The victims of unsustainability: A challenge to Sustainable Development Goals

Abstract

Environmental unsustainability is due to both structural features and historically specific characteristics of industrial capitalism resulting in specific patterns of production and consumption, as well as population growth. Sustainability literature criticizes the established corporate and political power hegemonies, interested in maintaining economic growth, as well as inability or unwillingness of citizen-consumers to counteract these hegemonic tendencies. Currently, official policies are still targeted at social and economic development as a panacea for unsustainability challenges. Renewed accent on social and economic objectives are outlined by a set of Sustainable Development Goals (SDG) that include fighting poverty, promoting better health, reducing mortality, and stimulating equitable economic growth. This article will examine the underlying morality of sustainability discourse in relation to 'victims of unsustainability' outside of socio-economic discourse. The achievement of SDG goals, as will be further elaborated on in this article, is unlikely to lead to greater social and economic equality, but to continuous economic as well as population growth that has caused environmental problems in the first place, and to the further objectification of environment and its elements. This article argues that an invocation of ethical duty toward the environment and its elements is required in order to move beyond unsustainability. An ecocentric ethical approach to unsustainability can effectively address the shortcomings of the mainstream sustainability discourse that is mainly anthropocentric and therefore fails to identify the correct locus of unsustainability.

Keywords: anthropocentrism; ecological justice; Sustainable Development Goals (SDG)

Introduction

From the promoters of sustainable development we learn that sustainability can be effectively driven by individuals, institutions and governments that seek to effectively combine social, economic and ecological objectives (WCED 1987; UNEP 2011, 2014; UN 2015).

This promotion is supported by the belief in ecological modernization, green economy, technological development, and economic welfare will all contribute to the more sustainable products and technologies (e.g. WCED 1987; UNEP 2011).

Despite this belief, empirical evidence from 'rich' countries failing to address even the minimal requirements targeted at counteracting environmental sustainability challenges (e.g. Kopnina 2014a). The view that the advance of industrialism can be equated with *human* development or 'progress', and that human destiny is intrinsically linked to a future defined by science and capital, is dubious as evidenced by many military and industrial disasters, as well as climate change (Kidner 2014). These challenges range from biodiversity loss to pollution and controlling the greenhouse gas (GHG) emissions that cause climate change, stopping the massive extinction of species, and bringing our consumption level to the sustainable standards (e.g. Corner 2014; Klein 2015; Washington 2015). In the case of fossil fuel use that causes climate change, for example, it appears that economic wealth does not automatically lead to choices for ecologically benign forms of renewable energy (e.g. Kopnina 2014a; The Economist 2015). Due to vested interests (or sometimes, disinterests, or ignorance) of a multitude of stakeholders and 'consumers', sustainability becomes nothing more than 'sustainabable' (Engelman 2013).

Yet, instead of tackling this conundrum, renewed accent on social and economic objectives are outlined by a set of Sustainable Development Goals (SDG), agreed upon at the <u>United Nations Conference on</u> <u>Sustainable Development</u>, also known as Rio+20 or Earth Summit 2012 (UNEP 2011; 2014; UNEP-UNDP 2011; UN 2015). These goals, incorporated into the Millennium Development Goals (MDGs) in 2015, include objectives of fighting poverty, promoting better health, and reducing mortality (Open Working Group 2015). Other aims address concrete sustainability challenges, including climate change and biodiversity loss. One of the central concepts outlined in SDG's that run throughout all other aims is 'sustained and inclusive economic growth' (UN 2015).

The critics have observed, however, that 'sustainable economic growth' is an oxymoron (e.g. Bartlett 1994), and is likely to exacerbate environmental crisis (e.g. Moran 2006; Hansen and Wethal 2014; Kopnina and Blewitt 2014; Washington 2015). Just as sustainable development, especially in a sense of 'sustaining growth', promoting economic development is not likely to address social inequalities (Rees 2010; Wijkman and <u>Rockström</u> 2012; Fletcher et al 2014; Washington 2015; Black 2016). In fact, economic development tends to exacerbate ecological injustice, privileging human welfare over concerns with other species (Crist 2012; Kopnina 2012a, 2012b, 2013; 2014b; Cafaro and Primack 2014; McKenzie et al 2015; Shoreman-Ouimet and Kopnina 2015, 2016; Strang 2016). As will be further elaborated on in this article, SDG goals are unlikely to lead to greater social equality and economic prosperity, but to a spread of unsustainable production and consumption to all corners of the globe,

continuous economic as well as population growth that has caused environmental problems in the first place, and non-abating commodification and objectification of environment and its elements.

Taking this critique into account, this article will address the underlying morality of unsustainability and the 'victims of unsustainability' outside of the conventional hegemonic discourse that supports socioeconomic objectives to the exclusion of ecological concerns. This article will address these main interconnected questions: Who are the main victims of unsustainability and can the SDG goals address their grievances? What alternatives for sustainable development can be conceived?

Anthropocentrically-motivated protection

Some steps to reduce the negative effects of climate change and the loss of biodiversity have been taken in the decade leading to the SDGs. There is growing evidence that market-based approaches may be particularly effective at incentivizing practices that ensure forests are managed to deliver highest and best values to social stakeholders (UNEP 2011, 2014; UNEP-UNDP 2011; UN 2015). However, there are also weaknesses in the market-based approaches, the full extent of which is not well understood.

As Eric Katz (1999) has reflected, anthropocentrically motivated protection of nature, where one's own interests are seen concomitant with nature protection and preservation can *sometimes* make a positive contribution to the environmental restoration. However, the anthropocentrically motivated protection typically occurs *only* in situations dealing with human-made or the human-connected environment, such as in cases of urban air pollution, or indeed climate change that can cause severe droughts or floods and thus threatens to affect human livelihood. While one can argue that even in these instances anthropocentric motivation is not enough – as we have discussed in the case of climate change action–self-interest has been a strong motivating factor in a number of environmental commitments (e.g. Stern et al 1995; Beckmann et al 1997). Yet in cases of protection of wilderness and the preservation of endangered species anthropocentrically inclined policies fall short of effectiveness (Katz 1999).

Empirically, it appears from examining the evidence of rising numbers of endangered species and recent extinctions humans do just fine, for instance, without Sumatran tigers and white rhinoceros. While there are arguments that we need *all* biodiversity to create a 'safe operating space for humanity' (<u>Rockström</u> et al 2009), thus creating it appears that humans are reasonably well sustained by planted monocultures, synthetic medicines, and electronic entertainment. Indeed, in the words of Eileen Crist (2012: 140), we live in a world that is 'propped by the strengths advanced industrial civilization has at its disposal: the

rational-instrumental means of technical management, heightened efficiency, and technological breakthrough'.

