

New extractivism in European rural areas: How twentieth first century mining returned to disturb the rural transition

Camila del Marmol^{a,*}, Ismael Vaccaro^b

^a Universitat de Barcelona, Departament d'Antropologia Social. Facultat de Geografia i Història, Montalegre 6, 08001 Barcelona, Spain

^b McGill University, Department of Anthropology and McGill School of Environment, 7th Floor, Leacock Building, 855 Sherbrooke Street West, Montreal, Quebec H3A 2T7, Canada



ARTICLE INFO

Keywords:

Metal mining
Extractivism
Rural change
Conservation
European Union

ABSTRACT

In this article we aim to explore the still incipient first steps of the return of extractivism to Europe, examining the geopolitical context that led to a reemergence of metal mining in rural areas. Previous emphasis on nature conservation and tourism promotion, equally fostered from European stances since the 70s on, are nowadays being confronted with a renewed focus on the strengthening of self-provision of certain raw materials. We will go through the most relevant regulations as key tools for grasping the contradiction within the new legal frameworks. Despite the urgent need to understand the changing scenario of European rural areas, the staggering reality of critical mineral extractivism, together with its environmental, ecological and social threats, is only now starting to be analyzed by social scientists.

1. Introduction

European landscapes of the 21st century are facing extraordinary pressure as competing land uses battle for new ground, confronting alternative ways of exploiting and inhabiting the countryside. Together with the widely analyzed processes of neoliberal conservation and the commoditization of nature that have deeply altered the direction of rural development in Europe in the past 50 years (Marsden et al., 1993; Halfacree, 1999; Wilson, 2001, 2007), new pressures on land-uses have been recently emerging. Several authors have been warning about the spreading throughout Europe of critical processes in which natural resources such as water, energy, or land are being harnessed in the form of critical land grabs (Van der Ploeg et al., 2015; Franquesa, 2018; Ye et al., 2020). A close examination of these new trends of capital accumulation within rural areas is key to approach a more nuanced understanding of the shifting nature of global capitalism and the rapid way in which local dynamics are being affected by its pervasive logics.

In the last few years we have started to observe how the mountains of Europe are being re-explored by the mining industry. Across Europe, prospection for specific metals has re-started in the form of the proliferation of permit requests or actual ground testing, together with the expansion of open pit and underground mines (Eurostat, 2018). This trend is added to the already developed structure of extractive industries affecting rural areas in Europe, mainly focused thus far on construction and industrial minerals (EIP, 2018). At a time of

conspicuous climate change, Europe is embarking on the race for metal ores in its quest to increase self-sufficiency. In this context, the current expansion of metal mineral mining across Europe, together with the established extraction of industrial and construction minerals, are prompting far-reaching changes in rural development. Contrary to former trends of rural development based on natural protection (Prados, 2008; Peluso, 1993; Jordan, 2005), this new wave of extractivism is sweeping European rural areas, scanning the land for critical minerals (EC, 2008). Many prospection projects and mines are attempting to seize rural landscapes that, so far, had been developing within a framework dominated by conservation policies, protected areas and tourism promotion. We find this happening even within the jurisdiction of actual protected areas, as is the case in the Catalan Pyrenees, in a dramatic mountain pass between France and Spain which is currently being prospected by an international corporation searching for tungsten. In this specific location, where we have developed long-term researches since 2005 (Vaccaro and Beltran, 2014; Del Marmol, 2016), a long history of raising livestock on communal land gave way to large-scale timber extraction and the subsequent transformation of the landscape, to finally become a protected area, for the enjoyment of urban dwellers in their weekly quest for beauty, peace and quiet. The irruption of tungsten prospecting has led to an escalation of social movements and platforms to oppose (or support) the initiative on both sides of the mountain range. Numerous local inhabitants are deeply concerned by the way in which mining has come back to their lives.

* Corresponding author.

E-mail addresses: cdelmarmol@ub.edu (C. del Marmol), ismael.vaccaro@mcgill.ca (I. Vaccaro).

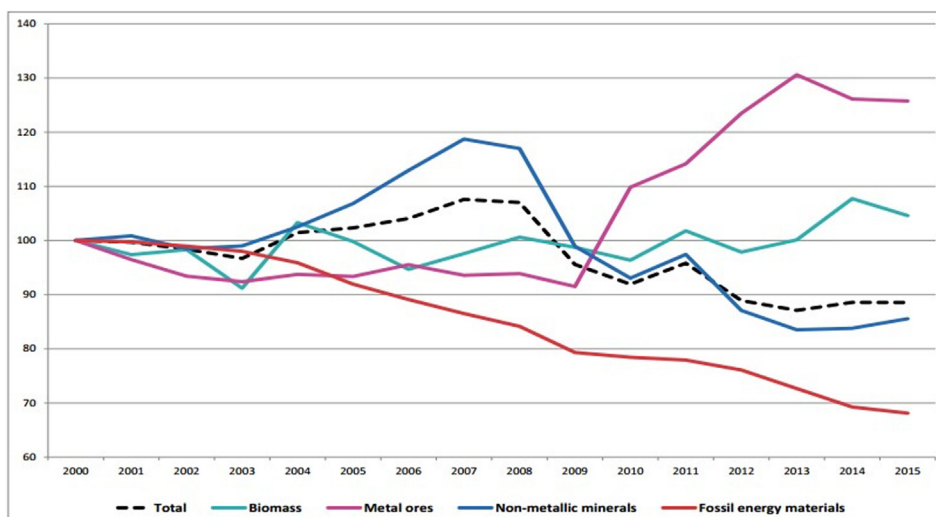


Fig. 1. Domestic extraction by material category in 2000–2015, EU 28 (2000 = 100). Source Eurostat 2018, 103.

In the midst of what has been recently called the ‘Mineral Age’ (Jacka, 2018), mineral extraction has been expanding exponentially across the world, encroaching on land and prevailing over previous uses (Arsel et al., 2016). Metal mining had been a persistent dynamic hovering over rural areas and leading landscape transition in Europe in the past centuries, and is crucial in contemporary processes defining economic livelihoods in various parts of the Global South (Gudynas, 2013; Kirsch, 2014; Bebbington and Humphreys, 2018). Nonetheless, its influence had decreased significantly from European landscapes. The last decades of the 20th century witnessed a gradual withdrawal of metal mineral extraction in Europe, due to the increasing constraints imposed by the developing environmental legislation and the rise in labor costs, as well as by the reduction in overseas transportation costs (Wagner and Fettweiss, 2001). But this situation is currently undergoing a drastic transformation. All of a sudden, what we were reading in the works of our colleagues working in South America, Oceania, or Africa, what seemed unimaginable in our field sites, is happening. Mining is stirring again under the regrown forests of Europe. This recent transformation is partly a consequence of the European Union (EU) changing the regulatory framework for mineral extraction, spurred on by the proliferation of government measures from emerging economies to alter the international trade in raw materials: export taxes and quotas, subsidies, price-fixing, dual pricing, and restrictive investment rules, among others (EC, 2008). These regulations, which prioritize the promotion of self-provision of what are now considered as top priority minerals, are transforming the current legislative and political framework for rural areas (EC, 2008, 2010, 2011, 2016). Metal ore mining is a deep-rooted reality which has been steadily developed in many areas of the Global South and is firmly advancing worldwide (Ferry, 2002; Kirsch, 2014; Gudynas, 2015; Jacka, 2018; Pijpers and Eriksen, 2019), but that because its environmental and health related costs, had long been abandoned in Europe. Nowadays it is expanding on the continent and marking an important watershed in the recent history of rural development. New mines and prospection projects are spreading in the beautified rural areas of Europe, even close to or within some of its protected areas, and are clashing with the previous emphasis on conservation and tourism development for rural zones (Halfacree, 1999; Wilson, 2007; Vaccaro and Beltran, 2007, 2010; Del Marmol et al., 2018).

