

JOURNAL FÜR ENTWICKLUNGSPOLITIK

vol. XXXVI 4-2020

THE GLOBAL POLITICAL ECONOMY OF GREEN FINANCE AND SOCIO-ECOLOGICAL TRANSFORMATION

Special Issue Guest Editors:
Johannes Jäger, Lukas Schmidt

Published by:
Mattersburger Kreis für Entwicklungspolitik
an den österreichischen Universitäten

Contents

- 4 JOHANNES JÄGER, LUKAS SCHMIDT
Global Green Finance and Sustainability:
Insights for Progressive Strategies
- 31 JOHANNES JÄGER, LUKAS SCHMIDT
The Global Political Economy of Green Finance:
A Regulationist Perspective
- 51 SAMUEL DECKER
On the Transformative Potential of the ‘Green New Deal’
- 74 ELISABETH SPRINGLER
Financial Innovation, Macroeconomic Stability and Sustainability
- 92 BERNHARD TRÖSTER, KARIN KÜBLBÖCK
Shifting the Course? The Impact of Chinese Finance on Extractivism
in Latin America and Sub-Saharan Africa
- 110 SIMONE CLAAR
Green Finance and Transnational Capitalist Classes – Tracing Vested
Capital Interests in Renewable Energy Investments in South Africa
- 129 SUSANNE SOEDERBERG, LAMA TAWAKKOL
The Humanitarian-Development Nexus and the Jordan Compact:
Tensions and Trajectories in Global Capitalism
- 154 YULIYA YURCHENKO
The Energy Sector and Socio-Ecological Transformation:
Europe in the Global Context
- 177 Book Review
- 180 Editors and Authors of the Special Issue
- 184 Publication Details

JOHANNES JÄGER, LUKAS SCHMIDT

**The Global Political Economy of Green Finance:
A Regulationist Perspective**

ABSTRACT Green finance is often presented as being essential for sustainability. In the tradition of critical political economy, this paper focuses on (green) finance and its impact on the use of natural resources and the environment. Given the global dimension of many environmental problems and the economic interconnections of the use of global natural resources, the paper takes a global view, focusing in particular on global asymmetries and dependency relationships between core and periphery. Against this background, global financial structures and the role of green finance, and their implications, are analysed. However, adopting a regulationist perspective, this paper discusses different forms of green finance, their regulation, and the implications for national development models and the environment. Neoliberal green finance, reformist green finance and progressive transformative green finance are distinguished. We conclude that neoliberal forms of green finance tend to deepen core-periphery dependencies and to contribute to a highly unequal and growing (over-)use of nature and a transfer of natural resources from the core to the periphery. In part, reformist forms of green finance may change this. However, in order to stop the global, highly uneven over-use of nature, a progressive transformative form of green finance is needed to contribute to a fundamental socio-ecological transformation that ends the unequal over-use of natural resources.

KEYWORDS Green finance, sustainability, critical political economy, regulation theory, global development

1. Introduction

Since the financial crisis, financial investment labelled as green, and climate finance have increased significantly (Buchner et al. 2019, UNCTAD

2020). Green finance is a central element of sustainable finance, a broad term that includes a wide range of financial asset classes, from loans and bonds to equity finance and peer-to-peer lending (for a more detailed overview on the term, the emergence of green finance and its importance see Jäger/Schmidt in the introduction). The broader background for the rise of green finance is the 2008 financial crises. This did not just contribute to a loss of confidence in financial markets and financial institutions, but also quantitative easing and a very low interest rate level, which led to a search for new attractive investment opportunities (see Springler in this issue). The emergence of green finance can be seen not just as an attempt to search for more attractive investment and new profit opportunities but also as a strategy to bring back legitimacy to finance. In this vein, Lagoarde-Segot/Paranque (2018) conclude that today's dominant discourses on green finance represent an ideology that supports power structures in finance and its position in economy and society. Moreover, institutions such as the European Commission (2019) and UNCTAD (2019) recently and prominently refer to the importance of green finance as a key to sustainable development (UN 2015). The goal of this paper is to show how green finance can be analysed in the tradition of critical political economy and how, based on this, the implications of green finance can be assessed. While we discuss the structure of global finance and the role of green finance therein, we also focus on the national/regional level and discuss the implications of different ways of regulating (green) finance. Thereby, we distinguish between different forms of green finance and indicate to what extent and how they contribute (or not) to a socio-ecological transformation that allows for overcoming the highly uneven global over-use of natural and environmental resources. The intention is to provide a conceptual framework that does not consider global finance and emerging green finance as simply givens, but seeks to open perspectives for different strategies and progressive developments. This is why we bring in regulation theory and its capacity to analyse different forms of regulating (green) finance and different national development models. The conceptualisation allows us to analyse emerging green finance not as a monolithic and completely unavoidable trend or a new facet of homogenous global financialisation processes, but as a variegated and socially contested terrain.