The points of criticism of commodification, or economic capture approaches include social justice and ecological justice (justice between species) objections, as economic capture approach is blamed for 1. promoting social injustice as the hegemonic elites are still controlling an profiting from commodification while the vulnerable communities are merely allowed to use the (free) ecosystem services (Igoe and Brockington 2007; West and Brockington 2012) and 2. because at its core commodification demotes nature and nonhuman species to commodities (Sullivan 2009; Crist 2012; Cafaro and Primack 2014; Shoreman-Ouimet and Kopnina 2016).

The third dimension of criticism can be added – apparent failure of commodification to actually counteract anything from climate change to biodiversity loss. There is enough evidence in Intergovernmental Panel for Climate Change (IPCC) 5th assessment report (http://www.ipcc.ch/) that the earth's climate crisis has not abated as carbon emissions have not been stopped but rather increased (Agard et al 2014; <u>Hansen and Wethal</u> 2014).

In regard to biodiversity loss, none of the CBD targets for 2010 were met and species and ecosystems are declining more rapidly than ever (Ingram et al 2012). While the benefits ecosystems provide humanity and are essential for human well-being and survival well-acknowledged (UNEP 2011, 2014), yet at least 60% of ecosystem services are being degraded or used unsustainably (MEA 2005). And while the loss of biodiversity is seen as threatening to human welfare as the importance of biodiversity is seen as providing the multitude of functions it serves for humans, from food to filtering waste (e.g. Elredge 1998), extinction threat has only increased in the last decades. As articulated by Veronica Strang (2016), abstract concepts of justice tend to subsume the reality that 'the environment' and its ecosystems are composed of thousands of individual species, ranging from the smallest microbial organisms (vital to healthy soil and to aquatic balance) to the largest creatures such as whales and elephants. But human destruction is undiscriminating. According to the International Union for the Conservation of Nature (IUCN), 16,928 plant and animal species are threatened with extinction. This may be a gross underestimate because less than 3% of the world's 1.9 million described species have been assessed for the IUCN Red List of Threatened Species (IUCN https://cmsdata.iucn.org/downloads/species extinction 05 2007.pdf).

The framing of the environment as a 'common good' has become increasingly common in international environmental governance. The economic cost-benefit worldview is represented by international political organizations such as the United Nations Environmental Program (UNEP) that promotes a number of economic capture approach schemes such as Payments for Ecosystem Services (PES) (http://www.unep.org/pdf/PaymentsForEcosystemServices_en.pdf); Reducing Emissions from Deforestation and Forest Degradation (REDD+) (http://www.un-redd.org/); and The Economics of Ecosystems and Biodiversity (TEEB) (<u>http://www.teebweb.org/</u>).

REDD+ is a UN-backed program which seeks '...to create a financial value for the carbon stored in forests, offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development. REDD+ includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks' (<u>http://www.un-redd.org/Home/tabid/565/Default.aspx</u>). One of the REDD+ initiatives is reforesting, defined as allowing natural regrowth of brush and woodland, restoring wetlands, and allowing grasslands to recover from overgrazing could take 10-20% of the greenhouse gases (GHGs) out of the air (Agard et al 2014). It was noted, however, that REDD+ and PES impacts on biodiversity through leakage (*i.e.* displacement of activities from one site to another) could lead to potential negative impacts on biodiversity offsite (Ingram et al 2012).

Similar to PES and REDD+, TEEB is focused on mainstreaming the values of biodiversity and ecosystem services into decision-making, as well as profiting from environmental services (http://www.teebweb.org/). These programs, targeted at blotting up GHGs, include schemes like vegetation recovery and strict conservation measures, in order to benefit humanity. Yet, when the economic interests are put before protection of the environment, economic development objectives are likely to trump over ecological concerns. Areas of particular concern in this regard include "species without utilitarian or economic value; ecological processes that do not directly benefit people; and critical ecological functions that may be undermined in attempts to optimize a target service" (Ingram et al 2012). The deforestation has not abated not only due to the corruption that allows illegal logging but also because of concessions for powerful timber companies, and also due to the opinion that economic interests of development should come first (Lang 2015). In fact, deforestation is reaching previously unseen heights in many areas. As with any natural resource management based approach, the benefits and risks of programs like REDD+ and PES for biodiversity conservation require detailed tradeoffs analysis aimed at enhancing one or several ecosystem services – an analysis which is not often in evidence

(Ingram et al 2012). More generally, is anthropocentrically motivated protection of environment enough to guarantee the sustainable future of this planet?

For(saking) nature?

The failure to address environmental degradation is much greater in cases where non-human species that are not instrumental to human survival or welfare are threatened. While entire habitats, containing multiple species, may be saved for the sake of humanity, such as forests protected by REDD+, the question remains: What is a forest exactly? Is it just a collection of vegetation that may also consist of planted monocultures, as in the case of soya, or a vital ecosystem that provides habitat for animals and rich plant life – not to mention sustainable livelihoods for countless small communities? A lot hinges on the question of how a forest is perceived and valued.

The part played by forests and trees was also acknowledged at the Rio+20 summit which led to the SDG's, as well as in a specific stand-alone thematic section, where delegates emphasized " social, economic and environmental benefits of forests to people and the contributions of sustainable forest management to the themes and objective of the Conference" (UN 2014). These benefits included 'production and processing of wood and non-wood products' (Mayers 2014). This implies as Rainforest Rescue (2015), a conservation advocacy group reflects, "if a plantation company destroys healthy grassland or grabs land from small farmers to plant a vast green desert of rubber trees, it actually counts as "afforestation". Multiple species are then doomed to exile or even extinction, as long as ecosystem services or natural resources or other human welfare benefits are successfully and efficiently extracted".

By the same token, the concept of "planetary boundaries" (Rockström et al 2009) in the context of unsustainability is often framed. Johan Rockström and colleagues proposed a framework of 'planetary boundaries' designed to define a 'safe operating space for humanity'. While the concept of "planetary boundaries" is a valuable idea in drawing public attention to breaching limits, it is dangerously anthropocentric in strongly suggesting that all we need to do is stay just outside the borders of those boundaries, in our use of (and impact on) the biosphere, in order to be 'sustainable' (Washington 2015).