This relatively new process requires a systematic, European wide, research effort. How are geopolitical priorities and global market conditions impinging on the transformation of European rural areas? What is the concrete impact of the mining push on the different regions accommodating extractive projects? To what extent is this reemerging of

mining conflicting with conservation policies, protected areas and the promotion of rural tourism? These critical questions relate to established and recognized debates revolving around rural change (e.g. Cloke, 1990; Wilson, 2001; Woods, 2011; Li et al., 2019), the agrarian question (e.g. Bernstein and Byres, 2001; Akram-Lhodi and Kay, 2010; Narotzky, 2016; Bernstein, 2017) and the critique of conservation and political ecology (e.g. Büscher et al., 2012; Cronon, 1996; Hornborg and Martínez-Alier, 2016; Igoe, 2010; Tsing, 2005; Vandergeest and Peluso, 2009); and open a path of critical rethinking of European rural transitions.

In this article we aim to explore the still incipient first steps of the return of extractivism to rural Europe through a review of relevant bibliographical and statistical sources and an analysis of the legal frameworks that are politically framing this socioeconomic process. We will examine the geopolitical context that led to a reemergence of metal mining in rural areas of Europe, and the extent of this process affecting former uses of the landscape. Previous emphasis on nature conservation and tourism promotion, equally fostered from European stances since the 70s on (Jordan, 2005; MacCormick, 2001; Langlet and Mahmoudi, 2016), are nowadays being confronted with a renewed focus on the strengthening of self-provision of certain raw materials. We will go through the most relevant regulations as key tools for grasping the contradiction within the new legal frameworks. Moreover, we make the case for the need to study the scope of these changes drawing on the vast research experience of extractivism abroad, in order to open a fruitful dialogue and prevent the dreadful conditions brought about by metal mining ventures in several parts of the world (Hornborg and Martínez-Alier, 2016; Pijpers and Eriksen, 2019; Moreno et al., 2016).

2. Is this really happening? Metal mining, the EU and geopolitics

Between 2000 and 2013, metal ore extraction in the EU-28 increased by around 30% (Eurostat, 2018, see Fig. 1). This is the result of a critical global supply situation of raw materials (World Bank, 2018) that prompted the EU to revise its procurements and provision policies. The commodity boom of the 2000s, the increasing demand from emerging markets and concerns over long-term supply, together with a rising need in the high-tech, electronic, defense and industrial sectors, affected the price evolution of metallic minerals, tripling prices between 2002 and 2008 (EC, 2008). This critical supply situation of raw materials was exacerbated by China’s dominance (Brautigam, 2009) of the metallic minerals’ market: it accounts for almost half of the global metal consumption (UNCTAD, 2015). As an example, the 2010–2012 metal mineral crisis set out by China’s export quotas on rare earth

elements, tungsten and molybdenum, triggered a global response in the form of a trade dispute involving the WTO and a global increase in investments and explorations (Cox and Kynicky, 2017). Moreover, the recent laws, regulations and certification standards on minerals extracted in areas with military conflicts (such as the EU Regulation 2017/821, the US Dodd Frank Act section 1502, the ICGLR Regional Certification, among others), have affected several countries establishing the obligation for importers to provide supply chain due diligence and restricting even more the supply of certain critical minerals (Barume et al., 2016).

In this context, assuring a secure and stable supply of raw materials has become a strategic policy of governments all around the world, and play a crucial role within the current expected transition of the European energy system to a low carbon economy after the 2016 Paris Agreement (Pavel and Tzimas, 2016). The potential risks of raw materials' shortages might compound with import reliance, the growing demand of China and emergent economies, supplier's countries' instabilities, the discovery of new applications, economic and political factors, trade restrictions, and availability, among others. Even though the global commodities market, including the price of minerals, ore and metals, has shown signs of decline since 2011 and is expected to fall further in accordance with the current deteriorating macroeconomic situation (World Bank, 2019); this tendency disguised the performance of particular commodities (UNCTAD, 2015) and most importantly does not directly impact in policy trends that are already operational. Furthermore, mineral, ores and metals are expected to maintain prices or even continue a moderate growing tendency in some cases over the next 10 years (World Bank, 2019). These financial forecasts are in line with the argument that commodities are experiencing a super-cycle boom, a demand-driven raise in prices lasting decades and not just shorts spans of time (Cuddington and Jerrett, 2008; Erten and Ocampo, 2013). Some forecasts predict a 95% rise in the global metallic mineral extraction until 2050 (EIP, 2018).

In this vein, access to raw materials in order to avoid external dependency has become and continue to be a geopolitical priority for the EU. In 2008 it issued the *Raw Materials Initiative* and the *European Innovation Partnership on Raw Materials*. As stated by the EC (2008, 2): 'Raw materials are essential for the sustainable functioning of modern societies. Access to and affordability of mineral raw materials are crucial for the sound functioning of the EU's economy. Sectors such as construction, chemicals, automotive, aerospace, machinery and equipment sectors which provide a total value added of 1324 billion € and employment for some 30 million people depend on access to raw materials'. Developed by the EC DG Grow (Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs), responsible for re-designing the internal market for goods and services, the Raw Materials Initiative is considered a critical step towards the implementation of the community's Sustainable Development Goals (SDGs) (UN, 2015) and the transition to a low-carbon and circular economy by 2050 (EIP, 2018). At the same time, it is regarded as a crucial step to meet European critical needs for growth and jobs preservation because it contributes to three fundamental economic pillars: assuring the supply of raw materials from global markets, a sustainable supply within the EU, and promoting resource efficiency through recycling (EC, 2008). As Oulu (2016, 456) has already highlighted, these pillars are firmly based on a free-market ideology, and include schemes to create and expand the raw materials' global market. The strategy includes as well a list of Critical Raw Materials (CRMs), defined as 'raw materials of a high importance to the economy of the EU and whose supply is associated with a high risk' (EU, 2017b, 7). To a large extent the raw materials defined as critical by the EU concur with the criticality of minerals as understood worldwide, while others are exclusively dived critical in the European context. The determination of the criticality of raw materials is based on two parameters: the so-called Economic Importance (EI) and Supply Risk (SR)¹: 20 out of the 26 identified as CRM in the updated list of 2017 are metallic minerals or metalloids.² This legal

framework breaks away from previous commercially based approaches and focuses on boosting European production, either by promoting new mining activities or through recycling activities (EC, 2017b).

