
Debate

Derisking Developmentalism: A Tale of Green Hydrogen

Daniela Gabor and Ndongo Samba Sylla

ABSTRACT

In the global race to scale up green hydrogen, a renewed appetite for the visible hand of the state once again promises to expand developmental space for low- and middle-income countries. On the African continent, several countries have announced green industrialization ambitions that rely on mobilizing, through various ‘derisking’ schemes, private (institutional) capital looking for investible opportunities. To examine the transformative potential of this new *derisking developmentalism*, this article extends the critical macrofinance lens to include Thandika Mkandawire’s theorization of post-independence African developmental states. Using Namibia as an illustration, it argues that an assumption of ‘divine coincidence’ creates the ideological space for the state to forge derisking blocs but structurally weakens its ability to discipline private capital into pursuing green industrialization. As (foreign) capital dominates the state–capital relationship in derisking developmentalism, the new green rules written by powerful investors and global North governments threaten to transform global South countries into consumers of green hydrogen technology and generators of yield for portfolio investors, thus reinforcing the structural drivers of their ongoing external debt vulnerabilities. Instead, countries should experiment with green public ownership and partnerships that discipline local green industries. Such strategies require replacing the Wall Street Consensus with a supportive global macrofinancial framework the authors call ‘Green Bandung Woods’.

INTRODUCTION

We all can work together, co-finance and investigate alternative funding partners and structures to de-risk and reduce the cost of the capital and funding for green hydrogen projects.

Bank Windhoek (n.d.)

This contribution builds on an earlier exploratory work published in the *Boston Review*, where Adom Getachew and Deborah Chasman provided sharp insights for which we are grateful. We are also grateful to the participants to the *Development and Change* workshop ‘Debt Crisis in the Majority World’ (17–18 November 2022), to the editors and to the anonymous referees for feedback. All remaining errors are ours.

Development and Change 54(5): 1169–1196. DOI: 10.1111/dech.12779

© 2023 The Authors. *Development and Change* published by John Wiley & Sons Ltd on behalf of Institute of Social Studies.

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

At COP27 in Egypt in November 2022, Namibia launched the US\$ 1 billion SDG Namibia One Fund, in partnership with two official Dutch development organizations, Climate Fund Managers and Invest International. The Fund would deploy concessional capital to mobilize private investments in green hydrogen and jumpstart the green industrialization ambitions formulated by Namibia's new Green Hydrogen Council. Indeed, by COP27, Namibia had approved a US\$ 9.4 billion green hydrogen pilot project run by Hyphen, a joint venture between a private equity company (Nicholas Holding Limited) and the German renewable energy supplier ENERTRAG. In turn, Hyphen had already secured demand for up to 1 million tonnes of green ammonia annually from the German utility company RWE and several other companies (Hyphen Africa, 2023), tapping into the global race to scale green hydrogen production. Furthermore, local institutional capital also signalled its commitment towards supporting green industrialization ambitions that can generate new investible opportunities (Bank Windhoek, n.d.). At above 100 per cent of GDP, the institutional capital amassed by Namibia in pension funds was among the greatest in the world relative to local GDP in 2022, with over half invested in overseas assets, given the lack of domestic 'investible' assets (World Bank, 2020). As the president of the European Investment Bank, one of the concessional lenders to SDG Namibia One, put it: 'green hydrogen will play a special role here. Not only will it be the basis for Namibia's industrialization and a potential cornerstone for developing a sustainable export economy, but it will also provide much-needed energy for the region'.¹

Does Namibia's push for green hydrogen mark the return of developmentalism, and in what form? The climate crisis, the post-COVID-19 debt crisis engulfing countries in the global South and the global rush to green hydrogen — the 'next frontier of the energy transition' (van de Graaf, 2022: 21) — are providing the 'exceptionally difficult circumstances' that typically incentivize national elites to embrace transformative projects (Nem Singh and Ovadia, 2018), now made easier politically as the 2022 US Inflation Reduction Act (IRA) normalizes the return of industrial policy. A green developmentalism is unfolding in the context of a new derisking-centred international development paradigm: the Wall Street Consensus (Elsner et al., 2022; Gabor, 2021a; Mawdsley, 2018).

Initially, the Wall Street Consensus prioritized investible (social) infrastructure, arguing that fiscal constraints or external debt pressures left the Sustainable Development Goals (SDGs) unachievable through public investment alone. Instead, international development agencies and governments should partner with (global) institutional capital, including pension funds, insurance companies, hedge funds or private equity funds, to turn public priorities for renewable energy, education, health, roads, forests, whales or

1. See www.eib.org/en/press/speeches/cop27-namibia-mou-hoyer

water infrastructure into *investible* asset classes (Gabor, 2021a). The market alone cannot produce investibility since such priorities rarely generate the risk/return profiles that fit with the profit/mandate requirements of investors managing trillions of dollars of institutional capital (Braun, 2021). Investibility is produced through derisking partnerships: public money is used to subsidize financiers, through vehicles such as SDG Namibia One, to increase returns relative to risks through instruments including public–private partnerships (PPPs), power purchase agreements, contracts for difference, or green bonds (Cooiman, 2023; Elsner et al., 2022; Gabor, 2021a; Haag and Muller, 2019).

Derisking has become immensely powerful as a vision of statecraft, from the G20's Infrastructure as an Asset Class, the World Bank's 2022 Evolution Roadmap,² and the EU's Global Gateway, to the US-led Partnership for Global Infrastructure and Investment, and various infrastructure-led state-capitalist approaches (Alami et al., 2022). It is silently becoming the hegemonic strategy of governing the climate crisis in high-income countries (Cooiman, 2023; Gabor, forthcoming), surrendering the pace and nature of structural transformation to private (institutional) capital that is characterized by systemic greenwashing, while simultaneously legitimizing the (de facto) privatization of a range of public goods. Distributional critiques aside, Gabor (2021a: 432) questioned the new paradigm for aspiring to create a derisking state that 'lacks an autonomous strategic vision, unless "more infrastructure" can be described as such Its industrial policy amounts to little more than planning and overseeing PPP projects'.

But the derisking state has now taken a developmentalist turn, guided for instance in Namibia by a strategic vision of green industrialization. Active government intervention with transformative ambitions is back after decades of ideological dismissal (Wade, 2018), albeit in a new guise shaped by financial capitalism (Gabor and Braun, 2023). We term this 'derisking developmentalism' and examine its potential to trigger the kind of (green) structural transformation that the early post-independence developmentalists envisaged (Economic Commission for Africa and African Union, 2011; Oqubay, 2015). By structural transformation, the developmental literature typically understands the nurturing of local firms 'across a broad range of major global industries, capable of acting as first-tier suppliers to multinational corporations and even competing head-to-head with them' (Wade, 2018: 525). It is this understanding of deep structural transformation and industrial upgrading that we deploy to unpack the rise of derisking developmentalism. Namibia's recently launched green hydrogen industrial strategy, and its distinctive financial ecosystem dominated by institutional capital, render it an excellent case study for theorizing the new, derisking-based relationships between state and private (financial) capital.

2. See www.worldbank.org/en/news/statement/2023/01/13/world-bank-group-statement-on-evolution-roadmap.

We approach derisking developmentalism through a critical macrofinance lens (CMF) (Gabor, 2020, see also Dutta et al., 2020) that takes as its starting point the macrofinancial pressures arising from financial globalization to theorize the distinctive nature of the derisking state. To examine how derisking mutates from co-producing investible infrastructure for financiers to investible productive capacity, we extend the CMF lens with Thandika Mkandawire's theorization of state–capital relationships in (post-independence African) developmental states. Mkandawire (2001) argued that the developmental state should be distinguished from other state projects along an ideology–structure nexus. The developmental state has to build both ideological hegemony that knits alliances with local ‘captains of industry’ supportive of its transformative plans, and capacity to pursue structural transformation ‘unencumbered by the claims of myopic private interests’ (ibid.: 290). Such institutional (bureaucratic), political and macro-economic capacity is necessary to institute a set of incentives, controls and mechanisms that pairs carrots to encourage local investment in strategic sectors with stringent performance conditions, aiming at international competitiveness (Öniş, 1991; Wade, 2018). To paraphrase Öniş (1991: 116), politicians reign, bureaucrats rule and business is disciplined into cooperation, through the creation of a ‘special set of institutions that rely on a significant element of compulsion’, such as state-controlled finance, capital controls, competition authorities checking monopoly power via stringent price controls, institutions enforcing compliance with performance conditions, etc.

Along the ideology–structure nexus, we argue, derisking developmentalism may be ideologically capable of forging derisking coalitions around green hydrogen, but structurally remains committed to the macrofinancial status quo put in place by the Washington Consensus (WC) and reaffirmed by the Wall Street Consensus (WSC). This involves, an independent central bank prioritizing inflation without coordination with fiscal authorities, in turn pressured into fiscal rectitude, capital mobility (via the market access imperative) and lightly regulated private finance, in stark contrast with the institutional arrangements that characterized successful developmental states (see Wade, 2018). Instead, derisking developmentalism assumes a ‘divine coincidence’ partnership for investibility that would simultaneously achieve transformative upgrading and reliable private profits regardless of changing market conditions (such as massive green hydrogen subsidies in the US IRA). This assumption, we argue, structurally weakens the ability of the state to discipline private capital into pursuing green industrialization goals. Rather, (foreign) capital dominates in the state–capital relationship.