While the planetary boundaries of "Land Use" and "Freshwater" appear to be infinitely malleable as they can be 'effectively managed' for the benefit of humanity, as far as biodiversity is concerned these boundaries have long been surpassed (Crist 2012). While land and water are still widely 'available' although degraded or polluted (to humans) actually testify to wild habitat destruction which in itself is the leading cause of biodiversity loss (Fitzgerald 2015). Freshwater and agricultural lands are in fact

'artifactual' system or at best a hybrid of natural and 'artifactual'. Such a system is essentially humanbased so that human interests and concerns dominate any evaluation (Katz 1999:388). The SDGs also promote 'sustainable industrialization' and 'sustainable use of land'. Sustainable USE is again a highly anthropocentric term. As critical observers have reflected, unless fundamental issues conserving production and consumption, as well as population growth are addressed, the practice is likely to be ABUSE of ecosystems (Crist 2012; Cafaro and Primack 2014). Besides, USING anything without giving back is ethically problematic – at least as it has been presently framed in the 'enlightened' academic and politically correct public discourse (e.g. using slaves, using women, etc.). The 15th goal of SDG to 'halt biodiversity loss', among other objectives formulated within the same aim in terms of 'management' and 'sustainable use' (https://sustainabledevelopment.un.org/sdgsproposal) becomes all but impossible.

The marginalization of environmental justice and biospheric egalitarianism

It has been argued that one of the reasons for the failure of commodification programs to protect nature is that they tend to be explicitly anthropocentric – placing profit and social objectives before environmental protection (Sullivan 2009; Crist 2012; Shoreman-Ouimet and Kopnina 2016). The utilitarian approach to nature preservation exposes limitations to using ecosystem services approaches for achieving certain conservation targets, such as the protection of rare species, endemic species, and species or habitats without utilitarian value (Ingram et al 2012). The underlying morality of utilitarianism, exemplified by the explicit use of 'resource' and 'services' rhetoric of the SDGs, underlines the exclusive focus on social and economic equity at the expense of ecological justice, or justice between species (Gleeson and Low 1999; Kopnina 2014b).

In a telling example of this tendency an economist Paul Collier (in Lee 2010) argues that the only ethical responsibility and only rights lie between present human communities and future human generations: "Sometimes, in poor societies, it is very important to burn down nature and convert it into more productive assets and hand these on. This is the ethical imperative – that's what stewardship is. Using natural assets productively, creating more value and passing them on, is how we will reduce poverty. But in other cases, the same thought experiment will come up with a different answer – the future may say you are proposing to leave us a nasty climate and we will be awash in man-made assets…" (Collier in Lee 2010).

In this analysis, nature, according to critical policy analysts, Wijkman and <u>Rockström</u> (2012) are left bankrupt. Also, while claiming the high ground of 'helping the poor', proponents of economic equity-at-

all costs avoid a thorny moral question as to whether anyone, advantaged or disadvantaged, has the right to prioritize their own interests to the extent that those of the non-human is deemed expendable (Strang 2016).

Indeed, today, 'while the unspoken conflict between the wild and the tame structures our behavior and feelings in ways that are generally denied and rationalized, we have even less aware that the industrial system's takeover of the natural world shapes our theoretical and conceptual views' (Kidner 2014). The 'natural' is either physically or contextually erased or made to 'work' for humanity. As Jean-Christophe Vié, Deputy Head of IUCN's Species Programme has contested, it is 'time to recognize that nature is the largest company on Earth working for the benefit of 100 percent of humankind – and it's doing it for free' (quoted in Sullivan 2009: 2).

Morally, more troubling than 'society's potential ability to technologically fix or muddle through problems of its own making is people's apparent willingness to live in an ecologically devastated world and to tolerate dead zones, endocrine disruptors, domestic animal torture (aka CAFOs), and unnatural weather as unavoidable concomitants of modern living' (Crist 2012:149). While it is possible that rather than the apocalyptic planetary collapse in which humans suffer the greatest brunt of their own short-sightedness, a new 'civilization' might be 'developed' and even made 'sustainable'. In this 'Anthropocene park' scenario (Kopnina 2014c) some form of human flourishing might be physically possible, with a 'sustainable' society 'established upon a thoroughly denatured planet' (Crist 2012).

'Yet, even if such a society can be physically sustained for some time, the cost to all other life on this planet, and the moral impact of this sacrifice, still needs to be recognized: 'What is deeply repugnant about such a civilization is not its potential for self-annihilation, but its totalitarian conversion of the natural world into a domain of resources to serve a human supremacist way of life, and the consequent destruction of all the intrinsic wealth of its natural places, beings, and elements' (Crist 2012:149).

Indeed, many species that go extinct do so without so much as a sigh from human beings as these species survival was NOT contingent upon human welfare. Biodiversity crises and extinction are not included in SDG objectives other than through the concept of services or resources. This is particularly worrying from an ecocentric point of view. Within the ecocentric position, there is no basis for assuming that humans represent the paragon of evolution with rights superseding or negating those of other life forms which are considered to have inherent value in their own right (Beckmann et al 1997). In this sense, moral ecocentrism is *necessary* if the interests of nonhumans are to be protected outside of utilitarian interests (Shoreman-Ouimet and Kopnina 2016). Thus, in order to achieve sustainability, an invocation of ethical duty toward the environment is required.

Commonly, environmental justice refers to the developed and developing countries' or different social groups' within one country's unequal exposure to environmental risks and benefits (Gleeson and Low 1999). In some instances, environmental justice includes ecological justice or biospheric egalitarianism, which refers to justice between human and non-human species (Kopnina 2014b). It is the former type of justice that the SDG's are mostly concerned with.

Yet, the ethical concern for the lives and health of *all* humans implied by the SDGs as the most commonsense moral basis is unprecedented in human history, which, in anthropological terms, exhibits no cultural or historical precedent for this global (at least in rhetoric) all-embracing humanitarianism (Brown 2000). Rather, concern with human lives and welfare has its roots in the Western Enlightenment and can be seen as anomalous in cross-cultural perspective. This individualism tradition coincides with the Christian reverence of every human life, or what the Monty Python, the British comedians' has summed up as: 'Every sperm is sacred'. (https://www.youtube.com/watch?v=fUspLVStPbk) conviction.