3. The new landscapes of metal ore

Amongst the critical raw material list of 2017 many are metals such as cobalt, vanadium, platinum, tantalum, rare earth elements, magnesium and tungsten, amongst others of which Europe's supply is highly dependent on the international market (EIP, 2018). The materials that account for the highest Economic Importance score in the EU are tungsten (EI = 7.3) and magnesium metal (EI = 7.1) (EC, 2017: 41). In the midst of what has come to be known as the 'Fourth Industrial Revolution' (Schwab, 2015), championing digital industrialization and clean technologies, the demand on these rare and exotic minerals is growing due to its applications in the high tech, defense, chemistry, industry and electronic sectors. It may even grow further due to the current Covid-19 global pandemic, considered by many as a consequence of the ecological threats posed by global capitalism (Ramonet, 2020; Harvey, 2020). Even though the share of EU global extraction of metal minerals is low, especially in comparison to Latin American and Asian outputs, European extraction of iron, ferrous and non-ferrous alloys, and precious metals has been increasing slowly in the past years (EIP, 2018, 28–29). At the same time, the import reliance in the EU for metal ores, which is in general high (EIP, 2018), has followed a downward path since 2009, with the economic crisis (Eurostat, 2018, see Fig. 2). But how much of this decline is related to the deployment of the *Raw Materials Initiative* is difficult to tell.

It is important to stress that the highest percentage of mineral extraction in the EU is of construction minerals, a sector that underwent a peak from mid-1990s to 2008, followed by the extraction of industrial minerals. Metals minerals extraction comes after, showing a clear increase starting around 2009 (EIP, 2018, 42). A key fact to grasp the growing relevance of metallic minerals' extraction in Europe is the significant investment increase of EU Research and Development investor companies between 2006 and 2016, around 75%. Such growth was most noticeable for the base metal sector, especially between 2013 and 2016 (EIP, 2018, 44, see Fig. 3).

About 300 enterprises are involved in metal ore mining across the EU, with Sweden spearheading iron ore mining and countries such as Poland, Bulgaria, Finland, Sweden, Portugal, Austria, Ireland and Spain increasing its activities related to non-ferrous metal ores mining (Eurostat, 2018, 49). The *Raw Materials Scoreboard* of 2017 (EIP, 2018, 56; EC, 2011, 10) celebrates the opening of new mines in Europe since 2014: Bulgaria (lead) and Spain (copper), Italy, Finland or Romania. Its stand is clear, European potential for mining and mineral extraction is not fulfilled and the budget for exploration activities remains low, which is working against European development in terms of economic growth and jobs: 'The EU's Raw Materials Initiative and the European Innovation Partnership on Raw Materials aim to facilitate further improvements in domestic framework conditions for mining' (EIP, 2018, 57). Therefore, these two initiatives are actively advocating for what they consider to be a more stable and efficient mining policy amidst the reigning diversity of European countries (Minlex Project EC, 2016).

To achieve a deeper understanding of contemporary European rural development, it is crucial to understand the new legislative framework and the self-provision emphasis on CRMs. Despite the relevance of this

¹ For more information on the current criticality paradigm see Hayes and McCullough 2018. The EI calculus is based on the relevance of specific materials in the EU end-use applications and the performance of available substitutes; while the SR is based on the risk estimation of a supply disruption of certain materials (EC 2017b).

² The List of Critical Raw Materials is available here: https://ec.europa.eu/growth/sectors/raw-materials/specific-interest/critical_en

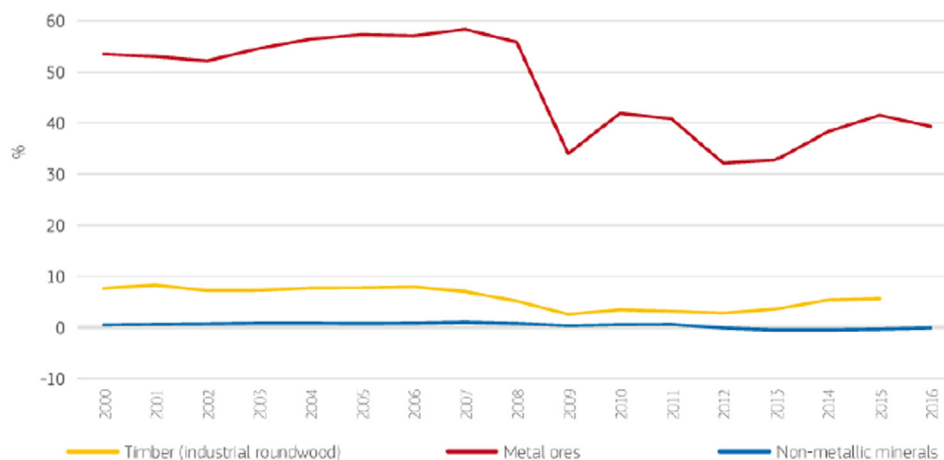


Fig. 2. Import reliance in the EU-28 for raw materials in the initial state of supply chain. Source: EIP 2018, 34.

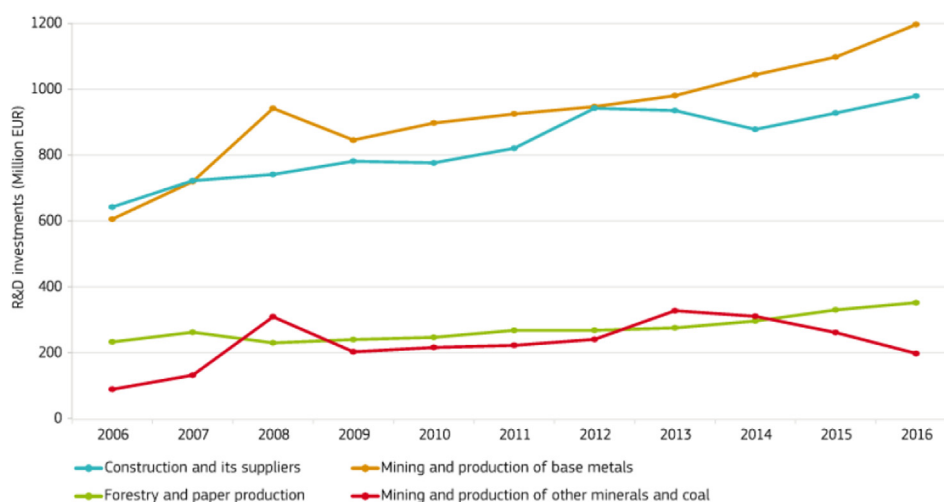


Fig. 3. Annual R&D investment by key EU based investing companies, by raw materials sector group (EU-29, 2006–2016). Source: EIP 2018, 48.

political shift and its impact on the transformation of rural dynamics, this changing scenario has not been thoroughly analyzed by social scientists yet. There are, though, a significant number of study cases that are emerging across Europe: mining and energy (Kesküla, 2016; Brock and Dunlap, 2018), mining and environment (Moreno et al., 2016; Velicu and Kaika, 2017; Apostolopoulou and Cortes-Vazquez, 2019; Velicu, 2019), and mining and social conflict (Egresi, 2011; Vesalon and Crețan, 2015; Nilsson, 2010; Koivurova et al., 2015; Suopajärvi et al., 2016; Jensen and Sandström, 2019). These studies offer new understandings within the framework provided by *The Raw Materials Initiative* contributing to a comprehensive and comparative approach to a complex phenomenon that is steadily spreading across the continent.