Without radical institutional change, ‘industrialization-by-derisking’ puts private capital into the driving seat, allowing powerful investors and global North countries to write new green rules that threaten to further entrench financial and technological dependencies. Namibia may become a successful green hydrogen exporter by hosting, partially financing and derisking Europe's green development. Yet this capital-intensive sector will not

generate the type of domestic aggregate demand necessary to spur structural transformation.³ Instead, it will most likely reproduce the enclave-type resource extraction that multinational corporations persuaded African states to support throughout the 1990s via foreign direct investment-friendly policies (Storm, 2008) and which resulted in huge licit and illicit financial resource transfers from the continent during the so-called ‘Africa rising’ period (Sylla, 2014).

Adherence to the WSC, and to ‘industrialization-by-derisking’, will likely strengthen the enduring pattern of unequal ecological exchange between global North and global South, of which global South’s debt crises are a symptom (Sylla, 2023). To prevent this scenario, we argue that global South countries should instead experiment with new forms of green public ownership in hydrogen infrastructure and partnerships that discipline local green industrial winners. Such a strategy requires greater control over the hydrogen global value chain and, critically, a move away from the WSC for a newer and supportive global macrofinancial framework we call ‘Green Bandung Woods’.

EXCEPTIONALLY DIFFICULT CIRCUMSTANCES: THE RACE FOR GREEN HYDROGEN

The view that green hydrogen could be the ‘game changer’ for African development can be traced back to an early prophet of climate change: Cheikh Anta Diop, the renowned Senegalese historian and political leader. Writing in 1985, as the world debated the oil glut pushing prices to historical lows while Africa was mired in a debt crisis, Diop imagined a green pan-African future. ‘Powered by hydrogen’, he wrote, ‘a supersonic plane would only dump tons of water into the atmosphere, whereas one powered by kerosene pollutes in three minutes what the Fontainebleau Forest takes a day to absorb’ (Diop, 1985: 165, authors’ translation). By 2020, he argued, light (green) hydrogen could be Africa’s future, building on its abundant renewable resources. Imagine, he invited his audience, ‘a university and an African government putting in place, in five years, a small solar plant, somewhere close to the sea, that would produce renewable energy to split seawater into hydrogen and oxygen, and then experiment with liquifying, storage, transport’ and other pilot projects. (ibid.: 166, authors’ translation). Developmental states intent on industrialization, he hoped, would coordinate, and unite politically, to lead the continent’s green hydrogen revolution (Diop, 1985).

Nearly 40 years later, Diop’s technological vision suddenly appears possible. Take Namibia’s US\$ 9.4 billion green hydrogen megaproject by Hyphen announced in 2021 (Ministry of Energy and Mines, 2022). A pipeline

3. We thank reviewer 1 for this interpretation.

delivers desalinated seawater to warehouses where electrolyzers use renewable energy to split the water into oxygen and hydrogen. Another pipeline will deliver the hydrogen into a chemical plant where it is transformed into green ammonia — cheaper to transport long distance than green hydrogen — then liquified to be pumped into ships for export. Hyphen will build new wind and solar energy plants to power the ecosystem, and distribute the remaining power into the national grid, as green hydrogen projects typically generate 10–15 per cent surplus of renewable energy.

A highly industrial commodity, green hydrogen is capital intensive. Until recently, it was cheaper to produce from dirty sources (fossil fuels) than in its green form (with renewable sources). To summarize crudely the basic economic pressures of the green hydrogen commodity: it involves (new) renewable energy plants, desalination of water, electrolyzers to split the water into hydrogen and oxygen, technologies to store and transport, and for derivatives, additional processing. These pressures put it out of the direct reach of most of the global South until two exceptionally difficult circumstances powered a global race for green hydrogen: a post-COVID-19 looming debt crisis for middle- and low-income countries, coupled with geopolitical pressures on Europe to delink from Russian fossil fuels.

First, the COVID-19 pandemic, the Russian invasion of Ukraine and predatory corporate profits fuelling inflation, and the ensuing dollar tightening cycle, left global South countries facing immense external debt pressures. By 2023, two out of three middle- and low-income countries were at risk of debt distress, while the cost of servicing external debt exceeded health, education, and social protection spending combined across dozens of developing countries.⁴ The new Special Drawing Rights (SDRs) disappointed expectations, as the 5 per cent quota assigned to African countries, at US\$ 33 billion (lower than Germany's) remained low relative to their liquidity needs (Plant, 2022). In turn, the G20 Debt Service Suspension Initiative and the Common Framework failed to mandate private creditors' involvement, effectively pressuring overburdened countries to prioritize market access rather than debt restructuring (Chandrasekhar, 2023; Fresnillo, 2020; Mosley and Rosendorff, 2023; Sylla, 2023). This, in turn, increased the political appeal of new green commodity exports such as green hydrogen that could generate much-needed foreign revenue.

Second, Europe put green hydrogen at the core of its RePowerEU plans to delink from Russian fossil fuels. Those sectors that cannot be decarbonized with electricity would instead use hydrogen, with an estimated demand of up to 500 million tonnes per year for cement or steel decarbonization, for re-electrification (to stabilize fluctuations in the supply of renewable energies) and for easily tradable hydrogen derivatives: ammonia, methanol for aviation, raw iron ore, etc. (Baker McKenzie, 2020:

4. See www.unicef.org/press-releases/pre-pandemic-data-show-1-8-countries-spends-more-debt-education-health-and-social

7). By 2050, the EU expects almost a quarter of global energy demand to be met by green hydrogen. RePowerEU aims for half of Europe's demand for green hydrogen, estimated at 20 million tonnes annually by 2030, to be produced locally, the other half imported through green hydrogen partnerships (European Commission, 2022; see also IRENA, 2022).

It is no coincidence that Germany led the efforts to create a global hydrogen commodity. Its Green–Social Democrat coalition government viewed green hydrogen as the key to decarbonizing heavy industries, and derisking as the policy intervention to achieve it, via Carbon Contracts for Difference and other fiscal or regulatory measures. The Germans are deriskers by conviction, by tactics and by policy. For example, in June 2021, Germany helped to establish the H2Global initiative, a financial instrument that promotes both hydrogen production in the EU and import partnerships with (future) producer countries. Its new dedicated intermediary Hydrogen Intermediary Network Company GmbH (HINTCO) will purchase hydrogen under long-term contracts, to then be resold under short-term contracts to German industry in annual auctions.⁵ This is a derisking intervention: HINTCO will use public funds to cover any difference between higher purchase prices and resell prices, changing risk/return profiles on both green hydrogen production and green hydrogen adoption. The German green hydrogen derisking coalition includes conglomerates like Siemens Energy, ThyssenKrupp, Deutsche Bank, Linde, Uniper and, relevant for Namibia, ENERTRAG and RWE. These are the contours of a global derisking chain, with ENERTRAG connecting German demand to Namibia-based supply.

At first glance, this agenda offers win-win opportunities for global North capital, its governments and for African countries facing severe debt pressures.⁶ Investors get access to investment deals with appropriate risk-return profiles, working in partnership with global North governments seeking to secure green energy from Africa. These governments no longer push for global integration as a substitute for development strategy in the global South (Rodrik, 2006). Rather, industrial policy is back. In turn, African countries could attract financing for their infrastructure and for the development of green manufacturing capacities. Indeed, at the first Green Hydrogen Global Assembly in May 2022, Kenya, South Africa, Namibia, Egypt, Morocco and Mauritania announced the African Green Hydrogen Alliance, with bold visions of hydrogen valleys developed in cooperation, to match India and China's ambitions as green hydrogen powerhouses. Later that year, at COP27 in Egypt, the European Union signed green hydrogen partnership agreements with Namibia and Egypt, while the South African Just Energy Transition Partnership with the US, EU, UK, France and Germany identified three priorities: transition from coal, electric car industry and green hydrogen (European Commission, 2021). The new appetite for the visible hand

5. See www.h2global-stiftung.com/project/h2g-mechanism

6. For a critical view, see Kalt and Tunn (2022).

of the state once again promises to expand developmental space for low- and middle-income countries. It is to this promise, in the guise of derisking developmentalism, that we turn.

DERISKING DEVELOPMENTALISM: A CRITICAL MACROFINANCE LENS

Critical macrofinance offers a powerful lens to examine the new state–capital relationship forged by derisking developmentalism. Its analytical starting point is the co-evolution of financial structure and the macro institutions of the state (Dutta et al., 2020; Gabor, 2020, 2021a; Tooze, 2021). Structural changes towards market-based finance, accelerated by US-led financial globalization, manifest as a glut of institutional capital — trillions of US dollars amassed through the shift from welfare state to asset-based welfare and expanded through aggressive leverage in shadow banking — that constantly seeks new asset classes to generate yield. Take for instance Namibia — institutional capital in its pension funds alone is above 100 per cent of GDP, among the greatest in the world, with over half invested in overseas assets, given the lack of domestic ‘investible’ assets. The largest local bank, Bank Windhoek, belongs to Capricorn Group that also has exposure to asset management, microlending, insurance and telecommunications. Capricorn Group is co-owned by the global derisking champion Capricorn Investment, a Silicon Valley impact investment group founded by the eBay billionaire Jeffrey Skoll, alongside the largest domestic public pension fund, the Government Institutions Pension Fund (GIPF), the investment fund arm of the Mineworkers Union of Namibia (Nam-mic) and various smaller shareholders. That Bank Windhoek plans to support SDG Namibia One and was the primary sponsor of the 2022 Green Hydrogen Conference in Namibia is not, through a critical macrofinance lens, accidental. It rather demonstrates how, in the presence of a portfolio glut, the question of ‘investibility’ acquires political salience because it offers a plausible transformative narrative without changes in the macrofinancial status quo that insists on free capital and trade flows, and on subordinating fiscal (and industrial) policy to the priorities of inflation-targeting central banks.

