Consilience: The Journal of Sustainable Development
Vol. 17, Iss. 1 (2017), Pp. 220–246

Accounting for Threats to Sustainable Development: An Indicator for Holding NGOs and International Organizations Accountable to Creating the Context for Sustainable Development

David Lempert, Ph.D., J.D., M.B.A., E.D. (Hon)
International Development Consultant, Global
superlemp@alumni.stanford.org

Hue Nhu Nguyen, M.S.
nhuhuenguyen@yahoo.com

Abstract

This article takes the simple, nine point, indicator that the authors devised for determining whether international organizations and governments were fulfilling the professional requirements and international legal mandates for sustainable development interventions and expands it to a second level to account for the management of external (natural) and human-created threats/risks to the context for sustainable development. The standard assumption in sustainable development planning is that communities and countries have controls over their own resources and can then plan their use of resources and their consumption in a way that is sustainable, but the reality is that resources are continually under threat and increasingly from outside sources (e.g., pollution, climate change, war). Since these barriers to sustainable development are often induced by or subject to influence by the very same global powers that comprise the donor community today, the challenge facing communities and programs seeking to achieve sustainability is not merely one of following the appropriate measures of sustainability. The challenge is also one of working to assure that governments and organizations reduce the political and environmental threats that they, themselves, are creating (such as climate change and threats of military conflict) through their own political choices and consumption patterns and the impacts these have for weaker countries and cultures, as well as share superior technology to help reduce other threats where technology can play a role in risk reduction (e.g., planetary threats, global pandemics)..

Keywords: sustainable development, Rio Declaration, global security, de-colonialization, globalization, climate change, cultural protection, resource protection, risk management

Biographical Notes: David Lempert, Ph.D., J.D., M.B.A., E.D. (Hon) & Hue Nhu Nguyen, M.S. have worked for a combined total of 45 years in

development and are the inventors of the basic indicator for whether NGO and international projects are sustainable.

Dr. Lempert is author of several books including, A Model Development Plan. He is an anthropologist, lawyer, and educator who has worked in more than 30 countries for the UNDP, UNICEF, World Bank, USAID, EC, WWF, IUCN, and several other development organizations.

Ms. Nguyen is an environmental policy analyst who has worked for the UN, Mekong River Commission, FFI, and the Vietnamese government.

Authors' Note:
Several years ago when the two of us were working on several of the so called international "sustainable development" projects promoted by donors and governments, we couldn't understand why none (or next to none) of them actually did anything that remotely fit the simple textbook definitions of long-term integrated culturally protective "sustainability" (or, for that matter, "development"). The idea of "sustainable development" and sustainable development planning seemed simple and obvious and it had already been around for decades if not for at least a century (dating back to Malthus and others). David brought Harvard and Brown students to Ecuador to write a national development plan for that country, also geared to survival of cultural groups, and it had already been published as a text for more than a decade.

That was when we decided to start putting the professional standards into measurement indicators that could be used for accountability tools (and legal enforcement); so that development actors could no longer claim that they "didn't know" the basic standards or that they were "too hard" to measure, or that the goals and priorities were ambiguous.

We have gone on to publish not only that simple indicator but also several others that now form a codification of international development "law" that NGOs and citizens and practitioners can use to assure an appropriate focus.

But having laws and measures doesn't mean that they will be enforced or used. And even if they were, we now see that globalization has created so many interdependencies that even local attempts at sustainability can now be destroyed by spillover harms coming from outside. That calls for an indicator to hold large international actors accountable for their very actions that pose global threats for sustainable development and to recognize specific responsibility. That is what we offer in this article.

Introduction

Nearly a decade ago, we designed the first sustainable development indicator ("A Sustainable Development Indicator for NGOs and International Organizations") for holding NGOs and international organizations accountable to the principles of sustainable development that have long been recognized by international experts and that were affirmed in international agreements some 25 years ago (Lempert and Nguyen, 2008). Despite continuing recognition of the planetary threats from climate change and threats to human security and peace from unsustainability, there has been little real progress over that time by the international community and by agencies promoting development interventions in moving towards cultural protections and sustainability. Though "sustainable development" has become the new mantra of the United Nations in its "Sustainable Development Goals" ("SDGs") as of 2016, not even these SDGs go very far in meeting the measurements for sustainable development that the international community had previously agreed to in declarations and treaties, and that we presented in our indicator.

In seeking explanations why developing countries seemed both unwilling and unable to implement even the basics of sustainable development that they have already agreed to in international declarations (UN Conference on Environment and Development, 1992), we unveiled in a follow-up article some of the hidden features of the global system that have created an underlying climate of insecurity to which developing countries feel they must respond (Lempert and Nguyen, 2011). Indeed, the paradox of the global system today is that while it claims to promote a system of trade and interdependency that favor security and conditions for "growth", it has actually done so in a way that threatens cultures and nations, or that works by escalating fears and insecurities. That has led to the prioritization of resource destruction for the purposes of military spending as the best form of "protection", though paradoxically it demands the destruction of culture and the environment as well as prospects for sustainability.

If international governmental organizations, governments, and international (and domestic) non-governmental organizations ("INGOs" and "NGOs") are to be held accountable for sustainable development, they must, in fact, also be accountable for creating the conditions for the workings of international law and the assurances of security of all types (e.g., environmental/climate security as well as peace) to set the context in which sustainable development can occur.

This article seeks to identify these unpleasant realities in the international system and the risks they create, as well as the positive aspects of global cooperation for reducing these and other risks (e.g., planetary disasters, global pandemics) and to incorporate them in a more robust accountability indicator for sustainable development, that takes them into account. While international organizations and governments have long funded support for "disaster risk management" planning and systems, including those that they

are now strengthening in the face of climate change, the reality is that they are in fact one of the contributing causes to these disasters and to their risks, including now the risks of war and political instability as a result of their policies. Only by taking these into account alongside better global systems for risk management and sharing of the costs, can communities and countries effectively move towards sustainable development.

This article provides a checklist of these threats to be taken into account in a robust analysis of sustainable development planning that can be used in the form of an indicator to determine whether international development organizations and agencies as well as local and national governments are working to create the conditions necessary to achieve sustainable development. Many of the measures of security, risk, hazard and spending needed to insure against these risks are highly specialized, and subject to error as a result of human inability to accurately perceive some kinds of risks as well as the inability of current levels of science to provide some measures. While it may not be possible to fully account for appropriate spending and steps to assure the context for sustainability, or to appropriately allocate the costs between different parties, it is at least possible to build systems that recognize these concerns and seek to appropriately incorporate them into sustainable development planning.

