

Acknowledgments: We would like to thank the reviewers for their thoughtful and extensive comments.

Author Contributions: GW laid the conceptual groundwork for the article and was involved in the writing of the article as well as extensive editing of the article. AL conducted the research, wrote the original draft of the article and was involved in the editing of the article.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Godden, L. The Principle of Sustainability: Transforming Law and Governance. *Osgoode Hall Law J.* **2009**, *47*, 807.
2. Redclift, M. Sustainable development and global environmental change: Implications of a changing agenda. *Glob. Environ. Change* **1992**, *2*, 32–42. [CrossRef]
3. World Commission on Environment and Development (WCED). Our Common Future: Report of the World Commission on Environment and Development. Available online: http://www.worldinbalance.net/intagreements/1987-brundtland.php (accessed on 3 February 2016).
4. (2012) "Sustainability", Facilities. Available online: http://dx.doi.org/10.1108/f.2012.06930iaa.001 (accessed on 24 February 2016).
5. Barnes, P.M.; Hoerber, T.C. *Sustainable Development and Governance in Europe: The Evolution of the Discourse on Sustainability*; Routledge: London, UK, 2013; Volume 96.
6. Doyle, T. Sustainable development and Agenda 21: The secular bible of global free markets and pluralist democracy. *Third World Q.* **1998**, *19*, 771–786. [CrossRef]
7. Haque, M.S. The fate of sustainable development under neo-liberal regimes in developing countries. *Int. Polit. Sci. Rev.* **1999**, *20*, 197–218. [CrossRef]
8. Tisdell, C. Sustainable development: Differing perspectives of ecologists and economists, and relevance to LDCs. *World Dev.* **1988**, *16*, 373–384. [CrossRef]
9. Banerjee, S.B. Who sustains whose development? Sustainable development and the reinvention of nature. *Organ. Stud.* **2003**, *24*, 143–180. [CrossRef]
10. Daly, H.E. Toward some operational principles of sustainable development. *Ecol. Econ.* **1990**, *2*, 1–6. [CrossRef]
11. Daly, H.E. Sustainable Development: From Concept and Theory to Operational Principles. *Popul. Dev. Rev.* **1990**, *16*, 25–43. [CrossRef]
12. Daly, H.; Jacobs, M.; Skolimowski, H. Discussion of Beckerman's Critique of Sustainable Developemnt. *Environ. Values* **1995**, *4*, 49–70. [CrossRef]

13. Littig, B.; Griessler, E. Social Sustainability: A Catchword between Political Pragmatism and Social Theory. *Int. J. Sustain. Dev.* **2005**, *8*, 65–79. [CrossRef]
14. Esquer-Peralta, J.; Velazquez, L.; Munguia, N. Perceptions of core elements for sustainability management systems (SMS). *Manag. Decis.* **2008**, *46*, 1027–1038. [CrossRef]
15. Daly, H.E.; Cobb, J.B.; Cobb, C.W. For the Common Good: Redirecting the Economy Toward Community, the Environment, and A Sustainable Future. Beacon Press: Boston, MA, USA, 1994.
16. Barbanente, A.; Borri, D. Reviewing self-sustainability. *Plurimondi* **2000**, *4*, 5–19.
17. Hill, R.C.; Bowen, P.A. Sustainable construction: Principles and a framework for attainment. *Constr. Manag. Econ.* **1997**, *15*, 223–239. [CrossRef]
18. Mendler, S.; Odell, W. *The HOK Guidebook to Sustainable Design*; John Wiley & Sons: Hoboken, NJ, USA, 2000.
19. Ahern, J. Theories, methods and strategies for sustainable landscape planning. In *From Landscape Research to Landscape Planning: Aspects of Integration, Education and Application*; Springer: Dordrecht, The Netherlands, 2006; pp. 119–131.
