The causal relationship between natural resource endowment and the outbreak of violent conflict is complex. In Africa the problem emerges and interacts with political, social, economic and ecological background factors to generate aggressive behaviour. Although natural resources on the continent have played a significant role in many violent conflicts, their character is often embedded in an understanding of the grievance narrative, within a context of social, economic and political factors. There are very few cases where natural resources are the sole cause of insurgency. Where natural resources have been the main driver of social violence, they need to be treated as crucial dimensions of conflict prevention that could unlock the economic potential of building peace in fragile societies.

When the missionaries came to Africa they had the Bible and we had the land. They said, ‘Let us pray.’ We closed our eyes. When we opened them we had the Bible and they had the land.

(Bishop Desmond Tutu)

Background

Africa is a large and topographically varied land mass, which has endowed the continent with a wide range of natural resources. Even despite a lack of systematic environmental mapping and survey, the vast expanse of the continent is known to contain widespread reserves of natural resources, with a great potential for mineral beneficiation. Yet in the midst of this great wealth Africa is a paradox of poverty and protracted social violence. It is home to most of the least developed countries of the world. More than two-thirds of the countries in Africa are fragile and characterised by a combination of weak governance infrastructure, little or no service delivery, protracted social unrest and political violence, questions about regime legitimacy, inter-communal strife, food insecurity, economic despair, disputed border conflicts and targeted attacks. Examples are Somalia, the Democratic Republic of Congo (DRC), Zimbabwe, Zambia, Congo DR, Senegal,
South Sudan, Libya, Madagascar, Kenya, Egypt, Burundi, Rwanda, Nigeria, Mauritania, and Sudan – the list is sobering.

Fragile countries lack the essential capacity and/or the will to fulfill four critical government responsibilities: fostering an environment conducive to sustainable and equitable economic growth; establishing and maintaining legitimate, transparent, and accountable political institutions; securing their population from violent conflict and controlling their territory; and meeting the basic human needs of their population. Even those controlling their territory; and meeting the basic human needs of their population. Even those countries that typically achieve well and show the potential for better human development and consolidate democracy are also critical, in that they perform poorly in at least one of the four above core areas of government responsibilities (for example South Africa, Seychelles, Botswana and Morocco).

Significantly, natural resources play a key role in triggering and sustaining conflicts. And the resources that generate many of these problems are largely oil and gas, diamonds, columbium tantalite (coltan), drugs, gold, platinum, uranium and other gemstones; and also timber, coffee, water, land, grazing pasture, livestock and rubber. In some cases, resource conflict is embedded in the social and economic grievance narrative. As a result, many see a ‘resource curse’ in Africa, whereby easily obtainable natural resources and commodities have essentially hurt the prospects of several African national and regional economies by fostering political corruption and feeding violence and rebellion.

Three interrelated dimensions of the resource curse are distinguishable: slower economic growth; violent civil conflict; and types of undemocratic regime. This paper therefore reviews the role natural resources play in the occurrence of violent conflict. It also outlines a theoretical framework defining environmental scarcities, the social effects of scarcities and the subsequent aggressive behaviour and insurgency, and suggests policy recommendations to respond to these challenges.

**Understanding the nature and drivers of conflict**

Every conflict is unique in its own way. Despite a lack of consensus on the underlying relationship between natural resources and conflict, many scholars conclude that the struggle over access to and control over natural resources constitutes considerable grounds for tension and conflict.

Sodaro argues that natural resources are a source of political contention within and between nations. Resources such as crude oil, for instance, are ‘capable of stimulating intense political contention … whether the issue concerns drilling rights in Alaska or the more explosive matter of who controls the Middle East’s abundant petroleum reserves, oil has provoked conflicts ranging in severity from legislative wrangling to mortal combat.’

Empirical studies also assert that ‘countries whose wealth is largely dependent on the exportation of primary commodities which include both agricultural produce and natural resources, are highly prone to civil violence.’ According to a recent United Nations (UN) report, in the last sixty years at least 40 per cent of civil wars on the African continent have been connected with natural resources; and intrastate conflicts that have a link to natural resources are twice as likely to relapse within five years as those that do not. Table 1 lists 22 recent conflicts that were linked to natural resources on the continent. In six of these, gemstones were one of the resources; in eight, the resource was oil or natural gas; in two, it was some type of illicit drug; in five cases, it was timber and in five cases it was land.

