



Besides greed and grievances

Natural resource characteristics and conflicts in Africa

INTRODUCTION

The relationship between natural resources and conflict is not new. It has long been a part of human history because of the central role that natural resources have played in the wealth of nations and, by extension, in the rise and fall of nations. The relationship between conflict and natural resources has been the subject of especially intense academic and policy debate since the late 1980s, when the waning of the Cold War superpowers' support for their respective allies enhanced the visibility of the role natural resources play in the stability of developing countries, particularly in Africa.

The heated debate on the issue has resulted in a substantial body of literature. With few exceptions, the literature agrees¹ that, under certain circumstances, natural resource endowments are capable of becoming a 'curse' to developing countries.² In Africa, this resource curse has over the years manifested itself principally in the economic and security sphere, where a mutually reinforcing negative relationship has developed. The economic dimension of the resource curse can be blamed on the emergence of rent-seeking tendencies among political elites, exposure to the volatility of commodity markets and the phenomenon of the 'Dutch disease'.³ However, establishing a relationship between security and natural resources, which commonly manifests in conflict, is perhaps the most complex aspect.

There is consensus that scarce or abundant natural resources have the capacity to foment conflict and also play a crucial role in the prolongation and resolution of conflicts. While these concepts are clearly articulated in the literature, the overall conceptualisation of linkages between conflict and natural resources has generally concentrated on the human aspects. However, by so

doing the nature of natural resources and the influence of their inherent and locational characteristics on conflicts are not factored in.

This paper argues that this focus on human behaviour and societal response, and the resultant ills that emerge around these choices in establishing the nexus between natural resources and conflict, is a one-sided approach to understanding the issues involved. For a more holistic understanding of the relationship between natural resources and conflict, an appreciation of the role of natural resource characteristics is required. The central question addressed by this paper therefore revolves around the key characteristics of natural resources that influence their predisposition to being exploited by warring factions and their role in conflict. Answers to this question will contribute to the body of literature and allow the debate to be approached from the perspective of the characteristics of natural resources and how these characteristics predispose a particular natural resource to the negatives of exploitation and conflict.

By hinging its arguments on the point of departure of Michael Ross, who suggests that the 'role played by any natural resource depends largely on its lootability and, to a lesser extent, its obstructability and legality',⁴ this paper advances two broad arguments. Firstly, it argues that a given resource has a higher chance of fuelling conflict when it has characteristics that require less specialised skills to exploit and refine it, has high liquidity, and is highly portable and therefore 'smugglable'. Secondly, it nuances this argument by positing that in the case of a lack of these characteristics, the role of a natural resource in conflict is a factor of state weakness, where the greed of existing political elites prevents the benefits from trickling down to

the entire or a militarised section of the population, very often the host communities to the resource.

This study does not attempt to reduce the significance of existing propositions on the theme, but rather to offer another important but oft-neglected dimension to understanding Africa's negative experiences with natural resource endowments. It offers an early warning signal to countries that are prospecting for particular resources or have certain types of resource characteristics within their territories. It draws on the experiences of oil management in Nigeria and diamond industries in countries such as Angola, Botswana and Ghana to illustrate the above arguments.

The paper is divided into five main sections. The first delves into the theory of the natural resource curse, resource creation and the political economy of conflict as the basis for establishing the role of natural resource characteristics. The three sections that follow establish the main arguments by discussing the skills levels, portability and weight-to-value ratio of natural resources. The last section nuances the argument, using the cases of oil in Nigeria and alluvial gold and diamonds in Ghana. The paper ends with a conclusion and implications for policy and research.