What is also historically and culturally anomalous is the apparent disregard for natural systems and elements outside of their instrumental utility. Numerous anthropological examples show that while not necessarily inherently ecocentric, traditional societies tended to have a closer connection to nature than members of our industrial society (Black 2010; Kidner 2014; Kopnina 2015; Shoreman-Kopnina 2015, 2016). Indeed, as the UN's proposal text itself states: 'Planet Earth and its ecosystems are our home and that "Mother Earth" is a common expression in a number of countries and regions' (Open Working Group Proposal 2015). Regrettably, this recognition gets all but lost in a document that promotes 'sustained, and inclusive economic growth' which, from the ecological justice point of view, leaves little or nothing of the resources of "Mother Earth" for present and future generations of millions of non-human species.

In many instances across the globe, extinction due to habitat loss threatens both 'iconic' species (Fitzgerald 2015) such as elephants, gorillas, pandas, tigers, and lions, and even to a greater degree the less known species. For example, often overlooked in the shadow of its larger cousin, the tiger, the fishing cat in India is rapidly losing its habitat due to draining and polluting marshland and clearing the mangrove forests it needs for survival. Poachers hunt the cats with relative impunity while local officials seem oblivious to their endangered status (https://www.rainforest-rescue.org/petitions/1014/india-stop-fishing-cat-poaching-now). Ajith Kumar of India's National Centre for Biological Sciences (NCBS) warns: "If killing continues like this, the species would become extinct very soon."

(http://smallwildcats.com/south-asias-forgotten-wildcat-needs-our-help/). But even the iconic or so-called flagship species, for which conservationists would appear to more easily win public support and

recognition (Veríssimo *et al.* 2014). Biodiversity is diminishing, by some estimates, and it is likely that up to two-thirds of existing terrestrial species may be extinct by the end of this century (Kolbert 2014). For those who are unable to participate in or profit from the SDGs, non-human species it seems that some animals are much more equal than others.

Simultaneously with commodifying living systems, the SDG's seem to exclude considerations of crucial drivers of unsustainability. The underlying causes of unsustainability- intensification of production/consumption and population growth are not explicitly mentioned in the SDGs.

Population and environment

Thus, the main victim of unsustainability is non-human nature. Concerns for poor people, slaves, and women have become mainstream in sustainability thinking, yet a concern for non-humans seem to have diminished

"Project Human Takeover" has proceeded acre by acre, island by island, region by region, and continent by continent, reaching its current global apogee with the final loss of wild places and the corollary sixth mass extinction underway. What the near future heralds, if we stay on the present trajectory, is the sealing of this nonhuman genocide by means of the Earth being <u>put to</u> work, 24/7, to serve a master, populous race. The proverbial water will be squeezed out of stone, metaphorically and literally, not only to bring people bread but circuses too' (Crist 2012:140).

The ethical side of this "Project Human Takeover" leads to the question of another important obstacle to sustainability caused by the improvements in medical technologies and material conditions promoted by the SDG's- human population growth. Due to the established power hegemonies (in particular that of corporate and political elites interested in maintaining the ever-expanding markets, ever-expanding workforce, ever-expanding consumption under the banner of continuous economic growth), political leaders seem equally unwilling to address population growth (Weeden and Palomba 2012; Weisman 2013). Indeed, population is often presented as a good thing (Blowfield 2013), as *The Economist* journal illustrates by explaining that "demographic dividend" (the economic boost that comes when the size of the labor force rises relative to the rest of the population) helps to create richer societies with more extensive social services (The Economist 2013:47). Indeed, the desire to create richer societies and human ingenuity in technically fixing some problems of its own making leads one to reflect upon the moral consequences of environmental degradation beyond conventional SDGs.

One of the aims of SDG is to reduce childhood and maternal mortality – which certainly is an admirable aim. Yet, such an aim does not consider the long-term effects of population growth. In the *Our Common Future* (UN 1987) formulation, in the developing world 'improvements in medicine and public health have led to a sharp drop in mortality rates and have accelerated population growth rates to unprecedented

levels. But fertility rates remain high; much human potential remains unrealized, and economic development is stalled. Agricultural intensification can go some way towards restoring a balance between food production and population, but there are limits beyond which intensification cannot go.'

It is empirically impossible to have enough resources to 'feed' all people presently alive on this planet if everybody was living like an average American (e.g. Bartlett 1994; Rees 2010; Washington 2015). Indeed, returning to the UN's (1987) formulation, 'An additional person in an industrial country consumes far more and places far greater pressure on natural resources than an additional person in the Third World'. Also, 'threats to the sustainable use of resources come as much from inequalities in people's access to resources and from the ways in which they use them as from the sheer numbers of people' (UN 1987). Yet, paradoxically, 'equitable economic growth' in the SDG's seems to push precisely for *more* unsustainable consumption, without considering population growth as a variable that makes the possibility of fair redistribution and availability of resources for everybody all but impossible.

The UN (2014b) report takes a somewhat contradictory attitude to population and environment. On the one hand: "A major driver of the overall increase in raw material extraction and use is population numbers. The world's, and each country's, material use is tightly coupled to the number of inhabitants." On the other hand: "From another perspective, metabolic rates can be seen as the 'material footprint'.... These metabolic rates are more than one order of magnitude different for different countries...While global resource use has increased eightfold during the course of the 20th century... average resource use per capita merely doubled." Further, it is suggested that resource use and population density may in fact actually be negatively correlated, stating: "It appears that densely populated areas and regions, for the same standard of living and material comfort, need fewer resources per capita [than less densely populated areas]" (UNEP 2014).

While outside of SDG's the UN has warned that world population, has reached a stage where the amount of resources needed to sustain it exceeds what is available, in the case of SDG's UN seems to exhibit a case of cognitive dissonance. It is not empirically proven that all countries follow the low mortality - low fertility progression, as demographic transition theory assumes (Wijkman and <u>Rockström</u> 2012). The average number of children in Niger is 7 per woman, despite lower mortality rates (http://kff.org/global-indicator/total-fertility-rate/).

Some academic observers have argued that population displaces attention from systemic issues within the political economy of development, namely, the futility of pursuing sustainable development within the context of neoliberal capitalism that characteristically exacerbates both economic inequality and

environmental degradation (Fletcher et al 2014). This is however only partially true. Indeed, neoliberal capitalism and sustainable development, as currently conceived, does little to address the inequalities. What complicates the matter is that population question is inextricably intertwined with a number of very sensitive political and ideological concerns, as well as ethics that precludes the very possibility of discussing population growth as a sustainability challenge (Wijkman and <u>Rockström</u> 2012).