20. Brown, B.J.; Hanson, M.E.; Liverman, D.M.; Merideth, R.W., Jr. Global sustainability: Toward definition. *Environ. Manag.* **1987**, *11*, 713–719. [CrossRef]
21. Roseland, M. *Toward Sustainable Communities: Solutions for Citizens and Their Governments*; New Society Publishers: Vancouver, BC, Canada, 2012; Volume 6.
22. Bell, S.; Morse, S. Sustainability Indicators: Measuring the Immeasurable? Earthscan: Abingdon, UK, 2008.
23. Clarke, J. A framework of approaches to sustainable tourism. *J. Sustain. Tour.* **1997**, *5*, 224–233. [CrossRef]
24. Anand, S.; Sen, A. Human development and economic sustainability. *World Dev.* **2000**, *28*, 2029–2049. [CrossRef]
25. Spaargaren, G. Sustainable consumption: A theoretical and environmental policy perspective. *Soc. Nat. Resour.* **2003**, *16*, 687–701. [CrossRef]
26. Lado, A.A.; Boyd, N.G.; Wright, P. A competency-based model of sustainable competitive advantage: Toward a conceptual integration. *J. Manag.* **1992**, *18*, 77–91. [CrossRef]
27. Kates, R.; Clark, W.C.; Hall, J.M.; Jaeger, C.; Lowe, I.; McCarthy, J.J.; Schellnhuber, H.J.; Bolin, B.; Dickson, N.M.; Faucheux, S.; *et al*. Sustainability science. *Science* **2001**, *292*, 641–642. [CrossRef] [PubMed]
28. Venkataraman, B. Education for sustainable development. *Environ. Sci. Policy Sustain. Dev.* **2009**, *51*, 8–10. [CrossRef]
29. Heiskanen, E.; Pantzar, M. Toward Sustainable Consumption: Two New Perspectives. *J. Consum. Policy* **1997**, *20*, 409–442. [CrossRef]
30. Brown, L.R. *Building A Sustainable Society*; W W Norton & Co Inc.: New York, NY, USA, 1981.
31. United Nation. Transforming Our World: The 2030 Agenda for Sustainable Development. Available online: https://sustainabledevelopment.un.org/post2015/transformingourworld (accessed on 3 February 2016).
32. Transforming Our World: The 2030 Agenda for Sustainable Development. Sustainable Development Knowledge Platform. Available online: https://sustainabledevelopment.un.org/ (accessed on 3 February 2016).
33. Leung, Z.; Middleton, D.; Morrison, K. One Health and EcoHealth in Ontario: A qualitative study exploring how holistic and integrative approaches are shaping public health practice in Ontario. *BMC Public Health* **2012**. [CrossRef] [PubMed]
34. Charron, D. Ecohealth Research in Practice. In *Ecohealth Research in Practice*; Charron, D.F., Ed.; Springer: New York, NY, USA, 2012; Volume 1, pp. 255–271.
35. Wilcox, B.A.; Aguirre, A.A.; Daszak, P.; Horwitz, P.; Martens, P.; Parkes, M.; Patz, J.A.; Waltner-Toews, D. EcoHealth: A transdisciplinary imperative for a sustainable future. *Ecohealth* **2004**, *1*, 3–5.
36. Butler, C.D.; Weinstein, P. Global ecology, global health, ecohealth. *Ecohealth* **2011**. [CrossRef] [PubMed]
37. Charron, D.F. Ecosystem Approaches to Health for a Global Sustainability Agenda. *Ecohealth* **2012**, *9*, 256–266. [CrossRef] [PubMed]
38. Wolbring, G. Ecohealth through an ability studies and disability studies lens. In *Ecological Health: Society, Ecology and Health*; Gislason, M.K., Ed.; Emerald: London, UK, 2013; Volume 15, pp. 91–107.
39. Unahalekhaka, A.; Pichpol, D.; Meeyam, T.; Chotinun, S.; Robert, G.; Robert, C. EcoHealth Manual. Available online: https://cgspace.cgiar.org/handle/10568/33566 (accessed on 22 February 2016).