2. The material (natural) foundations of global capitalism

While dominant mainstream perspectives tend to be optimistic about the role of markets and assume a compatibility between capitalism and nature, critical political economy perspectives are much more sceptical about this (Castro 2004). Whereas traditional mainstream views analyse the economy as a system separated from society, critical political economy (CPE) approaches provide an integrative analysis of economy, society and nature (Marx 2012 [1887], Jäger 2020). As problems of economy-society-nature interaction are at the centre of environmental issues and questions of sustainability, we consider critical political economy to be an adequate basis for the analysis of (green) finance and its potential for a socio-ecological transformation that allows for the end of the highly uneven over-use of global natural resources. On a very abstract level, the pivotal point of CPE approaches is the transformation of nature by human labour. Nature, however, is not just there but produced (Harvey 2014). Historically, changing forms of domination of nature (technology, material resources) went hand in hand with changing ways of organising production in society. Today's prevailing capitalist mode of production is characterised by a unique rapid development of productive forces, namely technologies to use and transform nature. The dynamic development is caused by the accumulation of capital under competitive conditions. However, capitalism is contradictory in multiple ways. An important reason for this is that capitalism is all about the accumulation of capital and the production of exchange value in order to make profit, while the production of use values is simply a by-product. Nature is a mere condition of production for use values. As a consequence, the expansionary search for profits and accumulation in a capitalist mode of production enters into contradiction with nature (Clark/Longo 2017). Foster (2013) refers to this as a metabolic rift. Capitalism's expansionary drive, and the commodification of nature by primitive accumulation (Marx 2012) and accumulation by dispossession (Harvey 2009) are central mechanisms that push this process. Commodifying nature means that commons are expropriated and private property rights are established. These private property rights allow for an exclusive access to nature. The income generated from the ownership of nature such

as land, patents on genetic codes, raw materials, water, carbon sinks, etc. can be considered as a rent that allows for the extraction of part of the surplus value created. In the process of commodification, nature becomes part of the capital circuit and provides financial asset holders with financial flows that give them access to surplus value. Depending on the specific conditions, these financial rents may lead to declining profits for productive capital (Harvey 2014), but also to increasing surplus value and consequently decreasing wages. This implies negative distributional consequences for the rural and urban working class, which has no relevant financial wealth, and represents an important reason as to why a progressive socio-ecological transformation that ends the overuse of global resources should not be based on further commodification but on opposing it.

The use of nature, measured, for example, in terms of the global carbon footprint, is highly unequal both within and among countries (see Jäger/Schmidt in the introduction). Environmental damage and climate change have contributed to the increase in global inequality (UNDP 2019: 173-196). The western way of living, that of a majority of people in the core countries and a small privileged sector in peripheral countries, is not sustainable on a global level (Hubacek et al. 2017). An imperial mode of living (Brand/Wissen 2016), oligarchic well-being (Ehrlich Reifer 2011), and (un-)sustainable welfare (Koch/Buch-Hansen 2020) are concepts used to refer to the fact the natural resources are over-used by a global minority of people in an unsustainable way. From a CPE perspective, specific core-periphery relationships enable and link such unequal modes of living and producing. On an abstract level, the tendency of capitalism to externalise costs and contradictions onto the periphery can be considered an important reason for why the Global North has been able to extract resources from the Global South and has externalised pollution and environmentally damaging production to these countries (Brand/Wissen 2016). Conceptualising this as unequal ecological exchange, Foster/Holleman (2014) show that the current global capitalist system entails a huge transfer of material sources and energy, which they refer to as eMergy, from the periphery to the core.

However, in the methodological tradition of CPE (Jäger et al. 2016; Jäger 2020), we argue that it is important to analyse the specific configuration of global capitalism by conceptualising, at a lower level of abstraction,

the mechanisms and relations that produce the highly unequal over-use of nature. From our perspective, this can be achieved by focusing on the dialectical relation between national development models and global capitalism, or, simply, the global market. Expanding national production and consumption are important for legitimising capitalist modes of production and domination in the core as well as in the periphery. Developing the domestic economy and being competitive internationally (by means of markets, coercion, etc.) enables access to natural resources from abroad. This provides economies with use value from other countries, ensuring an unsustainable mode of welfare. The competition between national respectively regional development models operates within a specific mode of foreign relations (van der Pijl 2007) that fuels the constant and increasing exploitation of nature. The current capitalist mode of foreign relations provides an advantage to the more developed economies. Within this context, it seems unlikely that national and/or regional strategies, which reduce the use of natural resources (from abroad), will be implemented. The reasons are that these resources are important for joining, and/or remaining in, the global core, while the appropriation of use-values contributes to legitimising class dominance. However, strategies that reduce (external) resource dependency based on technological innovation, possibly in the form of a specific variant of green capitalism, may represent a politically viable partial alternative. The problem remains that up to now, increasing resource efficiency has not led to a reduction in the use of resources, but, on the contrary, resource consumption has continued to increase (Fischer-Kowalski/Pallua 2016; Schandl et al. 2018), a problem traditionally referred to as the Jevons Paradox or the rebound effect.

3. The global financial system and green finance

Building on the above theoretical conceptualisation in the following, we analyse global finance in today's capitalism, and show how different national development models relate to it. It is against this background that we discuss green finance. The global financial system and the national financial systems are essential parts of the asymmetrically structured international capitalist political economy. The contemporary financial system,

benefiting the core countries over peripheral countries, is crucial for transferring surplus and use value. Moreover, it leads to (financially) dependent forms of development in the periphery, and has repercussions in the form of the overuse of nature. A central feature of the current global financial system, the so-called Dollar-Wall Street regime, is that of unrestricted cross-border capital flows. The system provides a huge privilege to capitalist core countries, in particular to the USA, as the US Dollar is at the top of the global currency hierarchy (Gowan 1999), but also to other countries that have a high position within this hierarchy. Within the Dollar-Wall Street regime, private and public capital flows have often contributed to a high and increasing level of external indebtedness in peripheral countries (UNCTAD 2019).