According to Smail (2003:297), chief among these political and ideological concerns are: 'matters pertaining to the enhancement of gender equity; the educational, economic, and political empowerment of women; ongoing controversies surrounding family planning, birth control, and abortion; problems of development and modernization; differential access to resources and/or inequities in their distribution; various forms of pollution and environmental degradation; the implementation of effective public health measures to counteract the consequences of endemic poverty, malnutrition, and infectious disease; the apparent growth of nationalism, ethnic/religious tensions, and more virulent forms of terrorism; sporadic (military) attempts to expand or redefine national borders; and various problems emanating from increased levels of transnational migration... and the growing number of political/environmental refugees'. What is essential though, as Smail continues, is that short term means not be confused with longer-term ends: 'Put another way, the human species must be very careful not to lose sight of the overarching and exploding demographic "forest" in the midst of legitimate and deeply felt concerns about particular political/ideological "trees" (Ibid 2003:297).

This complexity certainly explains some of the difficulty in addressing the population issue. Yet, denying that population growth is one of the major drivers of unsustainability is simply self-defeating (Engelman 2013; Washington 2015). After all, unless one assumes that the poor do not have a 'right' to escape poverty, and do not migrate, their carbon footprint is negligible. But this is obviously not the ideal of equality and freedom that those who deny overpopulation as a problem profess. Since all human beings on this earth have a right to a decent living, and since – at present – no sustainable system of production and consumption is devised, having over 8 billion people on earth is not going to help long term survival and welfare of future generations (Wijkman and <u>Rockström</u> 2012). It does, however, serve economic interests– the greater population, the bigger markets (thus possibility of expansion of market away from the already saturated 'rich' countries), and the bigger, once again, economic growth (Blowfield 2013).

Sustainable growth or sustaining growth?

As the UN (2015) states, inequality can be a barrier for 'sustained economic growth' (including international trade, international financial system, and external debt sustainability), infrastructure development and industrialization. Thus, there is possibly a not so well-hidden agenda driving the 'fight against inequality' – which is *not* social altruism but economic greed.

In the present formulation of SDG's the wide-spread concern about poverty is accepted as 'noble'. In a critical perspective, addressing poverty without treating the cause of it (the current capitalist industrial system of production that creates inequalities, as well as population growth) is gravely misguided (Black 2010; Zizek 2010; <u>Hansen and Wethal</u> 2014). In this critical perspective, poverty is the SYMPTOM of economic growth imperative and high population growth, not their cause (Washington 2015).

Having everybody lifted out of poverty without radically changing the system of global industrial capitalist production results in more consumption and the greater crisis of resources (Washington 2015). 'Plugging' everybody into the global economy will only exacerbate present challenges (Rees 2010). Thus, a deeper and perhaps more radical understanding and ethical analysis are needed, where the root causes, not symptoms of poverty should be treated (Zizek 2010; <u>Hansen and Wethal</u> 2014).

Since sustaining (keeping constant) something dynamic (such as growth) is a contradiction in terms and indeed a cause of most unsustainability challenges (<u>Washington 2015</u>), sustaining unsustainability (Blüdhorn 2007) at the cost of nature becomes a norm. As Paul Ekins (1991) has noted, a *sustainable* 'consumer society' is an oxymoron and certainly not something that can be – or should be - sustained in the long term. While the countries of the global North or West are still driving global environmental degradation, particularly if measured in per capita terms or from a consumption perspective, the developing countries' economies are swiftly catching up (<u>Rees 2010; Hansen and Wethal</u> 2014).

The aspiring 'emerging economies' do not seem to be fostering alternative environmentally benign development paths. Following outwardly admirable SDG's objectives, growth strategies pursued in developing countries do in fact allow – and stimulate - economic growth taking the driver's seat, with the 'catch-up' with the rich countries being the overriding goal (Hansen and Wethal 2014). As Washington (2015:36) has noted, sustainability should not be allowed to be high-jacked to justify further 'business-as-usual': "If we are to demystify sustainability, we have to be on the same page and speak of the same meaning. In a finite world, we need to accept once and for all that sustainability *cannot* be about further growth. This challenge remains critical, though still denied". In relation to climate change, Naomi Klein

(2015) has commented: "Our current economic system is both fueling the climate crisis and actively preventing us from taking the necessary actions to avert it." If the rhetoric of economic sustainability persists, this will result in nothing more than helping to 'sustain the unsustainable' (Blüdhorn 2007). Stopping climate change by halting the use of fossil fuels is far more effective in the long term than the politics of 'resilience' and 'adaptation', the terms used by the SDG's, as they seem to imply doing business as usual and adapting to negative consequences.

In an equal measure, while the worthy aim of social equality and economic equity needs to be supported, a more radical re-orientation of practical priorities and a more inclusive ethical concern for the environment is needed. Loaded ethical questions need to be considered first. If the SDG's propose that the poor need to earn (and logically, consume more), do the rich need to consume less? Indeed, the redistribution of wealth between the 99% of the less prosperous population, hinted upon by the members of the Occupy movement, could then guarantee that the total global natural resource pie stays the same (which is conditional halting population growth). Yet, no such revolution is likely to occur (and judging from the lessons of the Russian revolution, it might be a good thing that it does not). As it is, consumption in the rich countries is far from abating and poor countries are all too happy to emanate this 'progress' without serious reflection of what this means for the planet in the long term (Hansen and Wethal 2014).

As it is, the SDG's offer no alternative to the present state of poverty and inequality, other than treating them as symptoms, without asking deeper questions beyond conventional slogans of justice and equity. Below, a number of recommendations are highlighted in relation to human and non-human victims of unsustainability.

The ways forward: Recommendations

First, in terms of production and consumption, what is needed is a radical re-orientation of human industry away from those systems that support 'sustaining unsustainability' (Blüdhorn 2007) and 'sutainababble' (Engelman 2013). This includes attempts to employ eco-efficiency, adaptation, and resilience or other conventional measures that simply put delay the inevitable crisis without addressing the root causes of unsustainability. This orientation calls for adherence to the radical transformative frameworks, such as the Cradle to Cradle (McDonough and Braungart 2002) and circular economy (Ellen MacArthur Foundation). These frameworks promise to reach beyond conventional sustainability which basically makes a bad system last longer by making it more efficient (for example, by 'saving' electricity using less fossil fuel) (e.g. McDonough and Braungart 2002; Kopnina and Blewitt 2014). By contrast, these circular frameworks instruct us on how to design human industries in a way that does not harm the

planet (for example, by relying on wind and solar energy). The distinction between "restoration" in a sense of striving for "good growth" (as in the case of natural growth of trees) is very different from the economic growth that is continuously emphasized in the SDGs.