40. Lebel, J. Ecohealth and the Developing World. *EcoHealth* **2004**, *1*, 325–326. [CrossRef]

41. Boischio, A.; Sánchez, A.; Orosz, Z.; Charron, D. Health and sustainable development: Challenges and opportunities of ecosystem approaches in the prevention and control of dengue and Chagas disease. *Cad. Saúde Públ.* **2009**, *25*, S149–S154. [CrossRef]
42. Kingsley, J.; Patrick, R.; Horwitz, P.; Parkes, M.; Jenkins, A.; Massy, C.; Henderson-Wilson, C.; Arabena, K. Exploring Ecosystems and Health by Shifting to a Regional Focus: Perspectives from the Oceania EcoHealth Chapter. *Int. J. Environ. Res. Public Health* **2015**, *12*, 12706–12722. [CrossRef] [PubMed]
43. Colloque EcoHealth, Themes. Available online: https://ecohealth2014.uqam.ca/en/a-propos/themes.html (accessed on 22 February 2016).
44. One Health EcoHealth 2016. Available online: http://oheh2016.org/ (accessed on 22 February 2016).
45. Vliegenthart, R.; van Zoonen, L. Power to the frame: Bringing sociology back to frame analysis. *Eur. J. Commun.* **2011**, *26*, 101–115. [CrossRef]
46. Entman, R.M. Framing: Towards clarification of a fractured paradigm. *McQuail's Read. Mass Commun. Theory* **1993**, *43*, 51–58. [CrossRef]
47. ATLAS-ti 7, ATLAS.ti Scientific Software Development GmbH, Berlin, Germany, 2013.
48. Rapport, D.J.; Singh, A. An ecohealth-based framework for state of environment reporting. *Ecol. Indic.* **2006**, *6*, 409–428. [CrossRef]
49. Yacoob, M.; Hetzler, B.; Langer, R. The Ecohealth System and the Community Engagement Movement in Foundations: A Case Study of Mutual Benefits from Grants Funded by the United Nations Foundation. Natural Resources Forum, Wiley Online Library: Hoboken, NJ, USA, 2004; pp. 133–143.
50. Langlois, E.V.; Campbell, K.; Prieur-Richard, A.-H.; Karesh, W.B.; Daszak, P. Towards a better integration of global health and biodiversity in the new sustainable development goals beyond Rio+ 20. *EcoHealth* **2012**, *9*, 381–385. [CrossRef] [PubMed]
51. Romanelli, C.; Corvalan, C.; Cooper, H.D.; Manga, L.; Maiero, M.; Campbell-Lendrum, D. From Manaus to Maputo: Toward a public health and biodiversity framework. *EcoHealth* **2014**, *11*, 292–299. [CrossRef] [PubMed]
52. Bunch, M.J.; Morrison, K.E.; Parkes, M.W.; Venema, H.D. Promoting health and well-being by managing for social–ecological resilience: The potential of integrating ecohealth and water resources management approaches. *Ecology Society* **2011**, *16*, 6.
53. Lam, S.; Leffley, A.; Cole, D.C. Applying an Ecohealth Perspective in a State of the Environment Report: Experiences of a Local Public Health Unit in Canada. *Int. J. Environ. Res. Public Health* **2014**, *12*, 16–31. [CrossRef] [PubMed]
54. Orozco, F.; Cole, D.C. Development of transdisciplinarity among students placed with a sustainability for health research project. *EcoHealth* **2008**, *5*, 491–503. [CrossRef] [PubMed]
55. Rao, S. Understanding Risk Culture and Developing a'soft'Approach to Risk Assessment Methodologies. In *Environmental Security and Environmental Management: The Role of Risk Assessment*; Springer: Berlin/Heidelberg, Germany, 2006; pp. 201–210.