External debt and financial dependency are central entry points for imposing conditionality on countries. Frequently, conditionality demands that countries be more open to foreign capital and trade flows, and privatise public infrastructure and natural resources, thereby diminishing the policy space for development (Soederberg 2014). In addition, debt and portfolio investment flows tend to increase volatility and the vulnerability to financial crises (Bortz/Kaltenbrunner 2018). Liberalised capital accounts put monetary policy under pressure and facilitate capital flight, while even passive FDI may turn out to be problematic and so lead to long-term net capital outflows. As in the case of any investment, the goal of financial capital is to have access to cash flows and to make profit by taking out more money than originally invested. Not surprisingly, according to Akyüz (2018) and UNCTAD (2019: 107), the functioning of liberalised private capital markets has led to a net financial resource transfer from developing countries to developed countries of around USD 440 billion annually, which is significantly higher than the global net official development assistance, which amounts to USD 166 billion (World Bank 2020). This figure, however, does not include the likely much higher impact of unequal ecological exchange (that is whenever not easily quantifiable) (Foster/Holleman 2014).

In principle, cross-border green financial flows add to the negative consequences of common capital flows to peripheral countries, as they follow a similar logic. However, green finance has become a new label that claims to legitimise and therefore facilitate the access of traditional

ungleiche Nutzung von Naturressourcen weiter vertieft. Reformist Green Finance kann dies zumindest teilweise verändern. Um jedoch die global höchst ungleiche Übernutzung von Natur effektiv zu verändern bedarf es Progressive Green Finance, welche einen wichtigen Beitrag zu einer grundlegenden sozio-ökonomischen Transformation leisten kann.

Johannes Jäger
Fachhochschule des BFI Wien, Österreich
Johannes.jaeger@fh-vie.ac.at

Lukas Schmidt
FIAN Österreich
Lukas.schmidt@univie.ac.at

financial capital in the form of banking capital, but also in the form of new and increasingly important forms of financial capital such as mutual funds and private investors to peripheral countries. These investors push for access to these countries, and try to reshape discourses and international and national regulations in their favour. In a similar way, international trade and investment agreements such as the EU-Mercosur agreement may deepen environmental problems (Matković 2019). Financial investors, despite presenting themselves as environmental protectors and by doing green washing, cause dramatic ecological problems, as shown for example in the case of the world's largest investment company, BlackRock, and its activities in the Brazilian Amazon region (Amazon Watch 2020). With this new type of financial investment agent, the share of the so-called shadow financial sector in the external finance of peripheral countries has increased considerably over the past years (UNCTAD 2019). Public financial resources and international financial institutions, such as the European Bank for Reconstruction and Development (see Soederberg/Tawakkol in this issue), often support the expansion of green external financial capital, originating in general from core countries. Hence, green finance follows a similar investment logic as that of traditional finance. Against the background of a developmentalist perspective, cross-border capital flows to peripheral countries, including green finance, are, therefore, highly problematic, leading to instability, and a net outflow of resources from the periphery to the core countries. In addition, they may facilitate access to domestic natural resources and increase their transfer to the global core countries. This is a direct implication of commodification, as a consequence of cross-border financial investment, that mobilises resources for the global market.

Moreover, besides these general effects at the macro-level, green financial investment may have an additional negative impact at the micro-level. In the past years, 'green grabbing' as a form of green finance has raised attention as a way to cover and/or legitimise land grabbing in countries of the global periphery (Fairhead et al. 2012; Franco/Borras Jr. 2019). Land appropriations have taken place for the purpose of forest conservation and/or plantation, i.e. as part of emission trading (Heuwieser 2015; Scheidel/Work 2018), or for the production of biofuels (Bracco 2016; Maconachie 2019). The land deals often have a direct negative impact on the most vulnerable

groups: traditional small-scale farmland is acquired for export business, which causes people living in rural areas to lose the access to the land and/or their workplace, which provides the basis of their income (Oliveira et al. 2017). Hence, these green financial investments may reduce (global) food security (Clapp/Isakson 2018). Green microfinance has become another important form of green financial investment. For many years, these micro credits have been heavily criticised as being a debt trap, especially when provided by private lenders (Gosh 2013). The interconnectedness of microfinance and land grabbing and the negative ecological effects were, for example, recently shown by a study that analysed how the dispossession of rural people's land titles is used to keep non-performing loan indicators low in the Cambodian microfinance sector (LICADHO 2019). On a more general level, Hybrechts et al. (2019) point to the problem of the often individualistic framing of these green microfinance programmes, which may not just lead to further social exclusion but also to environmental degradation.

We consider the observed rise of green (cross-border) finance as being part of a larger process of financialisation. This term refers to the increasing importance of the financial sector in contemporary capitalist modes of production (Christophers 2015). The commodification of nature often goes along with financialisation, and has become an essential trend in capitalist accumulation strategies (Smith 2007; Brand/Wissen 2014; Ouma et al. 2018). However, financialisation is a process that does not spread evenly, but may, at least in part, be limited and even reversed at the national (regional) level, as argued below. Our proposed perspective provides entry points to critically analyse green financial strategies, their regulation, and the impact on development models and the environment.

