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# Fighting the Resource Curse: High-Value Natural Resource Management, Sustainability and Security in a Changing Climate in Afghanistan

*„The basic building block of peace and security for all peoples is economic and social security, anchored in sustainable development."*[1]

*„Warfare is inherently destructive of sustainable development."*[2]

## I. Introduction

The connection between the environment and violent conflict has long been established in the literature[3] and has gained recognition on the international plane as well.[4] One significant aspect of this link is with regards to natural resources, both in terms of their abundance, as in the case of high-value natural resources, and their – relative or absolute – scarcity.[5] With the onset of climate change, the connection between conflict and the environment will likely

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1 Ban Ki Moon: The Right War. In Time Magazine, 2008. április 17, http://content.time.com/time/specials/2007/article/0,28804,1730759_1731383_1731345,00.html (2013. szeptember 14).

2 Principle 24, Rio Declaration on Environment and Development, 1992, Report of the United Nations Conference on Environment and Development, UN Doc A/CONF.151/26/REV.1 (Vol.I.). http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm 2013(2013. április 22).

3 *See* Shlomi Dinar: Resource Scarcity and Environmental Degradation: Analyzing International Conflict and Cooperation, in Shlomi Dinar (szerk.): Beyond Resource Wars, Scarcity, Environmental Degradation, and International Cooperation. 2011, p. 3. [továbbiakban Beyond Resource Wars]; Christian Webersik: Climate Change and Security, p.8. 2010.

4 Examples include the 1980 Report of the Brandt Commission on International Development Issues, addressing the link between threats to the peace and environmental factors, available at http://www.stwr.org/special-features/the-brandt-report.html (2013. április 13.); the Global 2000 Report to the President from 1980; UN High-Level Panel on Threats, Challenges and Change's 2004 report on the environment and security, to name but a few. *See* Sanford E. Gaines: Sustainable Development and National Security. In WM. & MARY ENVTL. L. & POL'Y REV, 2006/30. pp. 326-327 (2006); The Brandt Report summary, available at http://www.stwr.org/special-features/the-brandt-report.html (2013. március 20); Donald K. Anton & Dinah L. Shelton (szerk.): Environmental Protection and Human Rights, p. 679. 2011.

5 Ben Saul: Climate Change and Resource Scarcity, pp. 73-74, in Rosemary Lyster (szerk): In the Wilds of Climate Law. 2010.

become even more significant. The conflict in Darfur, for better or worse, has already been termed by many as a climate conflict.[6]

Particularly vulnerable are societies that are already or still going through a period of conflict, or are just now transitioning to peace, especially if they are also impacted by climate change. The presence of high-value natural resources can further complicate the picture. The purpose of this paper is to examine the delicate interplay of conflict, the presence of high-value natural resources and climate risks, mostly through the example of Afghanistan, and to recommend proposals with regards to the management of valuable resources, and how the transparent, effective and sustainable management of such resources could serve as a potential pathway towards peace not only in the case of Afghanistan, but other countries as well.

## II. Climate Change, Resource Scarcity, Resource Abundance and Conflict: Establishing the Links

As noted, the connection between violent conflict and environmental causes has been vehemently established by now, especially in terms of resource wars. An additional factor in this equation is climate change, a "slow-moving environmental disaster,"[7] that will be a major and persistent driver of future change. The effects of climate change will be widely divergent across the globe: some regions will be more impacted than others, and not necessarily based on their contribution to the problem.[8] Countries' resilience will largely depend on factors such as the strength of their economy and democracy; poverty will significantly affect the coping abilities of states.[9]

It is likely that we will see more conflict scenarios where climate change or environmental degradation plays a role. Moreover, there is an important feedback loop here that cannot be disregarded; if indeed armed conflicts will multiply or become more constant or severe as we move forward in time, one cannot ignore the serious and often devastating effects that war – whether internal or international – can have on the environment. Throughout the history of mankind, the environment has been both the object and the victim

[6] Ban Ki Moon: A Climate Culprit in Darfur, In The Washington Post, 2007. június 16, http://www.washingtonpost.com/wp-dyn/content/article/2007/06/15/AR2007061501857.html (2012 szeptember 14.); Ban Ki Moon: The Right War, *supra* note 1.

[7] James R. Lee: Climate Change and Armed Conflict, p. 24 (2009). It is important to note that the distinction between slow-onset and rapid-onset disasters can be significant in terms of consequences. Some authors have noted that the scale of migration, for instance, might be much larger when tied to slow-onset changes in the environment, which can have significant consequences in terms of the possible scale displacement as a result from climate change. At the same time, it is also important to recognize that there is a possibility that if certain tipping points are triggered as a result of global warming, the slow-onset of consequences might turn into rapid-onset, possibly for a prolonged period and possibly with irreversible consequences. *See* Kjeld Rasmussen & Thomas Birk: Climate Change, Tipping Elements and Security. In H.J.S. Fernando, Z.B. Klaić, J.L. McCulley (szerk.): National Security and Human Health Implications of Climate Change, p. 40-41. 2011. [továbbiakban National Security and Human Health Implications of Climate Change].

[8] Karen Hulme: A Darker Shade of Green: Is It Time to Ecocentrise the Laws of War? In Noëlle Quénivet & Shilan Shah-Davis (szerk.): International Law and Armed Conflict, Challenges in the 21st Century, p. 161. 2010. [továbbiakban International Law and Armed Conflict]; Ruth Gordon: Climate Change and the Poorest Nations: Further Reflections on Global Inequality, U.COLO.L.REV. 2007/78, p. 1589.

[9] *See e.g*., Gordon, *supra* note 8, p. 1559; Margaux J. Hall & David C. Weiss: Avoiding Adaptation Apartheid: Climate Change Adaptation and Human Rights Law, YALE J.INT'L.L.2012/37, 379; Alex Evans: World Development Report 2011: Resource Scarcity, Climate Change and the Risk of Violent Conflict, 2010. szeptember 9, http://siteresources.worldbank.org/EXTWDR2011/Resources/6406082-1283882418764/WDR_Background_Paper_Evans.pdf (2013. március 30)[továbbiakban World Development Report 2011].

of warfare, a weapon and a battlefield, and has fared well in neither role.[10] As the African proverb says, "(w)hen two elephants fight, it's the grass that gets hurt."[11] Conflicts, new or recurrent, can thus further stress and degrade the environment, and become an obstacle to both sustainable development and long-lasting peace. Accordingly, lasting peace and security in the aftermath of a conflict can only be achieved if all root causes of the conflict adequately addressed, and if the transition to peace is built on sustainability.[12] Since in the past decades, recurrent conflicts with the same parties have become more common, mostly due to the underlying factors gone unresolved, this aspect is going to gain added significance.[13]

### II.1. Climate Change and Environmental Causes as Threat Multipliers

Although both the academic literature and the news media have at times been prone to paint an alarmist picture, there is considerable agreement that climate change will not act as the sole cause of violent conflict; its role could be described more in terms of it being a "threat multiplier,"[14] especially in some of the most volatile regions of the world.[15] Thomas Homer-Dixon, one of the first authors to write on the relationship between violent conflict and environmental conditions, drew up what is considered the "standard model of environmental security"[16], focusing on the links between environmental degradation, overpopulation, resource scarcity and armed conflict.[17] He too emphasized that conflict usually cannot be lead back to solely environmental causes.[18] Conflicts tend to result from a complex interaction of causes, such as economic problems, low levels of international trade, political instability, overpopulation, ethnic strife,[19] and it would be simplistic to try and pinpoint a singular cause for conflict.[20] To address any possible future conflict scenario effectively, the basic paradigm must be a complete understanding and mapping of the causes of the conflict before launching on to formulate easy conclusions. A thorough understanding of the complex interplay of conflict causes is necessary to work out an efficient blueprint for resolution; without this,