Second, population growth needs to be addressed. Indeed, there is ample evidence that the key factor in lowering population is the higher rates of education and women's empowerment (Weeden and Palomba 2012; Weisman 2013). Yet, if population growth and economic growth are continued to be seen as a 'good thing' (e.g. Blowfield 2013), and as long as international organizations seem to be internally conflicted about the issue, not much progress can be expected. The insistence of the UN (1987) that 'all should keep in mind that sustainable economic growth and equitable access to resources are two of the more certain routes towards lower fertility rates' without considering how economic growth has already undermined the planetary capacity to sustain even current population, seems very short-sighted. The singling out of economic inequality as a root cause of unsustainability is equally short-sighted when the way of production and the population are left constant or increasing. In the words of Smail (2003:295) as an essential first step to address the population, we need to

'establish a difficult but very necessary balance between individual reproductive rights and collective reproductive responsibilities. That is, all of the world's peoples must come fully to terms with the fact that a person's (biological) *right* to have children must now be reconciled with his or her (social) *responsibility* not to have too many''. Put differently, hard-won gains in any of the areas of humanitarian concern professed by the SDG's, as well as advances in sustainability such as enhanced efficiencies in production and energy use, 'would almost certainly be overwhelmed by continuing and uncontrolled numerical growth' (Ibid 297).

Third, ethical consideration needs to be extended beyond human interests to embrace ecological justice. This means re-evaluating commodification system presently supported by REDD+, PES, and TEEB. We need to consider a question as to whether an approach that evaluates the non-human in reductive monetary terms (which inevitably excludes many unmeasurable factors), and which positions the environment and its non-human inhabitants as a 'service' to humankind, can ever deliver the level of reciprocity required to ensure that non-human interests are protected in the longer term (Strang 2016). One common ground between those concerned with social inequality and the rights of nonhuman species can be the 'critique of instrumentalism and relation between the domination of humans over animals —as an integral part of the domination of nature in general— and the domination of humans over one another' (Best 2006). According to Crist and Kopnina (2014) historical conquests and displacements of *human* others—indigenous and less powerful peoples deemed beneath "humanity proper"—are a straightforward extension of anthropocentric logic. Categories of "savage" have precisely functioned to excise certain groups from humanity and lump them into the sphere of otherness toward which violence and domination

can be exercised (Crist and Kopnina 2014). In a similar way, the word 'underdeveloped' or 'developing' so prominent in SDG's may be seen to imply that the poor, vulnerable, marginal people – and in fact entire nations – need to emanate the higher stages of development exemplified by the superior nations (Black 2010).

Last but not least, the anthropocentric conception of development needs to be radically challenged, using culturally diverse examples from throughout the globe, and not a hegemonic economic model. In arguing that we should not speak of 'anthropocentrism' but of 'industrocentrism', David Kidner (2014) maintains that the current status quo is the enemy of both human and environmental interests. The industrialist neoliberalism destroys cultural as well as biological diversity as well as freedom of thought (Kidner 2014). An alternative way of looking at the 'developed' industrial nations and 'developing' societies is that the former could actually learn from the latter the ways of sustainable living perpetuated throughout generations and variable ways of living in relative harmony with nature (Black 2010). What is most important about alternate worldviews, according to Strang (2016), 'is that they offer a genuinely different constellation of relations: a closely integrated model of human and non-human beings interacting within a single conceptual community'. In this sense 'developing' (or still largely non-industrial) communities may provide examples of what is needed for long-term sustainability: a radical re-conceptualization of human-nonhuman relationships and the notion of 'community' itself (Strang 2016).

Just as in the case of social liberation movements, while equality between blacks and whites or men and women was unimaginable in the past – and practically unspoken of other than by radical revolutionaries, the idea of animal liberation, ecological justice, and biospheric egalitarianism still needs to take root in the public mind. Obviously, consideration of these perspectives will not be easy, since, as in the case of animal liberation movement, which challenges the anthropocentric, speciesist, and humanist dogmas that are so deeply entrenched in Western thinking, so that supporters of other social equality movements are more likely to mock than engage it (Best 2006).

While 'emancipation from the determining power of anthropocentrism cannot come without a widespread rebellion that radically challenges human supremacy thinking (Kahn 2010), we need is a 'radical reconfiguration of who is able to have a voice and of what is expressible in public discourse around 'sustainability' ...(McKenzie et al 2015:333). What is thus needed is a new set of ethical imperatives that would include non-human species – into the moral sphere. Such imperatives could help lead way towards ecological restoration, one of today's most constructive, hopeful, and provocative environmental movements (Pollan 2003). The reason why the author believes that the ethical approach is productive and realistic has to do with the empirical observation that presently (Western) citizens concern themselves with moral issues that they were historically much less concerned about – such as, indeed, combatting poverty and promoting social equality. If one is to assume that such concerns are a result of humanity (or at last of the 'enlightened' part of humanity) reaching a certain moral pinnacle (e.g. position of moral non-consequentialism), then there is hope that such altruistic concerns for all humanity may evolve into a higher stage of moral development – that is, a concern for non-humans. If, on the other hand, we are to assume that human morality is culturally relative and historically specific, there is an alternative hope that a new type of morality – biospheric altruism – can be 'learned' as well.

The author also believes that the revision of current ethical underpinning is necessary as anthropocentric perspective is insufficient for addressing grave environmental challenges and prevents us from recognizing that increase in the human population and our consumption habits require us to think of these two factors in tandem as the most significant obstacles to sustainable future (Moran 2006: 2-3). Engaging with the 'environment' not as a 'service' or a 'resource' but as a collection of living beings is necessary (e.g. Crist 2012). Simply put, without consideration of the environment as anything more than a feedlot of one single species, no legal and strong protection can be expected. This is a far cry from what is currently conceived by the SDGs. Yet, without realizing the gravity of environmental predicament, the UN appears to be nothing more than a 'useful talking shop, but it does not get much done' (The Economist 2009).