The article outlines those risks that form the context for sustainable development, defines the appropriate systems and locations in government for addressing these issues, offers a measurement indicator to troubleshoot governmental and international organizations working in the area of "development" and international interventions to assure that these concerns are incorporated, and then tests this indicator on the United Nations system and its Sustainable Development Goals (SDGs).

Theoretical Context

Expanding and strengthening the approach to sustainable development by communities and countries and development agencies requires placing the concepts of disaster risk management and systems for supporting disaster risk management functions within the context of sustainable development and within the context of government functions. This section describes the theory behind this accounting in a number of sub-section.

- The first sub-section shows where disaster risk management fits within an approach to sustainable development.
- The second sub-section lists the specific disasters that are relevant to consider in sustainable development and who bears the responsibility for addressing them.
- The third sub-section describes the theory of disaster risk management as a government function in ways that are cost-effective in dealing with risk.
- The final sub-section describes the administrative and legal mechanisms for assuring and enforcing appropriate disaster risk management in the context of sustainable development as well as the economics of allocating the costs

The Current Approach to "Sustainable Development" and Where Disaster Risk management Fits

Although much of the discussion about sustainable development focuses on detailed technical issues or politics, with the word "sustainable" often distorted beyond recognition in what may be purposefully obstructionist (Lempert and Nguyen, 2011; Shellenberger and Nordhause, 2004) the principle is actually very simple as is the relationship of disaster risk management.

The principles that underlie the work of environmentalists and development experts, and that have long been rooted in international agreements are easy to state. According to Principle 8 of the Rio Declaration, sustainability is a balance of consumption (number of people and the amount of consumption per person) with resources (a fixed amount of resources and an amount of productivity per resource that ensures the resources are replenished and not used up for future generations) (United Nations, Rio Declaration, 1992).

Population x Consumption = Resources x Productivity/Resource

In working through the mechanics of sustainable development, much of the discussion focuses on the final element (productivity per unit of resources) and on restricted consumption of certain protected resources that are simply taken out of the equation and viewed as key factors of survival (such as green forest cover, biodiversity in general or specific species in particular), with regulations on use of certain common planetary resources such as the oceans, fresh water, and air. Some focus is increasingly given to the left side of the equation in recognition that cultures have the right to not increase their consumption or population (i.e., the right not to "industrialize" or "modernize" and to be absorbed into the global monoculture, and therefore the right to "no growth" or "slow growth" with consistent productivity). There are also discussions as to whether technological growth (increased productivity per unit of resources) is actually sustainable or not (Nguyen, 2008).

In general, the focus on the third element of this equation, resources, is on whether the resources in a system are sustainable over time; i.e., the resources are not "consumed" or sold to generate short-term productivity but are continually replenished. In our nine question indicator determining whether or not communities, countries and development projects were actually doing "sustainable development", our fourth question included this determination drawn from the principles for measuring "strong sustainability". That question is as follows.

Question 4. The project results in *no total loss of value of per capita assets* (wealth) in the system. In other words, production does not CONSUME assets but either replenishes them or replaces them with an asset of equal

value. Another way of saying it is that if production and income increase, the sum total of per capita resource inputs consumed following the increased production is replaced directly or replaced by something of equal value. Yes – 1; Debatable – 0.5; No – 0 (Lempert and Nguyen, 2008).

Implicit in the protection against "loss of value" of per capita assets is the need for basic asset accounting for all assets, and not GDP accounting, though we did not state this formally in our original indicator:

Beyond the direct "consumption" of assets for production, however, is the possible loss of assets from several kinds of threats. In a stable, isolated, and sustainable system, the usual assumption is that cultures are experienced in maintaining their asset base and insuring against the various risks to their assets. In our original model, we incorporated this assumption.

The assumption of anthropologists studying cultures who have adapted to their environments is that these cultures understand all of the cycles of nature that threaten their "productive assets". In other words, they understand the cycles of flooding, fires, droughts, and even epidemics and conflicts with neighboring cultures, and that they have developed sophisticated systems for managing these costs and insuring against them. They maintain certain savings as security to last through these cycles and they build or prepare certain structures or systems to minimize their vulnerability (e.g., highland shelters for animals, boats in the cases of floods, and so on). In other words, they already have traditional systems for "disaster risk management". These traditional disaster risk management systems clearly do what modern systems do: they measure the frequency of the hazard (the type of disaster and its severity) and they create systems to reduce the vulnerability (the harm) when these disasters occur. This local disaster risk management system protects the resources over time and reinforces sustainability.

While we did not mention "disaster risk management systems" as essential "to protect the sustainability of assets" in our original nine question indicator, two of the questions that we included implicitly recognized the value of protecting and restoring such traditional practices as traditional disaster risk management systems in order to assure sustainability. Our Question 8 asked whether "the cultural integrity and special characteristics of each separate cultural group" was protected and whether any interventions were "positive system preserving changes" and our Question 9 asked whether any "legacy of colonialism" that reinforced dependency and destroyed these traditional mechanisms was reversed in a way that would promote "self-sufficient communities".

In our original indicator, we assumed that the threats of war, climate change and other global risks were small and relatively insignificant in the focus on sustainable development. Our goal was to start with the most simple and universally agree principles that were still not being incorporated in development planning and to keep the focus simple.

The reality, however, is that hazards and vulnerabilities to assets may in fact be outside of the control of the local community seeking to plan sustainable development. If so, we need to introduce specific systems to protect the "resources"; the key third factor of the sustainable development equation".

Traditionally, cultures were relatively closed systems but today, all systems are subject to human induced global climate change, to various forms of pollution in the air and water, and to other global hazards like regional wars. Dealing with these global hazards (i.e., what are often in the form of "disasters" as well as lower level continuous hazards) is outside of the traditional systems of disaster risk management. It requires more modern systems.

The function of disaster risk management that is required for dealing with hazards that are beyond their traditional experience serves the same function as the traditional methods. It is part of the security and viability of resources. It fits in the same place in considering sustainability of a system. The difference is that it requires a modern system to analyze all of the new, additional risks to resources in order to deal with them effectively.