[10] Rymn James Parsons: The Fight to Save the Planet: U.S. Armed Forces, "Greenkeeping", and Enforcement of the Law Pertaining to Environmental Protection during Armed Conflict, GEO. INT'L. ENVTL. L. REV. 1998/10, p.441. *See also* Silja Vöneky: Peacetime Environmental Law as a Basis of State Responsibility for Environmental Damage Caused by War. In Jay E. Austin & Carl E. Bruch (szerk): The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives, p. 191. (2000) [továbbiakban: Environmental Consequences of War]; Stephanie N. Simonds: Conventional Warfare and Environmental Protection: A Proposal for International Legal Reform, 29 STAN. J. INT'L. L. 1992/29, p. 202; Anton & Shelton, *supra* note 4, p. 679.

[11] African proverb, cited in Mark A. Drumbl: Waging War Against the World: The Need to Move from War Crimes to Environmental Crimes. In Environmental Consequences of War, *supra* note 10, p. 620.

[12] Anton & Shelton, *supra* note 4, p. 680, noting that it is "critical that the environmental drivers and impacts of conflict are managed, that tensions are defused, and that natural assets are used sustainable to support stability and development in the longer term."

[13] Webersik, *supra* note 3, p. 14.

[14] Saul, *supra* note 5, p. 77.

[15] Marcus DuBois King: National Security and Human Health Implications of Climate Change. In National Security and Human Health Implications of Climate Change, *supra* note 7, p. 1.

[16] Gaines, *supra* note 4, p. 322.

[17] *Id*.

[18] "But once I was deep into the issue, I found that environmental problems cannot, by themselves, cause violence. They must combine with other factors, usually the failure of economic institutions or government." Thomas F. Homer-Dixon:The Ingenuity Gap 21 (2000), cited in Gaines, *supra* note 4, p. 330 (footnote 39).

[19] Anton & Shelton, *supra* note 4, p. 678.

[20] Saul, *supra* note 3, p. 77.

recurrence seems almost inevitable, as experience shows that the past decades have had recurrent conflicts – with the same parties, over the same causes – as the norm.[21]

There is also force behind the argument that calls for referring to climate crisis or resource crisis instead of conflict. There is an important distinction between the two in terms of grade and management. A crisis has the potential to turn into a conflict, but it also has the potential to achieve resolution.[22] Whether a crisis situation turns into a conflict is not a linear process; as Ruettinger notes, "there is no automatism, or simple causal chain of events."[23] Just as with regards to actual, developed conflict scenarios, there is a delicate interplay of various factors here, some of which – if exacerbated – have the potential to turn the crisis into a conflict, whereas others can bear more pressure.[24] Crisis management thus gains increasing importance at the pre-conflict stage, and with conscious efforts, the adaptive capabilities of countries may be enhanced, which could make them more resilient in the face of potential crisis scenarios.[25]

It is important to note that while the connection between environmental degradation and conflict has been duly noted in the literature, and there is ample experience in this regard, climate change has such a high variability and such a high degree of uncertainty in terms of some of its possible effects and the direction such effects could push states that we need to proceed with extreme caution in formulating conclusions. Nevertheless, it is highly likely – and in fact, it is already happening – that climate change will become one of the most important drivers of change in the near-range future.[26] We should perhaps proceed bearing in mind Niels Bohr's words: "Prediction is very difficult, especially if it's about the future,"[27] keeping in mind that delayed action and reaction might in this case bear devastating consequences.

### II.2. Resource Scarcity

A link between resource scarcity and conflict has – rather vehemently – been established in the literature, with regards to climate change as well.[28]The most significant issue with regards to scarcity is distribution; as Ben Saul points out, "until our recent era of climate change, *relative* scarcity has been the norm."[29]The source of conflict thus was often a distribution issue: it is not an absolute lack of resources that fuels instability, but when the available resources are distributed unequally.[30] This relative scarcity, however, might at some point turn into absolute scarcity due to climate change,[31] presenting a new form of challenge. This new scarcity could affect the availability of water, food, arable land and energy, and could lead to new conflicts or the worsening of already existing conflict situations.[32] Perception also

[21] Anton & Shelton, *supra* note 4, p. 678.
[22] *See* Lukas Ruettinger: Assessing Local Water Conflicts: Understanding the Links Between Water, Marginalisation and Climate Change. In National Security Implications of Climate Change, *supra* note 7, p. 272.
[23] *Id*., p. 273. A similar point has been made by Saul, *supra* note 5, p. 77.
[24] Ruettinger, *supra* note 22, p. 273.
[25] Saul, *supra* note 5, p. 77.
[26] World Development Report 2011, *supra* note 9, p. 4.
[27] Niels Bohr, as cited in Hall & Weiss, *supra* note 9, p. 316.
[28] Saul, *supra* note 5, p. 73; Intergovernmental Panel on Climate Change: Climate Change 2007; Synthesis Report, pp.48-54.
[29] Saul, *supra* note 5, p. 74.
[30] Webersik, *supra* note 3, p. 14.
[31] Saul, *supra* note 5, p. 74.
[32] *Id*.

matters in terms of scarcity since a perceived scarcity can just as easily serve as a trigger for conflict as a real one.[33]

The U.N. Environmental Programme's 2008 Consultation Draft, From Peacebuilding: The Role of Natural Resources and the Environment, posits three pathways regarding the complex relationship between natural resources and conflict: as contributing to the outbreak of conflict, as financing and sustaining the conflict, and as undermining the peacebuilding process.[34] It is probable that a similar three-point framework could be posited over the future security implications of climate change as well. Aspects of sustainability have to be accounted for during all three stages of a future conflict.[35]

### II.3. High-Value Natural Resources – Abundance as Curse?

A distinction must be made between resource scarcity in terms of scarcity of resources needed to satisfy basic needs, such as water, and high-value resources, such as oil or diamonds.[36] The two result in different type of instability and different types of conflict. In case of high-value natural resources, abundance is more likely, although not necessarily, to cause conflict than scarcity, whereas with regards to resources satisfying basic needs, conflict is more likely to result from scarcity. Depending on the type of resource, their assessment and appraisal may have to be done in terms of the national (perhaps even sub-national), regional or global level, and solutions regarding their relative or absolute scarcity would also have to be dealt with at the appropriate level.[37]

In many countries, especially those going through a post-conflict transition, the presence of high-value natural resources may at times be the harbinger of more conflict.[38] In countries affected by conflict, the presence of high-value resources can present further fuel for violence, both as a catalyst for it and as a way of financing the conflict.[39] Scott Pegg described