RESOURCE CREATION, NATURAL RESOURCE CHARACTERISTICS AND THE POLITICAL ECONOMY OF CONFLICT: A REVIEW OF LINKAGES AND PERSPECTIVES

Writing on resource creation as early as the 1930s, economist Erich Zimmermann observed that:

Resources are highly dynamic functional concepts; they are not, they become, they evolve out of the triune interaction of nature, man, and culture, in which nature sets outer limits, but man and culture are largely responsible for the portion of physical totality that is made available for human use.⁵

In this observation, Zimmermann made a number of profound deductions about resource creation that shed light on the contemporary interrogation of the nexus between natural resources and conflict. Firstly, by asserting that 'resources are not, they become' he implies that resources do not merely exist, but that they emerge as humans appreciate the potential usefulness of a given product in nature and exploit this usefulness through science and technology. Secondly, he admits the triune interactive relationship between nature, man and culture, which is the basis for the dynamism surrounding resource creation and what is ultimately considered by society as a resource. Thirdly, he makes clear his appreciation of the

influences and role of nature in placing limits on resource creation and man's ingenuity in crafting the usefulness of a given resource.

Implicit in these three observations, and particularly in the latter, is the recognition that the extent of the creation, exploitation and usability of a resource is a product of human knowledge, science, technology and nature. By extension this indicates appreciation of the fact that the creation of a particular resource is dependent on its natural form, properties and characteristics. Therefore, even though resources 'are not, they become', or are made and given a specific purpose, not everything can be made into a resource. However, anything can be a resource to the extent that human knowledge, science and technology appreciate its natural characteristics and find a use for it. The creation of a resource thus has a lot to do with the existence of the resource in nature and its associated inherent characteristics that make it useable. For instance, it is possible to create petroleum products from oil because crude oil is combustible at a certain temperature and in a particular form. Combustibility represents an important natural characteristic of the product and a limit set by nature concerning the extent to and purpose for which the product can be utilised.

This implies that the natural properties and characteristics of a given natural resource are crucial in the process of resource creation, since this is related directly to its usefulness and eventual relevance to society. Against this background it can be argued that the nature of a given resource is also a determinant of the human choices and the cultural significance of the resource in view of its influence on usefulness. This represents another dimension of Zimmermann's reference to the triune interaction between nature (characteristics or property), man and culture. This interaction is important in providing an explanation for the role of nature and the characteristics of a resource in linking natural resources and conflicts in certain parts of the world, particularly in Africa.

However, the two dominant approaches to linking natural resources and conflict hardly reflect this deduction. The first approach revolves around the idea that an abundance of natural resources has the potential of fomenting conflict. Proponents hold the view that primary commodities are generally attractive to the rent-seeking tendencies of political elites and therefore provide the background to competition among people in the upper echelons of society over resource-rich geographical spaces, regular access to rent and control over natural resource exploitation. This then provides the context for the emergence of grievances, negative rivalry and appropriation of violence as means of dealing with greed, grievances and a struggle for control over resources.⁶

The second argument is that an abundance of natural resources is capable of serving as a source of funding for disgruntled groups and can influence the motivation, incentive and opportunity for rebels to employ violence as a means of settling political scores and grievances, and their predisposition to not ending a given conflict.⁷ Armed conflicts that are motivated or influenced by the incentive of natural resource exploitation tend to reflect not only the strong economic interests of actors, but also the existence of an underlying war economy dominated by private political and economic agendas, and sometimes by the dynamics of motivations oscillating between economic and political agendas.⁸

The third argument advanced by this school of thought is that an abundance of natural resources can prolong conflict because they provide a reliable source of finance with which warlords and armed groups are able to sustain combat engagement over a long period of time.⁹ In situations where factions involved in a conflict have a mutual interest in abundant natural resources, their preoccupation with the exploitation of such resources could contribute to the emergence of a mutually beneficial stalemate. In such a situation the different factions are disinterested in the prospect of peace since the chaos associated with conflict becomes an avenue for economic gain and profiteering. Somalia is a good example of this. Not only does this make the resolution of the conflict difficult, but it also contributes immensely to its protraction.

When abundant natural resources provide the context for factions to collude in the exploitation of resources, looting then forms the basis for the criminalisation of the actors, who eventually become preoccupied with resource exploitation rather than the core business of seeking peace or waging war. In the case of Sierra Leone, such collusion and criminalisation led to the emergence of the phenomenon of the *sobel*,¹⁰ in which government soldiers were found to be operating as soldiers by day and rebels by night. In the Democratic Republic of Congo (DRC), this development was partly responsible for the criminalisation of elements of regional forces that supposedly intervened in the search for peace, but became guilty of natural resource exploitation.¹¹ Because of their preoccupation with looting and their non-commitment to peace, the conflict has been prolonged.