These are new, unexpected, and often extremely high costs for systems to bear. When we sought to analyze why so many governments and communities do not even attempt sustainable development today, the answer we found was that the costs of these human induced disasters is now so high, that countries are forced to insure themselves now by generating high consumption of items needed for protection (largely building their militaries and their economic influence) that they are caught in a "prisoners' dilemma" of unsustainability" (Lempert and Nguyen, 2011; following Morganstern and von Neuman, 1947; Nash, 1951).

In the next sub-section, we begin to generate a list of these new risks to sustainable development before considering how to incorporate them into global disaster risk management systems that can offer the "insurance" to protect resources of countries and communities so that they may then move to plan for sustainable development.

Disasters to Consider in Sustainable Development and the Responsibilities for Them

The first step in disaster risk management, before assessing actions to take in a disaster risk management system, is to try to generate a basic list of the types of disasters/risks that threaten resources. This section identifies six categories of disasters/risks that are relevant to consider in sustainable development (though there may be more) and identifies who bears the responsibility for addressing them using economic principles of allocating legal liability:

The risks to community and national resources today that go beyond borders seem to fall into two overarching categories.

- In one category are those risks that are the result of human action (like war, pollution, and climate change) or that may be influenced by human action or made more likely by human action (such as global pandemics resulting from contacts between peoples and from human encroachment on eco-systems) (totaling four sub-categories).
- In a second category are risks that are recognized as natural risks but that are extraordinary events that we are now able to recognize as a result of the advance of science and that are also potentially manageable risks with advances in human technology. These risks were traditionally not even considered in planning. They include things like major earthquakes and other geological events on earth as well as threats from space, like meteors (falling into the two sub-categories of natural events on earth and events from space). Although these are natural events, they can also be partly influenced by human action.

There is a long and detailed literature on actuarial science (the setting of insurance rates) and on setting liability for various risks to assets. The basis of law and economics addresses some of the mechanisms for allocating liabilities between parties in ways that are most efficient and recognize ways to link benefits and costs (Coase, 1960). The use of insurance systems can now also be applied to protection of global resources and risks such as in the area of biodiversity (Lempert, 2015). Generally, we calculate risk management as an insurance cost that is something like 1 or 2% of the current value of the insured asset, such as insurance for valuables or property[1] (though health insurance is not a fixed percentage; it is higher for the elderly, for example, and reflects the protection costs). What insurance systems do is spread the risk over the insured populations, and also seek to create incentives for lowering the overall risk; use the law to increase protections; eliminate moral risk problem. For LDC's, costs of self-insurance against a military threat (e.g. East Timor) or climate (e.g. Tuvalu); it is a survival question and is more than these countries can ever hope to cover and remain sustainable. Where a risk is beyond the ability of a local government to control, the penalties and costs must be placed at the source of the threat. That is what the international legal system claims it seeks to ultimately do. Whether it can or ever will is subject to question, but this is how it "should" work, in principle.

Table 1 presents these two categories (six sub-categories) of disaster risks (column 1), identifies their root causes (column 2) and then suggests, in

[1] The standard insurance contract for jewelry, such as wedding rings, is 1 to 2%, added to homeowners insurance or in separate contracts. (Cyril Tuohy, "Compare Reviews for Jewel Insurance", on the web at Https://www.consumeraffairs.com/insurance/jewelry-insurance/). Homeowners insurance can often be less, at about 0.35% according to the U.S. Federal Reserve Bureau, given that homes are secure property with fewer risks than moveable property or personal health. (Ashley Henshaw, "What is the Average Cost for Homeowners Insurance" on the web at: http://homeguides.sfgate.com/average-cost-homeowners-insurance-3020.html)

principle, the allocation of costs for insuring against these risks and creating a world where countries and communities all then have sufficient resources to focus on planning sustainable development.

Translating these principles into actions requires effective implementation of modern disaster risk management systems and an appropriate international legal and administrative system to assure the allocation of costs to achieving these ends. The next sub-section describes the basic mechanics of effective disaster risk management systems and the following sub-section addresses the institutional requirements for placing the costs at the source of the harms and the ability to manage the risks, as well as some of the conflicts of interest and institutional failures that exist today and that would need to be overcome.

Table 1. Liability and Insurance Efficiency for Risks to Sustainability/Survival

Type of Threat/Risk to Sustainability	*Role of Major Powers in Contributing to the Cause or Harm*	*Appropriate Place for Efficient Insurance against the Threat/Risk*
Areas Where Larger or Technologically Advanced Countries (or Sectors/Cultures within Countries) May Increase Risks to Other Countries (or Sectors/Cultures within Countries)		
1. War or other Violence/Hegemony (including State terrorism and state-induced terrorism) Threatening Resources or Sustainability, both global (species annihilation) and local	Major powers are a source of fear and destabilization, though not the only cause. The damage of major power technologies (unexploded ordinance, toxic agents) are rarely covered by those causing the harm.	Costs to be placed on all countries in reference to exercise of hegemony and with the goal of eliminating the threats
2. Climate Change, Creating Unanticipated Weather Cycles, Greater Risks and Damages	High consumption of major powers and the transfer of technologies to spur consumption is the cause of climate change	Costs to be placed on countries in relation to the production of CO2 with a move towards reducing consumption in major countries
3. Toxic Pollutants (Chemical, Radiation, etc.), Genetic Change Agents, and other Pollution Interfering with Natural Cycles/Biodiversity and creating Safety Hazards beyond borders	Industrial technologies and military activity without appropriate safeguards and cleanup create global externalities	Costs to be Placed on the Polluter to reduce the current practice of exploiting weaker countries to transfer harms
4. Global Pandemic Health Threats	Rapid mobility, population growth spurred by global industrialization, and intruding on natural habitats spreads the diseases	Allocation based on contribution to causes with industrialized and high population growth countries paying a premium
Areas Where Larger or More Technologically Advanced Countries (or Sectors/Cultures within Countries) Can Better Measure and Reduce Overall Risks for Others		
5. Unusual National Disasters (Earthquake, Volcanic Eruption, Tidal Wave)	Some slight increase due to major changes on earth such as nuclear tests	Global Risk Sharing Based on Ability to Pay
6. Meteors and Threats from Space (not including "Space Junk")	Unknown	Global Risk Sharing based on ability to pay

The Current Approach to Risk Management/ Disaster Risk Management

The basic approaches to disaster risk management are "textbook" recipes that this article simply presents here without any need for specific adaptations or innovations in the context of sustainable development planning (Drabek, 1991; Dorfman, 2007; Hubbard, 2009; Smith, 2001; UN, 2002). A knowledge of the standard terminology and approaches is important to include here as a basis for incorporating into sustainable development tests presented later in the article.