The critical supply situation of raw materials and the subsequent growth of metal ores extraction affecting Europe, together with the influence of new extractivist neoliberal models (Ye et al., 2020), will have a deep impact on the everchanging profile of its rural areas. Amidst the consequences of the global economic and financial crisis, Europe is exploring novel approaches to the exploitation of its natural resources, unfolding an emerging landscape of metal mining that will have critical consequences for the rural world (Barbier, 2011; Berghäll and Perrels, 2010). The expansion of these new legal and physical landscapes of metal ore across Europe, however, despite the political actors, budgets, and economic projects involved, has not been widely publicized in the mass media and has taken many by surprise. Particularly, these new uses of the landscape are competing with previous

emphases on conservation, which are nonetheless still steering European policy. How is the new mining boom interacting with the aim of ‘a high level of protection and improvement of the quality of the environment’, as determined by different regulations of the EU (Langlet and Mahmoudi, 2016, 49-50)?

4. Europe and conservation

Ironically, the same political actor that is generating opportunities for the return of mining to the rural areas of Europe, has been for decades transforming these very same areas with environmental policies. At this point in history over 18% of the European territory is under some type of conservation, with 784,994 km² protected under Natura 2000 (European Environmental Agency, 2019, European Environmental Agency, 2020). This percentage, logically, once we discount the urban, industrial and commercial agricultural areas is a lot higher in the peripheral rural areas of Europe.

Very early on, the EU became, with the *Birds directive* (1972), or *Habitat directive* (1992), a major actor with responsibility on the transformation of the rural world by setting areas aside for the purpose of environmental conservation. The expansion of mining will necessarily result on a confrontation of these two potential developmental paths. To grasp the impact of this critical mining push in the rural areas of Europe, it is essential to analyze as well its confrontation with the dense environmental regulatory framework that sustained the conservation paradigm that since the 1970s expanded across the continent:

the European Community's new environmental regime (Hildebrand, 1992; Jordan, 2005). Within this regime, conservation and protectionist issues became one of the political priorities of the EU (MacCormick, 2001). This environmental framework, however, is not limited to territorial conservation. Through the *EU Environment Action Program* (2002), it integrates sustainability and sound management considerations such as permission and inspection standards in all sorts of fields (Langlet and Mahmoudi, 2016).³

This performative role of conservation as a key developmentalist tool, has moved the preservationist effort into the economic realm as well. Natural and cultural heritage tourism are a fundamental economic sector of rural Europe (Wilson, 2007; Bell and Jayne, 2010; Woods and McDonagh, 2011; Santamarina and Bodí, 2013; Ana, 2017). This imbrication of conservation, tourism, sustainability, and local development has resulted in a process of commodification of nature (Castree, 2003; Igoe and Brockington, 2007). Global capitalism, however, manifests in very different ways in different locales. With the disembarkment of mining, the political economy of many European rural areas is about to experience a radical reshuffle. From a political perspective, this new mining regime, with a legal as well as a socioecological footprint, emerges in direct friction with the previous environmental paradigm (Agrawal, 2005; Tsing, 2005). Extractivism, focused on water, energy, or minerals, because of the scale of its operations and needed investments, is a large corporation type of activity and as such, when implemented, it radically transforms local governance and politics (Van der Ploeg et al., 2015; Ye et al., 2020). This friction, these fundamental differences, between conservation and mining unveils radical contradictions of the public policy framework in place, both at national and European level.

This struggle between conservation and environmental policies and the new drive for critical raw materials becomes apparent in various documents and reports recently produced by the EC: *The Commission final communication on the raw materials initiative — meeting our critical needs for growth and jobs* (EC, 2008), the *EC guidance on undertaking non-energy extractive activities in accordance with NATURA 2000 requirements* (EC, 2011) or the *Minlex Project* (EC, 2016). In some aspects, these documents advocate, in subtle and not so subtle ways, for a revision of previous political trends focused on environmental protection, and are a probable consequence of internal tensions within the EC. The language and explicit goals of this approach is a clear sign of changing EU discourses and political dynamics, and anticipates a wider confrontation. While during the 90's the World Bank took the lead in its fight against Global South states' restrictions on foreign investment and natural resources extraction (see Moody quoted in Kirch, 2014), at the beginning of the new century the pressure to deregulate and privatize many mining sectors around the globe was brought about by the IMF (Jacka, 2018, 64). Over this period, Europe remained in some aspects a conservation enclave with pioneering policies on environmental protection integrated into all other EC policies (Article 11 TFEU, see Langlet and Mahmoudi, 2016), a trend that could be directly threatened in the following years.

In the *Raw Materials Initiative* (EC, 2008) the Commission acknowledges that the implementation of the Natura 2000 legislation, protecting large areas of the European rural landscapes from exploitation, is in some regards competing directly with the extractive industries, and stresses that the referred legislation does not completely exclude extractive operations: '...the Commission and Member States have committed themselves to developing guidelines for industry and

authorities in order to clarify how extraction activities in or near Natura 2000 areas can be reconciled with environmental protection' (EC, 2008: 9–10) or 'streamline the administrative conditions and speed up the permit process for exploration and extraction activities' (EC, 2008: 9). In other words, the new legal framework that intends to promote mining, emerges already in direct and explicit dialogue with a previous legal regime that was focused on environmental preservation. The document also states that land use planning must consider access to raw materials deposits. In the same line, in 2011 an EC document reflected on the interactions between Natura 2000 and the Non-Energy Extractive Industries (NEEI). In it, the EC through the collaboration of the EC Working Group (representatives of the industry sectors, experts and NGOs), was trying to develop strategic guidelines on 'how the potential impacts of extraction activities on nature and biodiversity can be minimized or avoided altogether' (EC, 2011, 4).

Amidst the potential effects of extractive industries on biodiversity this last document acknowledges the damaging consequences of potential habitat loss and degradation, species disturbance and displacements and states the need to avoid, or at least mitigate, the most relevant damages. These could be caused by the most usual practices of extractive industries such as land clearance, hydraulic disruption (alteration of hydrological conditions and changes in water quality), habitat changes that may promote invasive species colonization, noise and vibrations or movement related disturbances, dust, landslides and collapses. The document states the need to determine if the potential effects are significant or not (EC, 2011, 37), and in the case that they are considered so it develops the idea of 'imperative reasons for overriding public interest (IROPI)' as expressed in the Article 6(4) of the *Habitats Directive*, even in spite of negative assessments (EC, 2011, 48). These imperatives could be of a social or economic nature and compensatory measures should be taken when applicable (EC: 2018b). In fact, Article 6 of the *Habitats Directive* as proposed by the European Commission was brought to Court by the Member States (case C-57/89). In this case, the Court ruled in favor of Member States allowing them to reduce or impair protected areas on behalf of a general interest, specifying that economic and recreational requirements should not be considered priorities (Krämer, 2009, 60). Nonetheless, Member States considered that the prohibition was too strict, and included into Article 6 the possibility of limiting protection on a designated habitat area for economic and social reasons. In his analysis of the Opinions of the Commission under Article 6(4), Krämer contends that the exploration of alternatives by Member States to avoid serious damages on protected areas is not always taken seriously enough, and that no intense debate is normally undertaken on whether IROPIs are actually imperative for validating the impairing of protected areas. In light of the new priorities established under the *Raw Materials Initiative* discussed above, it is easy to argue that critical raw materials are crucial for broadening mining expansion across rural areas, since they are often considered as 'overriding public interest'.

