THE NEW DEVELOPMENT BANK (NDB) AS A MISSION-ORIENTED INSTITUTION FOR JUST ECOLOGICAL TRANSITIONS: A CASE STUDY APPROACH TO BRICS SUSTAINABLE INFRASTRUCTURE INVESTMENT[1]

João Pedro Braga[2]
Bruno De Conti[3]
Guilherme Magacho[4]

The New Development Bank (NDB) has not yet received the attention it deserves in the development community. On the one hand, this lack of attention could be partially explained by its short existence. On the other hand, in its first five years of operations, the bank consolidated as a source of development finance in the bloc by claiming originality from the traditional multilateral development bank (MDB) business model. In this sense, the research gap on the bank points to a miscommunication between the NDB's claims of originality and its engagement with the extended development community. Addressing the "new in the NDB" to consolidate it as a full member of the community, this paper analyses the bank's very first operations to understand the possibilities of the NDB to position itself as a mission oriented institution to finance the ecological transition in the BRICS countries by partnering up with local actors and institutions committed to public value. To understand these opportunities, this paper sheds light on five selected NDB projects and their engagement with the local sustainable development agendas. Studied together, the case studies provide important lessons on the bank's approach to achieve its newness, but do not pretend to evaluate the whole of its first five years of operations – which should be tackled by further research. The paper concludes by suggesting a mission roadmap for the bank to consider in its corporate strategy. This implies a perspective shift from its current narrow focus on sustainable infrastructure investment by partnering up with local actors of the extended BRICS development community. For that matter, a shared commitment to strong sustainability and public value is required when connecting the bank's operations with the country-specific challenges for the ecological transition.

Keywords: BRICS; New Development Bank; ecological transition; infrastructure; development.

1. This article is based on the master thesis of João Pedro Braga, supervised by Bruno De Conti, Guilherme Magacho, Uma Kollamparambil and Christina Teipen. The authors thank the abovementioned researchers for the supervision, taking responsibility for the adaptations made for this paper.

2. Economist graduated from the Economic Policies for the Global Transition (EPOG+ Masters) in the Sorbonne Université and University of the Witwatersrand. Orcid: <orcid.org/0000-0002-4599-1712>. E-mail: <jpedrolbraga@gmail.com>.

3. Associate Professor at the University of Campinas. Orcid: <orcid.org/0000-0002-7510-5283>. E-mail: <deconti@unicamp.br>.

4. Economist at Agence Française de Développement (AFD). Orcid: <orcid.org/0000-0002-6208-8226>. E-mail: <magachog@afd.fr>.

O NDB COMO UMA INSTITUIÇÃO ORIENTADA POR MISSÕES DE TRANSIÇÕES ECOLÓGICAS JUSTAS: UMA ABORDAGEM DE ESTUDO DE CASO PARA O INVESTIMENTO EM INFRAESTRUTURA SUSTENTÁVEL NO BRICS

O Novo Banco de Desenvolvimento (NDB em inglês) ainda não recebeu a atenção que merece na comunidade de desenvolvimento. Por um lado, esta falta de atenção poderia ser parcialmente explicada por sua curta existência. Por outro lado, em seus primeiros cinco anos de operações, o banco se consolidou como uma fonte de financiamento do desenvolvimento no bloco, reivindicando originalidade do modelo de negócios tradicional dos bancos de desenvolvimento multilaterais. Nesse sentido, a lacuna de pesquisa sobre o banco aponta para uma falta de comunicação entre as reivindicações de originalidade do NDB e sua comunicação com a comunidade envolvida nos debates sobre desenvolvimento. Abordando o "novo no NDB" para consolidá-lo como um membro pleno da comunidade, este artigo analisa as primeiras operações do banco para entender as possibilidades do NDB de se posicionar como uma instituição orientada à missão de financiar a transição ecológica nos países BRICS por meio de parcerias com atores locais e instituições comprometidas com a noção de valor público. Para entender estas oportunidades, este artigo lança luz sobre cinco projetos selecionados do NDB e seu envolvimento com as agendas locais de desenvolvimento sustentável. Estudados em conjunto, os estudos de caso fornecem lições importantes sobre a abordagem do banco para alcançar sua originalidade, mas não pretendem avaliar o conjunto de seus primeiros cinco anos de operações – o que deve ser abordado por mais pesquisas. O artigo conclui sugerindo um roteiro de missão para que o banco considere em sua estratégia corporativa. Isto implica uma mudança de perspectiva a partir de seu atual foco restrito no investimento em infraestrutura sustentável, em direção a parcerias com atores locais da comunidade de desenvolvimento do BRICS. Para isso, é necessário um forte compromisso compartilhado com as noções de sustentabilidade e de valor público ao conectar as operações do banco e os desafios específicos de cada país para a transição ecológica.