4. A regulationist perspective on green finance

In the tradition of CPE but on a more concrete level of abstraction, regulation theory can be used to analyse how specific national development models are related to each other. Regulation theory was developed to explain how, in capitalism, temporary institutional solutions contain contradictions in order to stabilise capitalist accumulation. Although there is the drive for commodification and a constantly increasing use

of nature, potentially this could be at least temporarily regulated. Originally, the focus in regulation theory was on the contradiction between capital and labour and specifically the contradictions in the area of money and finance. Capitalism constantly tends to undermine its conditions of existence, because it destroys labour power through over-exploitation and faces problems because of over-accumulation. Labour legislation, collective bargaining and welfare policies have contributed to dealing with these contradictions, in particular during the period of Fordism (Aglietta 2000). Becker/Raza (2000) provided a concept within the regulation theory approach to deal with the contradiction between capitalist accumulation and the use of nature which they called the ecological constraint and consider as essential structural form being part of a mode of regulation. Against the background of previous experiences, in particular in the case of Fordism in the core countries and peripheral-Fordism in the semi-periphery, it can be asked how it is possible to change the ecological constraint in such a way that the contradictions are offset, at least temporarily and in part. However, this depends on social struggles (Brand/Wissen 2016). It is, moreover, an open question whether a specific mode of regulation will contribute to stabilising capitalism and transform it into a green capitalism or whether a radical transformation towards a post-capitalist mode of production will be the outcome. We consider the regulation of green finance as an important element of the ecological constraint. The question, hence is, how financial regulation contributes to specific patterns of accumulation, so-called regimes of accumulation, and forms of accessing and transforming nature. For obvious reasons, extractive industries, hand-in-hand with green financial capital in search of long-term income streams, constantly push to change the environmental constraint in a way that gives them access to these income streams. The expansion and appropriation of the use of nature, making it part of accumulation, provokes resistance by those who are expropriated or negatively affected, and results in numerous so-called (local) environmental conflicts (Dietz/Engels 2016; Lust 2014), but may also be resisted at the national and international level fighting respective arrangements.

Although financialisation has become more important in general, the distinction between financialised and productive/extractive regimes of accumulation is still valid, in particular in the case of peripheral economies that often depend to an important extent on the extraction of natural

resources (Jäger et al. 2014). Productive regimes of accumulation may either be intensive, which means that productivity increases and wage goods become cheaper, or extensive, which means that growth is mainly based on increasing inputs. Extractive regimes of accumulation represent a specific form of extensive productive regime of accumulation based on the increasing use or extraction of natural resources. The dynamics of financialised regimes of accumulation are based either on increasing prices for fictitious capital such as financial assets, or on increasing debt levels. However, green finance does not necessarily contribute to financialisation but may also support and expand extractive development models. It is against this background that a more detailed analysis of the specific regulation and role of green finance and its contribution to different and related regimes of accumulation in the core countries and in peripheral countries, and their ecological impact, can be analysed.

Typically today, core countries tend to have either largely productive or largely financialised regimes of accumulation that are specifically related, as shown with the case of the EU (Becker et al. 2015). Within a liberalised global capitalist framework and facilitated by a liberal global financial system, they extract natural resources from peripheral countries in exchange for industrial goods and/or via financial means. Moreover, as CPE suggest, it is not just the transfer of financial value and natural resources (use value), but also exploitation, in the form of the over-exploitation of labour and the transfer of labour value, that are crucial. There are different mechanisms at work. Super-exploitation, because of weaker labour organisation leading to extremely low wages, as well as centralised power structures in global value chains (GVC) (Marini 1991; Smith 2016) play an important role. The specific regulation of the ecological constraint allows these mechanisms to work and leads to an extraction of natural resources from the periphery (or the use of the periphery as a sink or for environmentally damaging production) and their transfer to the core. Hence, a liberal configuration of global finance facilitating the access to the periphery via liberal green financial regulations and instruments is functional for core countries, as it allows for an increasing extraction of (financial) value and natural resources from the periphery, thus supporting modes of production in the core.

Such a regulation of finance that accompanies further commodification and the integration of nature into financial circuits can be considered a central element of *neoliberal green finance*. Private finance capital is an important driving force pushing for a liberal ecological constraint. Thereby, the asymmetric relationship between core and periphery and the transfer of use value and labour value from the periphery to the core is deepened, as well as is the over-exploitation of nature. Moreover, *neoliberal green finance* increases inequality and a very unequal access to natural resources by privileging capitalists and a labour aristocracy, mainly in the core of the global economy. In the case of peripheral countries this might deepen extractivist productive development models and/or lead to financialised models of development. In the latter case, financial bubbles and increasing debt levels may lead to frequent crises. The expanding of liberal economic and financial regulations and market-making institutions under the label of 'green finance' have contributed to this. The proposal by the European Commission (2019) on the Green Deal clearly is an example. It supports private European financial capital's access to the rest of the world in order to facilitate the inflow of natural resources. Such a neoliberal international regulation of finance seems to be in accordance with still existing but declining US hegemonic interests (Cafruny/Ryner 2017), and can be considered an active strategy to compete in global financial markets and extract financial profits. Against this background, it can be analysed how such liberal (green) financial regulations contribute either to extractivist or financialised development models in specific peripheral countries. Although financialisation is a general global tendency, analysing financialisation at the level of national development models, it turns out that processes of financialisation do not just have specific features in peripheral countries but have even been (temporarily) reversed in some cases (Becker et al. 2010) and have led to extractivist and productivist development models.