[33] World Development Report 2011, *supra* note 9, p. 4.
[34] Anton & Shelton, *supra* note 4, p. 679.
[35] One issue that might arise in terms of climate change is that over the long run, climate change might result in such absolute scarcity (for nonrenewable resources) that sustainability would no longer be applicable in terms of management of the resource. This means that during the pre-conflict phase, heightened attention must be paid to incorporating the principle of sustainable development, along other perspectives, such as distributive justice, to ensure preservation of the resource. Moreover, in climate change, actions must necessary point beyond the national level, and global cooperation – due to the fact that greenhouse gas emissions occurring anywhere contribute to the accumulation of such gases in the atmosphere, and that the resulting warming will affect each country equally – is the only option.
[36] World Bank Development Report 2011, *supra* note 9, p. 2.
[37] *Id.* p. 12.
[38] This was, for example, the recent conclusion that a team of officials from the U.S. Department of Defense, the U.S. Geological Survey and the U.S. Agency for International Development came to in 2010 in a finding that announced that Afghanistan had significant mineral wealth yet not extracted. Siri Aas Rustad, Päivi Lujala &Philippe Le BillonL Building or Spoiling Peace? Lessons from the Management of High-Value Natural Resources. In Päivi Lujala & Siri Aas Rustad (szerk.): High-Value Natural Resources and Post-Conflict Peacebuilding, p. 571. 2012 [továbbiakban High-Value Natural Resources and Post-Conflict Peacebuilding].
[39] Jan Erik Wetzel: Targeted Economic Measures to Curb Armed Conflict? The Kimberley Process on the Trade of Conflict Diamonds. In International Law and Armed Conflict, *supra* note 8, p. 161. Philippe Le Billon makes an interesting distinction between point resources, such as oil, and diffuse resources, such as coffee. Point resources tend to motivate armed conflict, whereas diffuse resources are often used to finance conflicts, the reason being that point resources are often extracted by international companies that cease their activities in times of violence, whereas diffuse resource extraction often continues during the period of conflict. Philippe Le Billon: The Political Ecology of War: Natural Resources and Armed Conflict, JOURNAL OF CONFLICT RESOLUTION, 2001/ 20, pp.561-584. In Paul Collier & Anke Hoeffler: High-Value Natural

three aspects of the "resource curse": internalization, or the dependence of the state on the sale of resources in the global market, centralization, the exclusive ownership of the resources by the state, which carries with it a heightened risk of corruption, and privatization, when the state's leaders increasingly rely on personal networks of control.[40] All three aspects can contribute to a country's ineffective exploitation of resources, unequal benefit-sharing and resulting instability.

At the same time, the presence of natural wealth does not necessarily have to qualify as the "resource curse";[41] it can also present an opportunity for controlled growth and development and the road to a more prosperous – and more cooperative – future, if the management of the resources is done in a sustainable, transparent way.[42] Resource scarcity with respect to high-value natural resources is often a relative scarcity or a distribution problem, but it can also arise in the absolute form if the resources are depleted entirely. A state that has relied exclusively on high-value natural resources in its economy, such as South Sudan with oil,[43] could experience serious destabilization if the said resource is depleted. This would probably not arise in relation to climate change, but as noted earlier, climate change can still act as a threat multiplier and worsen a brewing conflict. Climate change can an act as a stressor on other factors, such as the availability of food and water or arable land, which could lead to an increased fight to control valuable resources in the absence of other avenues to provide for a livelihood.

With regards to conflicts and high-value natural resources, the type of conflict – internal or international – that occurs is largely defined by the type of resource. As for high-value minerals, there have been few instances of direct state-to-state conflict over these; instead countries tend to "meddle" in other countries' affairs,[44] like in the case of the D.R.C., which might on occasion reach international dimensions. Moreover, when the resource is sold on the international market, the conflict may gain an international dimension even if no foreign governments get involved in the war.[45] With regards to oil, however, the picture is different; there is more possibility for international conflict over oil in the coming decades than over other high-value resources, partly because – as one commentator aptly observes – "oil is one of those few commodities whose significance has a cognitive or perhaps even visceral dimension, which can sometimes transcend empirical cost-benefit analyses."[46]

## II.4. Afghanistan as a Case Study

This paper attempts to discuss proposals leading to a more sustainable path of wealth management with regards to high-value natural resources in the context of post-conflict peacebuilding in Afghanistan, in part by embracing the UNEP Consultation Draft's three-pronged framework as a blueprint for success, and by making reference to the additional factor of climate change.

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Resources, Development, and Conflicts: Channels of Causation. In High-Value Natural Resources and Post-Conflict Peacebuilding, *supra* note 38, p. 302.

[40] Deborah J. Shields & Slavko V. Solar: Responses to Alternative Forms of Mineral Scarcity: Conflict and Cooperation. In Beyond Resource Wars, p. 258.

[41] Rustad, Lujala, Le Billon, *supra* note 38, p. 583.

[42] *Id.*

[43] *Id*. p. 573.

[44] Shields & Solar, *supra* note 40, p. 276.

[45] *Id*. p. 259.

[46] Christopher J. Fettweis: Is Oil Worth Fighting For? In Beyond Resource Wars, *supra* note 3, p. 204.

Afghanistan is a conflict-ridden country, with the war against the Taliban still ongoing, and the state marred by internal and international strife as well as poverty for decades now.[47] At the same time, in 2010, large deposits of minerals, such as cobalt, copper, gold, lithium and iron have been found by the U.S. Department of Defense, the U.S. Geological Survey and the U.S. Agency for International Development.[48] Estimates of the value of the find are around $1 trillion.[49] The country also has large natural gas deposits.[50]As a foreboding sign, in the past, natural resources have been found responsible for more than half of local level conflicts in the country.[51] The majority (some say 80%) of smaller mines, for example for gemstones, marble and chromite, are not in state control and there are signs that they may be used to finance the insurgency.[52] The late Ahmed Shah Massoud, commander of the United Front, allegedly made $50 million from the sale of emeralds and lapis lazuli, which he used to finance his operations.[53]

Afghanistan, a country heavily reliant on foreign aid and marred by conflict for over three decades, could benefit enormously from the discovery of mineral wealth, but only if it treads with prudence and keeps the concept of sustainability as its compass in the exploitation of the newly found reserves. Unfortunately, there are already signs that corruptive practices might hinder development: in 2010, the minister for mining resigned after he was accused by American officials of accepting a $30 million bribe to award a copper mine's development's rights to China.[54] Afghanistan will no doubt need foreign assistance and investment to start exploitation of the mines, especially since it has no history and experience in heavy mining. However, the country is still in a vulnerable and volatile state; foreign investment will come slowly due to security concerns and Afghanistan will have to negotiate wisely, as much as it can, when it does. Afghanistan is currently preparing a new mining law, which would be essential for attracting foreign investment.[55] The law has been controversial, as it has been attacked by other government officials in what many consider a feud over control of the mining ministry.[56] Swift and effective legislation, however, is much needed and the current

[47]Selected news media sources about the elusive end of the Afghan conflict: http://www.huffingtonpost.com/2012/10/27/afghanistan-war_n_2029807.html (2013. április 5); http://www.politicsdaily.com/2010/10/06/afghan-war-in-10th-year-no-end-in-sight/ (2013. április 5); http://thecable.foreignpolicy.com/posts/2012/10/16/state_department_official_negotiations_to_extend_us_troop_presence_in_afghanistan_s (2013. április 5); http://www.cnn.com/2012/05/23/opinion/tankel-afghanistan/index.html (2013. április 5) .