Indeed, CMF explores derisking as borderlands of economic statecraft, evolving under the structural constraints of the monetary dominance status quo regime. This establishes an institutional hierarchy whereby central banks target inflation under full capital mobility, without coordination with fiscal authorities (Schnabel, 2020) and under the systemic vulnerabilities triggered by growing insertion in the global financial cycle (Rey, 2015). Within that borderland, CMF recognizes space for local (political) agency to shape the specific architecture of derisking interventions in place across distinctive polities (Gabor, forthcoming; Schindler et al., 2022). CMF is interested in the kinds of agency that are possible under financial capitalism, recognizing, à la Samir Amin (2017), that while the state at the

periphery is an important locus of political struggle, the world system shaped by financial globalization places significant constraints on its actions. The state is restrained by new infrastructural entanglements with private finance, on which it relies for the implementation of monetary, fiscal (Braun, 2021), housing or climate policy (Dafermos et al., 2021). CMF introduces the notion of the derisking state to describe and theorize the distinctive mutations in economic statecraft oriented towards the production of investibility (Cooiman, 2023; Gabor, 2020, 2021a; Gabor and Braun, 2023; Kedward et al., 2022; Musthaq, 2020).

While CMF shares the dependency school's interest in the production of underdevelopment in the periphery (Kvangraven, 2021), it emphasizes the contested and contingent nature of derisking. Derisking interventions are not read from instruction sheets written by private capital but rather forged through political struggles, particularly where such interventions overtly contravene hegemonic institutional configurations or ideational commitments — as for example central banks' monetary derisking implemented through outright purchases of government bonds (Gabor, 2021b).

Critiques of CMF have focused on the neglect of productive structures. In part, this empirically driven neglect reflects the specific realms of derisking interventions that have emerged historically over the past 30 years, including monetary derisking in the EU and US (Gabor, forthcoming), multilateral development banks and governments' blended finance/fiscal derisking via PPPs in social infrastructure (Dimakou et al., 2021; Simeoni and Kinoti, 2021), or regulatory derisking of housing asset classes (Gabor and Kohl, 2022). Yet both the green hydrogen agenda and the US IRA placed derisking at the centre of green industrialization (see Gabor, forthcoming).

To examine the turn to industrialization by derisking in the global South, we upgrade CMF with Mkandawire's (2001) work on state–capital relationships under the developmental state (see Table 1). Writing about the post-independence African developmental state, Mkandawire fleshed out an ideology–structure nexus. The developmentalist ideology requires the state to establish a social consensus for its developmental project focused on industrial upgrading, a 'developmental bloc' which includes domestic capitalists (see also Nem Singh and Ovidia, 2018). The structural component requires the developmental state to have institutional and technical capacity to design the set of incentives, performance criteria and enforcement mechanisms that elicit the continuous cooperation of local industry, with the overall aim to foster international competitiveness in strategic sectors against the twin pressures of technological and financial dependency (Mkandawire, 2001: 290). Indeed, developmental state literature argues that the distinctive ways in which the state organizes support for business groups matter for the success of industrialization pushes in East Asia (Nem Singh and Ovidia, 2018), particularly by disciplining capital accumulation through reciprocal obligations for the receivers of subsidies to minimize rent seeking.

Table 1. *Developmental State vs Derisking Developmentalism*

	Developmental state	Derisking developmentalism
Ideology	Structural upgrading via strategic sectors to overcome technological/financial dependencies and enlarge domestic demand	Structural upgrading via transformative investibility
Trade regime	(Selective and strategic) protectionism	Liberalization
Financial sector	- close state control over the flow of credit to strategic sectors, often via state-ownership - instrument to discipline private business into strategic ambitions	- 'divine coincidence' partnership for investibility: structural upgrading and private returns for (institutional) capital - state-owned/controlled institutions key actors in production of investible assets
State support	Preferential credit, guaranteed demand via public procurement, tax credits, exports subsidies and competitive exchange rates, temporary protection for infant industries	<i>Monetary derisking</i> : (sovereign) bond/currency interventions <i>Fiscal derisking</i> : public (concessional) subsidies to enhance investibility via PPPs, tax credits, PPAs, carbon contracts for difference <i>Regulatory derisking</i> : remove regulatory obstacles to investibility
Discipline	Set of 'compulsive' institutions, including financial institutions, to design and enforce (a) stringent performance criteria; (b) monitoring and enforcement mechanisms; (c) curbs on market power	Soft conditionality: PPP contracts, green bonds, local content requirements
Domestic macrofinancial paradigm	Monetary-credit-developmental coordination (capital controls, competitive currency management)	Monetary dominance instituted by Washington Consensus (with bond/currency derisking interventions)
Global macrofinancial order	Regulation of cross-border capital movements	Financial globalization; portfolio glut; investibility 'imperative'

Historically, the developmental state organized investment in strategic sectors through a broad range of measures that included preferential credit, guaranteed demand via public procurement, promoted exports via subsidies and competitive exchange rates, and temporarily protected infant industries against competitive pressures from foreign firms enjoying economies of scale (Öniş, 1991). Carrots were accompanied by sticks, including stringent performance criteria (related to the price and quality gap to foreign competitors, technological upgrades, export targets) and mechanisms to curb market power of benefiting firms, such as price controls (Wade, 2018). Firms that failed to meet targets would lose support (Amsden, 2001). Macro policy institutions worked in coordination to support the state-directed expansion of private capital, with central banks closely controlling capital flows, while the financial system, often dominated by state-owned banks, would be deployed both as a carrot and a stick to ensure the continuous cooperation of private capital in the face of changing market signals. As Öniş (1991: 116) put it: ‘the extraordinary degree of monopoly and control exercised by the state over the financial system plus the extreme dependence of individual conglomerates on bank finance have been instrumental in eliciting compliance with the requirements of strategic industrial policy’, a corporate dependence reinforced by extensive capital controls (Wade, 2018).⁷ Capital controls further protected macroeconomic policy space, allowing the state to accommodate failures that are pervasive in industrial policy precisely because structural upgrading requires complex and strategically coordinated changes across many sectors (Chang and Andreoni, 2020).

Mkandawire warned against treating the developmental state as an omniscient and omnipotent Leviathan. Rather, his ideology–structure framework neatly fleshes out the domestic conditions under which developmental states could be successful, without downplaying the dependency school insights about the external obstacles that confront middle- and low-income states intent on overcoming technological and financial subordination (Kvangraven, 2021). He notes that ‘if there was anything that the state in Africa failed to do, it was to allow the local business class effective presence in policy making. Or, conversely, if there is anything that the African business classes failed to do it was to “capture” state politics’ (Mkandawire, 2001: 300). Furthermore, even successful developmental states came under pressure from changing domestic political circumstances (democratization) and global neoliberal hegemony, but in some cases managed to reconstitute developmental alliances (Chu, 2021).

As Mkandawire argues, the Washington Consensus sought to dismantle the ideological and structural conditions for developmentalism. This involved both the ideological dismissal of developmentalism (see Stein, 2021; Wade, 2018) and radical macrofinancial reform. Technocratic power was

7. For a contemporary discussion, see Pape and Petry (2023).

relocated from spending ministries (that organized public investment and conditional support for private capital) to budget ministries (whose mission is to lower budget deficits) and to inflation-targeting central banks treating fiscal activism as an inherent threat to price stability (Gabor, 2021a). In prioritizing monetary and fiscal austerity, this macrofinancial paradigm often bankrupted the local captains of industry that could form developmental blocs.

It is against the legacy of this dismantling that we should understand the return of the state in its derisking guise. Ideologically, the derisking state builds coalitions that share and support its narrative of transformative investibility. These could include global consulting firms (like McKinsey), foreign (institutional) investors, multilateral and bilateral donors (in green hydrogen partnerships for instance), local institutional investors (pension funds, insurance companies), global industrial giants, and local green entrepreneurs. One can identify a ‘divine coincidence’ that runs through the derisking developmentalist mindset: derisking interventions that can deliver on transformative policy ambitions via partnerships with private capital can simultaneously guarantee private returns for financiers in the face of changing market conditions. There are no potential trade-offs between investibility partnerships and structural upgrading.

But this divine coincidence renders the derisking state a fundamentally different beast from the developmental state. While it is not an obedient Leviathan that automatically bends to the will of (foreign) financiers, it has to enlist both industrial capital and (foreign) financiers, in stark contrast to the developmental state that deployed captive finance as both carrot and stick to discipline the captains of industry on which it relied for its transformative ambitions. In the derisking approach, even state-owned or state-controlled institutions become vehicles for enhancing the investibility of infrastructure or housing asset classes (Gabor, 2021a; O’Sullivan and Rethel, 2023). Close control over the flow of domestic credit to strategic sectors is far more difficult in derisking-based institutional arrangements that conceive of financiers, local and foreign, as partners whose risk/return expectations warrant negotiation rather than coercive instruments to mediate the relationship with private business in strategic sectors. For instance, in Namibia’s case, which we elaborate in more detail below, SDG Namibia One is constructed to be a financing vehicle, ‘by streamlining access to public, private, and philanthropic capital, linking finance to policy decision’ (Galma, 2022).