The destabilising effects of global finance and tendencies towards financialisation were criticised by UNCTAD already some time ago. More recently, UNCTAD (2019), under the heading of a green new deal, proposed multilateral strategies of (green) financial regulation. We see them as central elements of what we term *reformist green finance*. According

to this perspective, finance should be regulated nationally (or on a regional level) in such a way that it contributes to a productive transformation by increasing productivity (relative surplus value). Disturbing international financial flows should be restricted. Financial means for productive investment should be raised domestically via taxes and/or green public bonds and via central bank financing. Further elements of such regulations could be, for example, specific lending targets for banks regarding green finance (for an overview see Lagoarde-Segot 2020; Dikau/Ryan-Collins 2017). Importantly, not relying on external finance decreases external vulnerability and possibly encourages productive (green) accumulation strategies. The assumption that a strong state, domestic finance and increasing the degree of monetary policy autonomy can support catching-up stands in the tradition of a developmentalist perspective on finance. Implementing *reformist green financial regulations* may contribute to productive growth models that are more inclusive not only in the periphery but also in core countries. Potentially, such productivist development models could be based on coalitions between productive capital and labour. However, such strategies would lead to a further exploitation of natural resources and would not significantly alter the unequal over-use of nature, although the specific distributional patterns would change as a result of the catching-up industrialisation of some peripheral countries. Given the limited amount of global resources, the strategy cannot be employed by all countries (Fischer-Kowalski/Pallua 2016). Therefore, the global struggle for relatively more scarce resources will increase. China is a paradigmatic example of this. Its productive development model is characterised by restricting the access of global finance in order to avoid capital outflows and financial instability. In so doing, China is able to use domestic financial resources for development goals. Today, however, successful catching-up implies expanding a mode of production (and consumption) that is, even if it claims to be a form of green capitalist growth, not sustainable on a global level. China, although building on its own financial means, has started to behave much like a core-country and tries to ensure access to global natural resources. In order to do that, specific financial arrangements and strategies, such as debt for resources contracts with peripheral countries, play an important role (see Tröster/Küblböck et al. in this issue). Hence, China follows other industrial countries and takes advantage of the liberal global financial regulation, with similar consequences.

At the international level, *reformist green finance* can be supported by containing the most destructive tendencies of global finance through adequate regulations. This means that a productive use of finance is enabled by allowing countries to regulate and restrict international financial flows. Multinational and bilateral trade and investment agreements should therefore safeguard national policy spaces and not undermine them. A central element of this could be the reduction of foreign debt and financial dependency. At the global level, peripheral countries could potentially constitute an important group of protagonists for such a change in financial regulations; however, the G20 Sustainable Finance Group (2018) proposes a rather neoliberal approach. The position of China, by far the most important global challenger for a core position, does not seem very progressive either. While the proposal by the European Commission (2019) has a completely neoliberal perspective on global financial structures, it is more ambiguous regarding financial regulations and strategies within the EU. However, a partial productive orientation towards *reformist green finance* could potentially contribute to green capitalism and corresponding investment in technology and infrastructure (EuroMemo Group 2020). Notwithstanding this, the European Commission's approach turns out to be highly problematic in terms of how a transformation of the energy regime is envisaged (see Yurchenko in this issue). In addition, against the background of Europe's deep internal core-periphery structure and the related contradictions (Becker et al. 2015), it remains an open question how substantial and coherent a strategy of green growth can be. Moreover, under *reformist green financial strategies*, the problem remains that green capitalism and many projects labelled 'green' indeed contribute to more resource efficiency, but ultimately are expected to lead to a further over-use of nature (Schandl et al. 2018).

5. Conclusions

The main purpose of this chapter was to give an overview of green finance and its global implications, and to provide a theoretical framework to analyse emerging green finance from a global core-periphery perspective. The expansion of green finance in its current neoliberal form can be seen as an element of a further process of financialisation that deepens current

core-periphery relationships and asymmetries on a global level. A regulationist perspective was presented that allows us to discuss different forms of regulation of (green) finance and its (potentially different) impact on national development models, their interlinkages and the environmental consequences. Thereby, we distinguished between a regulation that deepens neoliberal financial structures, which we termed *neoliberal green finance*, and regulations that potentially lead to more productivist (green) development models, which we referred to as *reformist green finance*. Contrary to dominant discourses, we have identified various reasons for why *neoliberal green finance* and, to a lesser degree, *reformist green finance* turn out to be highly problematic. Firstly, they deepen the global ecological crisis. Secondly, international (green) financial flows make the periphery more dependent and contribute to increasing dependency and underdevelopment. However, different forms of regulating finance at the national and international level may have important consequences, as our conceptualisation suggests. While a regulation that leads to *neoliberal green financial structures* supports financialised or extractivist development models, *reformist green financial regulation* is more likely to contribute to productivist (green) development models. However, green capitalism will not stop the expansionary logic of capitalism, and will lead to increasing international conflicts about natural resources becoming scarcer and global environmental damage, e.g. in the form of climate change becoming more drastic and harming poorer countries, in particular the rural and urban working classes (mainly in the global periphery). A socio ecological transformation that ends the global unequal over-use of resources and guarantees equal access for all would definitely break with expansionary capitalism and would be based on de-commodification and *progressive transformative green finance* (see Jäger/Schmidt in the introduction). Although today such a transformation seems very unlikely, given the current form of global capitalism and the specific class relations that go along with it, it is necessary to struggle for it. Given the limited space available here, a more detailed empirical analysis, focusing on different political strategies, projects and regulations in the field of green finance and their potential for progressive development models, would be desirable, but this has to be left for future research.