In the same vein, the *Study on the Legal framework for mineral extraction and permitting procedures for exploration and exploitation in the EU* (Minlex Project, EC, 2016), a key document assessing the variability of practices and procurements among Member States, ascertains that the freedom of establishment and of providing services are two internal market core principles in the EU and not always equally secured across states. This study, elaborated by MinPol and partners⁴, is probably the most direct intent to provide rationales to overcome what they consider to be 'several issues which restrict permitting procedures and act against a level playing field for the NEEI sector' within the EU legal framework for exploration and for exploitation of non-energy minerals (EC, 2016, ix). Amongst others, the study denounces the existence of

³ Examples include the *Directive on the management of waste from extractive industries* (2006/21/EC), the *Environmental Liability Directive* (2004/35/EC), the *Water Framework Directive* (2000/60/EC) and the *Groundwater Directive* (2006/118/EC), the *Marine Strategy Framework Directive* (2008/56/EC), the *EU Strategy on Sustainable Use of Natural Resources, or the precautionary principle* (EC 2011, 27).

⁴ MinPol - Agency for International Minerals Policy is a private limited company (GmbH) in Austrian law. They motto read: 'Mineral resources are our passion'. More information: <http://www.minpol.com/index2.html>

‘overly restrictive’ approaches in the implementation of the Directives provisions by Member States’ reported by the industry (EC, 2016, x), as well as it reports their concern over appeals: ‘because, even though they ensure the right of access to justice, they often cause excessively lengthy, costly and unpredictable permitting procedures for potential investors, and also for the permitting authorities, and other concerned stakeholders. We find that preventing cases from reaching judicial instances appears as one of the best ways to avoid unnecessary delays in permitting procedures’ (EC, 2016, x). Ye et al., (2020: 161) emphasize that State agencies are often crucial to facilitate mining industry take overs by setting up legal and infrastructural frameworks. Therefore, the Raw Materials Initiative through its various outcomes, documents and reports, could be considered as a fundamental step in setting up the legal framework to enable mineral land grabbing of metal ores resources across European rural areas, disregarding previous conservation efforts. Metal mining is impelled from high European political spheres pursuing a concrete objective: increase self-sufficiency as a critical aspect of European industrial and technical competitiveness. Curiously the European Union advocates for self-sufficiency while at the same time it is clearly committed to a neoliberal agenda (Harvey, 2005; Laval and Dardot, 2014).

Rurality has traditionally been associated with processes of decline, depopulation and marginalization (Cloeke, 1990; Woods, 2012), in many cases underpinned by negative teleological assumptions of rural evolution. But the overstatement of rural decline and the labelling of the countryside as ‘empty’ have also been considered as useful metaphors to pave the way for renewed processes of dispossession (Franquesa, 2018). Certain programs and legislation in different countries target hinterland areas as ‘resource banks’ from where to seize natural and cultural assets to serve urban populations (Li, 2009; Markey et al., 2008; Del Mármol and Vaccaro, 2015). This is done without considering local dynamics and needs, both of rural inhabitants and their landscapes. The advance of the mineral age across Europe may imply an exacerbation of a process of ‘inner colonialism’ projected onto rural areas which have traditionally suffered from persistent underdevelopment and overuse of local resources in order to fulfill urban demands (Borras et al., 2011; Martínez-Alier et al., 2016). The high levels of variability of the value of commodities subjected to large fluctuations due to changing global conditions, economic variations and availability, make extractive modes of production extremely fragile and unstable, therefore potentially undermining the local possibilities of economic and social reproduction (Bunker, 1984; Vaccaro et al., 2016). The parceling out of rural territories in terms of identifiable assets, where critical raw materials, natural resources or cultural heritage are singled out as commodities, disregarding the embeddedness of social, cultural and natural life, is a classic example of the selective approach to production implemented by the extractive industry in particular and global capitalism in general.

5. The lessons from the south

Extractivism and its related topics, such as corporate practices, social and environmental effects and changing relationships, abrupt transformations in livelihood, and so on, have been widely studied in the Global South, mainly in Latin America, Africa and Asia (Bebbington and Humphreys, 2018; Gudynas, 2015; Jacka, 2018; Kirsch, 2014; Pijpers and Eriksen, 2019; Studnicki-Gizbert, 2016). The rich potential of this research field is conspicuous in light of the current expansion of social movements and contentious coalitions confronting and resisting the impacts of mining and other mega-projects that accompany infrastructure expansion in several areas of the world (Hornborg and Martínez-Alier, 2016; Silva et al., 2018; Apostolopoulou and Cortes-Vazquez, 2019). If extractivism in the Global South implies barrenness, manifested in the depletion of natural resources, water and soil contamination, destruction of the natural environment, disruption of local social relations, unemployment and displacement of local population

(Ballard and Banks, 2003; Ye et al., 2020), the renewed expansion of metal mining in Europe requires a vigilant and permanent critical analysis.

Mining has often been presented as integral part of the project of modernity, jointly with industrialization and development. Mining integrates the locality into modernity, into global networks of distribution and consumption, but its aftermath, when the mines close, often results on a new level of peripheralization. Ferguson’s study of the *Zambian Copperbelt* discusses the dispossession and disconnection suffered by local workers facing the experience of ‘being thrown aside’ (Ferguson, 1999, 2002) when the global market imposed a sudden deindustrialization process. In the Global South, extractivism most often than not comes as part of the colonial project, as an economic mode of production that taps into natural resources and diverts profit away from peripheral economies. Bunker refers to the regions with ‘extractive modes of production’ based on commodities as ‘extreme peripheries’, due to the ‘extremely low proportions of capital and labor incorporated in the total value of their exports’ (1984, 1020). With the last twenty years of technical and engineering improvements in the mining industry, local supplies of labor are even less relevant. Moreover, the rapid development of infrastructures, roads and facilities nearby the natural resources made these volatile projects destined to a quick abandonment once the resources are depleted (Vaccaro and Beltran, 2010). Some researchers have been warning for quite a while that the neoliberal project that had been running amok through the global South was in the process, once troubleshot, of being implemented in the north (Comaroff and Comaroff, 2012; Vaccaro et al., 2019).

These debates on extractivism may serve to advance and expand contemporary knowledge on the rural transition in Europe. Definitions of extractivism coined according to the experience in the Global South highlight the monopolization of resources, close relations between states and corporations, and the fulfillment of concrete infrastructure needs (such as harbors, transport networks, political stability, specific relations of capital/labor, etc.) as fundamental aspects of the articulation of these modes of extraction (Bunker, 1984; Gudynas, 2013). The neglect of the local conditions of reproduction, both in social and natural terms, and the focus on maximizing production turns extractivism into a destructive process (Ye et al., 2020, 157). Despite this, corporate lobbies acting in Europe advocate for the increasing benefits of the mining industry, resorting both to the economic and employment benefits and to the age-old mining culture in European history, building a particular narrative on the mining heritage of the continent (e.g. *Mining Journal*, 2018). Investment in mining has been fostered once again as a way out of economic depression and a potential growth and development trigger within rural communities across Western Europe (see EIP, 2018). This approach is offered alongside cautious descriptions of a new mining sector concerned with ethical issues and sustainable exploitation of natural resources (see EC, 2011; IGF, 2013; CCSI et al., 2016). Mining corporations and lobbies acting worldwide broadcast newly crafted narratives of technological development and innovative modes of production that pledge for better corporate social responsibility and sustainable practices. Nonetheless, as discussed above, recent studies show that the opposite can be true (Gudynas, 2013; Kirsch, 2014; Smith and Kirsch, 2018). The idea of a “resource curse” developed within economic debates (Auty, 1994), emerges from the wide range of studies conducted in the Global South, and must be considered when analysing the recent metal ore mining push in Europe. Despite the long and mostly negative experience of extractivism abroad (Martínez-Alier, 2002; Gudynas, 2015), the promise of modernity through mining is still operating within contemporary European imaginaries of development, mainly among corporate and political discourses.