The SDGs need to be critically examined for logic (to eliminate contradictions of purpose), motives (who or what profits from proposed policies and who is victimized by them), and relevance (in the world where environmental sustainability is gravely threatened). If 'People are at the center of sustainable development' (Open Working Group 2015), and the economic growth is seen as a panacea for unsustainability, this anthropocentric vision threatens to destroy the very foundations upon which humanity depends. The true victim of unsustainability is the Planet, including – but not limited to – all its people.

Bibliography

Agard J., Schipper L., Birkmann J., Campos M., Dubeux C., Nojiri Y., ... Bilir E. 2014. WGII AR5 glossary. IPCC 5th assessment report. Retrieved from <u>http://ipcc-</u> wg2.gov/AR5/images/uploads/WGIIAR5-Glossary_FGD.pdf Bartlett A. 1994. Reflections on Sustainability, Population Growth, and the Environment. *Population & Environment* 16(1): 5–35.

Beckmann S. C., Kilbourne W. E. van Dam, Y. & Pardo, M. 1997. Anthropocentrism, Value Systems, and Environmental Attitudes: A Multi-National Comparison. http://portal.uc3m.es/portal/page/portal/grupos_investigacion/sociologia_cambio_climatico/Pardo%20-%20Anthropocentrism%20Environmental%20Values%20%28ENG%29.pdf

Best S. 2006. Rethinking Revolution: Animal Liberation, Human Liberation, and the Future of the Left. The International Journal of INCLUSIVE DEMOCRACY, 2(3) Available online: http://www.inclusivedemocracy.org/journal/vol2/vol2_no3_Best_rethinking_revolution.htm

Black C. 2010. *Schooling the World: The White Man's Last Burden*. Documentary film. Lost People Films. <u>www.schoolingtheworld.org</u>.

Black, C. 2016. Schooling the World: Land-based pedagogies and the culture of schooling. In Handbook of Environmental Anthropology. Ed. by H. Kopnina and Shoreman-Ouimet. Routledge: New York. Forthcoming.

Blowfield M. 2013. Business and Sustainability. Oxford: Oxford University Press.

Blüdhorn I. 2007. Sustaining the unsustainable: symbolic politics and the politics of simulation. *Environmental Politics*. 16, 251–275.

Brown D. E. 2000. Human universals and their implications," in *Being Humans: Anthropological Universality and Particularity in Transdisciplinary Perspectives*. Edited by N. Roughley, pp. 156-174. New York: Walter de Gruyter.

Cafaro P. & Primack R. 2014. Species extinction is a great moral wrong. *Biological Conservation* 170, 1-2.

Corner A. 2014. The communication of uncertainty is hindering climate change action. *The Guardian*. January 31. <u>http://www.theguardian.com/sustainable-business/climate-change-communication-uncertainty</u>.

Crist E. 2012. Abundant Earth and Population. In *Life on the Brink: Environmentalists Confront Overpopulation*. Philip Cafaro and Eileen Crist, eds. Pp. 141-153. Athens, GA: University of Georgia Press.

Crist E. and Kopnina H. 2014. Unsettling Anthropocentrism. Dialectical Anthropology, 38:387-396.

The Economist. 2009. Getting warmer. December 3. http://www.economist.com/node/14994872

The Economist. 2013. Demography in Latin America: Autumn of the Patriarchs. June 1, p. 47. Available online: http://www.economist.com/news/americas/21578710-traditional-demographic-patterns-are-changing-astonishingly-fast-autumn-patriarchs

The Economist. 2015. Why the Dutch oppose windmills. Dutch Quixote. July 2. Available online: <u>http://www.economist.com/news/europe/21656730-wind-energy-once-powered-netherlands-not-anymore-dutch-quixote?fsrc=nlw|hig|2-07-2015|EU</u>

Ekins P. 1991. The sustainable consumer society: a contradiction in terms? *International Environmental Affairs*, 3: 243-257.

Elredge N. 1998. *Life in the Balance: Humanity and the Biodiversity Crisis*. Princeton, NJ: Princeton University Press.

Engelman R. 2013. 'Beyond sustainababble', in *State of the World 2013: Is Sustainability Still Possible?*, ed. L. Starke, Washington: Island Press.

Fitzgerald K. H. 2015. The Silent Killer: Habitat Loss and the Role of African Protected Areas to Conserve Biodiversity. In G. Wuerthner, E. Crist and T. Butler (eds), *Protecting the Wild: Parks and Wilderness, The Foundation for Conservation*. Washington, DC, and London: The Island Press, pp. 170–188.

Fletcher R., Breitlin J. and Puleo V. 2014. Barbarian Hordes: The Overpopulation Scapegoat in International Development Discourse. *Third World Quarterly*, 35(7):1195–1215.

Gleeson B. and Low N. (eds.) 1999. Global Ethics and Environment. London, Routledge.

Hansen A. and Wethal U. (eds.) 2014. *Emerging Economies and Challenges to Sustainability: Theories, strategies, local realities.* New York: Routledge.

Igoe J. and Brockington D. 2007. Neoliberal conservation: a brief introduction. *Conservation and Society* 5(4):432-449.

Ingram J. C., Redford K. H. and Watson J. E. M. 2012. Applying Ecosystem Services Approaches for Biodiversity Conservation: Benefits and Challenges, *S.A.P.I.E.N.S* [Online], 5.1. URL: http://sapiens.revues.org/1459

IPCC. 2014. https://ipcc-wg2.gov/AR5/report/

Kahn R. 2010. *Critical pedagogy, ecoliteracy and planetary crisis: The ecopedagogy movement*. New York: Peter Lang.

Katz E. 1999. A Pragmatic Reconsideration of Anthropocentrism. *Environmental Ethics* 21(4): 377–390.

Kidner D. 2014. Why 'Anthropocentrism' Is Not Anthropocentric. *Dialectical Anthropology*. 38: 465–480.

Klein N. 2015 (July 1), "People and Planet First": On the Moral Authority of Climate Justice and a New Economy," This Changes Everything. <u>http://www.commondreams.org/views/2015/07/01/people-and-planet-first-moral-authority-climate-justice-and-new-economy</u>

Kolbert E. 2014. The Sixth Extinction: An Unnatural History, New York: Holt and Company.

Kopnina H. 2012a. Education for Sustainable Development (ESD): The turn away from 'environment' in environmental education? *Environmental Education Research*, 18(5): 699-717.

Kopnina H. 2012b. The Lorax Complex: Deep ecology, Ecocentrism, and Exclusion. *Journal of Integrative Environmental Sciences*, 9(4):235-254.