[48] *See* Rustad, Lujala, Le Billon, *supra* note 38, p. 571.

[49] James Risen: *U*.S. Identifies Vast Mineral Riches in Afghanistan. In N.Y.TIMES, 2010. június 23., http://www.nytimes.com/2010/06/14/world/asia/14minerals.html?pagewanted=1&hp&_r=0 (2013. április 10).

[50] *See* https://www.cia.gov/library/publications/the-world-factbook/fields/2179.html.

[51] Renard Sexton: Natural Resources and Conflict in Afghanistan. In Afghanistan Watch, 2012. július. http://inec.usip.org/resource/natural-resources-and-conflict-afghanistan (2013. április 10).

[52] Graham Bowley: Potential for a Mining Boom Splits Factions in Afghanistan. In The N.Y. TIMES, 2012. szeptember 8. http://www.nytimes.com/2012/09/09/world/asia/afghans-wary-as-efforts-pick-up-to-tap-mineral-riches.html?pagewanted=all (2013. április 13.); Matthew DuPee: Afghanistan's Conflict Minerals: The Crime-State-Insurgent Nexus, Combating Terrorism Center, 2012. február 6. http://www.ctc.usma.edu/posts/afghanistans-conflict-minerals-the-crime-state-insurgent-nexus (2013. április 13.).

[53] PHILIPPE LE BILLON, FUELLING WAR: NATURAL RESOURCES AND ARMED CONFLICT, Adelphi Papers 373, p. 33.

[54] Risen, *supra* note 49.

[55] Graham Bowley & Matthew Rosenberg: Mining Contract Details Disclosed in Afghanistan. In N.Y.TIMES, 2012 október 15. http://www.nytimes.com/2012/10/16/world/asia/mining-contract-details-disclosed-in-afghanistan.html?pagewanted=all (2013. április 13.)

[56] Matthew Rosenberg: Afghan Cabinet Raises Concern About Mining Legislation, to West's Unease. In N.Y.TIMES, 2012. július 22. http://www.nytimes.com/2012/07/24/world/asia/afghan-cabinet-blocks-new-

turmoil does not do much good to the investment climate.[57]Past experience with resource contracts has shown an alarming lack of expertise and experience on the part of government officials, resulting in less than beneficial contracts for the country.[58]The World Bank, that had collaborated on the formulation of the previous mining law with Afghanistan,[59] has already provided significant assistance to the country to work out a sustainable path towards resource exploitation; foreign assistance and expertise as well as responsible foreign investment will be key in ensuring that the country avoids the resource curse.[60]

Since the country has no significant prior experience in mining, it has historically lacked environmental protection measures as well.[61] Afghanistan enacted a new environmental law in 2007, which sets out the requirements for environmental and social impact assessments.[62]The law attempts to create a regulatory framework for the sustainable use of Afghan natural resources.[63] The key will be enforcement, which is the task of NEPA, the National Environmental Protection Agency that was founded in 2005.[64]Since 2002, UNEP has worked extensively in Afghanistan to create a post-conflict path to sustainable development and has provided significant assistance to NEPA with regards to post-conflict environmental assessments and transition as well as adaptation to climate change.[65]

Afghanistan will also be significantly affected by climate change, which may well exacerbate these conflicts in the future.[66] One way that this could happen is by putting strains on or eliminating the traditional avenues of livelihood of the population, by drying up arable land, causing droughts, and leading to desertification. Since the Afghan economy, for now, is largely dependent on agriculture, but with only a very small portion of land being suitable for farming due to the arid climate,[67] further desertification as a result of climate change can exacerbate already existing tensions in the country.[68] Estimates suggest that by 2060, much of the agricultural economy in Afghanistan will become marginal without improving water

mining-laws.html?pagewanted=all (2013. április 13.); Afghan Cabinet Gives Preliminary Approval to Delayed Mining La. In Reuters, February 23, 2013, http://www.reuters.com/article/2013/02/23/us-afghanistan-mining-idUSBRE91M0C920130223 (2013. április 13.).

[57] Rosenberg, *supra* note 56.

[58] Bowley & Rosenberg, *supra* note 55.

[59] Rosenberg, *supra* note 56.

[60] World Bank, Mining for Sustainable Growth in Afghanistan, 2010. szeptember 30. http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSDNET/0,,menuPK:64885113~pagePK:7278667~piPK:64911824~theSitePK:5929282~contentMDK:22718722,00.html (2013. április 13).

[61] Risen, *supra* note 49.

[62] World Bank, *supra* note 60; A translation of the law can be found at http://postconflict.unep.ch/publications/EA_FINAL_2007_English.pdf (2013. április 13).

[63] *See* UNEP & NEPA, A Guide to Afghanistan's 2007 Environment Law. http://postconflict.unep.ch/publications/afg_env_law.pdf (2013. április 13).

[64] *See* http://www.afghan-web.com/environment/nepa.html (2013. április 13).

[65] *See* http://www.unep.org/afghanistan/ (2013. április 13).

[66] *See e.g.* http://programs.wcs.org/afghanistan/Challenges/ClimateChange.aspx (2013 április 7).

[67] UNEP, NEPA, GEF: Afghanistan: National Capacity Needs Self-Assessment for Global Environmental Management (NCSA) and National Adaptation Programme of Action for Climate Change (NAPA), Final Joint Report, 2009. február, p. 17. http://www.thegef.org/gef/sites/thegef.org/files/documents/document/ncsa-afghanistan-fr-ap.pdf (2013. április 6.).

[68] Jawad Peikar: Country Report: Afghanistan, Workshop on Climate Change and Its Impact on Agriculture, Seoul, South Korea, 2011. December 13-16, p. 2. http://www.adbi.org/files/2011.12.13.cpp.day1.sess1.8.country.paper.afghanistan.pdf (2013. április 6.); Department for International Development: Socio-Economic Impacts of Climate Change in Afghanistan, Executive Summary, http://www.necsi.edu/afghanistan/pdf_data/2007447_AfghanCC_ExS_09MAR09.pdf (2013. április 6).

management and irrigation.[69] Moreover, the environmental strain of the ongoing conflict is hard to estimate, but it no doubt further erodes infrastructure and significantly damages the agricultural basis of the economy. This might lead to conflict over the control of high-value natural resources as an alternative source of livelihood and also as a possible means to finance armament if rebel groups gain control of resources. We might well witness an interplay of resource scarcity in terms of basic resources as a result of climate change, and resource abundance with regards to high-value natural resources in Afghanistan: a dangerous combination.

As an important development, Afghanistan became a party to the Kyoto Protocol on March 25, 2013.[70] By signing on to the Kyoto Framework, Afghanistan – as a non-Annex I country – will not have any binding emission targets, but Afghanistan will be eligible for Clean Development Mechanism projects after June 25, 2013, when the Kyoto Protocol becomes effective in the country.[71] As commentators remarked, for Afghanistan, which has 0.2 tonnes per capita emissions, adaptation – and not mitigation – will be the principal objective in the future.[72] With 80% of the population relying on natural resources, mostly agriculture, and with severe climate change impacts forecasted for the future, the Afghan population will likely have to move away from agriculture as the main mode of earning livelihood; loss of land productivity is already an issue and will likely contribute to further instability in the country.[73] In 2012, the Afghan government through NEPA and UNEP launched a $6 million climate change initiative funded by the Global Environment Facility, focusing on adaptation projects, such as water management and use efficiency, rangeland management, early warning systems for climate change, and improved agricultural management.[74]

The discovery of high-value minerals can be either a curse or a blessing, depending on how Afghanistan and foreign investors manage the newly found wealth. The implications of climate change, the ongoing conflict and the newly found mineral wealth will have to be worked out in the context of sustainability and good governance. The international community will have to provide assistance for the post-conflict rebuilding of the country, which must necessarily include the sustainable exploitation of resources.