In short, the modern methods of coping with disasters are focused on planning activities, not on responses -- estimating the probability and the potential loss of every type of risk and seeking ways of reducing the potential losses by managing the risks.

The main tasks in modern risk management are finding ways to measure risks and costs over long periods of time and identifying the kinds of technical actions and expenses that can be undertaken now to result in future savings. The goal is to spend more now on safety and sustainability in order to reduce the likelihood of losses and to limit the amount of potential losses. Disaster risk management is increasingly an activity of combining scientific knowledge with sound financial accounting tools and administrative systems rather than simply that of building higher walls to potential dangers or responding more quickly to crises. In a modern disaster risk management system, the key skills needed are no longer just those of construction, forecasting, and emergency services, but long-term forecasting, resource measurement and valuation, and economic and risk assessments that one finds in an insurance system. Increasingly, the question is not what should be done about disasters, but whether losses are at the lowest acceptable level for the costs of preventing those losses.

By definition, disasters have ALWAYS been the result of hazards interacting with humans or human structures. Human actions by individuals, themselves, or by others, can actually change the hazard and/or vulnerability, thereby increasing disaster risk.

The key terms in any discussion of disaster risk management are: risk, hazard, and vulnerability. These terms relate to each other in an equation where:

$$DISASTER\ RISK = (Hazard) \times (Vulnerability)$$

The terms are used slightly differently than in business or common terminology and it is important to establish their clear meaning. This equation is about two "probabilities". "Risk" is really the probability of harm as a result of the interaction of the probability of hazard and the vulnerability, which is also a probability.

"*Hazard*" is defined as the occurrence of a (natural or social) phenomenon that has the potential for causing a loss. In talking about hazard, one is really discussing the "hazard probability"; the likelihood of a spectrum of natural occurrences that have the potential for causing a loss.

"*Vulnerability*" is defined as the inability to withstand a phenomenon that has the potential for causing a loss. In talking about vulnerability, one is really discussing the "probability that damage will occur from a particular type of hazard."

"*Disaster Risk*" is, therefore, the probability of loss from a hazard, given the probability of that hazard and the probable inability that capacity of the community to cope or withstand it (the probability that damage will occur from the hazard because of the inability to withstand it). In talking about risk, one is really discussing the probability that a hazard will occur and that damage will result from it.

The different missions, functions and tasks of disaster risk management generally follow six (sometimes five, if two of them are merged into one) phases. These are:
1) Prevention and Mitigation
2) Preparation and Forecasting (Warning)
3) Response and 4) Relief (Often Combined into One)
5) Recovery
6) Reconstruction

The real intellectual work, however, is in the prevention and mitigation (reducing the vulnerability) so that these other aspects of implementation of the spending to deal with the disasters (phases 2 through 6) are reduced to acceptable levels.

Generally, the work is just straightforward scientific and economic measurement. For example, assessing the vulnerability is a three step process of:
(a) Standardizing the value of the "assets" for comparison and decision-making;
(b) Valuing the assets to be protected (human life and various forms of property) before disasters happen, as part of the planning process; and
(c) Measuring the potential cost of harm to each of these assets.

Value judgments are needed at some stages, however, and this makes the analysis tricky, particularly when it comes to "standardizing" asset values and considering values over time as well as in measuring risks of extreme and unusual events like climate change and war. It has not been easy to come to agreement on the actual risks of climate change or of terrorism and war, or even to define them, due to the psychological processes that humans use to measure risks, that incorporate fears, ideology and denial in ways that distort actual risk. So, this is all possible in principle, but the science is not (and perhaps cannot be) "exact" in practice.

Conflicts of Interest with Sustainable Development in International Functions of Government

The basic theoretic principle for good governance is to identify all of the functions (missions) of government and to place them appropriately so that there are no conflicts of interest. In the area of "development" interventions from powerful, industrial cultures in their dealings with weaker communities/cultures, overlaps and conflicts of interest are far too common. Rather than work to protect the resources of weaker communities/cultures to create the conditions for sustainable development planning, powerful countries/cultures regularly now include disaster risk management as a "development" intervention and use it simply to compensate weaker countries or cultures (including weaker cultures within their own countries) for part of the harms that they cause to those cultures. The result is to increase disaster risks and to reinforce conflicts of interest at the expense of cultural protections and prospects for sustainable development.

In a previous article, one of the authors of this piece examined the set of government functions in the area of international relations as well as internal domestic relations between powerful industrial cultures in countries and weaker minority communities (Lempert, 2016). The goal of that piece was to identify the areas of overlaps of functions as well as to point out the conflicts between promotion of national interests (or interests of the more powerful internal communities) and international laws calling for protection of minority communities (U.N. 1948, 1976, 2007). Table 2, taken from that article presents the range of international functions that are currently in most governments. It notes the conflicts and overlaps. That article then offered sets of criteria to use in identifying conflicts of interest that could be described as promoting "colonialism" in international relations or "internal colonialism" within countries. The indicator in that piece can be used for overall design of departments with international or cross-community functions and for separating out the overlaps and conflicts.

In that scheme, for example, it is important to separate out "disaster risk management" and "relief" (post-disaster help) from "development" in order to prevent the internationally agreements on sustainable development to be replaced by forms of compensation that may actually undermine sustainable development. The current incentives in disaster risk management, for example, as Naomi Klein has widely publicized in her attention to what she calls the "shock doctrine" is for wealthy countries to create harms like human induced climate change or resource wars and then to pick favored countries where there is some reason to promote relations (e.g., economic exploitation or military strategy) to offer some compensation that relieves some of the impacts while exploiting the harms of others (Klein, 2007; Lempert and Nguyen, 2009; Lempert 2016). This is not fit within the context of promoting sustainable development in either

country as a way to save on these costs. It is simply to treat some of the symptoms in a way that continues or may increase the harms.

Once the overall functions are placed in appropriate departments, the next step is to define specific missions of disaster risk management and of international law compliance to assure that countries deal with the root causes of disasters (including human actions) as well as the appropriate ways of sharing costs. Some of the specific guidelines for doing that, as suggested above, can be placed in a set or principles or indicator (below, in this article).

