

ANTHROPOCENE

Rose U. Uwodha and Aymar N. Bisoka

Illustration by Benjamin Baharanyi



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ABOUT THE AUTHORS

AYMAR NYENYEZI BISOKA is a lawyer and political scientist, holding a PhD from the School of Political and Social Sciences at the Catholic University of Louvain. He is an assistant professor at the University of Mons and collaborates with institutions across the Great Lakes region and Europe on issues of natural resource governance, armed groups, and Afro-critical social thought.

ROSE UKECI UWODHA is a geographer-cartographer and a doctoral researcher in sociology and anthropology at the University of Mons. Her doctoral research focuses on local Anthropocene dynamics and vernacular knowledge systems in northeastern DR Congo, using the Kilo-Moto gold mine as a case study.

ABOUT THE ILLUSTRATOR

BENJAMIN BAHARANYI is an artist. His artistic approach is rooted in a deep appreciation of nature and its interaction with humanity. His art focuses primarily on trees, a living metaphor for current environmental challenges. Through detailed depictions of roots, bark, and leaves, Benjamin illustrates the essential symbiosis between humans and nature. His works question deforestation, encourage reforestation, and celebrate trees as a source of life.

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The term “Anthropocene” refers to the significant impact of human activities on the Earth, affecting everything from climate to biodiversity. This controversial concept has spread from the natural sciences to the social sciences, raising political, cultural and ethical issues. Although it sheds light on the pressures that globalisation places on ecosystems, it has nevertheless been criticised for glossing over historical inequalities and power relations. This has led to the emergence of alternative concepts, such as the Capitalocene and the Plantationocene. Ruashi in the Democratic Republic of Congo (DRC) is a prime example of these tensions, embodying the contradictions of the Anthropocene through pollution, soil depletion, social inequalities, and neo-colonial legacies.

Concept

The Anthropocene is currently being debated by scientists from a wide range of disciplines and has also attracted the attention of artists, writers, and the media (Malhi, 2017). First popularised by Crutzen and Stoermer (2000), it highlights the extent of human impact on the global system, particularly in terms of climate change, but also in relation to deforestation, energy use, air pollution, and the overexploitation of resources (Ibid.; Crutzen & Stoermer, 2000). It was first adopted by earth and environmental scientists seeking to quantify the impact of human activities on the planet. Some studies have focused on measuring the pressure that human societies exert on ecosystems by analysing the resources used (e.g. water, soil, and energy) and the

planet's capacity to regenerate them. This concept is known as the "ecological footprint" (Wackernagel et al., 2002; Smith et al., 2014). Other studies have focused on the quantity of materials and energy used by societies in their daily operations on a global scale (Fischer-Kowalski et al., 2014). Finally, several studies have demonstrated that the Earth has ecological limits that must not be surpassed to prevent severe imbalances (Rockström et al., 2009).

Meanwhile, ecological sciences have examined biodiversity loss and ecosystem transformation, emphasising the scale of ongoing extinctions (Ellis, 2011). These analyses highlight the long-lasting effects of human activity on life forms and reproduction conditions. Geological sciences have also adopted the term Anthropocene to designate a new geological era. The sci-entific validity of this term has been debated, with the focus

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being on the search for clear

traces in the Earth's geological layers and the difficulty of pin-pointing precisely when this era began (Austin & Holbrook, 2012; Federau, 2023).

Subsequently, the concept of the Anthropocene has rapidly extended beyond the natural sciences to establish itself within a broader scope of academic work, particularly in

the humanities and social sciences. It has acquired significant political importance, prompting reflection on the relationship between humans and their environment in a changing world at different levels (Malhi, 2017). Two main themes emerge among the cultural and philosophical reactions it elicits: the first concerns the challenges posed by global upheavals; the second focuses on how our relationship with nature can be redefined in a world that has been profoundly transformed by humans (Purdy, 2015).