Current scholarly discourse on resource endowment and armed conflict gained currency in the late 1990s, when empirical and theoretical literature emerged indicating a statistical correlation between a country’s natural resource endowment and the occurrence of violent civil war. Since then, several models have emerged to attempt to explore the factors that affect the risk of conflict. According to Collier and Hoeffler, civil wars are motivated either by greed or grievance. The economic theory literature models rebellion as an industry that generates profits from looting, so that ‘the insurgents are indistinguishable from bandits or pirates.’ Such rebellions are motivated by greed, which is presumably so common that profitable opportunities for rebellion will not be passed up.

In sharp contrast, grievance is rooted in a behavioural paradigm, and emphasizes relative deprivation, social exclusion and inequality, due for example to structural cleavages. In the context of resource-rich societies, grievance might be exacerbated by insufficiently compensated land expropriation, structural cleavages, resource scarcities, migration and a lack of employment opportunities.
The linkages

In the wars of natural resource-rich countries, two types of belligerents can be distinguished: those that have no encompassing interest in preserving the state or its people, but are simply intent on loot; and those who take control of the state and seek to maximise their own profit by encouraging stability and growth in their new domain.11 In Angola, for instance, off-shore oil and alluvial diamonds enabled the MPLA (Popular Movement for the Liberation of Angola) and UNITA (National Union for the Total independence of Angola) rebels to engage in protracted combat. Leaders on both sides enjoyed enormous wealth from oil and diamonds while unarmed citizens, and particularly women and children, suffered strange acts of violence.12 And in Liberia and Sierra Leone, the diversity of resources (diamonds, iron ore, rubber and timber) and their geographical distribution led to the phenomenon of warlordism, characterised by a highly fragmented conflict between a weak government holding the capital and numerous militia groups controlling resources in the interior.13

Since any rebel organisation needs financial support to manage and sustain its activities, the question then becomes how to generate funding. Unfortunately, the obvious answer is that the rebel groups’ only competitive advantage is their great capacity for organised violence and havoc. Given that insurgent groups tend to be based in rural areas for obvious military reasons, they therefore turn to ‘business activities’ such as various forms of extortion and the exploitation and trade of primary commodities.

Collier and Hoeffler find empirical evidence indicating that a relatively high dependence on

<table>
<thead>
<tr>
<th>Country</th>
<th>Duration</th>
<th>Natural resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>1992</td>
<td>Oil, gas</td>
</tr>
<tr>
<td>Angola</td>
<td>1975-2002</td>
<td>Oil, diamonds, timber, ivory</td>
</tr>
<tr>
<td>Angola (Cabinda)</td>
<td>1975</td>
<td>Oil</td>
</tr>
<tr>
<td>Burundi</td>
<td>1993</td>
<td>Land</td>
</tr>
<tr>
<td>Cameroon/Nigeria</td>
<td>1997</td>
<td>Oil</td>
</tr>
<tr>
<td>Chad</td>
<td>1980-94</td>
<td>Oil, uranium</td>
</tr>
<tr>
<td>Congo-Brazzaville</td>
<td>1993; 1997</td>
<td>Oil</td>
</tr>
<tr>
<td>DRC</td>
<td>1993</td>
<td>Copper, cobalt, diamonds, gold, timber</td>
</tr>
<tr>
<td>Kenya</td>
<td>1991</td>
<td>Water, grazing pasture, livestock</td>
</tr>
<tr>
<td>Liberia</td>
<td>1989-96</td>
<td>Iron, diamonds, rubber, timber, drugs</td>
</tr>
<tr>
<td>Libya</td>
<td>2011</td>
<td>Oil</td>
</tr>
<tr>
<td>Mozambique</td>
<td>1976-96</td>
<td>Ivory, timber</td>
</tr>
<tr>
<td>Morocco</td>
<td>1975</td>
<td>Phosphates, oil</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>1988</td>
<td>Copper, gold</td>
</tr>
<tr>
<td>Rwanda</td>
<td>1990</td>
<td>Coffee, land</td>
</tr>
<tr>
<td>Senegal</td>
<td>1997</td>
<td>Drugs</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>1991-99</td>
<td>Diamonds, bauxite, timber</td>
</tr>
<tr>
<td>Somalia</td>
<td>1988</td>
<td>Bananas, livestock</td>
</tr>
<tr>
<td>South Africa</td>
<td>1990s</td>
<td>Drugs, land, platinum</td>
</tr>
<tr>
<td>Sudan</td>
<td>1983</td>
<td>Oil</td>
</tr>
<tr>
<td>Western Sahara</td>
<td>1976</td>
<td>Phosphates</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>2000</td>
<td>Land</td>
</tr>
</tbody>
</table>

primary commodity exports is strongly related with the occurrence of violent armed conflict. They assert that natural resources constitute ‘booty’ which, in many cases, is far more valuable than possession of the state itself.14 As a result, belligerents may feel no regret at destroying state institutions if they can directly control and mine the country’s natural resource wealth. Collier asserts that:

Primary commodity production does not depend upon complex and delicate networks of information and transactions, as with manufacturing. It can also be highly profitable because it is based on the exploitation of idiosyncratic natural endowments rather than the more competitive level playing field of manufacturing. Thus, production can survive predatory taxation. Yet for export it is dependent upon long trade routes, usually originating from rural locations. This makes it easy for organised military force to impose predatory taxation by targeting these trade routes.15

Where rural areas produce commodities with high economic rents, such as the blood diamonds of Angola and Sierra Leone, it is a relatively easy matter for belligerents to run rackets extracting revenue by force. Indeed, diamonds accounted for the high incidence of conflict in those countries. They were seen as the ultimate lootable resource; alluvial diamonds were particularly suitable because they could be easily extracted and their transport costs, compared with their total value, were inconsequential. Thus the UN Office of the Special Advisor on Africa (OSAA) argued that revenues from natural resource exploitation were used for supporting militaries and also to sustain political support and self-centred egos.

Several other commodities such as gold, coltan, drugs and timber have at various times been linked with many violent conflict flashpoints in Africa. In the case of high-value agricultural commodities, rebel groups are not directly involved in production but predate harvests when they are ripe. Such resource predation is manifested in Uganda, Burundi and the DRC, where rebel groups and armed bandits maraud and loot crop fields. In Sierra Leone the Revolutionary United Front started by levying taxes on coffee, and only shifted to diamonds once the industry was well established.16

Where natural resources like oil occur in large quantities they have been associated with a high incidence of targeted attacks and/or secessionist movements. Examples are Biafra (Nigeria), Cabinda (Angola), Katanga/Shaba (DRC), West Sahara (Morocco), Bougainville (Papua New Guinea) and South Sudan, Abyei and Darfur (Sudan). Bannon and Collier assert that in many such contexts ethnic cleavages appear to cause the rebellion because some particular ethnic group is living on top of the resource and has an incentive to assert its right to secede.17 Rather than improving the fortunes of the people, exploitation and production of mineral commodities have negatively affected socio-economic development and livelihoods in several regions and contributed to unprecedented crisis flashpoints, such as those in Algeria, Angola, Burundi, Cameroon/Nigeria, Casamance region, Chad, Congo-Brazzaville, DRC, Kenya, Liberia, Libya, Mauritania/Senegal, Nigeria (Niger delta), Sierra Leone, South Africa, Sudan’s Abyei region and Zimbabwe.

De Soysa asserts that the presence of certain natural resources causes low economic growth and grievances that lead to conflict.18 As averred earlier, diamonds in Angola were critical to the ability of UNITA to sustain its challenge to the government. A UN panel of experts report established that rough gems in the Angolan civil war allowed the rebels to buy weapons and gain friends and external support, and served as a store for wealth.19 In the same vein, the Global Witness report confirmed that diamonds ‘played the major role in enabling UNITA to restock its munitions and maintain a flow of supplies which in turn … enabled it to disregard the 1992 election results and avoid meeting its obligations under the Lusaka Protocol’.20 Despite these findings, it is worth mentioning here that while both reports underscore the role of natural resources in sustaining the conflict, they nonetheless do not argue that diamonds were the sole cause of the war, or that UNITA was fighting only for diamond wealth.

Indeed, a review of literature on the causes of violent armed conflict in Africa suggests that there are very few conflicts that originate from only one type of motivation to rebel. Although several scholars and policy makers argue that the presence of natural resources may allow conflicts to continue, or even escalate, others emphasise the fact that natural resources are not the only goal of fighting. The role of natural resources is sometimes embedded in an understanding of what Collier would call the ‘grievance narrative’. Keen asserts that: ‘The civil war in Sierra Leone cannot really be understood without comprehending the deep sense of anger at lack of good government and educational opportunities … In this overall context, greed has undoubtedly played a role. The
failure to provide economic security was matched by a failure to provide physical security’.21

Nevertheless, in all rebellions, a clear economic aspect is ever present; more specifically, the aspect of resource predation and looting runs deep even if the initial instigation of the conflict may not have been necessarily linked to grievances around natural resource exploitation. Lootable resources have therefore been indispensable, or at least handy, to sustain the conflict and ‘in order for rebels to, among other things, feed themselves, but [have not been] the drivers of the conflict per se’.22

Population, environment and conflict

Another important dimension in the discourse on natural resources and conflict is the phenomenon of environmental scarcity. In view of the pervasive nature of human conflict – particularly contemporary intrastate conflict and notions of human security – and the popular cynicism about population growth, environmental degradation, climate change and resource scarcity, this linkage is evidently both important and policy-relevant.