In fact there are international organizations addressing all six of the categories of disasters/risks that are threats to sustainable development (both at the global level and at the country/community level) and most countries also now at least recognize, by name, these categories of threats (with the exception of those from space). Nevertheless, other than perhaps in some calculations of the risks of climate change and of nuclear war and some other categories (specific diseases), there do not seem to be routinized global assessments of all of the disaster risks and the costs of reducing vulnerabilities and hazards, nor do there appear to be full allocations of all of the costs on the basis of liability and ability to pay. While perhaps the measurements are increasing and improving, the real failure is that there is no linkage to international law in ways that protect cultures and communities from the conflicts of interest in actions by major country/cultural actors that prevent them from addressing their own role in disaster risks and undermining the context for sustainable development.

Currently, it is very rare for major powers to include any measurement of social costs or externalities that they impose on the world system, to internalize. To translate that into non-economic language: powerful, industrialized countries simply do not take responsibility for the harms that they cause to the resources and cultures of developing countries and to the fears that they create that make it impossible for countries/communities to focus on sustainable development. That is both the underlying reality of the global system and its inequalities of power (the dynamics of hegemony, dependency, and colonialism/neo-colonialism) (Gunder Frank, 1967; Wallerstein, 1974) and also of the institutions that almost every country now creates for its foreign relations, including those for "development aid" and "international relations". National institutions in foreign relations (and international organizations that respond to these agencies) have built-in conflicts of interest (Lempert, 2016).

The key task for creating the context for sustainable development planning everywhere, is to assure that disaster risk management functions fully incorporate the externalities (human created harms to others) such that countries have incentives to change behaviors that create these externalities and also that they bear the costs of compensation and protection of those who are suffering from increased risks in ways that impede their ability to do sustainable development planning.

The indicator below offers a way to troubleshoot disaster risk management systems to assure that they are meeting their responsibilities in this area.

Table 2. International Affairs Line Functions Other than "Development" (Long-Term, Humanitarian Support) (from Lempert, 2016)

Line Ministry/Department in International Affairs Functions	*Potential Conflicts or Overlaps with International Development Law Requirements*
International Obligations	
Disaster risk management (of Non-Military, Natural Threats)	Yes, conflicts and overlaps: the approach is to deal with threats and symptoms in ways that can distort local approaches and sustainability
- Climate and Space Threats	(Same as above)
- Disease control	(Same as above)
- Pest control	(Same as above)
Global Security Management (of Other Human Created Threats)	Yes, overlaps and conflicts: Poverty alleviation is often substituted for "development" and creates dependency rather than sustainability
- Poverty Alleviation	(Same as above)
- Cross Border Crime Prevention	(Same as above0
Relief (Crisis Insurance; an adjunct of disaster risk management)	Yes, conflicts: relief can create a culture of dependency
International Law Enforcement/Legal Accountability and International Governance	Yes, conflicts: nothing creates legal accountability of the stronger to the weaker and laws and agreements are easily overridden and unenforced, including replacing laws with other conflicting agreements (trade and investor protection agreements, "Development" goals that redefine "development")
- Indemnification and Compensation (UXO, Agent Orange, Climate Change)	(Same as above)
National Self-Interest Promotion	
Military (Response to Military Threats)	Yes, conflicts: the forcing of alliances, sales of weapons, destabilization of "neutral" or strategic border countries
Commerce (short-term interests)	Yes, conflicts: promotion of commerce through marketing and agreements with country leaders can create vulnerability by undermining self-sufficiency and traditional practices of cultures in their environments
- Access to raw materials	(Same as above)
- Access to markets	(Same as above)
Information and Promotion	Yes, conflicts: promotion and information can easily become propaganda and cultural imperialism, changing values and culture

Updating the Indicator: To make it easier for sustainable development planners to differentiate between approaches to resource protection that establish a truly secure context in which sustainable development can take place and those that simply give lip service to sustainable development while actually furthering the very fears and risks that undermine it, we have

devised the following specialized additional indicator. The indicator has 8 questions that even non-experts can quickly used as a litmus test of resource protection creating the context for sustainability. By asking these 8 easy "Yes or No" questions and then counting up the results, you can determine the relative ability of a community/country or project to set the basis for sustainable development planning by the following scale:

Scale:

ALL 8 points	Fully creates the context for resource protections and the incentives for sustainable development planning in line with the Rio Declaration and International Human Rights Conventions
4 - 7.5 points	Works towards the security of countries/cultures and their resources by recognizing the real threats to cultural diversity and sustainability in the global system and seeks responsibility and enforcement to protect a shared human future to be achieved through sustainable development planning
2 – 3.5 points	Recognition of the basics of disaster risk management but not of the links to sustainability for protecting the resources and cultural base for sustainable development planning
0 – 1.5 points	Colonial approach to sustainability that pays no attention to the context and incentives or the causes of unsustainability needed as the basis for sustainable development planning and likely continues the planet on course to cultural genocide, dislocation, and collapse

Note that the indicator is not an absolute scale since it is not offered as a social science research tool but as a project evaluation and selection tool. It is best used to show the relative value of different projects, with some leeway offered in judgments for calibrating the indicator for specific needs of the user and for application to meet the specific needs of countries. Like most indicators, answers to each question would need to be "calibrated" to assure that different observers make the exact same determinations. To do so would require a longer manual for standardized, precise answers across observers.

We have fit the eight questions into three different categories: two questions that simply ask whether the community/country seeking sustainable development for itself and for communities where it intervenes have established the basic system for resource management and protection; four questions on whether the country or project or organization that intervenes elsewhere has taken responsibility for the distortions it creates to the context of sustainable development by increasing disaster risks elsewhere; and two questions on whether the country or project or organization that intervenes has taken responsibility for natural global disaster threats to

sustainability where it has the technology and ability to work with others to help minimize these global risks.

The eight questions are as follows.

I. Basic Asset/Resource Measurement and Protection Framework within Countries and Communities for Identifying and Measuring Risks within Specific Communities/Cultures/Countries:

Question 1. *Establishes an appropriate disaster risk management system within government as part of sustainable development, to assure that within each government agency with the functions of protecting and development of specific assets that there are measures of the full range of recurrent and recognized hazards and vulnerabilities to those assets/resources as well as inventorying and valuing existing assets.* Does government routinely measure the expected range of hazards (e.g., floods, earthquakes) and vulnerability as part of the functions of protecting the full range of national assets and include the full list of new and non-traditional risks that were not included in traditional cultural systems for disaster risk management?