## III. Proposals for Moving Forward

### III.1. Mapping of High Risk Areas and Identifying Drivers of Conflict

As a general matter, and not necessarily in the context of Afghanistan, the first step in combating the "resource curse" as well as preparing for the possible effects climate change might have on this issue is by identifying the "hot zones" for possible climate change-induced conflict with regards to natural resources. This mapping must necessarily coincide with indentifying the major drivers of conflict in a specific area, including the possible effects of

[69] *Id*.
[70] *See* http://climate-l.iisd.org/news/afghanistan-joins-kyoto-protocol/ (2013. április 6.) [továbbiakban Afghanistan NCSA].
[71] *Id*., p. 18.
[72] Ed King: Afghanistan Joins Kyoto Protocol, 2013. április 5. http://www.rtcc.org/afghanistan-joins-kyoto-protocol/ (2013. április 11.).
[73] *Id*.
[74] *See* http://www.unep.org/newscentre/Default.aspx?DocumentID=2697&ArticleID=9300&l=en (2013. április 13.).

climate change. As James R. Lee suggested, such mapping essentially includes two convergences: countries or regions with a higher than average level of conflict and areas with higher than average climate change.[75] In our analysis, the presence of high-value natural resources must be added to this convergence as a third, determinative factor in the analysis. There are numerous forecasts which try to combine numerous factors and predict future conflict zones, based on past conflict trends, state failure, and climate change. As noted, one possible hot zone for conflict could be Afghanistan, a failed state with the presence of – as of yet – unexploited minerals and a high level of climate impact.[76] Other zones could include Central Asia, with an intersection of significant climate change impacts, valuable commodities and water scarcity (which could also affect Afghanistan in time),[77] the Niger Delta, and Sudan, to name but a few.[78] While many other regions will experience significant climate change impacts, or have significant natural resource reserves, or are politically volatile and have a tendency for conflict, the three factors might not necessarily overlap.

Mapping and identifying drivers of conflict thus will be key in the prevention phase; this is of course a moot point in terms of Afghanistan. In other cases, however, early detection can serve as a signal for the international community, either at the regional or global level, that it is time to step in, by providing help through mediation or negotiation, through financial or technical assistance, or good governance know-how. An early warning system is therefore key, also in the case of recurrent conflicts. Such warning system already exists in the form of some human rights bodies, such as the U.N. High Commissioner for Human Rights, but also in the form of the intelligence community, which gathers such information. Regional and international organizations and treaty bodies, not just in the field of human rights, but also in international environmental law can also provide significant insight and advance warning by early detection of tensions or divergence. There are also efforts to provide early warning based on the convergence of conflict data and meteorological data, both at the global level and on the regional level.[79]

### III.2. Mapping and Estimation of Resources, Understanding Their Role in the Local Economy

Mapping and understanding drivers of conflict is the first step. In order to stop a conflict from forming, we must take timely action to prevent the risk situation from developing into a proper conflict. Prevention is key if we are eager to promote sustainable development; since "warfare is inherently destructive of sustainable development,"[80] preventing further environmental degradation as a result of violence is determinative. As the first building block of prevention, mapping and estimating the resource base of the country or region in question

[75] Lee, *supra* note 7, p. 66.
[76] Global Research: "The War is Worth Waging": Afghanistan's Vast Reserves of Minerals and Natural Gas. http://www.globalresearch.ca/the-war-is-worth-waging-afghanistan-s-vast-reserves-of-minerals-and-natural-gas/19769 (2013. április 6.); Rustad, Lujala & Le Billon, *supra* note 38, p. 571. For the climate impact, *see e.g*., Department for International Development: Socio-Economic Impacts of Climate Change in Afghanistan, Executive Summary, http://www.necsi.edu/afghanistan/pdf_data/2007447_AfghanCC_ExS_09MAR09.pdf (2013. április 6.).
[77] Lee, *supra* note 7, pp. 108-109.
[78] For more "hot zones" *see* Lee, *supra* note 7, pp. 66-116.
[79] Webersik, *supra* note 3, pp. 113-115. A global initiative would be UNE/Global Resource Database's Disaster Risk Index, whereas a regional experiment would be the Conflict Early Warning and Response Network for the Horn of Africa. *Id*.
[80] Principle 24, Rio Declaration, *supra* note 2.

is essential.[81] Such an estimation of the resources should also be done in the post-conflict stage. This has been done before, for example in the case of Sudan and Southern Sudan and the 2004 Agreement on Wealth Sharing.[82] In the case of Afghanistan, a country coming out of a debilitating war, and decades-long instability, with a presence of newly-found mineral and natural gas reserves, it is imperative to make such estimations. This will probably mean the enlisting of foreign technical assistance and expertise if the country does not have the necessary means or experts for such an operation. Such estimation can also be helpful in eliminating or dissuading unrealistic expectations in terms of the size or scale of natural wealth.[83] If reliable estimations are made and they reveal more conservative reserves than expected, this could encourage a government to develop a more sustainable extraction plan, and can enhance cooperation among competing sub-national units.

An estimation of the resource base must be followed, as Rustad, Lujala and Le Billon suggest, by understanding the role of resources in local economies.[84] This is not always applicable. In the case of Afghanistan, much of the mineral wealth has recently been discovered, and there is no significant experience in their exploitation and extraction by the local communities. In other countries, however, this can be a significant aspect, especially when there had been exploitation prior to the outbreak of conflict, as was the case in Nigeria (oil), or the Democratic Republic of the Congo (D.R.C) (diamonds).[85] Especially with regards to resources that are known for being capable of fuelling conflicts, such as diamonds in the D.R.C., understanding the role that prior, peaceful exploitation of the commodity had performed in the economic life of the community is critical in the peacebuilding process, since such exploitation – although sometimes illegal - often served as employment and provided livelihood for the locals before the outbreak of violence.[86] If there is an overregulation of the commodity in terms of an absolute ban on extraction, for instance, or by only allowing the central government to extract, this could lead to the deprivation of the livelihood of the community, and can provide a cause for further instability.[87] It is imperative to balance the interests at stake here: the need for sustainable development, including the interest of the government to make revenues from the commodity, the interests of the local community, and the need to stop commodities from being used to serve as fuel for conflict.[88] This delicate balance can only be achieved through wide-scale public involvement in the decision-making process, giving adequate consideration to the needs of the local communities, yet at the same time reinforcing the need for the central government to gain revenues from the resources in question.