56. Custer, B.; Koné, B.; Kouassi, E.; Ontiri, E.; Watts, P.; Yi, Z.-F. News from the IAEH. *EcoHealth* **2014**, *11*, 286–289. [CrossRef] [PubMed]
57. Christens, B.; Speer, P.W. Review Essay: Tyranny/Transformation: Power and Paradox in Participatory Development. Available online: http://www.qualitative-research.net/index.php/fqs/article/view/91/190 (accessed on 22 February 2016).
58. Lipchin, C. A Future for the Dead Sea Basin: Options for a more sustainable water management. In *Environmental Security and Environmental Management: The Role of Risk Assessment*; Springer: Berlin/Heidelberg, Germany, 2006; pp. 79–91.
59. Berbés-Blázquez, M.; Oestreicher, J.S.; Mertens, F.; Saint-Charles, J. Ecohealth and resilience thinking: A dialog from experiences in research and practice. *Ecol. Soc.* **2014**, *19*, 24. [CrossRef]
60. Gilioli, G.; Baumgärtner, J. Adaptive ecosocial system sustainability enhancement in Sub-Saharan Africa. *EcoHealth* **2007**, *4*, 428–444. [CrossRef]
61. Harper, S.L.; Edge, V.L.; Cunsolo Willox, A. "Changing Climate, Changing Health, Changing Stories" Profile: Using an EcoHealth Approach to Explore Impacts of Climate Change on Inuit Health. *Ecohealth* **2012**, *9*, 89–101. [CrossRef] [PubMed]

62. Morrison, K.; Prieto, P.A.; Domínguez, A.C.; Waltner-Toews, D.; FitzGibbon, J. Ciguatera fish poisoning in La Habana, Cuba: A study of local social-ecological resilience. *EcoHealth* **2008**, *5*, 346–359. [CrossRef] [PubMed]
63. Harris, N.; Grootjans, J.; Wenham, K. Ecological aging: The settings approach in aged living and care accommodation. *EcoHealth* **2008**, *5*, 196–204. [CrossRef] [PubMed]
64. Mboera, L.E.; Mfinanga, S.G.; Karimuribo, E.D.; Rumisha, S.F.; Sindato, C. The changing landscape of public health in sub-Saharan Africa: Control and prevention of communicable diseases needs rethinking. *Onderstepoort J. Vet. Res.* **2014**, *81*, 1–6. [CrossRef] [PubMed]
65. Parkes, M. Personal Commentaries on "Ecosystems and Human Well-being: Health Synthesis—A Report of the Millennium Ecosystem Assessment". *EcoHealth* **2006**, *3*, 136–140. [CrossRef]
66. Stephens, C.; Parkes, M.W.; Chang, H. Indigenous perspectives on ecosystem sustainability and health. *EcoHealth* **2007**, *4*, 369–370. [CrossRef]
67. Nettleton, C.; Stephens, C.; Bristow, F.; Claro, S.; Hart, T.; McCausland, C.; Mijlof, I. Utz Wachil: Findings from an international study of indigenous perspectives on health and environment. *EcoHealth* **2007**, *4*, 461–471. [CrossRef]
68. Colwell, R.R.; Wilcox, B.A. Water, ecology, and health. *Ecohealth* **2010**, *7*, 151–152. [CrossRef] [PubMed]
69. Saint-Charles, J.; Surette, C.; Parkes, M.W.; Morrison, K.E. Connections for Health, Ecosystems and Society leading to Action and Change. *EcoHealth* **2014**, *11*, 279–280. [CrossRef] [PubMed]
70. Davies, K. Economic Costs of Childhood Diseases and Disabilities Attributable to Environmental Contaminants in Washington State, USA. *EcoHealth* **2006**, *3*, 86–94. [CrossRef]
71. Wernham, A. Inupiat health and proposed Alaskan oil development: Results of the first integrated Health Impact Assessment/Environmental Impact Statement for proposed oil development on Alaska's North Slope. *EcoHealth* **2007**, *4*, 500–513. [CrossRef]