Structurally, derisking developmentalism remains governed by the macrofinancial status quo of the Washington Consensus. Central bank independence precludes coordination between monetary, exchange rate? and fiscal policy, while credit policy is reduced to interest rate policy tailored to price stability. Indeed, the political appeal of derisking developmentalism lies precisely in the macroeconomic claim that the state cannot afford public investment and, by extension, significant public ownership is needed to drive

green industrial upgrading. The bet on the divine derisking coincidence stems precisely from macrofinancial constraints. A different macrofinancial paradigm would rethink fiscal-monetary coordination, shift power back to spending ministries and allow bureaucrats to deploy the monetary, regulatory and fiscal arms of the state to closely control the strategic business it supports.

Instead, the state participates in the production of investibility through monetary, fiscal and regulatory derisking interventions (Gabor, forthcoming). Central banks protect institutional investors from excessive volatility in government bonds or exchange rates via monetary derisking (Gabor, 2020; Musthaq, 2020), or support new asset classes like green bonds (Kedward et al., 2022). Fiscal derisking broadly involves domestic public resources or concessional funds directed towards ensuring predictable returns for investors in a range of asset classes, including but no longer restricted to (social) infrastructure. The state provides tax credits, assumes a series of risks in public–private partnerships, or guarantees demand/prices in power purchase agreements (offtake agreements) or carbon contracts for difference (Gabor and Sylla, 2020; Simeoni and Kinoti, 2021). Fiscal derisking commitments are off-balance-sheet, contingent on risks being realized, coded à la Pistor (2019) into obscure legal contracts. Yet, with notable exceptions such as Uruguay, countries do not have legal constraints on the budgetary timebombs that PPPs can unleash (Gabor, 2021a), nor systematic enforcement mechanisms to protect citizens from the commodification of social infrastructure that promises but underdelivers on universal access (Simeoni and Kinoti, 2021). Derisking partnerships are characterized by soft conditionality: the derisking state does not construct an overarching set of institutions to enforce stringent performance criteria, but rather resorts to soft conditions in PPP contracts focused on delivery, or (rarely) local content requirements. Rather, conditionality binds the other way: the state has to compensate private investors where market conditions change and disrupt return profit expectations, as for instance Ghana and Nigeria did for private energy investors (see Gabor, 2021a). Furthermore, derisking mechanisms are institutionalized in isolation, without coordination.

In sum, the ‘divine coincidence’ assumption at the core of derisking creates the ideological space for the state to forge derisking blocs but structurally weakens its ability to discipline private capital into pursuing green industrialization goals. (Foreign) capital dominates in the state–capital relationship in derisking developmentalism.

DERISKING DEVELOPMENTALISM: A NAMIBIAN STORY

Scholars identify two phases of Namibia colonial history. During the first period (1884–1915), South West Africa (SWA), as it was then called,

was a German colony. The Namibian War that started in 1904 and the resulting Herero and Nama genocides epitomized Germany's will to establish a white settler colony. In 1915, backed by Britain, South Africa invaded SWA. Following the defeat of Germany during World War I, SWA became a League of Nations protectorate, under the political control of South Africa from 1920. In 1966, six years after the creation of the South West African People's Organization (SWAPO) and the same year it started its war of liberation, the UN General Assembly revoked the South African mandate on SWA. Independence was officially proclaimed on 21 March 1990. Namibia thus became one of the last African territories to be decolonized (Katjavivi, 1988; Melber, 2014; Sarkin, 2011; Wallace and Kinahan, 2011).

With a population estimated at 2.6 million, Namibia belongs to the group of richest African countries in per capita terms. But its geography and colonial legacy regarding land distribution and use leave it highly vulnerable to the climate crisis. Only 0.05 per cent of its territory is irrigable (IFC, 2022: ix), while large-scale commercial farming accounts for most of the agricultural output and is dominated by the white minority. Whilst it only contributes 4 per cent of GDP, the agriculture sector (including livestock) provides one third of employment and is a source of livelihoods for 7 out of 10 Namibians (*ibid.*: 11). In contrast, the mining sector contributes around 10 per cent GDP and 60 per cent of export income, but only generates 2 per cent of employment (*ibid.*: 9). With unemployment rates among the highest in the world, Namibia's economic structure continues to produce one of the most unequal societies. According to the World Inequality Database, in 2021, the top 1 per cent in Namibia commanded 21.6 per cent of pre-tax national income versus 6.6 per cent for the bottom 50 per cent.⁸

Independent Namibia, under the uninterrupted rule of SWAPO, struggled to break with the colonial structures it inherited. This is particularly manifest in the domain of industrial policy (Hope, 2019). Under German rule, colonial authorities sought to develop white settler commercial farming and mining industries serving metropolitan demand for raw materials such as diamond, copper, lead, tin ore, etc. To that end, external surpluses were partly used for colonial-oriented infrastructure building, while 'beer production was the sole manufacturing success of the German era' (*ibid.*: 91). Even today, Namibia's largest private company, Ohlthaver and List, counts Namibia Breweries in its portfolio of companies spanning real estate, food and agriculture, and green infrastructure.

South Africa's colonial rule did little to change structures of production, pursuing the settlement of its white farmers through land attributions, loans,

8. See <https://wid.world/country/namibia/>; the Gini coefficient in Namibia was 0.57 in 2015–16 according to an official report (see Republic of Namibia, n.d.c: 6).

tariff and fiscal incentives, investment in infrastructure, etc.⁹ After independence, colonial legacies — monetary and productive — remain a significant constraint. Membership of the Southern African Customs Union limited room for selective and strategic commercial and industrial policies (Curry and Stoneman, 1993). South African firms sued Namibia on two occasions for infant industries protection (Hope, 2019: 216). Furthermore, although Namibia created its own currency in 1993 — the Namibian dollar — it chose to peg it to the South African rand and to retain membership in the Common (rand) Area. Its banking sector is dominated by subsidiaries of South African banks (IFC, 2022: 7). Along side the core–periphery dynamics with South Africa, post-independence Namibia’s ambition of industrial development was hampered by the SWAPO government’s adherence to the Washington Consensus view of ‘industrialization by invitation’, a sign of its lack of a clear industrial policy (Kaune and Mbazuvara 2020: 5; Rosendhal, 2010; Sherbourne, 2016).

Namibia’s turn to derisking developmentalism roughly coincides with the 2020 German National hydrogen strategy, while its emphasis on green hydrogen was then validated by Europe’s response to the Russian invasion of Ukraine. Indeed, the developmentalism of the second Harambee Prosperity Plan (HPP)¹⁰ contains the hallmarks of the Wall Street Consensus: derisking via PPPs¹¹ and other fiscal tools, and the structural transformation of the local financial system towards market-based finance to attract

9. The interwar period marked a relative decline of mining as an export income source and the concomitant development of new sectors, especially the karakul sheep pelts which accounted for more than half of export revenues by 1945 (Hope, 2019: 100). Although manufacturing export industries such as dairy, fish and meat processing were established during the interwar period, their size was relatively modest with respect to GDP and export revenues. The decades between World War II and independence were a low point for industrial policy except for a few sectors like dairy, and despite the efforts pursued through the First National Development Corporation, established in 1978.

10. The 2017–22 National Development Plan 5 does not include the word hydrogen, while the first Harambee Prosperity Plan (HPP2) does not deploy the keywords of the WSC lexicon — such as ‘derisking’, ‘unlocking’, ‘scaling up’, etc. — although the move to PPPs is encouraged as a way to provide new financing options to a country with a ‘limited’ fiscal space. (Republic of Namibia, n.d.a; n.d.c). The HPP2 (2021–25), marks the entry of green hydrogen into the orbit of Namibian economic policy making and planning (Republic of Namibia, n.d.b), following the September 2020 appointment of Namibian financier James Mnyupe as Presidential Economic Advisor. He became the Green Hydrogen Commissioner in August 2021, and one of the eight members of the newly established Green Hydrogen Council.

11. The Namibian government promulgated the PPP act in 2017. Until that year, its appetite for PPPs and explicit private guarantees had been rather low, with PPP engagements representing only 0.2 per cent of GDP (IMF, 2018: 33). Official data for the period 2018–19 to 2021–22 show that total government guarantees represented 6 per cent of GDP on an annual basis, with more than 84 per cent being foreign guarantees (Republic of Namibia, 2022: 25).

institutional investors,¹² coupled with an enduring commitment to the monetary straitjacket of the currency peg and fiscal austerity. Even as the Namibian government announced that green hydrogen would be a ‘game changer’, it agreed with the IFIs that the green industrialization push would occur in a context of ‘limited’ fiscal space and fiscal consolidation.¹³

To elaborate a national hydrogen strategy, the Namibian authorities relied on a number of studies, starting with a 2020 World Bank preliminary analysis (IPPR, 2021: 2–5; Republic of Namibia, n.d.d: 36). In June 2021, they solicited the services of the global engineering consultancy firm Hatch, which recently created a Green Hydrogen Consortium with three mining companies — Anglo American, BHP and Fortescue. The German Federal Ministry of Research paid McKinsey N\$ 34.6 million (€ 2 million) to draft a national hydrogen strategy, which in turn subcontracted part of the work to the Namibian consultancy and advisory firm, Monasa Advisory and Associates (*The Brief*, 2022).