### III.3. Effective, Transparent, Sustainable Management of Resources

The effective, sustainable and transparent management of resources is key in all three stages of the conflict (before, during, and after). High-value natural resources are especially susceptible to mismanagement in all three respects.[89] Due to the spatial constraints of this

[81] Rustad, Lujala, Le Billon, *supra* note 38, at 572.
[82] *Id*.
[83] Rustad, Lujala, Le Billon, *supra* note 38, p. 573.
[84] *Id*. p. 572.
[85] *Id*. pp. 573-574.
[86] *Id*. p. 574.
[87] Rustad, Lujala, Le Billon, *supra* note 38, p. 574.
[88] *Id*.
[89] *Id*. p. 575.

paper, it is impossible to discuss in detail every significant factor in this regard, therefore I will concentrate only on the discussion of a few proposals.

### III.4. Commodity-tracking

Commodity-tracking means tracing the path of high-value commodities from production to consumption, with the goal of making their sale and purchase more difficult.[90] The objective is to restrain the use of high-value commodities, such as diamonds, for fuelling conflict, but it also attempts to cut back on illegal exploitation to provide more revenue for the state.[91]

A notable example of such a system was the Kimberley Process Certification Scheme, which aimed to curtail the role of "conflict diamonds" in the rebel conflicts in a number of African countries, such as Angola, the D.C.R., Sierra Leone, and the Côte D'Ivoire, with a unique joint undertaking by governments, the relevant industries and civil society.[92] The process is open to any government that wishes to join, and the process covers all trade in rough diamonds.[93] The Kimberley Process took place with UN authorization[94] and under a special WTO waiver granted in 2003 (extended twice[95]), to avoid violation of the General Agreement on Tariffs and Trade (GATT), Articles I, XI (on non-discrimination) and XIII (on quantitative restrictions).[96] The waiver was necessary because the WTO has more member states than the Kimberley Process, which means that in theory, a WTO member who is not a member of the Kimberley Process could challenge the import bans on uncertified rough diamonds implemented by the participant governments of the Kimberley Process.[97] Arguments have been made in terms of the waiver having been granted either under Article XX(a)(morality) or Article XX(b)(human life) or Article XXI (b) (essential security interest), and also under Article XXI(c) (compliance with UN Charter obligations), since the process enjoyed the backing of the UN Security Council and the General Assembly.[98] The argument is only important in terms of future scenarios where the use of such a commodity-tracking scheme might arise.

In the specific context of Afghanistan, although the Kimberley Process has only been used in the rough diamond context, it is not impossible that it could be invoked again, perhaps with regards to high-value minerals. The Kimberley Process worked because its object was a specific commodity and because the problem was specific to a particular area, and also perhaps due to the high-profile nature of diamonds, but the scheme could theoretically be transposed to other commodities. There have already been efforts to trace gold, tin, coltan and tungsten, so-called "conflict metals", in the African Great Lakes Region by the International Conference of the Great Lakes Region in 2010.[99] Similar problems have occurred in

[90] *Id*. p. 580.
[91] *Id*.
[92] http://www.kimberleyprocess.com/ (accessed April 7, 2013). For a detailed assessment of the Kimberley Process, *see* Jan Erik Wetzel: Targeted Economic Measures to Curb Armed Conflict? The Kimberley Process on the trade in 'Conflict Diamonds'. In International Law and Armed Conflict, *supra* note 8, p. 161.
[93] Wetzel, *supra* note 39, p. 172.
[94] The U.N. General Assembly adopted Resolution 55/56 on the "role of diamonds in fuelling conflict" in 2001, and called for the establishment of a certification scheme. The Security Council gave its approval to the scheme in Resolution 1459 two years later. Wetzel, *supra* note 39, p. 170.
[95] *See* http://www.wto.org/english/thewto_e/gcounc_e/meet_dec12_e.htm (2013. április 6.).
[96] Wetzel, *supra* note 39, pp. 171-173.
[97] *Id*. p. 172.
[98] *Id*.
[99] *See* Partnership Africa Canada, http://www.pacweb.org/en/pac-and-the-kimberly-process/83-main/conflict-minerals (2013. április 6.).

Afghanistan before, with regards to certain gemstones being used to finance insurgent operation, so a similar process could be envisioned in the Afghan context as well.[100] It is worth bearing in mind, however, that the Kimberley Process was a unique process in terms of the support it received from the UN Security Council and General Assembly, the WTO, and the participation of not only governments, but also the crucial involvement of the industry and NGOs. Whether this success could be replicable remains to be seen.[101]

### III.5. Transparent Management of Resources

Transparency is key in the management of high-value resources, which are particularly prone to attract cronyism and corruption – both at the national and sub-national level. Transparency has to be extrapolated to the entire process of resource production and trade, and this can only be achieved through implementing adequate laws targeting corruption as well as money-laundering, preferably both on the supply and demand side.[102] A significant issue with regards to anti-corruption and anti-money laundering efforts is always enforcement. Effective enforcement requires – in the larger context – an independent and effective judiciary and prosecutorial branch.

Legal reform is thus an absolute necessity.[103] There must be a clear legal scheme setting out the context for exploitation within the country, as specifically as possible, to avoid abusive interpretation.[104] Legislation and signing on to anti-corruption conventions is not enough; without institutional reform, without enforcement, without prosecutions, transparency remains illusory. Many countries coming out of a conflict will need assistance from the international community in terms of creating an effective anti-corruption and anti-money laundering scheme, as well as in terms of implementation. Importantly, countries coming out of a conflict with a previous history of corruption should make use – with international assistance – of international asset recovery measures. In the case of Afghanistan, asset recovery for now is not an issue, but might become one in the future.

[100] *See supra* note 53.

[101] Although not in the peace-building context, but another successful commodity-tracking initiative is the Forest Law Enforcement Governance and Trade process of the European Union (FLEGT), which is providing incentives, such as capacity building and institutional development, to timber-producing countries that export to the European Union to adopt a voluntary timber-licensing system. Another initiative is the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, which intends to provide guidance for firms involved in mineral extraction and trade, and it was endorsed by the International Conference of the Great Lakes Region in 2010. Another commodity-tracking scheme is the Dodd-Frank Wall Street Reform and Consumer Protection Act, which attempts to restrict the use of conflict minerals from the D.C.R. Rustad, Lujala, Le Billon, *supra* note 38, pp. 581-582.

[102] A number of important conventions exist in the anti-bribery, anti-corruption and anti-money laundering context, ratification of which would be essential for all countries. Two of the most important conventions are: UN General Assembly, *United Nations Convention Against Corruption*, 2003. október 31. A/58/422, http://www.unodc.org/documents/treaties/UNCAC/Publications/Convention/08-50026_E.pdf (2013.április 7.); OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. 1997. november 21. http://www.oecd.org/daf/anti-bribery/anti-briberyconvention/38028044.pdf (2013. április 7.)

[103] Rustad, Lujala, Le Billon, *supra* note 38, p. 593.

[104] *Id*. p. 595.

### III.5.1. Review of Previous Resource Contracts

Transparency arises also in the public procurement context. Public auction of contracts should be the preferred method of allocating permits both at the national and sub-national level.[105] In the aftermath of conflict, a review of previously negotiated resource contracts should take place, to ensure that these serve the best interest of the community.[106] Poorly negotiated contracts by weak or corrupt governments, as Rustad, Lujala and Le Billon note, can deprive the government of revenue as well as undermine the legitimacy of the state, and often lack adequate environmental safeguards or protections for workers.[107] Such review has taken place in several countries that are undergoing or have undergone post-conflict transition, such as the D.R.C. or Liberia, with mixed results, which could be due to lack of expertise, capacity and also unequal power relations between the parties, as well as continuing corruption.[108] Since Afghanistan has no serious experience with mining contracts and there have been allegations of corruption with regards to previous contracts,[109] this could be a very important part of reform in the country.