In geography, the concept of the Anthropocene has been adopted in various ways, helping to revive and renew interest among geographers in environmental issues (Castree, 2014; Fourault-Cauet, 2020). It has broadened existing thinking on issues such as the human impact on nature, sustainable development, risk management, and climate change adaptation. The concept has also raised geographical questions, such as those concerning scale and the links between spaces. For example, it has focused on how global changes manifest themselves in local contexts (Dufour, 2024).

More recently, socio-anthropology has emphasised that environmental crises are essentially social crises and therefore cannot be analysed exclusively through the lens of the natural sciences (Simon, 2008). From this perspective, the concept has been criticised for being overly general. By designating “humanity” as a whole as responsible for environmental degradation, the concept erases the differences between societies and historical inequalities (Beau & Larrère, 2018). This erasure of power relations and differentiated trajectories is not neutral; it primarily reflects the experiences and practices of the Western world, which are often held up as the norm. This is particularly evident in the way the origin of the crisis is recounted, as it is based on a chronology rooted in European environmental history (Chakrabarty, 2009). Consequently, it renders invisible the forms of domination and suffering experienced by certain communities, masking the situated and political origins of this global crisis (Beau & Larrère, 2018; Ferdinand, 2019).

In this context, other concepts have emerged to provide a more contextualised and critical account of the processes associated with the Anthropocene. Some researchers have emphasised the links between the expansion of the capitalist system and environmental degradation, proposing the concepts of the *Capitalocene* (Moore, 2015) and the *Racial Capitalocene* (Vergès, 2017). These concepts highlight the connections between capitalism, racism, colonialism, and the destruction of ecosystems. Building on these critiques, the concept of the

Plantationocene has been proposed to reflect on exploitative regimes that emerged from plantation economies based on the enslavement of human and non-human bodies. These regimes continue to inform extractivist practices today (Haraway et al., 2015; Haraway, 2016). Feminist researchers have suggested the terms *Androcene* and *White Anthropocene* (Di Chiro, 2017) to emphasise the impact of patriarchal societal organisation and male domination over nature and women (Dufour, 2024).

In short, the concept of the Anthropocene has prompted new reflections in many fields, re-examining our relationship with nature and the history of human impact. The debates to which it has given rise testify to its power as a critical and analytical tool (Malhi, 2017). Taking into account multiple historical causes and diverse environmental consequences, socio-anthropology therefore calls for the consideration of *multiple Anthropocenes* (Mathews, 2020), as it seems difficult to imagine a single term that can encompass all of the issues it raises (Malhi, 2017).

Case study

Below, we describe a case of mining extractivism in Africa that illustrates the Anthropocene era. More specifically, it reflects our current era, characterised by the decisive impact of human activity on ecological, economic, and social systems on a global scale. In the DRC, these dynamics have resulted in increased conflicts relating to land, human rights, and governance in a neocolonial context where large mining companies exploit local vulnerabilities. Mining extractivism thus illustrates the tension between economic development and environmental destruction — an inherent contradiction of the Anthropocene, where the pursuit of growth threatens the conditions necessary for life to exist.

The case study focuses on the province of Katanga (now Haut-Katanga), one of the DRC's richest regions in terms of natural resources, particularly copper and cobalt. While these minerals have attracted many foreign investors, mining has had dramatic consequences for the

environment and local

communities, especially since privatisation and the creation of joint ventures in the 2000s. The Ruashi mine, formed in 2000 as a joint venture between

Gécamines and Ruashi Mining SPRL, is particularly emblematic of the socio-environmental challenges associated with the Anthropocene in the DRC.

Ruashi Mining was established in 2000 in response to the economic crisis that hit the DRC in the 1990s. At the time, Gécamines, a Congolese public company founded in 1966, was on the verge of bankruptcy. It therefore

sought to partner with private investors, enabling Ruashi Mining to become a major player in the mining industry. Open-pit mining and mineral transport were accompanied by promises of social development for the local population, including the provision of drinking water, infrastructure rehabilitation, and job creation. However, these benefits were widely perceived as insufficient, particularly given the environmental damage suffered by the inhabitants of the commune of Ruashi and the surrounding area.

It challenges the power structures inherited from colonialism that continue to favour the exploitation of African territories and their natural resources by foreign actors, often to the detriment of indigenous populations and their sustainable lifestyles.