These various studies constitute the backbone of the Republic of Namibia’s 2022 flagship publication: ‘Namibia: Green Hydrogen and Derivatives Strategy’ (Ministry of Mines and Energy, 2022). The document notes that Namibia could enjoy a significant competitive advantage due to exceptional conditions — a favourable mix of solar and wind conditions coupled with the coastal location of its renewable resources. Its competitive advantage lies in the production of green hydrogen derivatives such as ammonia, methanol, e-kerosene and green hydrogen-based hot briquetted iron. Exporting green hydrogen implies additional costs associated with infrastructure building/repurposing and losses in the process of compression and/or liquefaction.

The Namibian government plans to build three hydrogen valleys located in the southern region (Kunene), central (including Windhoek) and northern (Kharas) regions. In the southern region, the hydrogen project is organized around the Tsau/Khaeb National Park Southern Corridor Development Initiative (SCDI). The SCDI ‘envision[s] a portfolio of complementary projects and infrastructure’, with Hyphen Hydrogen Energy at its core. Selected as a preferred bidder,¹⁴ Hyphen will be granted a land concession of more than 4,000 km² for a 40-year period. The Namibian government is expected to provide support for the construction of the ‘core infrastructure’ (i.e. ports, terminals, pipelines), while Hyphen would ‘overcome or significantly derisk challenges for future projects and lower operating costs’ (Ministry of Mines

12. The HPP2 vowed to ‘champion the development of the central securities depository, green and blue bonds, transition bonds, carbon credits and other innovative tools to fund the matching opportunities in Namibia’ (Republic of Namibia, n.d.b: 37–38). In the same vein, the HPP2 resolved to develop ‘a portfolio of public–private partnerships (PPPs) as a mechanism for the delivery of public goods and services’ (ibid.: 28).

13. The expression ‘fiscal consolidation’ appears 69 times 111 page 2022 IMF report on Namibia (IMF, 2022).

14. For a critical assessment of the tender process, see IPPR (2022).

and Energy, 2022: 26). The private Hyron Steel Project is also on the cards given that Anglo-American has validated the technical work (ibid.: 22).

Regarding the central region, the idea is to transform it into a 'demonstration hub for hydrogen applications' (ibid.: 27). There are two ongoing projects. A green N\$ 181 million hydrogen HDF France project should be operational in 2024. Cleanergy Namibia, a joint venture between British CMB.Tech and private Namibian group Ohlthaver and List, is expected to conduct a N\$ 18 million pilot in 2023 to produce green ammonia. In that vein, the Namibian government anticipates that the Walvis Bay Port could become 'a green ammonia bunkering hub to refuel ships passing the Cape of Good Hope' (ibid.: 27). With this planned infrastructure, Namibia's ambitions to create a green hydrogen ecosystem in Southern Africa involve (i) the provision of low cost 'low-carbon transportation corridors'; (ii) exports of excess power supplies to neighbouring countries; (iii) cooperation in manufacturing.

Beyond the export of green hydrogen derivatives and the global positioning as a green hydrogen corridor, the Namibian government hopes to reap some additional benefits from the local manufacturing of some components entering into the production and transport of hydrogen (tower, blade, solar cell localization, module), an influx of foreign investment in energy intensive industries (aluminium, glass production) stimulated by a low-cost green grid, and the building of a supporting ecosystem of academic and training institutions, private sector companies, and so forth, around the Namibia Green Hydrogen Research Institute, the authority in charge of research and development.

The Namibian government counts on hydrogen developments to achieve more energy self-sufficiency and to reduce its strong reliance on energy from crisis-laden South Africa and its coal-fired power stations. It also aims to provide affordable energy to households and raise the national electrification rate (estimated at 45 per cent in 2015–16) (Republic of Namibia, n.d.b: 36). Finally, it aims at significantly reducing its greenhouse gas emissions by 2030, though the implications of the recent discovery of oil and gas are not known yet.

Overall, the hydrogen industry is supposed to add US\$ 4.1 billion (in real 2022 dollars) to GDP by 2030, i.e., 32 per cent more compared to a baseline with no hydrogen production. By 2040, 600,000 new jobs are expected — around 30 per cent being direct jobs created by the hydrogen industry (Ministry of Mines and Energy, 2022).

THE LIMITATIONS OF INDUSTRIALIZATION-BY-DERISKING

There is a case to be made that countries financially and technologically dependent on the global North cannot 'afford' green hydrogen megaprojects, and that partnerships with foreign investors are a pragmatic opportunity to

leverage the global race for green hydrogen to their advantage. Following this logic, Namibian authorities estimate that the green hydrogen strategy will require an investment of up to N\$190 billion by 2040. Thus, their macrofinancial strategy is dependent on attracting low-cost foreign capital, which in turn requires an international public–private derisking ecosystem:

In an increasingly competitive hydrogen production market where margins are decreasing, low WACC [Weighted Average Cost of Capital] is critical to Namibia's nascent hydrogen industry. Namibia is therefore working with project developers to address operational and technology risks and facilitate off-take agreements to lower market risk, and will deploy a blended financing solution by establishing an infrastructure fund, SDG Namibia One. This fund aims to attract catalytic climate financing for the three main phases of project delivery: development, construction and operation. (Ministry of Mines and Energy, 2022: 17)

Namibian authorities managed to attract N\$ 40 million of 'catalytic funding' from the Dutch government through Invest International. They also bet on hydrogen diplomacy. The German Federal Research Ministry provided € 40 million to finance scholarships, the development of a national synthetic fuels strategy and to identify pilot projects to spur the domestic hydrogen industry.¹⁵ Namibia also signed memoranda of understanding (MoUs) with Belgium and The Netherlands port authorities, with Japanese companies and recently with the European Union. The European Investment Bank (EIB) committed a € 25 million grant and a € 500 million concessionary loan, including for the capitalization of SDG Namibia One (*ibid.*: 41–42). Indeed, the EIB is an important promoter of derisking both in the European political economy (see Cooman, 2023) and abroad. Anticipating the expected carbon emission-reducing effects of green hydrogen developments, Namibia joined the Climate Market Club, a forum including governments and non-government actors created by the World Bank Group and the MDB Working Group in order to facilitate the development of carbon trading. In that vein, its Ministry of Environment, Forest and Tourism plans to set up a carbon market office to help promote the global investibility of local renewable energy assets, and thus expand the funding pool for SDG Namibia One.¹⁶

SDG Namibia One is the institutional vehicle for industrialization by derisking, guided by the macrofinancial logic of the WSC. Its premise is that even if the state may not be able to undertake green public investments, for ideological (austerity, inflation) or macrofinancial (limited foreign currency

15. The German Federal Ministry of Education and Research has been funding research initiatives such as the University of Cape Town's Electrolyser Research Group and an Atlas of Green Hydrogen Generation Potential (H2Atlas) which covers aspects such as natural resource availability, infrastructure conditions, costs, energy demand, etc. Africa-based and funded partners for this latter project are the West African Science Service Centre on Climate Change and Adapted Land Use and the Southern African Centre for Climate Change and Adaptive Land Management.

16. See www.zawya.com/en/projects/industry/namibias-green-hydrogen-fund-to-be-operational-by-july-swxx7kj

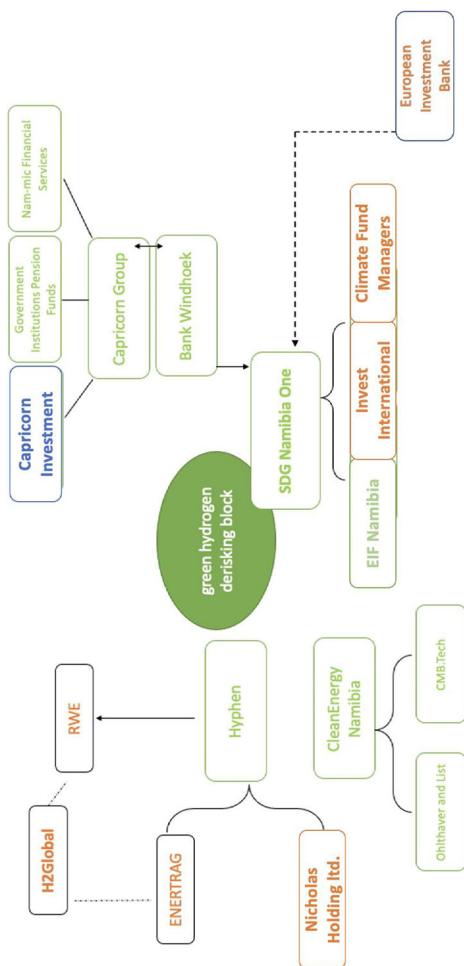
reserves) reasons, it can and should deploy fiscal, monetary and regulatory interventions to derisk private green investments, that is, to improve returns on green projects relative to risks enough to make these projects attractive to private investors. Philanthropic capital and official development aid should also support the local derisking effort. Gone is the central claim of the Washington Consensus, that the heavy hand of the state obstructs private investment. In the WSC, the state returns as a midwife allowing a secure and privileged local existence to private investment flows that ordinarily sidestep 'risky' economic places. Derisking coalitions around Namibia's green hydrogen agenda include foreign institutional investors and powerful local capitalists such as the Capricorn Group and Ohlthaver and List, whose centrality in the Namibian political economy has deep colonial era roots.