6. Conclusion

In this article we focus on the novel critical mineral mining push

and its fundamental interconnectedness with conservation politics and rural change across Europe. We have focused on the textual analysis of policies related to the expansion of metal mining in Europe, and the interaction with other relevant bodies of law, directives, and regulations on protected areas and rural development. By bringing to the fore the current metal mining in Europe, the article, in order to build a broader understanding of contemporary rural dynamics in Europe, analyzes an emerging body of policies that will contribute to redefine the shifting paradigms of rural change.

Until recently, conservation policies and tourism promotion were the almost exclusive developmentalist frameworks available for the peripheral areas of rural Europe. The pervasive presence of commodification, the proliferation of forms of capital accumulation, and the production of economic value by reconceptualizing cultural and natural resources, have been persistent features driving rural developmental logics in recent decades. On the one hand, the conservation shift proved to be enmeshed within a logic of commoditization, developing a protectionist frame while making it profitable. Several authors have already discussed how culture and nature became new economic resources to be tapped within the new heritage regimes (Bendix et al., 2012). On the other hand, for years, the conservationist effort has provided as well, a governance framework for the rural areas and its inhabitants. This paradigm is still at work, but it shares its predominance with the upcoming emphasis on metal ore extraction, together with similar dynamics spreading throughout Europe in which natural resources such as water, energy, or land are being harnessed in the form of critical land grabs. The expansion of extractivist dynamics across Europe, such as the growth of metal mining, might become the latest chapter in European rural change.

Mining is always a disruptive phenomenon that deeply impacts the sociocultural dynamics and the political economy of place-making (Bebbington and Humphreys, 2018). In the next few years critical ore extraction has the potential to radically change the European socio-economic scenario and might have a crucial impact on the short-term future development of its rural areas. Despite the relevance and growing incidence of mining activities in Europe and their profound impact on the development of rural areas and sustainability debates, social sciences are still more focused on the analysis of extractivism and mining policies in the Global South. There is a clear need to reignite the field of extractivism studies in Europe and Western countries more broadly, being as it is an essential area of the recent political shifts towards a raw materials' sovereignty.

CRedit authorship contribution statement

Camila del Marmol: Conceptualization, Methodology, Writing - original draft. **Ismael Vaccaro:** Conceptualization, Methodology, Writing - original draft.

Acknowledgements

This work was supported by the Spanish Ministry of Science, Innovation and Universities and the FEDER Program (UE) under grant PGC2018-096190-B-I00 "Patrimonio inmaterial y políticas culturales: desafíos sociales, políticos y museológicos"; and grant PID2019-106291RB-I00 "Antropología de la conservación. Una aproximación comparativa a las genealogías y el desarrollo de los parques naturales en España".

References

Agrawal, A., 2005. *Environmentality: Technologies of Government and the Making of Subjects*. Duke University Press, Durham.

Akram-Lodhi, A., Kay, C., 2010. Surveying the agrarian question: current debates and beyond. *J. Peasant Stud.* 37 (2), 255–284.

Ana, M., 2017. Ecotourism, agro-tourism and rural tourism in the European Union. *Cactus Tourism J.* 15 (2), 6–14.

Apostolopoulou, E., Cortes-Vazquez, J.A. (Eds.), 2019. *Rights to Nature: Tracing alternative political ecologies to the neoliberal environmental agenda*. Routledge, New York.

Arsel, M., Hogenboom, B., Pellegrini, L., 2016. The extractive imperative in Latin America. *Extr. Ind. Soc.* 3, 880–887.

Auty, R.M., 1994. Industrial policy reform in six large newly industrializing countries: the resource curse thesis. *World Dev.* 22 (1), 11–26.

Ballard, C., Banks, G., 2003. Resource wars: the anthropology of mining. *Ann. Rev. Anthropol.* 32 (1), 287–313.

Barbier, E., 2011. The policy challenges for green economy and sustainable economic development. *Nat. Resour. Forum* 35, 233–245.

Barume, B., Naeher, U., Ruppen, D., Schütte, P., 2016. Conflict minerals (3TG): Mining production, applications and recycling. *Curr. Opin. Green Sustainable Chem.* 1, 8–12.

Bebbington, A., Humphreys, D., 2018. Mining, movements and sustainable development: concepts for a framework. *Sustain. Develop.* 26 (5), 441–449.

Bell, D., Jayne, M., 2010. The creative countryside: policy and practice in the UK rural cultural economy. *J. Rural Stud.* 26, 209–218.

Bendix, R., Eggert, A., Peselmann, A. (Eds.), 2012. *Heritage Regimes and the State*. University Press, Göttingen.

Berghäll, E., Perrels, A., 2010. *The Economic Crisis and its Consequences for the Environment and Environmental Policy*. Nordic Council of Ministers, Copenhagen.

Bernstein, H., 2017. Political economy of agrarian change: some key concepts and questions. *RUDN J. Sociol.* 17 (1), 7–18.

Bernstein, H., Byres, T., 2001. From peasant studies to agrarian change. *J. Agrarian Change* 1 (1), 1–56.

Borras, S.M., Hall, R., Scoones, I., White, B., Wolford, W., 2011. Towards a better understanding of global land grabbing: an editorial introduction. *J. Peasant Stud.* 38 (2), 209–216.

Brautigam, D., 2009. *The Dragon's Gift: The Real Story of China in Africa*. Oxford University Press, Oxford.

Brock, A., Dunlap, A., 2018. Normalising corporate counterinsurgency: engineering consent, managing resistance and greening destruction around the Hambach coal mine and beyond. *Polit. Geogr.* 62, 33–47.

Bunker, S., 1984. Modes of extraction, unequal exchange, and the progressive underdevelopment of an extreme periphery: the Brazilian Amazon, 1600–1980. *Am. J. Sociol.* 89 (5), 1017–1064.

Büscher, B., Sullivan, S., Neves, K., Igoe, J., Brockington, D., 2012. Towards a synthesized critique of neoliberal biodiversity conservation. *Capital. Nat. Social.* 23 (2), 4–30.

Castree, N., 2003. Commodifying what nature? *Prog. Hum. Geogr.* 27 (3), 273–297.

CCSI Columbia Center on Sustainable Investment, UN Sustainable Development Solutions Network (SDSN), United Nations Development Programme (UNDP), World Economic Forum (WEF) (Eds.), 2016. *Mapping Mining to the Development Goals: An Atlas*. Available at: <http://unsdsn.org/resources/publications/mapping-mining-to-the-sustainable-development-goals-atlas/>.

Cloke, P., 1990. Rural geography and political economy. In: Peet, R., Thrift, N. (Eds.), *New Models in Geography*. Unwin Hyman, London, pp. 164–197.

Comaroff, J., Comaroff, J., 2012. Theory from the South: or how Euro-America is evolving toward Africa. *Anthropol. Forum* 22 (2), 113–132.

Cox, C., Kynicky, J., 2017. The rapid evolution of speculative investment in the REE market before, during, and after the rare earth crisis of 2010–2012. *Extr. Ind. Soc.* 5 (1), 8–17.

Cronon, W., 1996. The trouble with wilderness: or, getting back to the wrong nature. *Environ. History* 1 (1), 7–28.