### III.5.2. Industry Participation in Ensuring Transparency

Importantly, effective enforcement also requires participation by the relevant industries, especially since many states with high-value resources have weak or failing governments and lack adequate institutional stability; without commitment from the relevant industries, transparency would be illusory. Contracts in conflict-prone areas have to be negotiated with enhanced sensitivity to the context in which they will have to operate, making sure that they do not contribute to the worsening of the conflict.[110] Greater corporate social responsibility is thus very important in the context of conflict-ridden societies. There are initiatives on the industry side, such as the Extractive Industries Transparency Initiative, which aims at providing a review of the flow of revenue from oil, gas and mining projects, and is a "multi-stakeholder coalition of governments, companies, investors, civil society organizations and partner organizations."[111] Other initiatives include the Natural Resource Charter,[112] the EU's FLEGT initiative,[113] the IFC's Performance Standards on Social and Environmental Sustainability,[114] and the Equator Principles,[115] to name but a few. There are also initiatives in the oil and gas sector.[116]

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[105] Rustad, Lujala, Le Billon, *supra* note 38, p. 596.
[106] *Id*. p. 577.
[107] *Id*. p. 578.
[108] *Id*. pp. 578-579.
[109] Bowley & Rosenberg, *supra* note 55.
[110] Rustad, Lujala, Le Billon, *supra* note 38, p. 601.
[111] The Extractive Industries Transparency Initiative was initiated by Tony Blair in 2002, at the World Summit for Sustainable Development in Johannesburg. Today there are 37 countries are implementing the EITI standards, and 70 major oil, gas and mining companies have expressed their support for the standards. For more information, *see* http://eiti.org/ (2013. április 7.)
[112] *See* http://naturalresourcecharter.org/ (2013. április 7.)
[113] *See* http://www.euflegt.efi.int/portal/ (2013. április 7.)
[114] *See* http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_pps (2013. április 7.)
[115] *See* http://www.equator-principles.com/ (2013. április 7.)
[116] *See e.g.*, http://www.oilandgasanticorruption.com/Event.aspx?id=335544 (2013. április 7.); http://oilandgas-compliance.com/ (2013. április 7.); http://www.weforum.org/issues/partnering-against-corruption-initiative (2013. április 7.)

NGO and civil society engagement is key for ensuring transparency at every level. NGOs can provide important watchdog functions, especially domestic NGOs, often in collaboration with international ones.[117] Strengthening civil society is therefore imperative both before and after a conflict, not only from the perspective of sustainability and transparency, but also for democratization and human rights protection in general.

In Afghanistan, a country that is seriously impacted by violent conflicts – many over natural resources –, and tensions may exacerbate with the impacts of climate change, ensuring transparency is going to be key for a successful transition to lasting peace. As extractive industries are already present in the country and more firms will soon settle as well, it is imperative that contracts are negotiated in a transparent way and to the benefit of the entire society; whether this will actually happen is unfortunately unlikely at this point amidst multiple allegations of corruption and a fragile, conflicted government.[118] Some progress has been made: Afghanistan is an EITI candidate country since 2010, and a report by AEITI was published in 2010 on payments made in the extractive industries sector.[119] Civil society is also getting stronger, but is not yet strong enough.[120] Even though the situation is still volatile in Afghanistan, extractive industries are gradually moving into the country in the hope of profits.[121] The onus of responsibility is on them and the government to set up a transparent, balanced scheme that benefits both sides, as well as local communities. If the government proves unwilling to involve local communities in the negotiating process, then the industries themselves should make every effort to involve them themselves.[122] Although, as Deborah Shields and Slavko Solar note, there is "an increasing acknowledgement that communities need to be consulted about business activities" that may impact their social structure, health, economy, or environment, there is no clear blueprint as to how to fulfill this obligation.[123]Investors should also make sure that they have properly evaluated the climate of investment and the local conditions in Afghanistan; this is imperative to ensure that they do not contribute to or revive tensions.[124]

### III.6. Environmental Protection

Government and extractive industries have to work together to ensure that resource exploitation is done in a sustainable manner. This entails enacting legislation if needed, and also institutional capacity-building for enforcement. Environmental impact assessments and social impact assessments, which are provided for in the Afghan Environmental Law, have to be conducted to ensure that large extractive projects do not cause significant harm to the

[117] Rustad, Lujala, Le Billon, *supra* note 38, p. 603.
[118] Graham Bowley: Afghanistan's Natural Resources Could Mean Independence or Corruption. 2012 szeptember 9. denverpost.com, http://www.denverpost.com/nationworld/ci_21499949/afghanistans-natural-resources-could-mean-independence-or-corruption (2013. április 7.). *See* also Global Witness' reports on Afghanistan, the extractive industries and corruption at http://www.globalwitness.org/category/regions-and-countries/afghanistan (2013. április 7.)
[119] http://eiti.org/Afghanistan (2013. április 7.)
[120] Mariam Safi: Civil Society in Afghanistan: A Decade of Progress and Challenges. 2012. December 20, http://www.insightonconflict.org/2012/12/civil-society-afghanistan/ (2013. április 7.) For more on civil society's role on enhancing control over the extractive industries in Afghanistan, *see* USIP: The Role of Civil Society in Monitoring Afghanistan's Extractive Industries. http://www.usip.org/programs/initiatives/afghanistan#civil_society (2013. április 7.)
[121] *See* Bowley, *supra* note 118.
[122] Rustad, Lujala, Le Billon, *supra* note 38, pp. 602-603.
[123] Shields & Solar, *supra* note 40, p. 242.
[124] Rustad, Lujala, Le Billon, *supra* note 38, p. 603.

environment or do not adversely affect local communities.[125] This is especially significant, given that mining has a track record of pollution.[126] Local management of resources, if feasible politically, might ensure that exploitation is not causing significant harm to the local communities. Considering the vulnerability of post-conflict societies and their unequal negotiating position, it is important to ensure they do not enter into contracts with foreign governments that do not have adequate environmental protection measures. In this respect, companies coming to invest in Afghanistan have to show maturity and responsibility. Guidelines, such as the Equator Principles, can be important in ensuring that social and environmental aspects are adequately taken into account in major projects.[127]

### III.7. Equitable Wealth and Benefit Sharing

Countries with abundant, high-value natural resources must strive for a more equitable allocation of the benefits of such resources. This is especially important in cases, like Afghanistan, where a long-lasting conflict has seriously strained resources and the basis for livelihood for much of the population. This can be ensured in part by providing for greater participation in the control of resources by local communities. Before the conflict, Afghanistan had a history of local level resource management; this needs to be revived.[128] Moreover, transparent and accountable resource collection and allocation regimes need to be worked out with input from the affected communities.[129] This entails capacity-building as well as institutional and legal reform.[130] Afghanistan will have to make a decision how decentralized or centralized its revenue-tracking and allocation scheme should be, based on a careful balancing of all factors. While decentralization can help in creating transparency,[131] it might not work well in a country torn apart by warring factions where the creation and maintenance of national cohesion is a matter of survival. Strong democratic control over revenue resources is key in ensuring equitable distribution on both the national and subnational level;[132] strengthening democratic institutions therefore is a pre-condition for equitable benefit-sharing.