Palavras-chave: BRICS; Novo Banco de Desenvolvimento; transição ecológica; infraestrutura; desenvolvimento.

EL NDB COMO UNA INSTITUCIÓN ORIENTADA POR MISIONES DE TRANSICIONES ECOLÓGICAS JUSTAS: UN ESTUDIO DE CASO SOBRE LA INVERSIÓN EN INFRAESTRUCTURAS SOSTENIBLES EN LOS BRICS

El Nuevo Banco de Desarrollo (NDB em inglés) aún no ha recibido la atención que merece en la comunidad del desarrollo. Por un lado, esta falta de atención podría explicarse en parte por su corta existencia. Por otra parte, en sus primeros cinco años de operaciones, el banco se ha consolidado como fuente de financiación del desarrollo en el bloque, reivindicando la originalidad del modelo de negocio tradicional de los bancos multilaterales de desarrollo. En este sentido, el vacío en la investigación sobre el banco apunta a una falta de comunicación entre las pretensiones de originalidad del NDB y su comunicación con la comunidad implicada en los debates sobre el desarrollo. Abordando lo "nuevo en el NDB" para consolidarlo como miembro de pleno derecho de esta comunidad, este artículo analiza las primeras operaciones del banco para comprender las posibilidades de que el NDB se posicione como una institución orientada a la misión de financiar la transición ecológica en los países BRICS mediante asociaciones con actores e instituciones locales comprometidos con la noción de valor público. Para entender estas oportunidades, este artículo arroja luz sobre cinco proyectos seleccionados del NDB y su compromiso con las agendas locales de desarrollo sostenible. Estudiados en conjunto, los estudios de caso aportan importantes lecciones sobre el enfoque del banco para lograr su originalidad, pero no pretenden evaluar

la totalidad de sus primeros cinco años de operaciones, lo que debería ser abordado por otras investigaciones. El artículo concluye sugiriendo una hoja de ruta de como alcanzar esta misión para que el banco considere su estrategia corporativa. Esto implica un cambio de perspectiva desde su actual enfoque estrecho en la inversión en infraestructuras sostenibles hacia las asociaciones con los actores locales de la comunidad de desarrollo de los BRICS. Esto requiere un fuerte compromiso compartido con las nociones de sostenibilidad y valor público para conectar las operaciones del banco y los retos específicos de cada país para la transición ecológica.

Palabras clave: BRICS; Nuevo Banco de Desarrollo; transición ecológica; infraestructuras; desarrollo.

JEL: F63; G21; O10; O19; Q01; Q56.

DOI: http://dx.doi.org/10.38116/rtm29art5

Data de envio do artigo: 10/7/2022. Data de aceite: 11/9/2022.

1 INTRODUCTION

In spite of some interesting academic studies (e.g., Batista Jr., 2019; Wang, 2019; Humphrey, 2020), the New Development Bank (NDB) has not yet received the attention it deserves in the development community. On the one hand, the lack of attention to it could be partially explained by its short existence, as the first operations took place only in 2016. On the other hand, in its first five years of operations, the bank consolidated as a solid source of development finance in the bloc by claiming originality from the traditional multilateral development banks (MDB) business model. In this sense, the research gap on the bank points to a miscommunication between the NDB's claims of originality and its engagement with the development community both within the BRICS and internationally. Filling this gap, or in other words addressing the "new in the NDB", this paper aims to suggest a roadmap to consolidate the NDB as a full member of the sustainable development community by emphasising its role as a mission-oriented development bank for the BRICS ecological transitions.