Cuddington, J., Jarret, D., 2008. Super-cycle in real metal prices? *IMF Staff Papers* 55 (4), 541–565.

Egresi, I., 2011. The curse of the gold: discourses surrounding the project of the largest pit-mine in Europe. *Human Geogr.* 5 (2), 57–68.

del Marmol, C., Vaccaro, I., 2015. Changing ruralities: between abandonment and redefinition in the catalan pyrenees. *Anthropol. Forum* 25 (1), 21–41.

EIP European Innovation Partnership on Raw Materials, 2018. *Raw materials Scoreboard*. European Commission, Joint Research Centre. Retrieved from <https://publications.europa.eu/en/publication-detail/-/publication/117c8d9b-e3d3-11e8-b690-01aa75ed71a1>.

Erten, B., Ocampo, J., 2013. Super cycles of commodity prices since the mid-nineteenth century. *World Dev.* 44 (C), 14–30.

EC European Commission, 2008. COM (2008) 699 final Communication from the Commission to the European Parliament and the Council. The raw materials initiative — meeting our critical needs for growth and jobs in Europe. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008DC0699&from=EN>.

EC European Commission, 2010. *Critical Raw materials for the EU*. Report of the Ad-hoc Working Group on defining critical raw materials. Retrieved from http://ec.europa.eu/enterprise/policies/rawmaterials/documents/index_en.htm.

EC European Commission, 2011. *EC Guidance on undertaking new non-energy extractive activities in accordance with Natura 2000 requirements*. Luxembourg: Publications Office of the European Union. Retrieved from <https://ec.europa.eu/environment/pdfinfo.htm>.

EC European Commission, 2016. MINLEX project. Study - Legal framework for mineral extraction and permitting procedures for exploration and exploitation in the EU'. Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs Raw Materials Luxembourg: Publications Office of the European Union. Retrieved from <https://publications.europa.eu/en/publication-detail/-/publication/18c19395-6dbf-11e7-b2f2-01aa75ed71a1/language-en>.

EC European Commission, 2017a. COM(2017) 490 Final Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the 2017 list of Critical Raw