The derisking toolbox is broad. Regulatory derisking invites the state to align regulations with the preferences of private investors. For example, Hyphen is working closely with the Namibian government to design the hydrogen regulatory framework. This may involve, as in other countries, regulatory derisking that dismantles vertically integrated, state-owned energy monopoly utilities to guarantee demand for private producers of renewable energy. Actually, a green development state be supplemented by monetary derisking, where the central bank guarantees the market liquidity of hydrogen-related government or private green bonds, to preserve their attractiveness for institutional investors, who fear illiquid positions that are difficult to exit. Perhaps more important in low-income countries with shallow capital markets is fiscal derisking, typically through PPPs.

SDG Namibia One will be run by two derisking specialists, Climate Fund Managers and Invest International in partnership with the government-owned Environmental Investment Fund of Namibia (see Figure 1). Climate Fund Managers is a Dutch asset manager specializing in blended finance: it uses public funding from European official development agencies to mobilize private funding. In turn, Invest International is the official derisking arm of the Dutch government, owned by the Dutch Ministry of Finance and the development bank FMO. SDG Namibia One will rely on PPPs for the 'derisking scale-up' stage of the green hydrogen strategy.

The green hydrogen derisking bloc consolidating in Namibia is transnational in nature. Hyphen is run by the German renewable company ENERTRAG and Nicholas Holdings, a private equity company. The Namibian government will be a junior equity partner, planning to issue green bonds to fund its equity share, up to 24 per cent of the overall project. Even a smaller US\$ 500 million official stake in Hyphen would double Namibia's foreign bond debt. In turn, Hyphen signed an MoU for delivery of green ammonia to RWE, a Germany energy multinational. Both RWE and ENERTRAG are important partners in Germany's green hydrogen derisking strategy (H2Global), positioning themselves to benefit from derisking subsidies there.

Figure 1. The Green Hydrogen Derisking Bloc, Namibia



This ideology–structure nexus suggests that Namibia will likely be a consumer of green hydrogen technology and a generator of financial yield for green hydrogen investors, without any direct public control of this new strategic sector. Indeed, investors eagerly anticipate the Namibian government's active involvement in accelerating the 'green bonds' market. For example, Bank Windhoek, a member of the Capricorn Group, issued the first Green Bond on the Namibian Stock Exchange (NSX) in 2018. Three years later, Bank Windhoek issued and listed the first regional sustainability bond and subsequently became a member of the Nasdaq Sustainable Bond Network. According to the bank's chief treasurer, this initiative 'allowed us to showcase our country's capabilities and assisted in deepening Namibia's financial markets while indicating our commitment to the United Nations Social Development Goals (SDG) and the path to net zero' (cited in Bank Windhoek, n.d.). She also confirmed 'Bank Windhoek and Capricorn Group's participation in and support of the proposed blended finance vehicle, SDG Namibia One, facilitated by the Environment Investment Fund' (ibid.).

The derisking bloc organized around SDG Namibia One mostly involves extraverted domestic investors,¹⁷ foreign investors and concessional lenders, an 'industrialization by invitation' approach all too familiar to post-independence African states racing to the bottom to attract foreign capital. This leaves the derisking state in a weak position to discipline the foreign beneficiaries of its interventions, or indeed to promote national champions that could compete with foreign investors. Derisking-based industrial partnerships surrender the pace and ultimate agency of structural transformation to private (mostly foreign institutional) capital.

Equally important, this vision of derisking partnerships downplays Mkandawire's analysis of the structural component of the developmental state: the need to build institutional and technocratic capacity to design long-term economic transformation and enforce the participation of private capital in it. Global North initiatives to skill a small labour force for the green hydrogen economy aside, the very logic of relying on PPPs to develop a hydrogen industry is predicated on the assumption that the government does not need the expertise of highly capable industrial technocrats. To quote SYSTEMIQ, the environmental consultant commissioned to put together the business case for green hydrogen in Namibia, the Namibian government 'can engage in PPPs without needing to input expertise' (SYSTEMIQ, 2022: 57). Rather, green hydrogen rules are written by powerful foreign and local investors, reflecting their positioning in the emerging global hydrogen value chains. This validates Diop's early

17. Bank credits to the private sector as a share of GDP appear high in Namibia in comparison to its neighbours except for South Africa. However, this hides the fact that the Namibian banking sector provides little financing to SMEs and local entrepreneurs due to its oligopolistic structure (IFC, 2022: 7). Namibia's institutional capital, i.e., pension fund assets, tends to be invested abroad (World Bank, 2020).

concerns that Africa may end up exporting hydrogen commodities vulnerable to price volatility and neocolonial extractivism rather than green hydrogen technology (see also Barnard, 2022; Morgen et al., 2022).

DISCUSSION AND CONCLUSION: WAYS FORWARD

Is 'industrialization-by-derisking' the only path (realistically) open to African countries individually and collectively? Could a green development state operate in parallel, if not altogether replace derisking developmentalism? Actually, a green development state confine commodity derisking to a narrow set of projects targeted at generating green commodity revenues, while codifying obligations for the private party to share not just the risks, but also the benefits of (eventually) buoyant demand. Critically, it should abandon industrialization-by-derisking and instead experiment with new forms of green public ownership in hydrogen infrastructure and industry while setting up institutions capable of disciplining local green industrial winners. It should revisit the history of successful industrial policy that subsidized credit via state-owned banks, guaranteed demand via public procurement, promoted exports via subsidies and competitive exchange rates. To finance this, it first has to channel (some of) its share of green hydrogen revenues for the imports of green technologies. Second, it has to overtly reject the WSC insistence that the race to green industrialization is not a macroeconomic question, that it can be achieved without a change in the macrofinancial regime. Rather, the green developmental state must reorder its macro institutions to set the foundations for a closer relationship between fiscal authorities, industrial authorities and the central bank, necessary for the strategic coordination of state-led green industrialization.

Without the developmental state in strategic control over the green hydrogen chain, the green hydrogen revolution threatens to trap global South countries into the patterns of unequal ecological exchange that have characterized carbon capitalism (Mitchell, 2011). Carbon capitalism in the core supposed that the periphery specializes, by colonial force first and informal/free trade imperialism later, in the production and exports of industrial commodities. Take sugar. Among the world's first global industrial commodities, it was an early pioneer of unequal ecological exchange: produced by starving plantation slaves through massive ecological destruction for consumption in the European core. On the commodity frontier, sugar consumed distant ecologies: forests were cleared to make way for sugar monoculture and to fire the boiling furnaces, which transformed raw cane juice into semi-refined sugar. Depleted soil meant declining yields, forcing producers to add more enslaved labour and to increase fertilizer, which in turn created demand for new waves of deforestation for cattle ranches (Moore, 2000). In the sugar commodity complex, financiers were the real beneficiaries, while the competitive pressures of the global sugar market

led plantation owners into a savage exploitation of enslaved people and environmental destruction in a drive to reduce costs. Since then, unequal ecological exchange has reconfigured the social, political and economic organization of peripheral territories to suit the ecological requirements of core countries. Peripheral territories are reshaped in a way to mobilize their human and natural resources for the production of goods critically needed by industrial centres. The ecological burden driven by capitalist accumulation in the core is partly shifted to the periphery. As a result, unequal ecological exchange usually manifests through net transfers of biophysical *and* financial resources from the periphery to the core as well as ecological devastation in the periphery (Hickel et al., 2022).

To end this unequal ecological exchange, which usually manifests in global South sovereign debt crises (Sylla, 2023), African countries must wield more control in the green hydrogen chain, which includes controlling the key raw materials critical for a global energy transition. They must negotiate partnerships that will allow them to provide universal access to electricity, to get out of dependence on primary and low-wage-based products, and to achieve green industrialization through technological leapfrogging and more favourable domestic demand conditions. For this to occur, the domestic efforts guided by green developmentalism with a derisking arm must be accompanied by a new economic and financial order we call 'Green Bandung Woods', rather than the oft-repeated call for a 'new' Bretton Woods (Gallagher and Kozul-Wright, 2022).

In 1944, the United Nations Monetary and Financial Conference was held at Bretton Woods, New Hampshire, and laid the groundwork for the US-centred economic and monetary order that emerged in the aftermath of World War II. The conference did not reflect the economic and political concerns of most countries in Africa and Asia, most still under colonial rule (van Dormael, 1978; Peet, 2009; Tooze, 2021). Just over a decade later, the 1955 Asian-African conference of Bandung gave voice to the nations that the mainly Euro-American conference of Bretton Woods had excluded. The representatives of 29 countries gathered in Indonesia to discuss the 'problems of dependent peoples and colonialism and the evils arising from the subjection of peoples to alien subjugation and exploitation'. They called for an end to racial segregation, discrimination and colonialism. While vowing to work for world peace and cooperation, they encouraged economic and cultural cooperation among countries of the global South, emphasizing the need for African and Asian nations to 'diversify their export trade by processing their raw material' and to work toward a 'unified approach' to stabilize prices and demand for primary products.¹⁸ Later the spirit of Bandung was carried on through the 1962 Non-Aligned Movement, which sought autonomy in exiting the East–West conflict, and the 1970s

18. 'Final Communiqué of the Asian–African Conference of Bandung (24 April 1955)', *Interventions* 11(1): 94–102, wi; the quotations are from 95–96.

movement for a New International Economic Order. In the same vein, the 1974 Cocoyoc Declaration in Mexico sounded yet another vibrant call to create a more egalitarian world system that respects the environment. It continues to ring true today (UNDP, 1974: 3d):

The trebling of the price of food, fertilizers and manufactures in the wake of world inflation has most severely hit the world's poorest peoples We recognize the threats to both the 'inner limits' of basic human needs and the 'outer limits' of the planet's physical resources. But we also believe that a new sense of respect for fundamental human rights and for the preservation of our planet is growing up behind the angry divisions and confrontations of our day.