References

- Aglietta, Michel (2000 [1979]): *A Theory of Capitalist Regulation. The US Experience*. London: Verso.
- Akyüz, Yilmaz (2018): External Balance Sheets of Emerging Economies: Low-Yielding Assets, High-Yielding Liabilities. In: PERI Working Paper Series (476).
- Amazon Watch (2020): BlackRock's big problem: Amazon Destruction. <https://amazonwatch.org/work/blackrocks-big-problem>, 21.9.2020
- Becker, Joachim/Jäger, Johannes/Leubolt, Bernhard/Weissenbacher, Rudy (2010): Peripheral Financialization and Vulnerability to Crisis: A Regulationist Perspective. In: *Competition & Change* 14 (3-4), 225-247. <https://doi.org/10.1179/102452910X12837703615337>
- Becker, Joachim/Jäger, Johannes/Weissenbacher, Rudy (2015). Uneven and dependent development in Europe: the crisis and its implications. In: Johannes Jäger/Elisabeth Springler (eds.): *Asymmetric Crisis in Europe and Possible Futures. Critical Political Economy and Post-Keynesian Perspectives*. Oxon: Routledge, 81-97.
- Becker, Joachim/Raza, Werner (2000): Theory of Regulation and Political Ecology. An Inevitable Divorce? In: *Économie et sociétés, Série „Théorie de la régulation“* (11), 55-70.
- Berrou, Romain/Dessertine, Philippe/Migliorelli, Marco (2019): An Overview of Green Finance. In: Migliorelli, Marco/Dessertine, Philippe (ed.): *The Rise of Green Finance in Europe. Opportunities and challenges for Issuers, Investors and Marketplaces*. London: Palgrave Macmillan, 3-30. https://doi.org/10.1007/978-3-030-22510-0_1
- Bortz, Pablo G./Kaltenbrunner, Annina (2018): The International Dimension of Financialization in Developing and Emerging Economies. In: *Development and Change* 49 (2), 375-393. <https://doi.org/10.1111/dech.12371>
- Bracco, Stefania (2016): *The Economics of Biofuels. The impact of EU bioenergy policy on agricultural markets and land grabbing in Africa*. London: Routledge. <https://doi.org/10.4324/9781315621111>
- Brand, Ulrich/Wissen, Markus (2013): Imperiale Lebensweise und die politische Ökonomie natürlicher Ressourcen. In: Karin Fischer/Johannes Jäger/Lukas Schmidt (eds.): *Rohstoffe und Entwicklung. Aktuelle Auseinandersetzungen im historischen Kontext*. Wien: New Academic Press. 235-248.
- Brand, Ulrich/Wissen, Markus (2014): The Financialization of Nature as Crisis Strategy. In: *Journal für Entwicklungspolitik* 30 (2), 16-45. <https://doi.org/10.20446/JEP-2414-3197-30-2-16>
- Buchner, Barbara et al. (2019): *Global Landscape of Climate Finance*. <https://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019>

- Castro, Carlos J. (2004): Sustainable Development: Mainstream and Critical Perspectives. In: *Organization Environment* 17 (2), 195-225. <https://doi.org/10.1177/1086026604264910>
- Christophers, Brett (2015): The limits to financialization. In: *Dialogues in Human Geography* 5 (2), 183-200. <https://doi.org/10.1177/2043820615588153>
- Clapp, Jennifer/Isakson, S. Ryan (2018): Risky Returns: The Implications of Financialization in the Food System. In: *Development and Change* 49 (2), 437-460. <https://doi.org/10.1111/dech.12376>
- Clark, Brett/Longo, Stefano B. (2017): Marxism and Ecology. In: Brennen, David M./Kristjanson-Gural, David/Mulder, Catherine P./Olsen, Erik K. (ed.): *Routledge Handbook of Marxian Economics*. London: Routledge, 399-408. <https://doi.org/10.4324/9781315774206-37>
- Dietz, Kristina/Engels, Bettina (2016): Umkämpfter Rohstoffboom. Akteure und Strategien in Konflikten um Bergbau in Subsahara-Afrika. In: Karin Fischer/Johannes Jäger/Lukas Schmidt (eds.): *Rohstoffe und Entwicklung. Aktuelle Auseinandersetzungen im historischen Kontext*. Wien: New Academic Press, 220-234.
- Dikau, Simon/Ryan-Collins, Josh (2017): *Green Central Banking in Emerging Markets and Developing Country Economies*. London: New Economics Foundation.
- Ehrlich Reifer, Thomas (2011): Global Inequalities, Alternative Regionalisms and the Future of Socialism. In: *Journal für Entwicklungspolitik* 27 (1), 72-94. <https://doi.org/10.20446/JEP-2414-3197-27-1-72>
- Euro Memo Group (2020): *A Green Memo Deal for Europe – Opportunities and Challenges*. http://www2.euromemorandum.eu/uploads/euromemorandum_2020.pdf
- European Commission (2019): *European Green Deal*. Brussels: European Commission.
- Fairhead, James/Leach, Melissa/Scoones, Ian (2012): Green Grabbing: a new appropriation of nature? In: *Journal of Peasant Studies* 39 (2), 237-261. <https://doi.org/10.1080/03066150.2012.671770>
- Fischer-Kowalski, Marina/Pallua, Irene (2016): Ressourcenextraktion und Ressourcenverbrauch – globale Trends, regionale Muster. In: Karin Fischer/Johannes Jäger/Lukas Schmidt (eds.): *Rohstoffe und Entwicklung. Aktuelle Auseinandersetzungen im historischen Kontext*. Wien: New Academic Press, 85-106.
- Foster, John Bellamy (2013): Marx and the Rift in the Universal Metabolism of Nature. In: *Monthly Review* 65 (7), 1-19. https://doi.org/10.14452/MR-065-07-2013-11_1
- Foster, John Bellamy/Holleman, Hannah (2014): The theory of unequal ecological exchange: a Marx-Odum dialectic. In: *The Journal of Peasant Studies* 41 (2), 199-233. <https://doi.org/10.1080/03066150.2014.889687>