Yes: 1 point
Debatable: .5 point (Some assets and hazards are neglected or measures are weak)
No: 0 points

Question 2. *Government funds appropriate cost-effective projects to reduce vulnerabilities and hazards, following best practices of disaster risk management.* Does government taxation link assets to spending on insuring the value of those assets and creating incentives for minimizing risks? Does the system seek to reduce the vulnerabilities by addressing root causes (e.g., the relationship of consumption to climate change) and not just seek to prepare for the symptoms?

Yes: 1 point
Debatable: 0.5 point
No: 0 points

II. *Frameworks for Minimizing Sustainability Risks to Other Cultures, that are Human Created (Internalizing the Costs of Externalities/Eliminating Conflicts of Interest)*

Question 3. *Establishes measures of threats of war/violence and (state) terrorism against other countries or cultures that are caused by desires for resources or markets in those other cultures or some other exploitation (military, strategic or other motive) and creates incentives for eliminating those exploitative dependencies in order to fully minimize or eliminate such threats, in full accordance with principles of international law and sustainability.* Does government routinely monitor its conflicts of interest and exertion of hegemony over other countries and cultures and work towards minimizing it in keeping with international agreements and principles (UN, 1948; 1976; 2007)?

Yes: 1 point

Debatable: 0.5 points (Measures the harms to others and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so)
No: 0 points

Question 4. *Establishes measures of threats of climate change created in stronger/industrialized countries/cultures and causing harm to other countries/cultures and its root causes (e.g., population, consumption, use of fossil fuels) and creates incentives for eliminating those exploitative dependencies (e.g., reasons for promoting population growth, for high consumption and use of fossil fuels) in order to fully minimize or eliminate such threats, in full accordance with principles of international law and sustainability.* Does government routinely monitor its conflicts of interest in the contributing factors to climate change (e.g., promoting population growth, consumption, and use of fossil fuels) and work towards minimizing it in keeping with international agreements and principles (UN, 1992)?

Yes: 1 point
Debatable: 0.5 points (Measures the harms to others and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so and its support does not prioritize smaller cultures)
No: 0 points (The only real action is to compensate for some of the harms in some favored countries or to prepare for further harms, but not to address the root cause behaviors causing the harms)

Question 5. *Establishes measures of threats of pollution/toxicity caused by one country/culture against other countries/cultures and of its root causes (e.g., dirty and risky technologies) and creates incentives for eliminating those exploitative dependencies in order to fully minimize or eliminate such threats, in full accordance with principles of international law and sustainability.* Does government routinely monitor its conflicts of interest in the contributing factors to pollution/toxicity and work towards minimizing it in keeping with international agreements and principles?

Yes: 1 point
Debatable: 0.5 points (Measures the harms to others and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so and its support does not prioritize smaller cultures)
No: 0 points (The only real action is to compensate for some of the harms in some favored countries or to prepare for further harms, but not to address the root cause behaviors causing the harms)

Question 6. *Establishes measures of threats of global and localized pandemics and the contributing causes induced by larger cultures (globalization that increases transmission;*

industrialization and encroachment on eco-systems; overuse of anti-biotics) and creates incentives for reducing such threats as well as for assuring that attention to disease control prioritizes threats to individual cultures and not just to industrial societies, in full accordance with principles of international law and sustainability. Does government routinely monitor its conflicts of interest in the contributing factors to global health emergencies and work towards minimizing it as well as focusing support on protection of smaller cultures, in keeping with international agreements and principles?

Yes: 1 point
Debatable: 0.5 points (Measures the harms to others and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so and its support does not prioritize smaller cultures)
No: 0 points (The only real action is to compensate for some of the harms in some favored countries or to prepare for further harms, but not to address the root cause behaviors causing the harms)

III. *Frameworks for Minimizing Sustainability Risks to All Cultures, that are Natural Events but where Larger Cultures have the Technologies for Minimizing the Risks*

Question 7. *Establishes measures of threats of earth based global disasters (e.g., earthquakes, tsunamis) and of human contributory factors and creates incentives for global cooperation reducing such threats, including promoting expansion of the human species beyond earth, as well as for assuring protections for smaller cultures and not just industrial countries with the information and technology to minimize their own risks, in full accordance with principles of international law and sustainability.* Does government routinely monitor global disasters and work towards minimizing them in coordination with all of the countries and cultures on earth, with a focus of support on protection of smaller cultures and on expansion of human cultures and diversity outside of earth?

Yes: 1 point
Debatable: 0.5 points (Measures the harms and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so in a way that protects all cultures)
No: 0 points

Question 8. *Establishes measures of threats of global disasters from space (including human created space junk) and creates incentives for global cooperation reducing such threats, including promoting expansion of the human species beyond earth, as well as for assuring protections for smaller cultures and not just industrial countries with the information and technology to minimize their own risks, in full accordance with principles of international law and sustainability.* Does government routinely monitor global disasters from space and work towards minimizing them in coordination with all of the countries and cultures on earth, with a focus of

support on protection of smaller cultures and on expansion of human cultures and diversity outside of earth?

Yes: 1 point
Debatable: 0.5 points (Measures the harms and seeks to work with other countries and cultures to create a system that will eliminate the human risks but is not yet fully committed to doing so in a way that protects all cultures)
No: 0 points

Results

In the current era of globalization and industrialization, there is a common mindset among country leaders, the international organizations they establish, and the projects that they fund that avoids real discussion of the stable context that countries/communities/cultures need for their peoples and resources in order to offer the basis for sustainable development planning, and of the elements of sustainable development planning, itself. The single-minded global ideology of "growth", "industrialization", globalization, and creation of a global mono-culture not only violates the basis of sustainable development (Lempert and Nguyen, 2008, 2011) but also serves to undermine the basic security that countries/communities/cultures need in order to be able to consider sustainable development planning.

We have tested our eight question (8 point) indicator on the Sustainable Development Goals (SDGs) that the international community now universally supports as its set of goals for "sustainable development" (UN, 2015). The result is presented in the annex.

On the 8 point scale, the SDGs score at best 0.5 points, which reflects an international agenda that is a failed, colonial approach to the context of sustainability. It avoids any recognition of the human threats that undermine the context for sustainable development planning and avoids any attempts to allocate responsibility or to establish professional disaster risk management systems to protect resources. Since this is the agenda supported by international leaders and also their systems of "international development" and domestic "development" interventions, developed countries, developing country governments, other international organizations, and most of the development projects they fund that work with government partners, will all score about the same.