Revenue sharing can have an important function from a peacebuilding perspective: as Lujala, Rustad and Le Billon note, "an optimal allocation arrangement harmonizes the political objective of reconciliation and the economic objective of broad development."[133] This is another reason why equitable revenue-sharing among the different regions is essential to ensure lasting peace, and this requires a careful balancing among the interests of revenue-producing regions and other parts of the country.[134]Experience seems to suggest that centralized revenue-sharing is the best avenue for post-conflict societies, especially if there are gross inequalities between the different regions of the country in terms of the presence and production of resources, but centralized plans are not always welcome by warring factions.[135]

[125] Rustad, Lujala, Le Billon, *supra* note 38, p. 602.
[126] *See e.g.*, http://www.pollutionissues.com/Li-Na/Mining.html (2013. április 7.)
[127] *See* http://www.equator-principles.com/ (2013. április 13.)
[128] UNEP: Afghanistan's Environmental Recovery: A Post-Conflict Plan for People and Their Natural Resources. 2006. augusztus, http://postconflict.unep.ch/publications/UNEP_afghanistan_lr.pdf (2013. április 13.)
[129] Le Billon, *supra* note 53, p. 54.
[130] *Id*.
[131] *Id*.
[132] *Id*. p. 68.
[133] Rustad, Lujala & Le Billon, *supra* note 38, p. 583.
[134] *Id*. p. 583.
[135] Rustad, Lujala, Le Billon, *supra* note 38, p. 587.

A delicate compromise needs to be worked out, suited to the particular needs of the state, adequately addressing the concerns of all sides. It is also important to take into account the possible environmental and social harm that might befall producing regions as a result of exploitation and compensation for such harm must also be accounted for in the plan.[136] Needless to say, broad participation in the decision-making over this issue is a necessity.

The concept of equitable share of resources should embrace not just intragenerational equity, but also intergenerational equity. Most countries with rich reserves of natural resources tend to experience a lower economic growth rate and low standards of living and social development, especially if the resources are minerals and oil.[137] Few countries that currently enjoy an abundance of a resource are stocking up for the future. Norway and its sovereign wealth fund, the Government Pension Fund, is a good example of providing for future generations from the proceeds of non-renewable resources.[138] It is worth noting that the Norwegian Fund has strong corporate governance requirements, and the guidelines restrict investment if there is a risk that the company is involved in human rights violations, environmental damage, corruption or other particularly serious violations of fundamental ethical norms.[139] The Norwegian Fund could serve as a blueprint for similar initiatives for other countries. Currently such funds exist for example in Russia, Saudi Arabia, Kuwait, Chad and the United Arab Emirates.[140] Such funds could be particularly important in countries that will be significantly impacted by climate change, like Afghanistan, and where the agricultural basis of the economy might be severely reduced in the coming decades. However, in most countries coming out of a debilitating conflict, the application of the intergenerational equity as a guiding principle will only become feasible after stabilization, and even then, it will be very much dependent on development. One way of achieving a balance between providing for the needs of current generations whilst taking care of the interests of future ones is to allow for such funds to be used for current government expenses, including urgent needs as well as necessary infrastructure-building for development, but with a ceiling – in part also to avoid looting by current leaders – as opposed to solely future generation-oriented funds.[141] These are often called stabilization funds, and are considered more appropriate for post-conflict settings.[142] Transparency and accountability must be the foundational elements in the governance of such funds.[143]

Accumulating resource revenues or reserves is significant not only for future generations' sake, but also to provide a cushion for states that are dependent on global and often volatile resource prices.[144] Funds, like the Norwegian Pension Fund, can serve to absorb excess revenues during times of abundance, and can create a buffer of protection during recessions.[145] Accumulating reserves can also serve to provide for intragenerational equity, by allowing for a more equitable national revenue redistribution.[146] Accumulation therefore is key both for purposes of intra- and intergenerational equity. As a further suggestion, countries

[136] *Id*. p. 588.
[137] Le Billon, *supra* note 53, p. 11.
[138] *See* http://www.swfinstitute.org/swfs/norway-government-pension-fund-global/ (2013. március 31.); http://www.regjeringen.no/en/dep/fin/Selected-topics/the-government-pension-fund.html?id=1441 (2013. március 31.)
[139] *Id*.
[140] Rustad, Lujala & Le Billon, *supra* note 38, p. 584.
[141] Rustad, Lujala, Le Billon, *supra* note 38, p. 585.
[142] *Id*. p. 585.
[143] *Id*.
[144] Le Billon, *supra* note 53, p. 52.
[145] Rustad, Lujala & Le Billon, *supra* note 38, p. 584.
[146] Le Billon, *supra* note 53, p. 52.

that are overly dependent on non-renewable, high-value natural resources should try to diversify their economies for further protection against market volatility.[147] This is easier said than done, of course.

## IV. Conclusion

The above proposals represent tentative steps towards effective post-conflict peacebuilding and sustainability. The road to prosperity is long and never easy, and depends to a large extent not only on the country in question, but also on the assistance of foreign countries and the responsible attitude of foreign investors. Countries have to make their own decisions regarding the applicability and feasibility of the steps above in terms of the local conditions and needs; post-conflict management of natural resources is largely a balancing act. In countries like Afghanistan, that have a history of conflict stretching over more than three decades, peace is not going to come at a low cost. Due to the spatial limits of this paper, I could not address other important issues, such as poppy farming and narcotics trading, which is an additional factor to be considered in this specific context, and there are no doubt many more. As noted earlier, addressing all significant root causes of the problem will be necessary to ensure lasting peace.

Aside from the difficulties inherent in transition, and the dangers and possibilities inherent in Afghanistan's newly discovered mineral wealth, climate change introduces an additional element of uncertainty and risk into this equation. By putting strains on the main forms of livelihood of the population, already badly mangled by a conflict stretching over more than three decades, climate change – and its impacts, such as droughts and desertification – may well act as a threat multiplier, further eroding the hope for long-lasting peace. At the same time, with timely measures for adaptation, as well as building prosperity by ensuring effective, equitable and transparent management of high-value natural resources, Afghanistan has the theoretical possibility of turning this ship around; the newly discovered natural wealth could be the source of a great opportunity for the country, if managed prudently. It is commendable that Afghanistan has become a party to the Kyoto Protocol and that adaptation projects have already started taking place. It remains to be seen whether mitigation efforts, perhaps in the form of Clean Development Mechanism projects, would also be feasible; much depends on the resolution of the ongoing violent conflict. Afghanistan might also face further – and possibly international – conflict risks if increased droughts occur while its development needs require increased availability of water; the importance of joint regimes with its neighboring countries with regards to water management will no doubt be another important area to focus on in the near future.

Any solution must envisage a collective effort and a co-operative endeavor, entailing foreign assistance as necessary, to address not only the challenges posed by climate change, but also conflict and resource management. The delicate and complex interplay of the issues of violence, its causes, the impacts of climate change and resource management demands a holistic approach both in terms of conflict prevention and post-conflict transition. Post-conflict transition in the shadow of climate change will not be an easy task, but with caution, cooperation and mature judgment, the post-conflict rebuilding of Afghanistan can be a successful and sustainable one.

[147] Le Billon, *supra* note 53, p. 56.