Another major link between natural resources and conflict is perhaps an indirect one. This is the relationship between natural resources, poor economic development and the nature of governance.¹² While the last two variables are highly correlated with the likelihood of conflict, the role of natural resources in fomenting conflict is at best symptomatic of an underlying leadership crisis. The accessibility of natural resource revenue in a given country without any appreciable change in the fortunes of that

country and the quality of life of its citizens provides ample evidence of economic mismanagement and leadership ineptitude. In a sense, natural resource mismanagement exemplifies the underlying political and economic leadership crisis. Natural resource abundance then provides stark evidence of the poverty of leadership and the governance deficit around which grievance-based conflicts may revolve.

The characteristics of natural resources ought to be interrogated in the quest for a holistic understanding of the link between natural resources and conflict

The other dominant approach to establishing a link between natural resources and conflict revolves around scarcity. Here the argument is that a scarcity of natural resources is capable of causing conflict based on the proposition that the scarcity of any given resource is capable of becoming the basis around which people, groups and nations may wage war in the pursuit of access to the quantity and quality of resources necessary for survival.¹³ This proposition implies that the more severe the scarcity, the more intense the resultant struggle and the worse the form of violence employed.¹⁴ Across the world this argument is starkly exemplified by cases ranging from a scarcity of water, land and grazing in Africa to more complex cases such as the role of external actors in the Middle East. In many African countries contention over access to land is a source of conflict between ethnic groups. However, scarcity at the macro and international level remains probabilistic rather than conclusive save for the geopolitics surrounding the management of the Nile River, which is more about a clash of competing national interests and a lack of political will to cooperate than an actual scarcity of the resource.

While arguments about scarcity have been strongly articulated, it is also true that scarcity has at times been a basis for mutual cooperation through economic and natural resource diplomacy, innovation and diversification. In recent times, advances in technology and regional integration have enhanced the choices for mutual cooperation and provided a framework for diminishing the instances in which states resort to violence over scarce resources. Conflicts at the local level in Africa tend to reflect contentions around scarcity more than at the national and regional levels.

These two approaches generally sum up the connection between conflict and natural resources as a complex interaction of the quality and quantity of availability; the manipulative politics of ownership, management and control, and the excesses and corruptive influences associated with the process of natural resource extraction.¹⁵ These three interconnected considerations play out in complex and mutually reinforcing ways to influence access by groups, perceptions of relative deprivation, elite manipulation and politicisation, and the appropriation of inequality and violence in a context of scarcity or abundance.

While these perspectives offer important insights into the cause-effect relationship between natural resources and conflict, they do not in any way reflect on the role played by a given resource's characteristics. The role of nature and the characteristics of natural resources, as evident from the processes and dynamics of natural resource creation, ought to be interrogated in the quest for a holistic understanding of the link between natural resources and conflict. There are three important views in this regard. The first is found in the work of Philippe le Billon, who observes that the distance between the national capital and a resource, and the nature of the concentration of the resource in a given area (whether scattered or not), have implications for the typology of conflicts.¹⁶ A second case, albeit cursory, is made by Richard Auty, who observed in passing that the 'significance of the value-to-weight ratio of different natural resource commodities has been neglected in the literature on natural resources and conflict'.¹⁷

The third view, which is the basis for the point of departure of this paper, is held by Michael Ross, who suggests that the 'role played by any natural resource depends largely on its lootability, and to a lesser extent, its obstructability and its legality'. He defines 'lootability' as the ease with which a resource can be extracted and transported by individuals or small teams of unskilled workers, and 'obstructability' as the extent to which the transportation of a given natural resource can be blocked. Legality relates to the extent to which a resource can legally be sold on the international market.¹⁸ Ross's argument highlights the links between natural resource characteristics and conflict. However, the conceptualisation is still emphatic about human actions to loot, block or obstruct transportation and sell on the international market, rather than the characteristics of the resources themselves that predispose them to human exploitation.