As 2012 unfolds, Africa is at a crossroads. The continent’s share of the world population is increasing exponentially (from 8.9 per cent in 1950 to 14.0 per cent in 2005), and is projected to reach 21.5 per cent in 2050.23 With a large majority of the population directly dependent on four key renewable resources that are especially crucial to food production – water; cropland; forests; and fisheries – this growth in population does indeed present the largest and most complex of threats to human security. The availability of these key renewable resources determines the people’s well-being, and the scarcity of such resources under certain circumstances could lead to violent conflict.

The following discussion therefore depends on research conducted by Thomas Homer-Dixon, who has published extensively on population, environment and conflict.24

Environmental scarcity

Environmental scarcity is sometimes called resource scarcity. According to Homer-Dixon, this concept describes the declining availability of renewable natural resources such as fresh water, soil, forests and fish. There are three fundamental ways in which such environmental scarcity can occur:

- **Demand-induced scarcity** is primarily created by population growth and/or increasing per-capita resource-consumption levels. These decrease the amount of limited natural resources available to each individual. The population of Africa has increased from 221 million in 1950 to 921 million and is projected to reach 1 998 million in 2050, shrinking the amount of resources available to the average person. Violent conflicts such as those in Rwanda in 1994, South Africa in pre- and post-apartheid, Mauritania/Senegal in 1989 and Zimbabwe in 1960 to 1980 were, among other factors, the result of demographic pressures that created extreme environmental scarcities.

- **Supply-induced scarcity** describes ‘environmental change’ resulting from depletion and/or degradation of a natural resource that occurs faster than it is renewed by natural processes. In some cases, this process causes a resource to become irreversibly and permanently degraded even though human activities that led to the degradation are controlled. Examples include desertification in the Sahel region lacing the Sahara desert. Other classic examples include pockets of over-populated, over-grazed and over-cultivated interiors in Sudan, Kenya, Zimbabwe, Botswana, South Africa and Zambia. Very violent conflicts have occurred among local communities in competition for diminishing resources.

- **Structural scarcity** denotes unequal distribution and access to natural resources in which less powerful groups in the society, relative to other groups, are marginalised from equal access to particular resources. Resources concentrate in the hands of a few elite while the rest are subjected to greater scarcity. Such unequal social distribution does not presuppose actual shortage if the resource were to be distributed evenly. In many countries in Africa the colonial governments segregated local citizens, and this was one of the major causes of violent nationalist movements. In South Africa, for example, the system of apartheid provided whites with 87 per cent of the land, while almost 75 per cent of the country’s black population lived in squalor and within restricted areas that accounted for only 13 per cent of the land. Resources were also inequitably distributed within the restricted areas, as local elites controlled access to productive agriculture and grazing land. Unfortunately, many of the post-colonial regimes in Africa have perpetuated some of these structural cleavages, leading
to the churning out of discontent and violent protests against corrupt officials.

In effect, a reduction in the quantity and/or quality of a resource decreases the resource, while population growth divides the resource into smaller pieces between more and more people, and unequal resource distribution means that some groups get disproportionately larger allocations of the resource. Thus, increased environmental scarcity caused by one or more of the above-mentioned processes may lead to several consequences, which in turn may generate armed and/or domestic conflict. Important intervening changes may include decreased economic activity and agricultural production, displacement of persons and compromised states.

The relationship between environmental scarcity and conflict is a complex one. Scarcities can interact with numerous social, economic, and political factors, such as the legitimacy of the political regime and the character of the economic system. These social effects can then, under certain conditions, cause ethnic conflicts, insurgencies, and toppling of regimes. The probability of violence increases as the balance of power in the society shifts away from the state and moves toward opponents. According to Homer-Dixon, such changes have a propensity to generate acute insecurity and therefore increase the probability of violent intrastate conflict, as demonstrated in Figure 1.

Significant changes can constrain larger national and regional economies and hence engender widespread poverty, political violence, migration and regional instability. Migrating groups often trigger cleavages in receiving regions because of a range of factors on ethnic, religious, class and/or linguistic lines, and generate complex and sporadic violent conflict. A classic example is the complex crisis in Zimbabwe that has spilled to engulf the entire Southern Africa region, distilling secondary forms of violence in South Africa, Botswana, Mozambique and Zambia. Homer-Dixon observes that poverty associated with inequality, corruption, unmet expectations and a deepening aspiration gap may induce aggrieved groups to rebel, and that under certain circumstances this may weaken the state and thus generate opportunities and momentum for uprising against state authority.