72. Xu, J.; Sharma, R.; Fang, J.; Xu, Y. Critical linkages between land-use transition and human health in the Himalayan region. *Environ. Int.* **2008**, *34*, 239–247. [CrossRef] [PubMed]
73. Pesek, T.; Abramiuk, M.; Garagic, D.; Fini, N.; Meerman, J.; Cal, V. Sustaining plants and people: Traditional Q'eqchi'Maya botanical knowledge and interactive spatial modeling in prioritizing conservation of medicinal plants for culturally relative holistic health promotion. *EcoHealth* **2009**, *6*, 79–90. [CrossRef] [PubMed]
74. Connell, D.J. Sustainable livelihoods and ecosystem health: Exploring methodological relations as a source of synergy. *EcoHealth* **2010**, *7*, 351–360. [CrossRef] [PubMed]
75. Patrick, R.; Capetola, T.; Townsend, M.; Hanna, L. Incorporating sustainability into community-based healthcare practice. *EcoHealth* **2011**, *8*, 277–289. [CrossRef] [PubMed]
76. Asakura, T.; Mallee, H.; Tomokawa, S.; Moji, K.; Kobayashi, J. The ecosystem approach to health is a promising strategy in international development: Lessons from Japan and Laos. *Glob. Health* **2015**, *11*, 1–8. [CrossRef] [PubMed]
77. Crawshaw, L.; Fèvre, S.; Kaesombath, L.; Sivilai, B.; Boulom, S.; Southammavong, F. Lessons from an Integrated Community Health Education Initiative in Rural Laos. *World Dev.* **2014**, *64*, 487–502. [CrossRef]
78. Min, B.; Allen-Scott, L.; Buntain, B. Transdisciplinary research for complex One Health issues: A scoping review of key concepts. *Prev. Vet. Med.* **2013**, *112*, 222–229. [CrossRef] [PubMed]
79. Zinsstag, J. Convergence of ecohealth and one health. *EcoHealth* **2012**, *9*, 371–373. [CrossRef] [PubMed]
80. Patz, J. Launch of the International Association for Ecology and Health at Its First Biennial Conference: Message from the President Elect. *EcoHealth* **2007**, *4*, 6–9. [CrossRef]
81. Hall, D.C.; Le, Q.B. A Basic Strategy to Manage Global Health with Reference to Livestock Production in Asia. *Vet. Med. Int.* **2011**. [CrossRef] [PubMed]
82. Dolan, A.H.; Taylor, M.; Neis, B.; Ommer, R.; Eyles, J.; Schneider, D.; Montevecchi, B. Restructuring and health in Canadian coastal communities. *EcoHealth* **2005**, *2*, 195–208. [CrossRef]
83. Spiegel, S.J.; Veiga, M.M. Building capacity in small-scale mining communities: Health, ecosystem sustainability, and the Global Mercury Project. *EcoHealth* **2005**, *2*, 361–369. [CrossRef]
84. Fillion, M.; Philibert, A.; Mertens, F.; Lemire, M.; Passos, C.J.S.; Frenette, B.; Guimarães, J.R.D.; Mergler, D. Neurotoxic sequelae of mercury exposure: An intervention and follow-up study in the Brazilian Amazon. *Ecohealth* **2011**, *8*, 210–222. [CrossRef] [PubMed]

85. Spiegel, J.; Bennett, S.; Hattersley, L.; Hayden, M.H.; Kittayapong, P.; Nalim, S.; Wang, D.N.C.; Zielinski-Gutiérrez, E.; Gubler, D. Barriers and bridges to prevention and control of dengue: The need for a social-ecological approach. *EcoHealth* **2005**, *2*, 273–290. [CrossRef]
86. Forde, M.; Morrison, K.; Dewailly, E.; Badrie, N.; Robertson, L. Strengthening integrated research and capacity development within the Caribbean region. *BMC Int. Health and Hum. Rights* **2011**. [CrossRef] [PubMed]
87. Zaidi, M.K.; Ganoulis, J. Cooperative network for environmental risk analysis studies: The case of the Middle East region. In *Environmental Security and Environmental Management: The Role of Risk Assessment*; Springer: Berlin, Germany, 2006; pp. 315–320.