While these findings offer little "new" to anyone in the field of sustainable development planning, they are at least backed now by some clear measures and standards that can be used to try to promote accountability and improvement.

Conclusion

This article documents the processes that are occurring, offers a set of professional measures of what is happening and a path to creating accountability of the international system for moving towards sustainable development.

There is no magic bullet we know of to change incentives in systems that are hierarchical and based on self interest and authority to those that are cooperative and protective where there is no universal outside threat that requires it. We know that government systems are corrupted by self-interest and power and pernicious incentives that are found in human cultural behaviors. All we can do is to start calling attention to the measurement of the harms and real costs to imagine the ideal and to recognize how it can and must work

This article is just one of several measures for exposing contemporary colonialism by development agencies and governments (Lempert, 2016) and one among many approaches to documenting threats to cultures and their sustainability (Lempert, 2010).

At least these standards and measures offer the product of rational human thinking and guides to cooperation that go beyond the turn towards religious invocation in studies of sustainability and collapse, including various predictions for cooperation (Axelrod, 1984) or renewal (Homer-Dixon, 2006; Korten, 2007; Speth, 2008) that do not really have a scientific basis in the study of cultural change.

Testing the Indicator on the UN's Sustainable Development Goals (SDGs):

Preliminary Information for Assessment	
The UN Systems Sustainable Development Goals	Sustainable Development Goals (SDGs) or "Agenda 2030" is an agreed list of "development" goals ratified by the United Nations at the end of 2015, for the period of 2016 to 2030. It consists of 17 broad thematic goals and 169 "targets" (UN, 2015). None of the goals are enforceable. They are a list of priorities for fundraising and spending to be coordinated by the UN system.
SDGs and the Categories of Disaster risk management and Asset Protection	The mention of Disaster risk management frameworks includes: - Target 1.5 for building the "resilience of the poor" to climate and environmental disasters (without saying how); - Target 2.4 for increasing food productivity in ways that are sustainable and resilient to disasters; - Target 11.5 and 11.b for reducing vulnerability of human settlements to disasters; and - Target 13.1 to expand resilience and adaptability to climate disasters without specifics; The mention of global and individual state action on four human caused threats to resources (war/violence, climate change, pollution/toxins, and pandemics) includes the following additional information: - *War/Terrorism*: None - *Climate Change and its Root Causes*: Goal 12 mentions "sustainable consumption" but does not offer specifics for reduction or allocate responsibility. - *Pollution*: Target 3.9 offers a vague statement on reducing deaths and illnesses from pollution, while 6.3 calls for reducing water pollution, and 14.1 calls for reducing ocean pollution. There is no mention of causes or responsibilities. Target 12.4 calls for "environmentally sound" management of wastes through their lifecycles. - *Pandemics*: Goal 3 calls for "healthy lives" but assigns no responsibility for externalities that impact on health or diseases. Target 3.3 calls for ending epidemics but does not mention root causes or link them to sustainability or to human practices. Target 3.8 calls for "affordable vaccines" for all without explaining the costs of development, production or distribution. The mention of natural disasters and technology to address them (on earth and from space) includes the following: - *Natural Disasters*: Nothing beyond Target 13.1. - *Space Disasters*: None
Overall analysis of the SDGs in Setting the Context for Sustainable Development	There is little or nothing in the SDGs on the context and barriers to sustainable development that are created by developed countries or by industrial sectors in developing countries and the actual focus of the document is on promoting industrialization and growth, which are the contributing factors. The goal seems to be to raise money for projects in developing countries without any real changes of behaviors in the developed countries and without any acknowledgment of responsibility, incentives, or enforcement.

Analysis		
Question	**Indicator**	**Scoring**
I.	***Basic Asset/Resource Management and Protection Framework***	*Though the basic topic is mentioned, there are no specifics and no professionalism.* *0.5 points*
1.	*Establishes an appropriate disaster risk management system within government as part of sustainable development?*	Debatable. The SDGs mention disaster risk management but makes no mention of asset measurements or of the types of systems needed. In some cases, donors will recognize the needs and follow but there is no consistent systematic approach. *0.5 points.*
2.	*Government funds appropriate cost-effective projects to reduce vulnerabilities and hazards, following best practices of disaster risk management?*	No. There is no mention of root causes or funding and no specifics that promote professionalism in this area for resource protection. *0 points.*
II.	***Frameworks for Minimizing Sustainability Risks to Other Cultures, that are Human Created***	*The international community seems to promote growth and colonialism/industrialization through the SDGs without any recognition of how powerful countries create threats to resources and undermine the context for sustainability.* *0 points*
3.	*Establishes measures of threats of war/violence and (state) terrorism against other countries or cultures that are caused by desires for resources or markets in those other cultures or some other exploitation (military, strategic or other motive) and creates incentives for eliminating those exploitative dependencies?*	No. There is nothing in the SDGs that recognizes the link between peace and security for peoples and resources and that this is the very context needed for sustainable development that is often under threat, even though the very purpose of the UN system is to promote peace and security.. *0 points.*
4.	*Establishes measures of threats of climate change created in stronger/industrialized cultures/countries and causing harm to other countries/cultures and its root causes (e.g., population, consumption, use of fossil fuels) and creates incentives for eliminating those exploitative dependencies (e.g., reasons for promoting population growth, for high consumption and use of fossil fuels) in order to fully minimize or eliminate such threats?*	No. Climate change is viewed as an act of nature whose symptoms need to be addressed by developing areas, rather than a human caused problem that industrialization and "growth" continue to worsen. The SDGs actually reinforce the problem by promoting growth and do little to address the causes and responsibility. *0 points.*
5.	*Establishes measures of threats of pollution/toxicity caused by one country/culture against other countries/cultures and of its root causes (e.g., dirty and risky technologies) and creates incentives for eliminating those exploitative dependencies?*	No. While the SDGs mention pollution as a threat and calls for local planning, there is no recognition that pollution is "exported" to weaker systems and that it occurs as part of a system of exploitation that requires recognition of its root causes and responsibilities.. *0 points.*
6.	*Establishes measures of threats of global and localized pandemics and the contributing causes induced by larger cultures (globalization that increases transmission; industrialization and encroachment on eco-systems; overuse of anti-biotics) and creates incentives for reducing such threats as well as for assuring that attention to disease control prioritizes threats to individual cultures and not just to industrial*	No. While there are calls for international cooperation in vaccinations, there is no attention to root causes of global health problems or of the differential risks of these harms to weaker cultures/countries and the difference between existing diseases to which cultures have adapted (and may have

