

## Original article

# A sub-national scale geospatial analysis of diamond deposit lootability: The case of the Central African Republic



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## ABSTRACT

The Central African Republic (CAR), a country with rich diamond deposits and a tumultuous political history, experienced a government takeover by the Seleka rebel coalition in 2013. It is within this context that we developed and implemented a geospatial approach for assessing the lootability of high value-to-weight resource deposits, using the case of diamonds in CAR as an example. According to current definitions of lootability, or the vulnerability of deposits to exploitation, CAR's two major diamond deposits are similarly lootable. However, using this geospatial approach, we demonstrate that the deposits experience differing political geographic, spatial location, and cultural geographic contexts, rendering the eastern deposits more lootable than the western deposits. The patterns identified through this detailed analysis highlight the geographic complexities surrounding the issue of conflict resources and lootability, and speak to the importance of examining these topics at the sub-national scale, rather than relying on national-scale statistics.

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## 1. Introduction

Diamonds have been linked to conflicts in several African countries in recent decades, including those in Sierra Leone (Smillie et al., 2000), Angola (Le Billon, 2001), the Democratic Republic of the Congo (DRC) (Samset, 2002), Côte d'Ivoire (UNSC, 2005), and Liberia (UNSC, 1992). Most recently, the international community has voiced concern that the diamonds in the Central African Republic (CAR) may be the latest example of a conflict resource. In December 2012, soldiers from the Seleka rebel group alliance began a steady march toward the capital, Bangui. Originating in CAR's remote, diamond-rich northeastern region, Seleka seized 19 towns on its way to the capital. There was a brief respite in violence following the signing of a peace agreement; however, violence resumed in March of 2013, and by the end of the month President François Bozizé had fled the country and Seleka had taken over Bangui and control of the government. As a result, the Kimberley Process (KP), the international initiative tasked with stemming the flow of conflict diamonds, suspended CAR from diamond export due to the lack of internal controls over the diamond sector in the wake of the Seleka takeover (KPCS, 2013a).

In light of recent political events in CAR, it is highly relevant to examine the country's diamond deposits within the context of the conflict resources literature. Most literature analyzes this subject in one of three ways: by comparing the deposits of two different countries (Le Billon, 2008), by averaging the experiences of multiple countries (Olsson, 2007; Snyder, 2006), or by generalizing the characteristics of a single country's deposits (Richards, 2001). All three methods fall short of identifying the state-level geographic discrepancies of the factors that shape a deposit's vulnerability to exploitation by rebel groups. Each method assumes that the physical characteristics of the deposits and the socio-cultural and political conditions that surround each deposit are nationally uniform. This study does not seek to determine whether diamonds are the cause of conflict in CAR; rather, it seeks to understand how the vulnerability of a country's deposits to looting may vary spatially. The authors argue that four principal geographic contexts influence a deposit's vulnerability to looting, or vulnerability to exploitation: the physical geographic (referring to the geologic characteristics of the deposits), political geographic, spatial location, and cultural geographic contexts. Focusing on the issue of conflict diamonds in CAR, this paper (1) uses a geographic approach to perform a spatially quantitative analysis of the factors that facilitate the exploitation of diamond deposits by rebel groups, (2) identifies how these factors distinctly manifest themselves across CAR, and (3) argues for the need to shift away from the current approach of assessing lootability at the national scale and toward assessing it at the sub-national scale. CAR's diamond

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deposits serve as the archetypal example of how the physical, cultural, and political dynamics that influence a deposit's risk of being looted can vary within national boundaries. CAR's two principal diamond deposit zones are located more than 600 kilometers (km) apart, and while geologically similar, they differ in terms of the strength of state control, access to and from the capital, proximity to internal and regional armed conflicts, and the degree of ethnic fragmentation of the local population. The detailed level of analysis conducted in this study allows for the research results to have important policy implications, enabling government and development agencies to better target their limited resources toward a country's most vulnerable regions.

## 2. Diamonds and conflict in the CAR

Home to 5.1 million people, CAR is one of the world's least developed countries, ranking 180 out of 187 countries in the 2012 United Nations Development Programme's Human Development Index (Malik, 2013). The recent government takeover in CAR follows a turbulent history of political instability, defined by a series of coups and attempted coups and the formation of multiple armed rebel groups. Prior to the formation of the Seleka rebel group in 2012, three principle groups were operating in CAR: the Popular Army for the Restoration of the Republic and Democracy (APRD), the Union of the Democratic Forces for Unity (UFDR), and the Convention of Patriots for Justice and Peace (CPJP) (Bauters, 2012; Spittaels and Hilgert, 2009). In September 2012, the UFDR, CPJP, and a third group, the Wa Kodro Salute Patriotic Convention (CPSK), aligned to form the Seleka rebel group (ICG, 2013). Members of the Ugandan-based Lord's Resistance Army (LRA) have also been operating in CAR since 2008, primarily in the southeast (Bauters, 2012).