88. Stephen, C.; DiCicco, E.; Munk, B. British Columbia's Fish Health Regulatory Framework's Contribution to Sustainability Goals Related to Salmon Aquaculture. *Ecohealth* **2008**, *5*, 472–481. [CrossRef] [PubMed]
89. Hales, S.; Corvalan, C.A. Public Health Emergency on Planet Earth: Insights from the Millennium Ecosystem Assessment. *EcoHealth* **2006**, *3*, 130–135. [CrossRef]
90. Johnston, F.H.; Jacups, S.P.; Vickery, A.J.; Bowman, D.M. Ecohealth and Aboriginal testimony of the nexus between human health and place. *Ecohealth* **2007**, *4*, 489–499. [CrossRef]
91. Ali, R.; Zhao, H. Wuhan, China and Pittsburgh, USA: Urban environmental health past, present, and future. *EcoHealth* **2008**, *5*, 159–166. [CrossRef]
92. Añabieza, M.; Pajaro, M.; Reyes, G.; Tiburcio, F.; Watts, P. Philippine alliance of fisherfolk: Ecohealth practitioners for livelihood and food security. *EcoHealth* **2010**, *7*, 394–399. [CrossRef] [PubMed]
93. Brown, V.A. Principles for EcoHealth Action: Implications of the Health Synthesis Paper, the Millennium Ecosystem Assessment, and the Millennium Development Goals. Workshop Group, EcoHealth ONE, Madison, Wisconsin, October 2006. *EcoHealth* **2007**, *4*, 95–98. [CrossRef]
94. Rapport, D.J. Sustainability science: An ecohealth perspective. *Sustain. Sci.* **2007**, *2*, 77–84. [CrossRef]
95. Kittinger, J.N.; Coontz, K.M.; Yuan, Z.; Han, D.; Zhao, X.; Wilcox, B.A. Toward holistic evaluation and assessment: Linking ecosystems and human well-being for the Three Gorges Dam. *EcoHealth* **2009**, *6*, 601–613. [CrossRef] [PubMed]
96. Bunch, M.J.; Franklin, B.; Morley, D.; Kumaran, T.V.; Suresh, V.M. Research in turbulent environments: Slums in Chennai, India and the impact of the December 2004 Tsunami on an EcoHealth project. *EcoHealth* **2005**, *2*, 150–154. [CrossRef]
97. Parkes, M.W. Diversity, emergence, resilience: Guides for a new generation of ecohealth research and practice. *Ecohealth* **2012**, 1–3. [CrossRef] [PubMed]
98. Rapport, D.J. Response to EcoHealth editorial, Parkes MW (2011) Vol. 8, Issue 2. *EcoHealth* **2012**, *9*, 378–379. [PubMed]
99. Aoyama, M.; Hudson, M.J. No Better Medicine: Health in American Environmental Writing. *EcoHealth* **2014**, *11*, 461–463. [CrossRef] [PubMed]
100. Butler, C.D.; Friel, S. Time to regenerate: Ecosystems and health promotion. *PLoS Med.* **2006**. [CrossRef] [PubMed]
101. Bunch, M.J.; Parkes, M.; Zubrycki, K.; Venema, H.; Hallstrom, L.; Neudorffer, C.; Berbés-Blázquez, M.; Morrison, K. Watershed management and public health: An exploration of the intersection of two fields as reported in the literature from 2000 to 2010. *Environ. Manag.* **2014**, *54*, 240–254. [CrossRef] [PubMed]
102. Forster, P. Ten Years on: Generating Innovative Responses to Avian Influenza. *EcoHealth* **2014**, *11*, 15–21. [CrossRef] [PubMed]
103. Nguyen, V.; Nguyen-Viet, H.; Pham-Duc, P.; Stephen, C.; McEwen, S.A. Identifying the impediments and enablers of ecohealth for a case study on health and environmental sanitation in Hà Nam, Vietnam. *Infect. Dis. Poverty* **2014**, *3*, 36. [CrossRef] [PubMed]