The urgent nature of the socioecological crises materialised in climate change presents a grand challenge to the reproduction of economic systems around the world. In this sense, paving the way for just ecological transitions is one the greatest development missions of the century (Mazzucato, 2021). To implement this mission, the financial sector is key not only to allocate finance to sustainable infrastructure sectors but also to guarantee that the climate mission will have the socioeconomic impact to tackle societal goals framed under the Sustainable Development Goals (SDGs). Hence, the notion of mission-oriented approach to financial institutions' corporate governance is key to finance both sustainable development and just ecological transitions (Macfarlane and Mazzucato, 2018).

Applying the notion of a mission-oriented institution to the NDB, this paper analyses the bank's practices of "new development banking" when applied to sustainable infrastructure investment by studying the NDB's first approved

operations. These projects were analysed from a case study perspective to understand how specific projects helped tackling the challenges for just ecological transition in each of the BRICS countries. With an implicit selection bias, as all operations were approved in 2016, these projects had more time to be disbursed and implemented and thus paved the way for the NDB's corporate strategy. As these projects materialised the NDB's approach to sustainable infrastructure investment, the takeaways from the study cases contribute to understanding the NDB's role on financing just BRICS' ecological transitions. As the conclusions address the "new in the NDB", this paper suggests opportunities for the bank to consider a mission-oriented roadmap when further positioning itself as a mission-oriented institution to finance BRICS just transitions.

On a methodological note, this paper sheds light on the NDB's engagement with the local sustainable development agendas by using a case study approach to five of its first projects. However, as with all operations, their short description available on the NDBs website lacked detailed information on project implementation. To overcome this transparency issue, we approached institutionally and individually the NDB's corporate communications division and its staff. The attempts to communicate institutionally with the bank via the official information disclosure form failed, but the strategy to approach its staff individually via email and invite them to an academic interview on the NDB proved to be more effective. To put together the 5 case studies of this section, we interviewed 10 NDB staff and BRICS academics using a semi-structured interview method (see annex) to shed light on how selected projects materialised the bank's corporate strategy. These exchanges benefited this research to a great extent by getting a first-hand perspective on the reality of NDB's new development banking paradigm, shedding light on the challenges to fully achieve its originality.

Without diving too deep into the projects, it is important to define them and point out some differences and similarities which will be further addressed in the conclusion of this paper. These projects are, namely, Brazil's *Financing of Renewable Energy* (RE) *Projects and Associated Transmission* in partnership with the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social – BNDES); Russia's *Two loans for Nord-Hydro* in partnership with the two other MDBs, the Eurasian Development Bank (EDB) and the International Investment Bank (IIB); India's *Canara Renewable Energy Financing Scheme*, in partnership with the public Canara Bank which was later cancelled without further

explanations; China's *Putian Pinghai Bay Offshore Wind Power Project* guaranteed by the People's Republic of China (PRC); South Africa's *Project Finance Facility* (PPF) *for the Electricity Supply Commission* (Eskom), the state-owned electricity company. These operations sum up to USD 1.1 billion, a significant amount for the NDB's first operations but still low relative to the emerging infrastructure investment gap – calculated to be as of 1 trillion dollars yearly (Bhattacharya, Romani e Stern, 2012; Griffith-Jones, 2014). Arguably, these first projects were fundamental for consolidating the NDB's corporate strategy by materializing its approach to sustainable development finance.

Approved in the NDB's first year of operation, these five projects were fundamental for accelerating the bank's learning curve by combining the expertise of existing local development finance institutions, national sovereign guarantees and simplified loan structures to deliver renewable energy infrastructure. As the paper shows, these operations incorporate significant aspects of sustainability in their descriptions given the NDB's focus to finance sustainable investment. As such, they focus on the intersection of clean energy and sustainable infrastructure (SDGs 7 and 9) – central areas both for the NDB's mission and the 2030 sustainable development agenda. In addition to their sectoral focus, the projects also have in common a strong element of public value in their partnerships (SDG 17).