- Franco, Jennifer C./Borras Jr., Saturnino M. (2019): Grey areas in green grabbing: subtle and indirect interconnections between climate change politics and land grabs and their implications for research. In: *Land Use Policy* 84, 192-199. <https://doi.org/10.1016/j.landusepol.2019.03.013>
- G20 Sustainable Finance Group (2018): Synthesis Report. http://www.g20.utoronto.ca/2018/g20_sustainable_finance_synthesis_report.pdf, 21.9.2020
- Gosh, Jayati (2013): Microfinance and the challenge of financial inclusion for development. In: *Cambridge Journal of Economics* 37, 1203–1219. <https://doi.org/10.1093/cje/beto42>
- Gowan, Peter (1999): *The Global Gamble. Washington's Faustian Bid for World Dominance*. London: Verso.
- Harvey, David (2009). The 'New' Imperialism: Accumulation by Dispossession. In: Leo Panitch/Colin Leys (eds.): *The New Imperial Challenge*. Socialist Register. London: Merlin Press, 63-87.
- Harvey, David (2014): *Seventeen Contradictions and the End of Capitalism*. London: Profile Books.
- Heuwieser, Magdalena (2015): *Grüner Kolonialismus in Honduras. Land Grabbing im Namen des Klimaschutzes und die Verteidigung der Commons*. Wien: Promedia.
- Hubacek, Klaus/Baiocchi, Giovanni/Feng, Kuishuang/Muñoz Castillo, Raúl/Sun, Laixiang/Xue, Jinjun (2017): Global carbon inequality. In: *Energy, Ecology and Environment* 2 (6), 361-369. <https://doi.org/10.1007/s40974-017-0072-9>
- Huybrechts, Frédéric/Bastiaensen, Johan/Van Hecken, Gert (2019): Exploring the potential contribution of green microfinance in transformations to sustainability. In: *Current Opinion in Environmental Sustainability* 41, 85-92. <https://doi.org/10.1016/j.cosust.2019.11.001>
- IFC (2017): *Green Finance. A bottom up approach to tracking existing flows*. IFC: Washington D.C.
- IMF (2019): *Global Financial Stability Report. Lower for Longer*. Washington D.C.: IMF.
- Jäger, Johannes (2020). From Marx to Critical International Political Economy. In: Ernesto Vivares (ed.): *The Routledge Handbook to Global Political Economy*. London: Routledge, 247-261. <https://doi.org/10.4324/978135106454517>
- Jäger, Johannes/Horn, Laura/Becker, Joachim (2016). Critical International Political Economy and Method. In: Alan Cafruny/Leila Simona Talani/Gonzalo Pozo (eds.): *The Palgrave Handbook of Critical International Political Economy*. London: Palgrave Macmillan, 101-118. https://doi.org/10.1057/978-1-137-50018-2_7
- Jäger, Johannes/Leubolt, Bernhard/Schmidt, Lukas (2014): Alles Extraktivismus in Südamerika? Rohstoffrenten und Politik in Brasilien, Chile und Venezuela. In: *Journal für Entwicklungspolitik* 30 (3), 9-26. <https://doi.org/10.20446/JEP-2414-3197-30-3-9>