And while scarcity of renewable resources can produce civil conflict, instability, large and destabilising population movements, aggravated racial, ethnic, or religious tensions, and debilitated political and social institutions, Homer-Dixon is quick to point out that the role of environmental scarcity in contributing causally to conflict is often overlooked.

**A call for action**

Despite a glimmer of hope from the continent’s wealth and the rising stock and value of its land and minerals, armed violence still continues to ravage many African economies. The costs of armed violence from natural resource exploitation are borne in direct and indirect ways. The obvious and direct costs tend to divert money from

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**Figure 1 Sources and consequences of environmental scarcity**

Source: adapted from Homer-Dixon, T.F., 1994, p. 3.
more productive uses and may include military expenditure, destruction of infrastructure, medical costs and care for displaced persons. A study by Oxfam in 2008 estimated that close to US$18 billion are lost per year through conflicts in Africa – money which could literally build thousands of schools, roads, dams, industries and hospitals and help to solve the scourge of malaria, TB and HIV/AIDS on the continent, thus benefiting millions of people.

Indirect costs from missed opportunities are even higher. Economic activities weaken and grind to a halt. Many economies suffer from inflation, debt, reduced investment, unemployment and lack of service delivery by incapable and incompetent institutions. Women and children suffer many forms of secondary violence like household violence and rape, while looking after extended families. These problems have not been contained in their specific context of origin but have tended to have transnational dimensions that impact on neighbouring countries and cause regional arrangements to suffer economically due to reduced trade, political insecurity and/or influx of refugees. These generate secondary forms of violence, including xenophobic violence, as has happened in South Africa since 2007 and in Mauritania and Senegal in 1989.

Another dimension of the effects of armed violence from natural resources has been the proliferation of assault weapons on the continent. Even when conflict makes way for fragile peace, the free flow of weapons has remained a serious threat to efforts to consolidate peace and human security. In the face of resource scarcities such weapons have been employed to commit serious crimes, violating human rights and undermining wholesome and sustainable development in many fragile societies.

**Lessons learnt**

- Where natural resources have been the main driver of violent conflict, they need to be treated as crucial dimensions to the prevention of conflict, sustainable development and peace-building. Failure to do so may jeopardise the fragile peace, increase the risk of a relapse into violent conflict and endanger post-conflict reconstruction efforts. Grundel asserts that ‘improving natural resource governance and addressing land ownership and control are vital components of successful peace consolidation strategies, and while tackling them is likely to be complex in an environment affected by conflict, they are essential for sustainable peace and development in the longer term’.
- Transparency and accountability with regard to government management of natural wealth and the revenues it generates are crucial.
- There is a need to involve civil society, in particular local communities, including indigenous and marginalised groups, in the definition and implementation of road maps towards better natural resource governance and management.
- Countries should invest more in manufacturing and service industries to improve wider governance conditions within the exploitation of natural resources.
- This review also suggests that it is important to develop a continent-wide shared strategic vision; articulate purposeful and proactive government-led collective action; and develop appropriate interventions and harmonisation of public, private and community interests at local, national and regional echelons, to consolidate a resource-based development and industrialisation strategy for the continent. This also implies identifying anchor projects that would underpin linkages at national, regional and continental levels.
- Continued innovation and human resources development are paramount for reducing the dependence on primary commodities and building and sustaining locally embedded, competitive and diversified economies. Indeed, where there is underdeveloped human, knowledge, physical and institutional capital, as well as governance deficiencies, and inefficient economic and business organisation, it is impossible to turn dependence on primary resources into a policy of building successful clusters and diversified economies.
- Africa needs to overcome her brutal infrastructural barriers, including poverty and dearth of capacity, in order to overcome the ‘resource curse’ and build resource-based linkages.
- Countries need to facilitate research on natural resource governance, corporate good governance, and issues of trade, as they relate to the exploitation of natural resources and conflict.
- It is also vital to mainstream issues of natural resource governance into the post-conflict peace-building activities of the UN Peacebuilding Commission, in tandem with the African Union (AU) Peace and Security agenda.
- Where there is underdeveloped human capital, as well as institutional governance deficiencies within an inefficient economic and
business orientation, it is almost an unattainable aim to turn the basket-case into peaceful bread-basket.

Notes and references


17 Ibid.