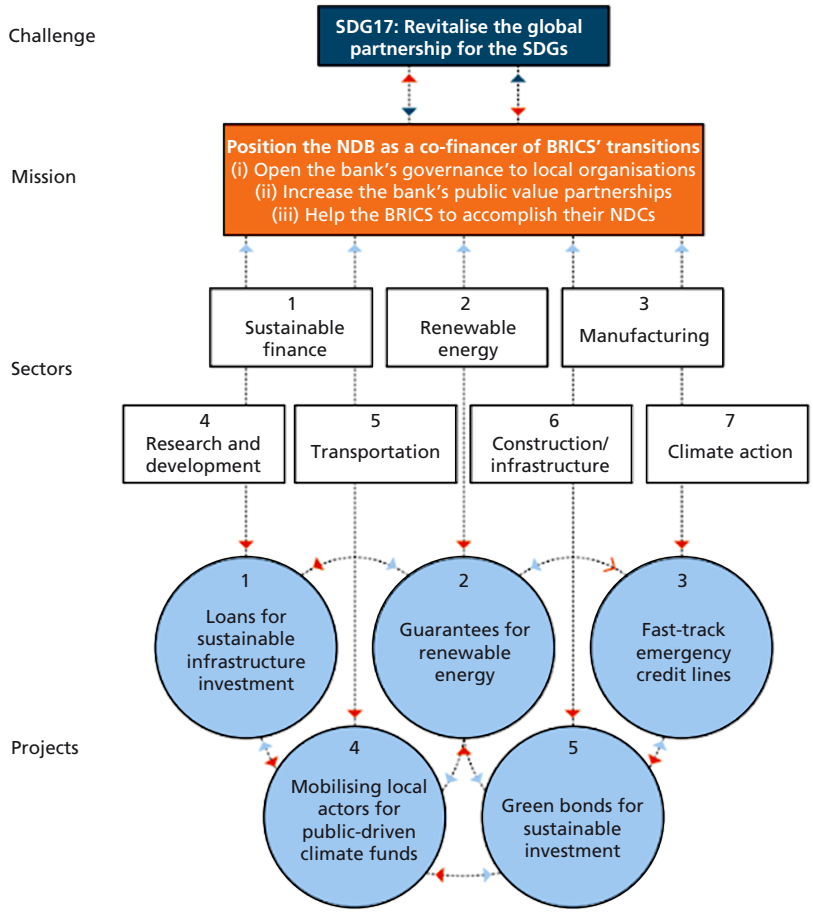
Hence, it should be argued that the bank has already played a key role in providing infrastructure and sustainable finance for the BRICS countries. Additionally, when studied together, the case studies provide important lessons for the NDB to continue positioning itself as a mission-oriented institution to finance just BRICS' ecological transitions. To achieve that, this paper suggests a mission roadmap for the bank to consider in its future corporate strategies. This roadmap implies a considerable perspective shift from its current narrow focus on sustainable infrastructure investment (SDG 9), by partnering up (SDG 17) with both local actors of the extended BRICS development community and international actors of the multilateral development banking arena by providing technical support for the implementation of projects. As a matter of fact, these opportunities require a corporate governance shift in the banks approach to sustainable development.

As argued in the conclusions, a shared commitment to the notions strong sustainability and public value is required when connecting the bank's operations with the country-specific challenges for articulating just BRICS ecological transition. As the mission roadmap below argues, this can be done by opening up the bank's corporate governance for public-value partnerships with both local and international development actors committed to the notion of sustainable and inclusive development. This illustrates the need for the NDB to rethink its engagement with sustainability, addressing the "new in the NDB" to consolidate it as a full member of the development community and finance just BRICS transitions. To structure this argument, after this introduction, the paper is organised in five more sections, one for each of the BRICS countries, and the conclusions. The case study sessions present a brief discussion of the country specific challenges for the transition, connecting these challenges to an also brief description of how the analysed project tackles structural issues for the transition in each of the BRICS. Summing up and comparing the main features of the case studies, the conclusions review the mission-oriented roadmap to address the "new in the NDB".[5]

As illustrated in the case studies, the NDB needs to enhance its partnerships with local actors of the development community to tackle the country-specific challenges of the ecological transition. To achieve that, figure 1 presents a roadmap toward positioning the NDB as a mission-oriented institution to co-finance the BRICS ecological transitions. Building partnerships centred on public value (SDG 17), the bank should also commit to strong sustainability standards to mobilise different sectors and partners into its existing portfolio of projects. This illustrates the need for the bank to rethink its engagement with sustainability, addressing the "new in the NDB" to consolidate it as a full member of the development community and help achieve fair and just transitions in the BRICS.