- Materials for the EU. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0490&from=EN>.
- EC European Commission, 2017b. Study on the review of the list of Critical Raw Materials Criticality Assessments. Retrieved from <http://hytechcycling.eu/wp-content/uploads/Study-on-the-review-of-the-list-of-Critical-Raw-Materials.pdf>.
- European Environmental Agency, 2019. The European environment — state and outlook 2020. Knowledge for transition to a sustainable Europe. Retrieved from <https://www.eea.europa.eu/publications/soer-2020>.
- European Environmental Agency, 2020. Natura 2000 sites designated under the EU Habitats and Birds Directives. Retrieved from <https://www.eea.europa.eu/data-and-maps/indicators/sites-designated-under-the-eu-3/assessment>.
- Eurostat, 2018. Economy-wide material flow accounts. Handbook. Retrieved from <https://ec.europa.eu/eurostat/documents/3859598/9117556/KS-GQ-18-006-EN-N.pdf/b621b8ce-2792-47ff-9d10-067d2b8aac4b>.
- Ferguson, J., 1999. Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt. University of California Press, Berkeley.
- Ferry, E.E., 2002. Inalienable commodities: the production and circulation of silver and patrimony in a Mexican mining cooperative. *Cult. Anthropol.* 17 (3), 331–358.
- Franquesa, J., 2018. Power struggles: Dignity, Value, and the Renewable Energy Frontier in Spain. Indiana University Press, Bloomington.
- Gudynas, E., 2013. Extracciones, extractivismos y extrahecciones. Un marco conceptual sobre la apropiación de recursos naturales. *Observatorio Del Desarrollo, CLAES* 18, 1–17.
- Gudynas, E., 2015. Extractivismos. Ecología, economía y política de un modo de entender el desarrollo y la naturaleza. CLAES: Cochabamba.
- Halfacree, K., 1999. A new space or spatial effacement? Alternative futures for the post-productivist countryside. In: Walford, N., Everitt, D., Napton, J. (Eds.), *Reshaping the countryside: perceptions and processes of rural change*. CAB International, Wallingford, pp. 67–76.
- Harvey, D., 2005. *A Brief History of Neoliberalism*. Oxford University Press, Oxford.
- Harvey, D., 2020. Anti-Capitalist Politics in the Time of COVID-19. *Jacobin*. <https://jacobinmag.com/2020/03/david-harvey-coronavirus-political-economy-disruptions>.
- Hayes, S., McCullough, E., 2018. Critical minerals: a review of elemental trends in comprehensive criticality studies. *Resour. Policy* 59, 192–199.
- Hildebrand, P., 1992. The European community's environmental policy, 1957 to '1992': from incidental measures to an international regime?. *Environ. Polit.* 1 (4), 13–44.
- IGF Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development, 2013. IGF Mining policy framework. Mining and sustainable development. Retrieved from <https://www.igfmining.org/mining-policy-framework/framework/>.
- Hornborg, A., Martínez-Alier, J., 2016. Ecologically unequal exchange and ecological debt. *J. Polit. Ecol.* 23, 328–491.
- Igoe, J., 2010. The spectacle of nature in the global economy of appearances: anthropological engagements with the spectacular mediations of transnational conservation. *Crit. Anthropol.* 30 (4), 375–397.
- Igoe, J., Brockington, D., 2007. Neoliberal conservation: a brief introduction. *Conserv. Soc.* 5 (4), 432–449.
- Jacka, J., 2018. The anthropology of mining: the social and environmental impacts of resource extraction in the mineral age. *Ann. Rev. Anthropol.* 47 (1), 61–77.
- Jensen, T., Sandström, J., 2019. Organizing rocks: Actor–network theory and space. Organization. Published online.
- Jordan, A. (Ed.), 2005. *Environmental Policy in the European Union. Actors, Institutions, and Processes*. Earthscan, London.
- Kesküla, E., 2016. Temporalities, time and the everyday: new technology as a marker of change in an Estonian mine. *History Anthropol.* 27 (5), 521–535.
- Kirsch, S., 2014. *Mining Capitalism: The Relationship between Corporations and Their Critics*. University of California Press, Berkeley.
- Koivurova, T., Buanes, A., Riabova, L., Didyk, L., Ejdemo, V.T., 2015. 'Social license to operate': a relevant term in Northern European mining? *Polar Geogr.* 38 (3), 194–227.
- Krämer, L., 2009. The European commission's opinions under article 6(4) of the habitats directive. *J. Environ. Law* 21 (1), 59–85.
- Langlet, D., Mahmoudi, S., 2016. *EU Environmental Law and Policy*. Oxford University Press, Oxford.
- Laval, C., Dardot, P., 2014. *La nueva razón del mundo: ensayo sobre la sociedad neoliberal*. Gedisa, Barcelona.
- Li, T., 2009. To make live or let die? Rural dispossession and the protection of surplus populations. *Antipode* 41, 66–93.
- Li, Y., Westlund, H., Liu, Y., 2019. Why some rural areas decline while some others not: an overview of rural evolution in the world. *J. Rural Stud.* 68, 135–143.
- Markey, S., Halseth, G., Manson, D., 2008. Challenging the inevitability of rural decline: advancing the policy of place in northern British Columbia. *J. Rural Stud.* 24, 409–421.
- del Marmol, C., Celigueta, G., Vaccaro, I., 2018. Socioeconomic transitions and everyday life changes in the rural world: pyrenean households and their contemporary economic history. *J. Agric. Change* 18 (3), 677–693.
- del Marmol, C., 2016. *Muntanyes de formatge. Transformacions productives i patrimonialització a l'Urgell i el Baridà*. Generalitat de Catalunya, Barcelona.
- Marsden, T., Murdoch, J., Lowe, P., Munton, R., Flynn, A., 1993. *Constructing the Countryside*. UCL Press, London.
- Martínez-Alier, J., Demaria, F., Temper, L., Walter, M., 2016. Changing social metabolism and environmental conflicts in India and South America. *Spec. Sect. J. Polit. Ecol.* 23, 467–491.
- MacCormick, J., 2001. *Environmental Policy in the European Union*. Palgrave Macmillan, London.
- Mining Journal, 2018. Spain's mining bull-run. Retrieved from: <https://www.mining-journal.com/discovery/news/1346989/spains-mining-bull-run>.
- Moreno, I., Talego, F., Hernández, J., González, C., 2016. Modifican los desastres ambientales mineros la actitud de las poblaciones locales antes nuevas minas? In: *Conflictos ambientales na Indústria mineira e metalúrgica*. CETEM/MCTIC, Rio de Janeiro, pp. 215–242.
- Martínez-Alier, J., 2002. The environmentalism of the poor: a study of ecological conflicts and valuation. Edward Elgar, Cheltenham.
- Narotzky, S., 2016. Where have all the peasants gone? *Ann. Rev. Anthropol.* 45 (1), 301–318.
- Nilsson, B., 2010. Ideology, environment and forced relocation: Kiruna - a town on the move. *Eur. Urban Reg. Stud.* 17 (4), 433–442.
- Oulu, M., 2016. Core tenets of the theory of ecologically unequal exchange. *J. Polit. Ecol.* 23 (1), 446–466.
- Pavel, C., Tzimas, E., 2016. *Raw Materials in the European Defence Industry*. European Commission, DG Joint Research Centre, Petten, Netherlands.
- Peluso, N., 1993. Coercing conservation: the politics of state resource control. *Global Environ. Change* 3 (2), 199–218.
- Pijpers, R., Eriksen, T.H., 2019. *Mining Encounters: Extractive Industries in an Overheated World*. Pluto Press, London.
- Prados, M.J., 2008. *Naturbanization: New Identities and Processes for Rural-Natural Areas*. CRC Press.
- Ramonet, I., 2020. La pandemia y el sistema-mundo. *Le Monde Diplomatique en español*. Retrieved from: <https://mondiplo.com/la-pandemia-y-el-sistema-mundo>.
- Santamarina, B., Bodí, J., 2013. Rural places versus naturalized spaces. The logic of knowledge and acknowledgement in protected heritage areas. *AIBR Revista de Antropología Iberoamericana* 8 (1), 111–138.
- Schwab, K., 2015. The fourth industrial revolution: what it means and how to respond. Retrieved from <https://www.foreignaffairs.com/articles/2015-12-12/fourth-industrial-revolution>.
- Silva, E., Akchurin, M., 2018. Policy effects of resistance against mega-projects Latin America. *Eur. Rev. Latin Am. Caribbean Stud.* 106, 25–46.
- Smith, J., Kirsch, S., 2018. Mining. In: Callan, Hilary (Ed.), *The International Encyclopedia of Anthropology*. John Wiley & Sons.
- Studnicki-Gizbert, D., 2016. Canadian mining in Latin America (1990 to present): a provisional history. *Canadian J. Latin Am. Caribbean Stud.* 41 (1), 95–113.
- Suopajarvi, L., Poelzer, G., Ejdemo, T., Klyuchnikova, E., Korchak, E., Nygaard, V., 2016. Social sustainability in northern mining communities: a study of the European North and Northwest Russia. *Resour. Policy* 47, 61–68.
- Tsing, A., 2005. *Friction: An Ethnography of Global Connection*. Princeton University Press.
- UNCTAD United Nations Conference on Trade and Development, 2015. *World commodity trends and prospects. Report of the Secretary-General*. A/70/184.
- Vaccaro, I., Beltran, O., 2007. Consuming space, nature and culture: patrimonial discussions in the hyper-modern era. *Tourism Geogr.* 9, 254–274.
- Vaccaro, I., Beltran, O. (Eds.), 2010. *Social and ecological history of the Pyrenees: State, market, and landscape*. Left Coast Press, Walnut Creek, CA.
- Vaccaro, I., Beltran, O., 2014. *Parcs als comunals: la patrimonialització de la muntanya al Pallars Sobirà*. Generalitat de Catalunya, Barcelona.
- Vaccaro, I., Harper, K., Murray, S. (Eds.), 2016. *Anthropologies of post-industrialism: ethnographies of disconnection*. Routledge, London.
- Vaccaro, I., Kirsch, E., Sabaté, I., 2019. The emergence of the global debt society: governmentality and profit extraction through fabricated abundance and imposed scarcity. *Focaal: J. Global Historical Anthropol.* 1–15.
- Van der Ploeg, J., Franco, J., Borrás, S., 2015. Land concentration and land grabbing in Europe: a preliminary analysis. *Canadian J. Develop. Stud.* 36 (2), 147–162.
- Vandergest, P., Peluso, N., 2009. Territorialization and state power in Thailand. *Theory Soc.* 24, 385–426.
- Velicu, I., 2019. De-growing environmental justice: reflections from anti-mining movements in Eastern Europe. *Ecol. Econ.* 159, 271–278.
- Velicu, I., Kaika, M., 2017. Undoing environmental justice: Re-imagining equality in the Rosia Montana anti-mining movement. *Geoforum* 84, 305–315.
- Vesalon, L., Çeçen, R., 2015. 'We are not the Wild West': anti-fracking protests in Romania. *Environ. Polit.* 24 (2), 288–307.
- Wagner, H., Fettweis, G., 2001. About science and technology in the field of mining in the Western world at the beginning of the new century. *Resource Policy* 27, 157–168.
- Wilson, G., 2001. From Productivism to Post-Productivism...and Back again? Exploring the (Un)changed Natural and Mental Landscapes of European Agriculture. *Trans. Inst. Brit. Geogr.* 26 (1), 77–102.
- Wilson, G., 2007. *Multifunctional Agriculture: A Transition Theory Perspective*. Cromwell Press, UK.
- Woods, M., 2011. *Rural*. Routledge, New York.
- Woods, M., 2012. Editorial: new directions in rural studies. *J. Rural Stud.* 28, 1–4.
- Woods, M., McDonagh, J., 2011. Rural Europe and the world: globalization and rural development (Editorial). *European Countryside* 3, 153–163.
- WB World Bank, 2018. *Special Focus: The Changing of the Guard: Shifts in Commodity Demand*. Retrieved from <http://documents.worldbank.org/curated/en/678081540845321639/Commodity-Markets-Outlook-The-Changing-of-the-Guard-Shifts-in-Commodity-Demand>.
- WB World Bank, 2019. *Commodity Markets Outlook*. Retrieved from <https://www.worldbank.org/en/research/commodity-markets>.
- Ye, J., Van der Ploeg, J., Schneider, S., Shanin, T., 2020. The incursions of extractivism: moving from dispersed places to global capitalism. *J. Peasant Stud.* 47 (1), 155–183.