	societies?	co-evolved) and those to which they have not. *0 points.*
III.	***Frameworks for Minimizing Sustainability Risks to All Cultures, that are Natural Events but where Larger Cultures have the Technologies for Minimizing the Risks***	*The SDGs does not yet have any consciousness of global threats and global responses and responsibilities as a factor linked to human survival and sustainability.* *0 points*
7.	*Establishes measures of threats of earth based global disasters (e.g., earthquakes, tsunamis) and of human contributory factors and creates incentives for global cooperation reducing such threats?*	No. While the UN system may be promoting this through its agencies, the SDGs do not recognize these threats as relevant to the context for sustainable development and places them in a separate category.. *0 points.*
8.	*Establishes measures of threats of global disasters from space (including human created space junk) and creates incentives for global cooperation reducing such threats?*	No. The SDGs does not consider global threats as part of the equation for human survival and sustainability. *0 points.*
Total	0.5 points. Failed, Colonial Approach to Sustainability Context. The SDGs take a colonial approach to sustainability with no recognition of the human threats that undermine the context for sustainable development planning, no attempts to allocate responsibility and little attempts to establish professional disaster risk management systems to protect resources.	

References

Axelrod, Robert (1984). *The Evolution of Cooperation.* New York: Basic Books.

Coase, Ronald H. (1960). "The Problem of Social Cost". *Journal of Law and Economics* **3** (1): 1–44

Dorfman, Mark S. (2007). *Introduction to Risk Management and Insurance (9 ed.).* Englewood Cliffs, N.J: Prentice Hall.

Drabek, Thomas (1991). *Emergency Management: Principles and Practice for Local Government.* Washington, D.C.: International City Management Association

Gunder Frank, Andre (1967), Capitalism and Underdevelopment in Latin America New York: Monthly Review Press.

Homer-Dixon, Thomas (2006), *The Upside of Down: Catastrophe, Creativity an the Renewal of Civilization*, Island Press.

Hubbard, Douglas (2009). *The Failure of Risk Management: Why It's Broken and How to Fix It.* John Wiley & Sons

Klein, Naomi (2007). *The Shock Doctrine: The Rise of Disaster Capitalism*, New York: MacMillan.

Korten, David (2007), *The Great Turning: From Empire to Earth Community*, Berret-Koehler Publishers.

Lempert, David (2017, forthcoming). **"**Testing the Global Community's Sustainable Development Goals (SDGs) Against Professional Standards and International Law"

Lempert, David (2016). ""The Logic of Imperial Economics: Distinguishing Development Agencies from Colonial Bureaus Exercising Soft Power", *Journal of Globalization Studies*, Volume 7:1:87-111, May. On line at: http://www.sociostudies.org/journal/files/jogs/2016_1/Lempert%20Full%20version.pdf

Lempert, David (2015). "How Much is Saving Humanity and Our Planet Worth?," review of Michael Jones, "Accounting for Biodiversity," *Ecological Economics*, Volume 117, September, pages 214-215.

Lempert, David (2010), "Why We Need A Cultural Red Book for Endangered Cultures, Now," *International Journal of Minority and Group Rights*, Fall/Winter, No. 17 (4), 511-50.

Lempert, David and Hue Nhu Nguyen (2008), "A Sustainable Development Indicator for NGOs and International Organizations," *International Journal of Sustainable Society*, 1:1:44-54. On line at: http://www.pelicanweb.org/solisustv07n8page4.html

Lempert, David and Hue Nhu Nguyen (2011). "The Global Prisoners' Dilemma of Unsustainability: Why Sustainable Development Cannot Be Achieved Without Resource Security and Eliminating the Legacies of Colonialism," *Sustainability: Science, Practice and Policy*, (Spring), Volume 7, No. 1. http://sspp.proquest.com/archives/vol7iss1/1006-031.lempert.html

Lempert, David and Hue Nhu Nguyen (2009). "A Convenient Truth About Global Warming: Why Most of the Major Powers Really Want Global Warming," with Nguyen Nhu Hue, *The Ecologist*, February. http://www.theecologist.org/pages/archive_detail.asp?content_id=2112 Reprinted in *Mother Pelican*: http://www.pelicanweb.org/solisustv07n09page4.html

Morgenstern, Oskar and John von Neumann (1947) *The Theory of Games and Economic Behavior* Princeton University Press.

Nash, John (1951) "Non-Cooperative Games" *The Annals of Mathematics* 54(2):286-295.

Nguyen, Hue Nhu (2008). *Toxic Omissions: and Cancerous Growths: Addressing the Unexamined Assumption of Sustainable Consumption in Technologically Innovative Societies*. Masters Thesis, Lund, Sweden: IIIEE Lund University, IIIEE Theses 2008:XX. http://www.etd.ceu.hu/2008/nguyen_hue.pdf

Shellenberger, Michael, and Ted Nordhaus (2004). *The Death of Environmentalism: Global Warming Politics in a Post-Environmental World*, The Breakthrough Institute. http://www.thebreakthrough.org/images/Death_of_Environmentalism.pdf

Smith, Keith (2001). *Environmental Hazards: Assessing risk and reducing disaster*. New York, New York, USA: Routledge

Speth, James G. (2008), *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability,* Yale University Press, New Haven, CT.

United Nations Conference on Environment and Development. (1992) *Rio Declaration on Environment and Development*. http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm

United Nations Convention on the Prevention and Punishment of the Crime of Genocide (1948), U.N. General Assembly, December 9, 1948.

United Nations Covenant on Civil and Political Rights (1976), and Optional Protocol.

United Nations Declaration on the Rights of Indigenous Peoples (2007).

UN International Strategy for Disaster Reduction Secretariat, (2002). *Living with Risk: A Global Review of Disaster Reduction Initiatives*, Geneva, July.

United Nations (2015), "Draft outcome document of the United Nations summit for the adoption of the post-2015 development agenda," August 12, A/69/L.85.

Wallerstein, Immanual (1974), *The Modern World-System, vol. I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York/London: Academic Press.