5. For a discussion on the methodology of case studies, see Yin (2014).

FIGURE 1
A roadmap towards revitalising the BRICS partnership for the SDGs via the NDB as a mission-oriented institution to co-finance the BRICS ecological transitions



Source: Mazzucato (2021).[6]
Authors' elaboration.
Obs.: Nationally Determined Contribution (NDC).

6. The notion of a mission-oriented approach to societal challenges derives from the works of the Institute for Innovation and Public Purpose (IIPP) at the University College London (Mazzucato and Ryan-Collins, 2022; Mazzucato, 2021; Mazzucato and Macfarlane, 2018). It points to the centrality of public value in articulating partnerships between different sectors, agents, stakeholders and institutions to find workable solutions for grand societal challenges. It also involves setting an ambitious but realistic roadmap with a clear direction for change and target goals which involve multiple sectors to come up with bottom-up solutions on how to achieve the mission. When applied to development banks as financiers of the ecological transition, it means that these institutions have a public mandate to implement and engage different actors of the development finance community and civil society organisations into the projects that will help achieve these missions.

2 BRAZIL'S SUSTAINABLE INVESTMENT TRANSITION BY 2050 VIA THE BNDES

2.1 Country context and challenges for the ecological transition

The largest and most populous country of South America, Brazil's economy accounts for a big share of the continent's investment, greenhouse gas (GHG) emissions and forest reserves.[7] After a decade of unprecedented continuous growth and political stability that made it be considered as one of the emerging economies to join the BRICS, Brazil's development was severely halted by successive politico-economic crises since 2014. In the context of these multiple crises, investments fell significantly as the public sector adopted an austerity-centred economic policy from 2016 onwards (Arestis et al., 2022). On the climate side, under the Bolsonaro government, the expansion of the agricultural frontier and the dismantling of the fiscalization bodies were associated with higher deforestation rates in decades in the amazon rainforest. This scenario poses important challenges for the ecological transition in Brazil (Alvarenga Junior, Yong and Costa, 2022).

Indeed, the Green New Deal (GND) agenda in Brazil is a recent phenomenon. One GND bill has been proposed to the National Congress, but its approval depends on the support of a federal government that integrates public investment as a key driver of climate action (Molon, s.d.). Meanwhile, a Brazilian GND consists of engaging developmental actors to support and finance the transition (GND Brazil 2022).[8] These include not only national development banks such as BNDES, but also MDBs such as the NDB.

Even if Brazil doesn't have detailed concrete plans for the transition, it played a pivotal role in the Paris Agreement negotiations to keep global warming well below 2 °C. In its NDCs, it committed to lower GHG emissions when compared to 2005 levels by 37% in 2025 and 43% in 2030. Brazil's goal to reach emissions neutrality by 2050 is aligned with the global net zero target, but it has not yet published a Long-Term Strategy (LTS) to achieve it.

To accomplish its climate goals, Brazil needs to further diversify its energy mix towards alternative renewables. In fact, renewable energy production in Brazil depends considerably on hydroelectric power plants and most of its total renewable energy consumption is generated by hydel. Given its reliance on hydel, the higher volatility associated with it poses a problem to Brazil's energy capacity. As a matter of fact, alternative renewable energy resources such as solar and wind power have not been fully explored due to financial constraints. In this context, the *Financing of RE Projects* operation was approved by the NDB in partnership

7. Available at: <https://climateactiontracker.org/>.
8. Available at: <https://www.gnd-brasil.com>.

with the BNDES to enhance the capacity of Brazil's alternative renewable energy sector in wind and solar sources.

2.2 Project description

- Project name: Financing of RE Projects.
- Financing mechanism: NDB-BNDES renewable energy partnership.
- NDB loan/investment: USD 300 million to BNDES.
- Target sector: multiple (SDG 7 on energy, 9 on sustainable infrastructure and 17 on partnerships).

As mentioned in the introduction of this paper, this brief case study is based on the project description available in the NDB's website (NDB, 2016b) and interviews done with the responsible staff for the *Financing of RE Projects* operation. In short, the document approved in 2016 details that the NDB would concede a two-step loan for renewable energy projects and associated transmission projects to the BNDES so the bank could on-lend into its own portfolio of renewable energy projects.