Moving toward a 'Green Bandung Woods' means building a democratic global economic and monetary order, not one based on the plutocratic principle of one dollar, one vote. Such an order must work to reduce economic inequalities between countries and between those bearing the brunt of climate change and climate injustice. Such a framework would also promote global peace and the ending of the arms race, if only to downsize the large ecological footprint of the military-industrial complex. It would implement net transfers of resources from global North countries to global South ones to put an end to unequal ecological exchange. Then, the hydrogen promise foreseen by Cheikh Anta Diop would start to benefit a united Africa and the rest of the world.

REFERENCES

- Alami, I. et al. (2022) 'International Financial Subordination: A Critical Research Agenda', *Review of International Political Economy*. <https://doi.org/10.1080/09692290.2022.2098359>
- Amin, S. (2017) 'The Sovereign Popular Project: The Alternative to Liberal Globalization', *The Journal of Labor and Society* 20(1): 7–22.
- Amsden, A.H. (2001) *The Rise of 'The Rest': Challenges to the West from Late-industrializing Economies*. New York: Oxford University Press.
- Baker McKenzie (2020) 'Shaping Tomorrow's Global Hydrogen Market via De-risked Investments'. Chicago, IL: Baker McKenzie. www.bakermckenzie.com/-/media/files/insight/publications/2020/01/hydrogen_report.pdf (accessed 26 May 2023).
- Bank Windhoek (n.d.) 'Bank Windhoek Supports Namibia's Green Hydrogen Hub Goal'. Windhoek: Bank Windhoek (accessed 3 February 2023).
- Barnard, M. (2022) 'Assessing EU Plans to Import Hydrogen from North Africa: The Cases of Morocco, Algeria and Egypt'. Brussels and Amsterdam: Corporate Europe Observatory and Transnational Institute. www.tni.org/en/publication/assessing-eu-plans-to-import-hydrogen-from-north-africa (accessed 26 May 2023).
- Braun, B. (2021) 'Asset Manager Capitalism as a Corporate Governance Regime', in P. Pierson (ed.) *The American Political Economy: Politics, Markets, and Power*, pp. 270–94. Cambridge: Cambridge University Press.
- The Brief (2022) 'McKinsey Secures N\$36.4m Green Hydrogen Consultancy', *The Brief* 29 September. <https://thebrief.com.na/index.php/component/k2/item/1809-mckinsey-secures-n-36-4m-paycheck-for-green-hydrogen-consultancy-work> (accessed 26 May 2023).
- Chandrasekhar, C.P. (2023) 'Resolving the Debt Crisis: Grim Lessons from Africa', *Economic and Political Weekly* 58(2): 10–12.

- Chang, H.J. and A. Andreoni (2020) 'Industrial Policy in the 21st Century', *Development and Change* 51(2): 324–51.
- Chu, Y.W. (2021) 'Democratization, Globalization, and Institutional Adaptation: The Developmental States of South Korea and Taiwan', *Review of International Political Economy* 28(1): 59–80.
- Cooiman, F. (2023) 'Veni Vidi VC: The Backend of the digital Economy and its Political Making', *Review of International Political Economy* 30(1): 229–51.
- Curry, S. and C. Stoneman (1993) 'Problems of Industrial Development and Market Integration in Namibia', *Journal of Southern African Studies* 19(1): 40–59.
- Dafermos, Y., D. Gabor and J. Michell (2021) 'The Wall Street Consensus in Pandemic Times: What Does it Mean for Climate-aligned Development?', *Canadian Journal of Development Studies/Revue Canadienne d'Études du Développement* 42(1–2): 238–51.
- Dimakou, O., M.J. Romero and E. van Waeyenberge (2021) 'Never Let a Pandemic Go to Waste: Turbocharging the Private Sector for Development at the World Bank', *Canadian Journal of Development Studies/Revue Canadienne d'Études du Développement* 42(1–2): 221–37.
- Diop, C.A. (1985) 'Le Problème Énergétique Africain' ['The African Energy Problem']. Communication at the International Symposium of Kinshasa 'Science, Technology and the Development of Africa — Africa and its Future' (20–30 April). www.ankhononline.com/telecharger/cheikh_anta%20Diop_afrique_energie.pdf (accessed 26 May 2023).
- van Dormael, A. (1978) *Bretton Woods: Birth of a Monetary System*. London and Basingstoke: Macmillan Press.
- Dutta, S.J., R. Kremers, F. Pape and J. Petry (2020) 'Critical Macro-finance: An Introduction', *Finance and Society* 6(1): 34–44.
- Economic Commission for Africa and African Union (2011) *Economic Report on Africa 2011. Governing Development in Africa: The Role of the State in Economic Transformation*. Addis Ababa: United Nations Economic Commission for Africa.
- Elsner, C., M. Neumann, F. Müller and S. Claar (2022) 'Room for Money or Manoeuvre? How Green Financialization and De-risking Shape Zambia's Renewable Energy Transition', *Canadian Journal of Development Studies/Revue Canadienne d'Études du Développement* 43(2): 276–95.
- European Commission (2021) 'France, Germany, UK, US and EU Launch Ground-breaking International Just Energy Transition Partnership with South Africa', 2 November. Brussels: The European Commission. https://ec.europa.eu/commission/presscorner/api/files/document/print/en/ip_21_5768/IP_21_5768_EN.pdf (accessed 26 May 2023).
- European Commission (2022) 'Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: REPowerEU Plan', 18 May. Brussels: The European Commission.
- Fresnillo, I. (2020) 'Shadow Report on the Limitations of the G20 Debt Service Suspension Initiative: Draining Out the Titanic with a Bucket?'. Briefing Paper, 20 October. Brussels: European Network on Debt and Development. www.eurodad.org/g20_dssi_shadow_report (accessed 26 May 2023).
- Gabor, D. (2020) 'Critical Macro-finance: A Theoretical Lens', *Finance and Society* 6(1): 45–55.
- Gabor, D. (2021a) 'The Wall Street Consensus', *Development and Change* 52(3): 429–59.
- Gabor, D. (2021b) 'The Wall Street Consensus at COP26', 18 November. New York: Phenomenal World. www.phenomenalworld.org/analysis/cop26/ (accessed 26 May 2023).
- Gabor, D. (forthcoming) 'The (European) Derisking State', *Stato e Mercato*.
- Gabor, D. and B. Braun (2023) 'Green Macrofinancial Regimes', Mimeo.
- Gabor, D. and S. Kohl (2022) 'My Home is an Asset Class: The Financialization of Housing in Europe'. Brussels: The Greens/EFA in the European Parliament. <https://extranet.greens-efa-service.eu/public/media/file/1/7461> (accessed 26 May 2023).

- Gabor, D. and N.S. Sylla (2020) 'Planting Budgetary Timebombs in Africa: The Macron Doctrine En Marche'. Paris: Groupe d'études géopolitiques. <https://geopolitique.eu/en/2020/12/23/planting-budgetary-time-bombs-in-africa-the-macron-doctrine-en-marche/> (accessed 26 May 2023).
- Gallagher, K. and R. Kozul-Wright (2022) *The Case for a New Bretton Woods*. Cambridge and Medford, MA: Polity Press.
- Galma, K. (2022) 'Here's How African Leaders Can Close the Climate Finance Gap', WEF 15 November. www.weforum.org/agenda/2022/11/heres-how-leaders-close-climate-finance-gap/
- van de Graaf, T. (2022) 'Hydrogen's Decade', *Finance and Development* 59(4): 21–23.
- Haag, S. and F. Müller (2019) 'Finanzplatz Afrika: Grüne Finanzflüsse und afrikanische Energie Transitionen' ['Place of Finance Africa: Green Finance and the African Energy Transition'], in H. Melber (ed.) *Deutschland und Afrika — Anatomie eines komplexen Verhältnisses [Germany and Africa — Anatomy of a Complex Relationship]*, pp. 58–73. Frankfurt: Brandes and Apsel.
- Hickel, J., C. Dorninger, H. Wieland and I. Suwandi (2022) 'Imperialist Appropriation in the World Economy: Drain from the Global South through Unequal Exchange, 1990–2015', *Global Environmental Change*. <https://doi.org/10.1016/j.gloenvcha.2022.102467>
- Hope, C.J. (2019) 'Developmentalism, Dependency, and the State: Industrial Policy and Structural Transformation in Namibia since 1900'. PhD thesis, University of Cambridge. <https://doi.org/10.17863/CAM.38635>
- Hyphen Africa (2023) 'Hyphen Hydrogen Energy Announces Ammonia Offtake MoUs with Approtium and Industrial Group', 2 February. Windhoek: Hyphen Africa. <https://hyphenafrika.com/news/hyphen-hydrogen-energy-announces-ammonia-offtake-mous-with-approtium-and-industrial-group/> (accessed 26 May 2023).
- IFC (2022) *Creating Markets in Namibia: Creating Resilient and Inclusive Markets*. Washington, DC: International Finance Corporation, The World Bank Group.
- IMF (2018) 'Namibia: Technical Assistance Report — Assessing and Managing Fiscal Risks from State Entities and Public–Private Partnerships'. IMF Country Report No. 18/258. Washington DC: The International Monetary Fund.
- IMF (2022) 'Namibia: 2022 Article IV Consultation–Press Release; Staff Report; and Statement by the Executive Director for Namibia'. IMF Country Report No. 22/364. Washington DC: The International Monetary Fund.
- IPPR (2021) 'Green Hydrogen and Namibia: Has the Future Arrived?', *Namibia Quarterly Economic Review October–December*: 1–20.
- IPPR (2022) 'Transparency Concerns Dog “Largest Tender in Nation's History”', *Procurement Tracker Namibia* 16: 1–3.
- IRENA (2022) 'Geopolitics of the Energy Transformation: The Hydrogen Factor'. Abu Dhabi: International Renewable Energy Agency.
- Kalt, T. and J. Tunn (2022) 'Shipping the Sunshine? A Critical Research Agenda on the Global Hydrogen Transition', *GAI* (31/2): 72–76.
- Katjavivi, P.H. (1988) *A History of Resistance in Namibia*. Trenton, NJ: Africa World Press, Inc; London: James Currey.
- Kaune, A. and B. Mbazuvara (2020) 'Note on Understanding FDI Profitability in Namibia: Reinvestment or Repatriation?'. Quarterly Bulletin, June. Windhoek: Bank of Namibia.
- Kedward, K., D. Gabor and J. Ryan-Collins (2022) 'Aligning Finance with the Green Transition: From a Risk-based to an Allocative Green Credit Policy Regime'. Working Paper Series (IIPP WP 2022–11). London: UCL Institute for Innovation and Public Purpose. www.ucl.ac.uk/bartlett/publicpurpose/wp2022-11 (accessed 26 May 2023).
- Kvangraven, I.H. (2021) 'Beyond the Stereotype: Restating the Relevance of the Dependency Research Programme', *Development and Change* 52(1): 76–112.
- Mawdsley, E. (2018) 'Development Geography II: Financialization', *Progress in Human Geography* 42(2): 264–74.