Kopnina H. 2013. Evaluating Education for Sustainable Development (ESD): Using Ecocentric and Anthropocentric Attitudes toward the Sustainable Development (EAATSD) scale'. *Environment, Development, and Sustainability,* 15 (3): 607-623.

Kopnina H. 2014a. Consumption, waste and (un)sustainable development: Reflections on the Dutch holiday of Queen's Day. *Environment, Systems, and Decisions*, 34 (2):312-322.

Kopnina H. 2014b. Environmental justice and biospheric egalitarianism: reflecting on a normativephilosophical view of the human-nature relationship. *Earth Perspectives*, 1:8.

Kopnina H. 2014c. Future Scenarios and Environmental Education. *The Journal of Environmental Education*, 45(4):217–231.

Kopnina H. 2015. Revisiting the Lorax complex: Deep ecology and biophilia in cross-cultural perspective. *Environmental Sociology*. 43(4) In print.

Kopnina H. and Blewitt J. 2014. Sustainable Business: Key issues. Routledge Earthscan, New York.

Lee M. 2010. Paul Collier: saying 'nature has to be preserved' condemns the poor to poverty. *The Ecologist*. Available online:

http://www.theecologist.org/Interviews/484203/paul_collier_saying_nature_has_to_be_preserved_conde mns_the_poor_to_poverty.html

Mayers J. 2014. Forests in the sustainable development goals. *Biores*, 8(3). http://www.ictsd.org/bridgesnews/biores/news/forests-in-the-sustainable-development-goals

McKenzie M., Bieler A. & McNeil R. 2015. Education policy mobility: reimagining sustainability in neoliberal times, *Environmental Education Research*, 21(3): 319-337.

Ellen MacArthur Foundation. Circular Economy. http://www.ellenmacarthurfoundation.org

Lang C. 2015. Permitting Crime: Palm oil expansion and illegal logging in Indonesia's REDD pilot province. <u>http://www.redd-monitor.org/2015/01/23/permitting-crime-palm-oil-expansion-and-illegal-logging-in-indonesias-redd-pilot-province/</u>

McDonough W. and Braungart M. 2002. *Cradle to Cradle: Remaking the way we make things*, London: Vintage Books.

MEA 2005. Living Beyond Our Means: Natural Assets and Human Wellbeing, Statement from the Board, Millennium Ecosystem Assessment, United Nations Environment Programme (UNE): www.millenniumassessment.org.

Moran E. 2006. *People and Nature: An Introduction to Human Ecological Relations*. Malden MA, Oxford: Blackwell Publishers.

Open Working Group 2015. Proposal for Sustainable Development Goals. UN Department of Economic and Social Affairs, <u>https://sustainabledevelopment.un.org/focussdgs.html</u>, accessed 2 August 2015.

Pollan M. 2003. Statement on the cover of William Jordan, *The Sunflower Forest: Ecological Restoration and the New Communion with Nature*. Berkeley, CA: University of California Press.

Rainforest Rescue. 2015. Forests. https://www.facebook.com/rainforest2rescue/posts/861682827212329

Rees W. 2010. What's blocking sustainability? Human nature, cognition, and denial. *Sustainability: Science, Practice, & Policy* 6(2):13-25.

Rockström J., Steffen W., Noone K., et al. 2009. 'Planetary boundaries: Exploring the safe operating space for humanity', *Ecology and Society*, 14 (2): 32.

Shoreman-Ouimet E. and Kopnina H. 2015. Reconciling Ecological and Social Justice to Promote Biodiversity Conservation. *Biological Conservation*, 184: 320–326.

Shoreman-Ouimet E. and Kopnina H. 2016. *Conservation and Culture: Beyond Anthropocentrism*. Routledge Earthscan, New York.

Smail, K. 2003. Remembering Malthus III: Implementing a Global Population Reduction. *American Journal of Physical Anthropology*, 123(2):295-300.

Stern P. C., Dietz T., and Guagnano, Gregory A., 1995. The New Ecological Paradigm in socialpsychological context. *Environment and Behavior* 27 (6): 723-743.

Strang V. 2016. Justice for all: inconvenient truths and reconciliations in human and non-human relations. In *Routledge Handbook of Environmental Anthropology*. Ed. by H. Kopnina and E. Shoreman-Ouimet. New York: Routledge.

Sullivan S. 2009. Green Capitalism and the Cultural Poverty of Constructing Nature as Service Provider. *Radical Anthropology* 3: 18–27.

UN 1987. Our Common Future, Chapter 4: Population and Human Resources. http://www.undocuments.net/ocf-04.htm

UN 2015. Sustained and inclusive economic growth. https://sustainabledevelopment.un.org/index.php?page=view&type=9502&menu=1565&nr=7

UN 2014. Sustainable Development Goals. https://sustainabledevelopment.un.org/index.php?page=view&type=400&nr=1579&menu=1300

UNEP 2011. Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. United Nations Environment Programme, Nairobi.

UNEP 2014. The Adaptation Gap Report 2014. United Nations Environment Programme, Nairobi.

UNEP-UNDP 2011. Mainstreaming Climate Change Adaptation into Development Planning: A Guide for Practitioners. New York: UNEP-UNDP.

Veríssimo D., Pongiluppi T., Santos M.C.M., Develey P.F., Fraser I., Smith R.J. and MacMilan D.C. 2014. Using a Systematic Approach to Select Flagship Species for Bird Conservation. *Conservation Biology* 28: 269–277.

Washington H. 2015. Demystifying Sustainability: Towards Real Solutions. London, Routledge.

WCED 1987. *Our Common Future: Report of the World Commission on Environment and Development*. Retrieved January 2015 from <u>http://www.un-documents.net/wced-ocf.htm</u>

Weeden D. and Palomba C. 2012. A post-Cairo paradigm: Both numbers and women matter. In *Life on the Brink: Environmentalists Confront Overpopulation*, eds. P. Cafaro and E. Crist, Georgia, US: University of Georgia Press.

Weisman A. 2013. Countdown. Little, Brown, London.

West P. and Brockington D. 2012. Introduction: Capitalism and the Environment. <u>Environment and</u> <u>Society: Advances in Research</u>, 3 (1):1-3.

Wijkman A. and Rockström J. 2012. *Bankrupting Nature: Denying Our Planetary Boundaries*. New York: Routledge.

Zizek S. 2010. First as Tragedy, then as farce. https://www.youtube.com/watch?v=hpAMbpQ8J7g