In line with the challenges for the transition in Brazil, the project's main objective was for the NDB to offer additional concessional finance for BNDES on renewable energy projects, co-financing the sub-projects along with other sources. In practice, this means that BNDES would serve as financial intermediary to allocate the NDB's initial loan into its own renewable energy sub-projects.

Both the borrower without sovereign guarantees and the implementing agency, BNDES is the main financier for infrastructure projects in Brazil. It received a loan of USD 300 million to finance at least 5 sub-projects of its own portfolio to be disbursed by the NDB as the projects were approved. Complementing NDB's loan, BNDES also committed to invest at least another USD 300 million to implement these projects, mobilising its own capital, shareholders equity and green bonds.

As of 2022, three main projects had been approved, fully disbursed and implemented. Two of them in wind plants and one in solar. As for Environmental, Social and Governance (ESG) safeguards, the project followed NDB's country-systems approach. Thus, BNDES was responsible to comply with national legislation, but sub-projects were subject to NDB's assessment if categorised as ESG A.

All in all, the subprojects contributes to further diversifying Brazil's energy mix, reducing reliance on hydel towards other alternative renewable energy sources such as wind and solar. Hence, the project aligns with NDB's focus on sustainable

infrastructure. By partnering up with consolidated Development Finance Institutions (DFIs) such as BNDES to co-finance sustainable development, it provides an important lesson for the NDB to position as a mission-oriented institution to finance Brazil's ecological transition.

3 RUSSIA'S ENERGY MIX DIVERSIFICATION BY 2060 VIA REGIONAL DEVELOPMENT BANKS

3.1 Country context and challenges for the ecological transition

The world's largest country, the Russian Federation accounts for a big share of Eurasian GHG emissions, but it is also home to the world largest forest reserves – a global carbon sink.[9] After the economic collapse following the dissolution of the Soviet Union in 1991 and the Russian debt crisis in 1998, from the 2000s onwards the country managed to combine high growth rates and political stability that made it be considered as one of the fastest growing markets to join the BRICS. If Russia was hit by the Global Financial Crisis (GFC) in 2008, its growth prospects have been way less bloomy since 2014, following the important geopolitical conflicts with its neighbour Ukraine – conflicts that evolved into the 2022 war. Facing important financial sanctions from North Atlantic Treaty Organization (NATO), internal and external political crises have hit Russia hard. In the context of these multiple crises, Russia faces important challenges for the agenda on the ecological transition (Godzimirski, 2022).

The country's dependence on gas and oil shapes its accumulation regime both politically via its reliance on large State-Owned Enterprises (SOEs) such as Gazprom (Vercueil, 2021) and economically via higher exports volatility implying external constraints (Grouiez, Vercueil and Volkov, 2021). Hence, diversifying Russia's energy mix is an imperative for its ecological transition. Even though the GND agenda is existent via climate activism by Greenpeace (2020), a more bottom-up agenda has been systematically blocked.

On the official agenda to diversify Russia's energy mix and increase energy security, the federal government introduced its Energy Sector Strategy in 2009. This plan was set to increase the share of renewable energies to 4.5% by 2024. It is also the bulk of Russia's NDCs to lower GHG emissions by 30% by 2030 and 80% by 2050 relative to 1990 levels. Russia's LTS to implement the Paris Agreement goals was announced in 2021, expectedly achieving emissions neutrality by 2060 – ten years after the global Paris Agreement goal.

9. Available at: <https://climateactiontracker.org/>.

Investment in renewable energy is essential to achieve these targets, as non-fossil fuel sources account for 3% of total energy consumption.[10] In areas where non-fossil energy capacity is low, power projects using renewable sources can increase the energy security and contribute to local sustainable development. This is the case in the northwestern Republic of Karelia, the region where the *Two Loans to EDB and IIB for Nord-Hydro* operation was approved by the NDB to facilitate renewable energy development projects and help diversify Russia's energy mix.

3.2 Project description

- Project name: Two Loans to EDB and IIB for Nord-Hydro.
- Financing mechanism: NDB-Regional development banks partnership.
- NDB loan/investment: USD 100 million to EDB and IIB.
- Target sector: multiple (SDG 7 on energy, 9 on sustainable infrastructure and 17 on partnerships).