- Melber, H. (2014) *Understanding Namibia: The Trials of Independence*. London: Hurst and Co. Publishers Ltd.
- Ministry of Mines and Energy (2022) 'Namibia: Green Hydrogen and Derivatives Strategy'. Windhoek: Government of Namibia.
- Mitchell, T. (2011) *Carbon Democracy: Political Power in the Age of Oil*. London: Verso.
- Mkandawire, T. (2001) 'Thinking about Developmental States in Africa', *Cambridge Journal of Economics* 25: 289–313.
- Moore, J.W. (2000) 'Sugar and the Expansion of the Early Modern World-economy: Commodity Frontiers, Ecological Transformation, and Industrialization', *Review (Fernand Braudel Center)* 23(3): 409–33.
- Morgen, S., M. Schmidt, J. Steppe and C. Wörten (2022) 'Fair Green Hydrogen — Chance or Chimera in Morocco, Niger and Senegal?'. Berlin: Rosa Luxemburg Foundation. <https://arepoconsult.com/en/publications/fair-hydrogen-potentials-and-limits-for-the-examples-of-niger-senegal-and-morocco/> (accessed 26 May 2023).
- Mosley, L. and B.P. Rosendorff (2023) 'The Unfolding Sovereign Debt Crisis', *Current History* 122(840): 9–14.
- Musthaq, F. (2020) 'Development Finance or Financial Accumulation for Asset Managers? The Perils of the Global Shadow Banking System in Developing Countries', *New Political Economy* 26(4): 554–73.
- Nem Singh J. and J.S. Ovadia (2018) 'The Theory and Practice of Building Developmental States in the Global South', *Third World Quarterly* 39(6): 1033–55.
- Öniş, Z. (1991) 'The Logic of the Developmental State', *Comparative Politics* 24(1): 109–26.
- Oqubay, A. (2015) *Made in Africa: Industrial Policy in Ethiopia*. Oxford and New York: Oxford University Press.
- O'Sullivan, L. and L. Rethel (2023) 'Financial Globalization, Local Debt Markets and New State Financial Activism in Middle-income Countries', *Development and Change* 54(2): 304–30.
- Pape, F. and J. Petry (2023) 'East Asia and the Politics of Global Finance: A Developmental Challenge to the Neoliberal Consensus?', *Review of International Political Economy*. <https://doi.org/10.1080/09692290.2023.2170445>
- Peet, R. (2009) *The Unholy Trinity. The IMF, World Bank and WTO* (2nd edn). London and New York: Zed Books.
- Pistor, K. (2019) *The Code of Capital: How the Law Creates Wealth and Inequality*. Princeton, NJ: Princeton University Press.
- Plant, M. (2022) 'The EU, Africa and SDRs: More Can Be Done'. Washington, DC and London: Center for Global Development (accessed 7 February 2023).
- Republic of Namibia (n.d.a) 'Harambee Prosperity Plan 2016/17–2019/20. Namibian Government's Action Plan towards Prosperity for All'. Windhoek: Republic of Namibia.
- Republic of Namibia (n.d.b) 'Harambee Prosperity Plan 2021–2025. Namibian Government's Action Plan towards Economic Recovery and Inclusive Growth'. Windhoek: Republic of Namibia.
- Republic of Namibia (n.d.c) 'Namibia's Fifth National Development Plan (NDP 5). Working Towards Prosperity, 2017–2018 — 2021–2022'. Windhoek: Republic of Namibia.
- Republic of Namibia (n.d.d) 'Traction. Namibia's Green Hydrogen Overview. Developing a Green Hydrogen Hub'. Windhoek: Republic of Namibia. <https://gh2namibia.com/media-downloads/> (accessed 26 May 2023).
- Republic of Namibia (2022) 'Fiscal Strategy for the Medium-term Expenditure Framework FY2022/23 TO FY2024/25'. Windhoek: Republic of Namibia.
- Key, H. (2015) 'Dilemma not Trilemma: The Global Financial Cycle and Monetary Policy Independence'. NBER Working Paper No. 21162. Cambridge, MA: National Bureau of Economic Research.
- Rodrik, D. (2006) 'Goodbye Washington Consensus, Hello Washington Confusion?', *Journal of Economic Literature* 44(4): 973–87.

- Rosendahl, C. (2010) 'Industrial Policy in Namibia'. Discussion Paper No. 5. Bonn: Deutsche Institut für Entwicklungspolitik.
- Sarkin, J. (2011) *Germany's Genocide of the Herero: Kaiser Wilhelm II, His General, His Settlers, His Soldiers*. Suffolk: James Currey; New York: Boydell and Brewer.
- Schindler, S., I. Alami and N. Jepson (2022) 'Goodbye Washington Confusion, Hello Wall Street Consensus: Contemporary State Capitalism and the Spatialisation of Industrial Strategy', *New Political Economy* 28(2): 223–40.
- Schnabel, I. (2020) 'The Shadow of Fiscal Dominance: Misconceptions, Perceptions and Perspectives'. Speech by Member of the Executive Board ECB, at Centre for European Reform and the Eurofi Financial Forum (11 September). www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200911~ea32bd8bb3.en.html
- Sherbourne, R. (2016) 'Guide to the Namibian Economy 2017'. Windhoek: Institute for Public Policy Research.
- Simeoni, C. and W. Kinoti (2021) 'Medical Equipment Leasing in Kenya: Neocolonial Global Finance and Misplaced Health Priorities'. DAWN Discussion Paper No. 25. Suva: Development Alternatives with Women for a New Era.
- Stein, H. (2021) 'Institutionalizing Neoclassical Economics in Africa: Instruments, Ideology and Implications', *Economy and Society* 50(1): 120–47.
- Storm, S. (2008) 'Building Productive Capacities and Technological Capabilities in LDCs', *Development and Change* 39(6): 1203–21.
- Sylla, N.S. (2014) 'From a Marginalised to an Emerging Africa? A Critical Analysis', *Review of African Political Economy* (41 Supl): S7–S25.
- Sylla, N.S. (ed.) (2023) *Imperialism and the Political Economy of Global South's Debt*. Bingley: Emerald Publishing.
- SYSTEMIQ (2022) 'Namibia's Green Hydrogen Opportunity — Key Questions + Initial Answers'. Amsterdam: SYSTEMIQ. https://gh2namibia.com/wp-content/uploads/2022/09/Namibias-Green-Hydrogen-Opportunity-key-questions-initial-answers-Jan-2022-_-SYSTEMIQ.pdf (accessed 2 June 2022).
- Tooze, A. (2021) *Shutdown: How Covid Shook the World's Economy*. New York: Viking Press.
- UNDP (1974) 'The Cocoyoc Declaration'. New York: United Nations Environment Programme. <https://digitallibrary.un.org/record/838843> (accessed 26 May 2023).
- Wade, R.H. (2018) 'The Developmental State: Dead or Alive?', *Development and Change* 49(2): 518–46.
- Wallace, M. and J. Kinahan (2011) *A History of Namibia: From the Beginning to 1990*. London: Hurst.
- World Bank (2020) *Leveraging Pension Fund Investment for Domestic Development: Namibia's Regulation 29 Approach*. Washington, DC: The World Bank.
- World Bank (2021) 'What You Need to Know About Green Loans'. World Bank News Feature 4 October. www.worldbank.org/en/news/feature/2021/10/04/what-you-need-to-know-about-green-loans (accessed 26 May 2023).

Daniela Gabor (Daniela.Gabor@uwe.ac.uk) is Professor of Economics and Macrofinance at UWE Bristol, UK.

Ndongo Samba Sylla (ndongo.sylla@rosalux.org) is a Senior Programme and Research Manager at the West Africa office of the Rosa Luxemburg Foundation, Dakar, Senegal.