It is argued here that although an understanding of the human dimension linking natural resources and conflict is essential, the underlying lootability, obstructability and legality issues are characteristics that ought to be highlighted, disaggregated and conceptualised from the

perspective of the characteristics of natural resources. The following sections identify three interrelated characteristics underlying human choices and the predisposition for humans to exploit natural resources for conflict financing.

SKILLS REQUIREMENTS AND NATURAL RESOURCE CONFLICTS

From the perspective of the level of skills required for extraction, two main types of natural resources can be identified. The first group includes those that require less specialised skills and equipment to exploit, principally because they are (a) accessible in time and space, allowing individuals and groups to extract them with minimal effort; (b) usually widely scattered within a vast geographical space or region, which makes them difficult to police or guard effectively against the exploitation by criminals, including warlords and armed groups; and (c) exist in marketable forms that require limited processing. These three characteristics predispose such resources to exploitation by groups and individuals. In the category of conflict-related natural resources in Africa, these minerals include alluvial gold and diamonds.¹⁹ Diamonds in particular illustrate these characteristics and their predisposition to exploitation for conflict financing.

Alluvial diamonds have three major characteristics that make them vulnerable. Firstly, they are usually scattered over wide areas in remote areas, making their exploitation difficult to control. Secondly, the nature of deposition is superficial and they are thus readily accessible. Finally, they are fairly easy to extract, usually requiring only rudimentary equipment and low-skilled labour with minimal training and sometimes no education. According to the World Bank Group, small-scale diamond mining 'is often a poverty-driven activity, typically practiced in poor and remote rural areas of a country by a largely itinerant and poorly educated population with few other employment alternatives. More often than not, in the absence of functioning state regulatory frameworks and enforcement capabilities, it is conducted illegally'.²⁰ Alluvial diamonds are usually also of 'high quality and more valuable in terms of their per carat value and can be cut and polished losing less [of] their carat weight'.²¹

These three characteristics make the exploitation of alluvial diamonds ideal for conflict financing in low-income African states in a process that is driven by the ease of accessibility and the will to use diamonds for conflict financing, as there are few alternative sources of financing. The remaining variable, the low level of skills required for exploitation, then becomes the crucial determinant. In the case of Angola, this partly explained the complexity of the dynamics surrounding the strength and sustenance of combat supplies by the National Union for the Total Independence of Angola (Unita) during the war from the

early 1990s till the death of Jonas Savimbi, Unita's leader, in 2002. Angola's alluvial diamond resources are scattered across a surface area of about 300 000 km² in the country's north-east, an area that was under Unita control. The group recruited thousands of illegal miners called *garimpeiros*, who were largely underpaid poor people searching for diamonds in riverbeds with their bare hands under the watchful eyes of armed Unita guards.

The proceeds, which amounted to about US\$600 million annually between 1993 and 1997, provided Unita with revenue to purchase the arms it needed and subsequently enhanced its combat capability.²² Apart from the absence of a government presence in the resource areas,²³ the ease with which the mineral could be exploited with rudimentary equipment and unskilled labour enhanced Unita's ability to take advantage of the resource. The characteristics of the resource and the role it plays in conflicts explains in part the origin of 'blood diamonds' and the overall popularity of the resource among armed groups in a number of African conflicts, such as in Sierra Leone.

When it comes to this category of resources, it is easy for individuals, non-state actors and armed groups to raise makeshift processing plants and exploit the resources. In Ghana, for example, the alluvial nature of gold and diamonds has made it very difficult for government processes, oversight and governance to be exercised since the character of the resource predisposes it to ease of exploitation by criminal groups. It thus becomes the basis for contention between actors in a given state, not least because rent seeking encourages collusion between state officials and criminals.

The second category of natural resources includes those that have to be mined at depth, such as deep-level gold, oil and diamonds in kimberlite formations. These usually require high-end specialised skills, highly mechanised processes and engineering equipment for their exploration and exploitation. The process of acquiring the skills and equipment needed is highly capital intensive and is beyond the capabilities of individuals and groups without the necessary standing and legitimacy to attract international finance. The extraction of such resources is thus the preserve of multinationals such as Shell (oil) and De Beers (diamonds) that have the required skills and capital base to maximise extraction and processing.