As mentioned in the introduction of this paper, this brief case study is based on the project description available in the NDB's website (NDB, 2021) and interviews done with the responsible staff for the *Two Loans to EDB and IIB for Nord-Hydro* operation. In short, the document approved in 2016 details that the NDB would concede two loans to support EDB and IIB to on-lend to the Nord-Hydroelectric project.

In line with the challenges for the transition in Russia, the project's main objective was to increase energy supply in the Karelia Republic. This would be accomplished by building a small dam, two hydroelectric power plants with a total installed capacity of 49.8 MW and a 10 km 220 kV power transmission line. The project was set to avoid 48,800 tons of carbon dioxide emissions per year.

The borrowers, the EDB and the IIB, are key regional financiers of infrastructure in Eastern Europe and Central Asia. In practice, they served as financial intermediaries to allocate NDB's loan into the project, which was fully guaranteed by the Russian government with a preferential status. Each MDB received a USD 50 million loan, adding up to a total project loan of USD 100 million. The total project cost was complemented by other bank loans and equity, totaling USD 161.9 million. It was fully implemented by Nord Hydro in 3 years from the disbursements and procurements.

This project also followed NDB's country-systems approach for its ESG. Thus, Nord Hydro was responsible to run environmental mitigation evaluations

10. Available at: <https://www.iea.org/countries>.

which were yearly supervised by the NDB. In particular, smaller dam dimensions were designed for this project to avoid resettlements and minimise its ecological impact by focusing on energy efficiency both in generation and distribution.

All in all, the project contributed to diversifying Russia's energy mix by reducing reliance on fossil fuels towards renewables, aligning with NDB's focus on sustainable investment. On the other hand, even with smaller dimensions, the construction of a dam always creates environmental disturbances. Anyway, it illustrates how the NDB can finance energy mix diversification by partnering up with RDBs and governments to deliver sustainable development. Also, given the project's small scale, it illustrates that the BRICS ecological transitions imply multiple local bottom-up projects that are reproduced on a larger scale with the support of international institutions towards public-value.

4 INDIA'S GRADUAL PHASE-OUT FROM THERMAL BY 2070 VIA COMMERCIAL BANKS

4.1 Country context and challenges for the ecological transition

The world's second most populous country, the Republic of India accounts for a big share of South Asia's investments and emissions.[11] In the six decades following its independence and partition in 1947, India's rise as an economic power is a defining feature of today's world (Sen and Dasgupta, 2009). Combining continuous growth and a formal democracy, India led the way for the so-called emerging market economies (EMEs) to integrate into the world economy. As it joined the BRICS, it also grew bigger than the bloc by following its own development model (Drèze and Sen, 2013). With the allegation of modernising the country, the Modi administration pledges to "create a new India" through a combination of economic neoliberalism and political authoritarianism (Patnaik, 2019). For that purpose, India still faces relevant challenges to articulate its ecological transition agenda (Roy and Schaffartzik, 2021).

As with many Western notions, the GND agenda does not fully translate into India's political debate. This is the case since it adopts a different set of cultural principles and business practices that make the concept of a "Deal" an state-level practice of policy making in India (Byrd, 1990). Thus, searching for an Indian version of a GND one has to look at the government's official sectoral plans.

On the official agenda to diversify India's energy mix, the central government introduced the 2018 National Electricity Plan (Climate Action Tracker – CAT). It details a gradual and multi-targeted agenda that was formalised in the country's

11. Available at: <https://climateactiontracker.org/>.

NDCs: i) to lower its emission intensity by 33% and 35% by 2030 from 2005 levels; ii) to achieve 40% of installed capacity from non fossil fuel sources by 2030; and iii) to create an additional forestry carbon sink of 2.5 to 3 billion tonnes of CO2 by 2030. Even if India is still to officially submit its LTS, prime minister Modi announced a 2070 GHG emissions net zero target to comply with the Goals of the Paris Agreement – twenty years after most countries and the global goal.