Complicating this unstable political situation is the fact that CAR is home to extensive alluvial diamond deposits. The deposits are principally located in the southwest (hereafter referred to as the western zone deposits) and northeast (hereafter referred to as the eastern zone deposits), and in a smaller zone in the southeast

(see Fig. 1). CAR is the world's 12th leading producer of rough diamonds in terms of value and diamonds represent 40% of the country's total export revenues, with production fluctuating between 300,000 and 450,000 carats since the late 1960s (KPCS, 2013b). While CAR is a relatively minor producer in terms of volume, the quality of the diamonds is exceptionally high.

Diamond production in CAR has been nearly exclusively artisanal in nature since independence in 1960, with miners extracting stones using only rudimentary tools and techniques. Artisanal mining is frequently perceived as an attractive livelihood option by impoverished populations due to its low entry barriers and potential for high earnings. However, it is also associated with a high degree of uncertainty, as miners lack efficient exploration techniques and often operate largely by guesswork (Jönsson and Fold, 2011). It is estimated that there are approximately 60,000–90,000 miners operating in CAR (Bermúdez-Lugo, 2011; Chirico et al., 2010). It is important to note, however, that estimating the number of artisanal miners in a particular region or country is a challenging task, due to factors such as the transient nature of miners, poor record-keeping by mine managers, and the informality of the sector (Heemskerk, 2001). It is made even more difficult in countries such as CAR, where political instability and open conflict are widespread.

## 3. Natural resources and armed conflict

### 3.1. Conflict resources

The relationship between natural resources and armed conflict has been the topic of considerable study and debate since the early 1990s. Le Billon (2008) outlines the three prominent theoretical arguments that have been put forth to explain the connections between resources and wars: the resource conflict, resource curse, and conflict resource theories. The resource conflict argument focuses on the existence of a causal link between resource scarcity and specific types of conflicts, such as those over resource access. These conflicts are typically diffuse, persistent, and sub-national in

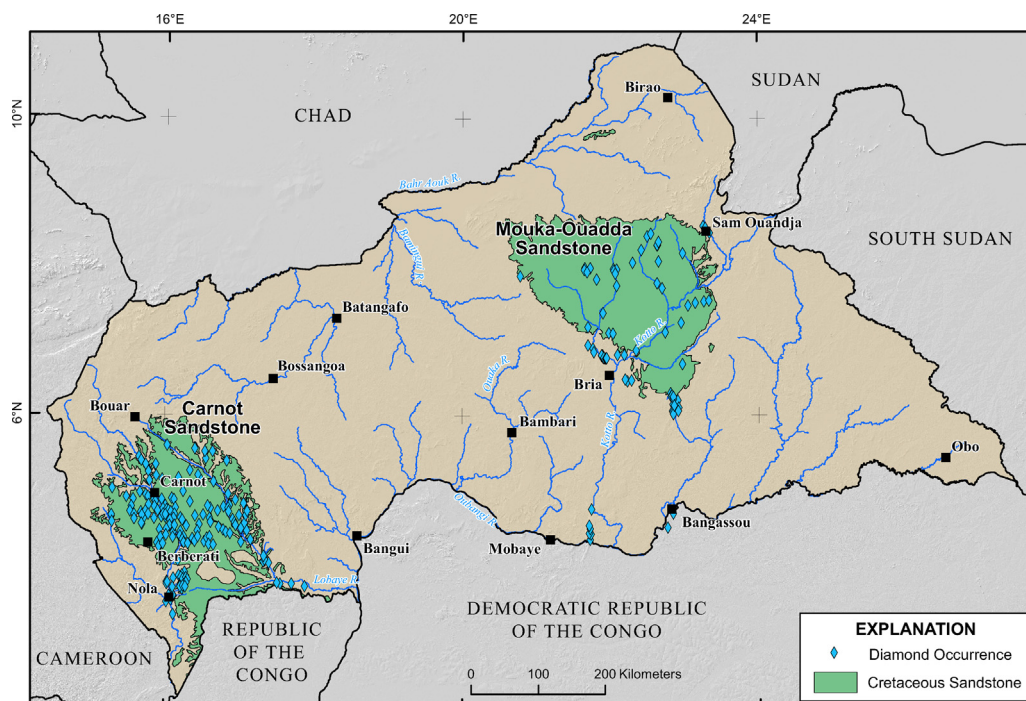


Fig. 1. The location of CAR's diamond deposits and the Carnot and Mouka-Ouadda Sandstone formations.

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