The operations that fall within this category are well policed and protected by either government security forces or private security companies. These characteristics make them unattractive to armed groups and warlords. Diamonds are once again a case in point. Kimberlite mining, which involves the extraction of diamonds from volcanic pipes, is machine, skills and capital intensive. Diamonds mined from kimberlite formations in countries like Botswana are hardly the cause of contention.

PORTABILITY OF NATURAL RESOURCES AND CONFLICTS IN AFRICA

Another important characteristic of natural resources is their portability, which is defined as the ease with which a mineral can be transported from one place to another and the means by which its integrity is maintained during transport so that its marketable form, quality and quantity are retained at the point of delivery. In the case of natural resources exploited by illegal groups to finance conflict in Africa, portability is a factor of four main variables, namely size, weight, volume and ease of concealment during transportation. Today's African armed groups and warlords prefer material, weapons and equipment that are portable and do not impede mobility. Apart from considerations of affordability, these requirements can be explained in part by the predominantly guerrilla nature of conflict in Africa, which requires armed groups to be highly mobile in difficult terrain during certain times of the year.

Compact natural resources enhance mobility and reduce the complexity of maintaining marketable form, quality and quantity

This logic also determines the choice of the natural resource to be exploited. Generally resources that are light in weight and small in size are preferred. They must neither inhibit combat readiness nor increase the vulnerability of fighters to enemy fire. Compact natural resources enhance mobility and reduce the complexity of maintaining marketable form, quality and quantity. The portability characteristic provides an important explanation for the preference by armed groups of a resource such as diamonds, especially in situations where middlemen are not readily available to take over the responsibility for transportation. Even where middlemen do attend to this aspect, ease of transportation is a factor, given the illegal nature of operations.

Alluvial diamonds are generally small in size, easy to conceal and not cumbersome to carry around. A diamond is one of the hardest mineral substances and does not require extreme care and protection to maintain its marketable form, quality and quantity during transportation. These qualities make diamonds far more portable than other resources, such as oil, that are relatively heavy, voluminous and require special handling and transportation methods. Nevertheless, in the case of

the Niger Delta in Nigeria, oil is vulnerable to bunkering by criminals and armed groups. The difficulties inherent in portability and concealment of bulk minerals can result in trouble for armed groups aiming to exploit them to finance their activities.

CURRENCY SIGNIFICANCE OF NATURAL RESOURCES AND CONFLICTS

During the Angolan civil war, Unita depended heavily on diamonds, which were 'a prime means of payment for arms, either via barter or through the prior ability to exchange diamonds for cash'.²⁴ This was possible primarily because diamonds have a high value-to-weight ratio compared to other resources such as oil, copper and sugar.²⁵ Over the years, the price of diamonds per kilogramme has been far higher than that of other commodities, while diamonds also hold their value over time. In addition, even though diamonds are not fungible, they are highly liquid. They can be readily bought or sold because they have a high cultural significance and are desired, an excellent store of value and readily marketable.

As a result of these characteristics, which are similar to that of cash in certain currencies, diamonds were Unita's preferred means for storing wealth, influencing state agencies and purchasing arms. Diamonds became a form of currency for transactions by rebels. According to David Gold, it was easy to use diamonds to 'purchase transportation and other services to move them out of war zones to where they can be sold for cutting and polishing'.²⁶ Coupled with the difficulty of tracking diamonds, this made it relatively easy to smuggle the stones across international boundaries, which further enhanced their exploitation and smugglability, even under stringent international regulations, including United Nations sanctions prohibiting the sale of 'blood diamonds' from Angola.

Based on the Angolan experience, this paper posits that the closer resource characteristics are to the characteristics of money, the greater the chances of its being converted into currency or its use as medium of exchange for arms purchases and a store of value for warlords and rent-seekers. These are enhanced in particular if the natural resource in question has high liquidity.