A major concern raised by inhabitants of the region is water pollution, particularly of the drinking water supplied by Regideso pumping stations. Mining in Ruashi, as well as at other metallurgical plants such as Chemaf, has led to rivers and groundwater being contaminated with heavy metals such as lead, copper, and cadmium. The United Nations Environment Programme (UNEP) has shown that these pollutants originate from factory discharges and mining activities, directly affecting the water sources that supply the population with drinking water. Samples taken by the Agri-Food Research Centre (CRAA) at Regideso pumping stations in Lubumbashi revealed lead and copper concentrations well

above the limits authorised by the World Health

Organisation (WHO). Residents of neighbourhoods affected by this pollution have expressed concern, saying that they now use water with caution, often treating it with chlorine before using it for cooking and household chores.

In addition to water pollution, mining in Ruashi has also had a dramatic impact on agricultural land. In Lubumbashi, subsistence farming remains crucial for the most vulnerable populations. However, the expansion of mining activities has led to soil contamination, increasing infertility, and reducing productivity. Farmers in the commune of Ruashi and the surrounding area have reported that water from mine tailings dumped on their fields has degraded the quality of the soil. This water contains heavy metals and mining residues, which have made some agricultural land infertile and hindered crop growth, threatening families' livelihoods.

Vegetable farmers in Luano, for example, reported that their fields had been flooded with acidic water, which affected the growth of cabbages, tomatoes, and other food crops. Other farmers have also experienced a loss of soil fertility, which has forced them to abandon their farms, resulting in dramatic economic consequences for their households. In 2015, over 200 farmers in the municipality accused Ruashi Mining of polluting their fields, primarily through spills of acidic water from mine tailings. This situation directly impacted their productivity and income, exacerbating poverty in these communities.

In the face of mounting environmental pollution and deteriorating living conditions for residents, several organisations, including local and international NGOs, have criticised the inaction of the authorities and mining companies. Farmers and residents have expressed their frustration through protests and public demonstrations, accusing local and national political authorities of colluding with mining companies for economic interests.

In response to the criticism it has received, Ruashi Mining has proposed several compensation measures, such as digging wells

to provide drinking water and supplying chemical fertilisers for affected agricultural land. The company has also promised to lay pipes to divert acidic water from the fields into the rivers. However, residents widely perceive these solutions as insufficient. They argue that these

measures do not address the root causes of the pollution, but instead reinforce the population's dependence on the mining company. The mining operation in Ruashi has had a profound environmental impact and has negatively affected the living conditions of the local population.

It illustrates the broader global dynamics of the Anthropocene, in which the effects of human activity on ecosystems interact with historical and contemporary power relations, resulting in environmental degradation and social inequality.

The Ruashi case is therefore more than just a local pollution or governance issue. It illustrates the broader global dynamics of the Anthropocene, in which the effects of human activity on ecosystems interact with historical and contemporary power relations, resulting in environmental degradation and social inequality.

The situation in Ruashi highlights the multidimensional nature of the Anthropocene by demonstrating the combined effects of human activity on the planet from scientific, geographical, environmental, social, colonial, and other perspectives. Indeed, the Anthropocene reflects the impact of human activities on natural ecosystems, including the contamination of water resources and soil degradation, demonstrating the extent of pollution caused by extractivism. At the same time, it emphasises the unequal distribution of environmental impacts, with vulnerable communities, often situated in remote areas, shouldering the greatest burden. Furthermore, the Anthropocene shows how natural resources are being depleted, biodiversity is being lost, and local ecosystems are being contaminated, as evidenced by ground-water and agricultural land pollution. Finally, the Anthropocene

exacerbates inequalities, whereby local populations suffer the consequences of resource overexploitation while being excluded from economic benefits. It challenges the power structures inherited from colonialism that continue to favour the exploitation of African territories and their natural resources by foreign actors, often to the detriment of indigenous populations and their sustainable lifestyles. Thus, the Anthropocene reveals a dynamic of environmental and social domination that perpetuates historical injustices.

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