- Koch, Max/Buch-Hansen, Hubert (2020). The IPE of degrowth and sustainable welfare. In: Ernesto Vivares (ed.): *The Routledge Handbook to Global Political Economy*. London: Routledge, 375-390. <https://doi.org/10.4324/9781351064545-26>
- Lagoarde-Segot, Thomas (2020): Financing the Sustainable Development Goals In: *Sustainability* 12 (7), 2275. <https://doi.org/10.3390/su12072775>
- Lagoarde-Segot, Thomas/Paranque, Bernard (2018): Finance and sustainability: From ideology to utopia. In: *International Review of Financial Analysis* 55, 80-92. <https://doi.org/10.1016/j.irfa.2017.10.006>
- LICADHO (2019): Collateral Damage: Land Loss and Abuses in Cambodia's Microfinance Sector. www.licadho-cambodia.org/reports.php?perm=228,275.2020
- Lust, Jan (2014): Peru: Mining capital and social resistance. In: Veltmeyer, Henry/Petras, James (eds.): *The New Extractivism. A post-neoliberal development model or imperialism of the twenty-first century?* London: Zed Books, 192-221.
- Maconachie, Roy (2019): Green grabs and rural development: How sustainable is biofuel production in post-war Sierra Leone? In: *Land Use Policy* 81, 871-877. <https://doi.org/10.1016/j.landusepol.2017.01.013>
- Marini, Ruy Mauro (1991 [1973]): *Dialéctica de la dependencia*. Ciudad de México: Ediciones Era.
- Marx, Karl (2012 [1867]): *Capital. A Critique of Political Economy*. London: Penguin Classics.
- Matković, Aleksandar (2019): Climate change and imperialism: what connects the Amazon fires and the EU-Mercosur agreement? <http://cadtm.org/Climate-change-and-imperialism-what-connects-the-Amazon-fires-and-the-EU,21.9.2020>
- Oliveira, Gustavo de LT/McKay, Ben/Plank, Christina (2017): How biofuel policies backfire: Misguided goals, inefficient mechanisms, and political-ecological blind spots, *ENERG POLICY* 108: 765-775. <https://doi.org/10.1016/j.enpol.2017.03.036>
- Ouma, Stefan/Johnson, Leigh/Bigger, Patrick (2018): Rethinking the financialization of 'nature'. In: *Environment and Planning A: Economy and Space* 50 (3), 500-511. <https://doi.org/10.1177/0308518X18755748>
- Ryner, Magnus/Cafruny, Alan (2017): *The European Union and Global Capitalism. Origins, Development, Crisis*. London: Palgrave. <https://doi.org/10.1057/978-1-137-60891-8>
- Schandl, Heinz/Fischer - Kowalski, Marina/West, James/Giljum, Stefan/Dittrich, Monika/Eisenmenger, Nina/Geschke, Arne/Lieber, Mirko/Wieland, Hanspeter/Schaffartzik, Anke/Krausmann, Fridolin/Gierlinger, Sylvia /Hosking, Karin/Lenzen, Manfred/Tanikawa, Hiroki/Miatto, Alessio/Fishman, Tomer (2018): Global Material Flows and Resource Productivity: Forty Years of Evidence. In: *Journal of Industrial Ecology*, 22(4), 827-838. <https://doi.org/10.1111/jiec.12626>

- Scheidel, Arnim/Work, Courtney (2018): Forest plantations and climate change discourses: New powers of 'green' grabbing in Cambodia. In: Land Use Policy 77, 9-18. <https://doi.org/10.1016/j.landusepol.2018.04.057>
- Smith, John (2016): Imperialism in the Twenty-First Century. Globalization, Super-Exploitation, and Capitalism's Final Crisis. New York: Monthly Review Press.
- Smith, Neil (2007): Nature as Accumulation Strategy. In: Socialist Register, 16-36.
- Soederberg, Susanne (2014): Debtfare States and the Poverty Industry. Money, discipline and the surplus population. London: Routledge. <https://doi.org/10.4324/9781315761954>
- UN (2015): Transforming our world: the 2030 Agenda for Sustainable Development. New York. UN.
- UNDP (2019): Human Development Report 2019. Beyond Income, Beyond Averages, Beyond Today - Inequalities in Human Development in the 21st Century. New York: United Nations.
- UNCTAD (2019): Trade and Development Report 2019. Financing a Global Green New Deal. Geneva: UNCTAD
- UNCTAD (2020): World Investment Report 2020: Geneva: UNCTAD.
- Van der Pijl, Kees (2007): Nomades, Empires, States. Modes of Foreign Relations and Political Economy, Volume I. London: Pluto Press.
- World Bank (2020): Net official development assistance received (current US\$). <https://data.worldbank.org/indicator/DI.ODA.ODAT.CD>, 21.9.2020

ABSTRACT Green Finance wird oft als zentrales Element zur Erreichung von Nachhaltigkeit präsentiert. In der Tradition der kritischen politischen Ökonomie fokussiert dieses Beitrag auf (Green) Finance und dessen Auswirkungen auf den Verbrauch von natürlichen Ressourcen und die Umwelt. Vor dem Hintergrund der globalen Dimension wichtiger Umweltprobleme und den globalen Zusammenhängen des Ressourcenverbrauchs nimmt dieser Beitrag eine globale Perspektive ein. Dabei wird insbesondere auf die globalen Asymmetrien und Abhängigkeiten zwischen Zentrum und Peripherie eingegangen und die Bedeutung von globalen Finanzstrukturen und Green Finance analysiert. Aufbauend auf eine regulationstheoretische Perspektive werden unterschiedliche Ausgestaltungen von Green Finance und Implikationen für Regulation und Entwicklungsmodelle und die Umwelt konzeptualisiert. Dabei werden Neoliberal Green Finance, Reformist Green Finance und Progressive Transformative Green Finance unterschieden. Eine wesentliche Schlussfolgerung besteht darin, dass Neoliberal Green Finance Abhängigkeitsmuster zwischen Zentrum und Peripherie vertieft und die global äußerst