ROLE OF THE STATE IN ENHANCING VULNERABILITIES: THE COUNTERFACTUAL

Despite the characteristics of natural resources, a scan of African conflicts reveals that there are instances when these characteristics have not led to conflict and situations where the non-existence of such characteristics had not

prevented conflict either. Contrasting the availability of alluvial gold and diamonds in Ghana and oil in Nigeria helps to illustrate these nuances well. Despite the existence of alluvial gold and diamonds in Ghana, the country has not experienced any major conflict associated with these minerals, even though the country has faced difficulties in effectively exercising governance and control over their exploitation as a result of the nature of these resources. Ghana has a long history of grappling with the challenges associated with artisanal miners, popularly known as *galamsey* operators, in several areas hosting alluvial gold and diamond deposits.

In Nigeria, on the other hand, the abundant availability of oil, the level of skills required for its exploitation, the cost of transportation and its generally low value-to-weight ratio has not been a panacea to the curse associated with oil in the Niger Delta. This paper argues that these two cases clearly highlight the role of the state in the creation of an environment conducive to the onset of natural resource-based conflicts and illustrate the importance of the state in arresting the role natural resource characteristics play in conflict.

In the case of Ghana, the government's response helped to eliminate the underlying grievances that could have encouraged the emergence of conflict. Rather than criminalising and enforcing punitive measures against illegal small-scale miners, the government embarked on a process of registering their operations, thereby legitimising them. A small-scale mining law was passed in 1989 that paved the way for the patronage of their activities. An estimated 15 000 *galamsey* operators were granted operational licences, and sales of their output within the legitimate economy rose from zero to about US\$11,2 million for diamonds and US\$18,4 million for gold by 1998.²⁷ This response averted the possibility of a conflict between the state and small-scale miners. However, in the case of Nigeria the failure of the political elite to address the concerns of ethnic minorities in oil-rich regions, particularly the Ogoni and Ijaw people, contributed to the escalation of the issue from an ethnic minority grievance to a crisis.

These two cases speak to the role of the state in a number of ways. Firstly, in most instances of conflict involving natural resources in Africa, the resources help to finance or aggravate an existing conflict. In the absence of an ongoing conflict, natural resources hardly ever become the source of conflict. Natural resources are, therefore, secondary drivers of conflict in the majority of African cases. In situations where primary drivers of conflict are dealt with by state authorities, natural resource characteristics cease to create vulnerabilities. Unfortunately, however, the majority of countries hosting natural resources in Africa also exhibit signs of leadership weakness and social fragility. When resources with certain

characteristics become a factor, however, it is clear that their role in conflict is reinforced by other underlying variables, in which case they may then become a factor at the onset and in the prolongation and resolution of conflict.

Secondly, strong states maintain a degree of monopoly over the use of force and adequately control their territories, including areas with natural resource deposits. The opportunities for exploitation by criminal elements and armed groups are thus reduced.

Thirdly, the majority of weak states are characterised by corruption and a high number of rent-seeking political and economic actors. These actors attempt to benefit directly from natural resource proceeds through misappropriation and marginalisation, which creates grievances, or through collusion with criminals. Ultimately, the legitimacy and capacity of the state to deal with the issues is undermined and provides an environment that is conducive to the onset of conflict and subsequent natural resource conflict dynamics. This situation reflects the challenges facing Nigeria, where political collusion, marginalisation and rent-seeking tendencies have fomented the Niger Delta crisis. It can be deduced that the resource characteristics argument is a function of state responsibility, capacity, strength and policy choices. A state's response to underlying vulnerabilities, drivers and enablers of conflict makes a huge impact on the role of characteristics in the predisposition to conflict.

CONCLUSION AND POLICY IMPLICATIONS

While human choices are important when it comes to the link between conflict and natural resources, the significance of the characteristics that encompass the level of skills required, portability and the liquidity of natural resources cannot be overemphasised. Portability and liquidity provide important explanatory variables for the behaviour of people in the face of an abundance of natural resources. This paper has tried to cite evidence in support of the argument that even though human-centred aspects of the nexus between natural resources and conflict is important, an appreciation of the nature of a given natural resource is equally significant since it explains the predisposition of particular natural resources to exploitation and their overall role in conflict. It has been argued that when a given natural resource requires less specialised skills to explore, exploit and refine, is highly portable and has characteristics similar to that of currency, its role in conflict is enhanced because of the exploitative tendencies of armed groups and criminal organisations, which are naturally predisposed to exploiting the resource.