104. Yee, S.H.; Bradley, P.; Fisher, W.S.; Perreault, S.D.; Quackenboss, J.; Johnson, E.D.; Bousquin, J.; Murphy, P.A. Integrating human health and environmental health into the DPSIR framework: A tool to identify research opportunities for sustainable and healthy communities. *EcoHealth* **2012**, *9*, 411–426. [CrossRef] [PubMed]
105. Aguirre, A.; Wilcox, B.A. EcoHealth: Envisioning and creating a truly global transdiscipline. *Ecohealth* **2008**, *5*, 238–239. [CrossRef] [PubMed]
106. Kaneshiro, K.Y.; Chinn, P.; Duin, K.N.; Hood, A.P.; Maly, K.; Wilcox, B.A. Hawaii's mountain-to-sea ecosystems: Social-ecological microcosms for sustainability science and practice. *EcoHealth* **2005**, *2*, 349–360. [CrossRef]

107. Burns, T.E.; Wade, J.; Stephen, C.; Toews, L. A Scoping Analysis of Peer-Reviewed Literature About Linkages Between Aquaculture and Determinants of Human Health. *EcoHealth* **2014**, *11*, 227–240. [CrossRef] [PubMed]
108. Fowler, C.W. Sustainability, health, and the human population. *EcoHealth* **2005**, *2*, 58–69. [CrossRef]
109. Mackay, R.; Wolbring, G. Sustainable consumption of healthcare: Linking sustainable consumption with sustainable healthcare and health consumer discourses. In Proceedings of the 3rd World Sustainability Forum, Basel, Switzerland, 1–30 November 2013.
110. Wolbring, G.; Mackay, R.; Rybchinski, T.; Noga, J. Disabled People and the Post-2015 Development Goal Agenda through a Disability Studies Lens. *Sustainability* **2013**, *5*, 4152–4182. [CrossRef]
111. Li, Y.-Y.; Dong, S.-K.; Wen, L.; Wang, X.-X.; Wu, Y. Three-dimensional framework of vigor, organization, and resilience (vor) for assessing rangeland health: A case study from the alpine meadow of the qinghai-tibetan plateau, China. *EcoHealth* **2013**, *10*, 423–433. [CrossRef] [PubMed]
112. Von Schirnding, Y. WHO World Health Organization Health in Sustainable Development Planning: The Role of Indicators. Available online: http://www.who.int/wssd/resources/indicators/en/ (accessed on 3 February 2016).
113. Saint-Charles, J.; Webb, J.; Sanchez, A.; Mallee, H.; de Joode, B.V.W.; Nguyen-Viet, H. Ecohealth as a field: Looking forward. *Ecohealth* **2014**, *11*, 300–307. [CrossRef] [PubMed]
114. Vallance, S.; Perkins, H.C.; Dixon, J.E. What is social sustainability? A clarification of concepts. *Geoforum* **2011**, *42*, 342–348. [CrossRef]
115. Koren, H.; Butler, C. The interconnection between the built environment ecology and health. In *Environmental Security and Environmental Management: The Role of Risk Assessment*; Springer: Berlin, Germany, 2006; pp. 109–125.
116. Fang, J.; Wu, X.; Xu, J.; Yang, X.; Song, X.; Wang, G.; Yan, M.; Yan, M.; Wang, D. Water management challenges in the context of agricultural intensification and endemic fluorosis: The case of Yuanmou County. *Ecohealth* **2011**, *8*, 444–455. [CrossRef] [PubMed]