Furthermore, it has been argued that, even so, not all cases of natural resource deposits exhibiting the required

characteristics have culminated in the onset of conflict or led to resource-based conflicts. The paper has, however, argued that in the absence of all these characteristics, as in the case of oil, vulnerability is a factor of state weakness in managing the primary drivers and onset of conflict.

The closer resource characteristics are to the characteristics of money, the greater the chances of its use as medium of exchange

This study is important for policy in a number of ways. It highlights the fact that the characteristics of a particular natural resource deposit can help to explain its predisposition to being exploited by armed groups and its overall role in conflict. This implies that for countries with resources such as alluvial diamonds and gold, the need for the political leadership to extend control over areas of the deposit is important for containing a possible role of the resource in conflict. The maintenance of a monopoly over the use of force and the assertion of power over territories are also an important means by which a country can deal with the vulnerabilities associated with the existence of particular natural resources.

Appreciation by states of the arguments contained in this paper is important for creating good information on the nature of their country's natural resources. States with resources such as alluvial gold and diamonds should pay serious attention to addressing the primary drivers of conflict and their underlying vulnerabilities in this regard for the reason that any conflict that may result could be prolonged by the reinforcing role of natural resource exploitation and the ability of armed groups to capitalise on such resources for sustaining combat operations.

In terms of research, this paper provides another dimension to the ongoing debate about the linkages between natural resources and conflict. It explains in part why Africa's security experiences with some natural resources have been so torturous.

NOTES

- 1 Christa Brunnschweiler and Erwin Bulte argue that natural resource abundance is associated with a reduced probability of the onset of war and that there is therefore no reason to regard resources as a general curse to development. See Brunnschweiler and Bulte, *Natural resource abundance and violent conflict: resource abundance, dependence and the onset of civil wars*,

- Working paper no. 08/78, Zurich: CER-ETH Center of Economic Research at ETH, January 2008, 1.
- 2 Ian Bannon and Paul Collier, *Natural resources and violent conflict: options and actions*, Washington, DC: World Bank Publications, 2003; Abiodun Alao *Natural resources and conflict in Africa: the tragedy of endowment*, Rochester: University Rochester Press, 2007; Richard M Auty, Natural resources and civil strife: a two-stage process, *Geopolitics* 9(1) (Winter 2004), 29–49; OECD-DAC Network on Development Co-operation and Environment, *Natural resources and pro-poor growth: the economics and politics*, Paris: OECD Publishing, 2009; Macartan Humphreys, Natural resources, conflict and conflict resolution: uncovering the mechanisms, *The Journal of Conflict Resolution* 49(4) (August 2005), 508–537.
 - 3 This is the phenomenon whereby natural resource-rich countries experience a rise in the prices of tradable goods and wages as a result of a large increase in revenue from natural resource exports. This damages the productive economic sector and reinforces the country's dependence on natural resources. See Xavier Sala-i-Martin and Arvind Subramanian, Addressing the natural resource curse: an illustration from Nigeria, National Bureau for Economic Research Working Paper Series, Working Paper 9804, 2003, 1–3, <http://www.nber.org/papers/w9804> (accessed 15 May 2012).
 - 4 Michael L Ross, Oil, drugs, and diamonds: the varying roles of natural resources in civil war, in Karen Ballentine and Jake Sherman (eds), *The political economy of armed conflict: beyond greed and grievance*, Boulder: Lynne Rienner, 2003, 54–57.
 - 5 Erich Zimmerman, *World resources and industries*, New York: Harper and Brothers, 1933, 814–815.
 - 6 Philippe Le Billon, The political ecology of war: natural resources and armed conflicts, *Political Geography* 20(5) (2001), 564.
 - 7 Paivi Lujala, The spoils of nature: armed civil conflict and rebel access to natural resources, *Journal of Peace Research* 47(1), 3–4; K Ballantine, Beyond greed and grievance: reconsidering the economic dynamics of armed conflict, in K Ballentine and J Sherman (eds), *The political economy of armed conflict: beyond greed and grievance*, London: Lynne Rienner, 2003, 259–83; Michael Ross, How do natural resources influence civil war?: evidence from 13 cases, *International Organisation* 58(1) (2004), 35–68.
 - 8 Le Billon, The political ecology of war, 565.
 - 9 Abiodun Alao and Funmi Olonisakin, Economic fragility and political fluidity: explaining natural resources and conflicts, *International Peacekeeping* 7(4) (2000), 25.
 - 10 *Sobel* – soldier-rebel; soldier by day, rebel by night. *Sobels* were government soldiers who assumed the identities of rebels at night in order to pillage and rob communities, and plunder factories and mining operations. See Arthur Abraham, War and transition to peace: a study of state conspiracy in perpetrating armed conflict, *Africa Development* 22(3–4) (1997), 103.
 - 11 United Nations, Report of the Panel of Experts on the illegal exploitation of natural resources and other forms of wealth of the Democratic Republic of the Congo, 2001, <http://www.un.org/news/dh/latest/drcongo.htm> (accessed 7 June 2012).
 - 12 Alao, *Natural resources and conflict in Africa*, 27.
 - 13 Le Billon, The political ecology of war, 564.
 - 14 Ibid.
 - 15 Alao, *Natural resources and conflict in Africa*, 26.
 - 16 Le Billon, The political ecology of war, 564.
 - 17 Auty, Natural resources and civil strife, 42.
 - 18 Ross, Oil, drugs, and diamonds, 54–57.
 - 19 The World Diamond Council defines alluvial diamond as diamonds that have been removed from the primary kimberlite source by natural erosive action over millions of years and deposited them in a new environment such as a riverbed, an ocean floor or a shoreline.
 - 20 World Bank, Conflict diamonds, Africa Region Working Paper Series No. 13, 2001, 4, <http://www.worldbank.org/afr/wps/wp13.pdf> (Accessed 10 June 2012)
 - 21 Franziska Bieri, *From Blood Diamonds to the Kimberley Process: how NGOs cleaned up the global diamond industry*, Surrey: Ashgate Publishing (2010), 18.
 - 22 Auty, Natural resources and civil strife, 42.
 - 23 Le Billon, The political ecology of war conceptualises the role of the distance between natural resource deposits and national capitals.
 - 24 David Gold, The attempt to regulate conflict diamonds, *The Economics of Peace and Security Journal*, Vol. 1(1) (2006), 49.
 - 25 For a comparison of the weight to value ratio of different commodities, see Auty, Natural resources and civil strife, 42.
 - 26 Gold, The attempt to regulate conflict diamonds, 49–50.
 - 27 KE Aning and H Ebo, The political economy of conflict in West Africa's security challenges, London: Lynne Rienner Publishers, 2004, 215–217; A Atta-Asamoah and K Aning, Demography, environment and conflict in West Africa, in Thomas Jaye, Dauda Garub and Stella Amadi (eds), *ECOWAS and the dynamics of conflict and peace-building*, CODESRIA, 2011, 77–96.

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ABOUT THE PAPER

This paper addresses the debate on natural resources and conflict from the point that conceptualisations of the linkages between conflicts and natural resources have generally concentrated on the human aspects of the relationship. By so doing, the nature of natural resources and the influence their inherent and locational characteristics have on the roles they play in conflicts are seldom taken into account. Drawing on African conflict experience, the paper adduces evidence to establish an argument that this approach is one-sided for a proper understanding of the issues involved, and maintains that a more holistic understanding and conceptualisation should appreciate the role of natural resource characteristics. It posits that a given resource has a higher chance of fuelling conflict when it has characteristics that require less specialised skills for its exploitation and refinement, has high liquidity, and is easily portable and therefore 'smugglable'.

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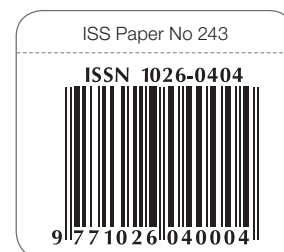
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