This twenty-year lag is justified due to India's heavy reliance on thermal power for its power generation capacity. To gradually phase-out thermal sources, India's transition towards renewable energies is fundamental. Aiming at a more diversified energy mix, however, the central government is yet to work closer with state-level governments on social and economic policies for a just transition that take into account the inequality in access to electricity. In areas where energy supply is low, power projects using renewables can increase the energy security and contribute to local sustainable development. In this context, the *Canara Renewable Energy Financing Scheme* was approved by the NDB to support the nationalised Canara Bank in financing its own renewable sub-projects.

4.2 Description

- Project name: Canara Renewable Energy financing.
- Financing mechanism: Financing scheme with the Canara Bank.
- NDB loan/investment: USD 250 million to Canara with sovereign guarantee.
- Target sector: multiple (SDG 7 on energy, 9 on sustainable infrastructure and 17 on partnerships).

Contrary to previous operations, this case study is based only on the *Canara Renewable Energy financing* project description available in the NDB's website (NDB, 2016c). It details that the NDB would provide a USD 250 million financing scheme for Canara Bank to on-lend to its own renewable energy sub-projects. In 2021, however, the project appeared in the NDB's website as cancelled without further explanations.[12] The responsible staff for the project did not reply to the interview invitation.

In line with the challenges for the transition in India, the main objective of the scheme was for the NDB to co-finance existing initiatives in the renewable sector. According to the approved project document, this would be accomplished

12. The choice to keep the case study on this operation even if it was cancelled was made due to the fact that it illustrates two important issues in 'addressing the new' in the NDB which are made explicit in the last paragraph of the case study.

by capitalising the Canara Bank to scale up on-lendings in its renewables, but no further information is given on specific sub-projects or expected benefits.

Both as borrower and implementing agency, Canara Bank is India's third largest public bank. It is owned by the Ministry of Finance since its nationalisation in 1969. In the scheme, Canara was supposed to receive a USD 250 million loan from the NDB. Total project costs added up to USD 500 million when co-financed by Canara and other borrowers. The project benefited from support from the Ministry of New and Renewable Energy via a sovereign guarantee. As the implementing agency, Canara Bank was required to comply with NDBs' and country-system regulations. Since there were no explanations on the cancellation, it is not known on which side the issue happened.

Given the limitations of researching an operation that never materialised, the incompleteness of this study case sheds light on important limitations posed to NDB's business model. First, it illustrates the lack of transparency in the NDB's operations since several failed communication attempts were made to clarify the reasons for cancellation. Secondly, it highlights the importance of choosing the right partners to deliver sustainable development by focusing on public-value centred partnerships to avoid cancellations. All in all, it displays an insufficient fulfilment of the NDB's potential as a mission oriented institution to finance India's energy transition in a gloomy partnership context.

5 CHINA'S EXIT FROM COAL BY 2060 VIA PANDA BONDS

5.1 Country context and challenges for the ecological transition

The world's most populous country and second biggest economy, China accounts for a big share of its investment and GHG emissions.[13] In the four decades of unprecedented growth since the opening up and reform of its economy dating back to 1979, China's rise as a global power is a defining characteristic of the world economy (Nogueira, Guimarães e Braga, 2019). Combining continuous growth with political stability under the Chinese Comunist Party (CCP), China not only led the emerging markets' integration into the world economy but also grew bigger than the BRICS by following a very particular development model (see for instance Aglietta and Bai, 2012; Nolan, 2007). Under Xi Jinping administration, the *Chinese Dream* is a modernization agenda for the country to become a "fully developed" nation by 2049 – the Socialist Revolution's 100th anniversary. To accomplish that, the CCP has taken climate action seriously in its Five-Year Plans (FYP) for the ecological transition, with important consequences for the world economy (Vazquez, 2021).

13. Available at: <https://climateactiontracker.org/>.

As it is the case with India, the GND agenda within China does not translate perfectly into China's political system. This is the case since it adopts a different set of cultural and philosophical principles defining State-Market relationships that render the concept of planning an intricate and top-down practice of policy making in China (Weber, 2021). In a sense, the Chinese version of a GND is reflected in the CCP's official FYP (Donato, 2020).

In particular, the CCP's 14th FYP published in 2021 sets the tone for China's ecological transition strategy. It details a bold and multi-targeted NDCs: i) to peak CO2 emissions by 2030; ii) to lower its carbon intensity by 60% relative to the 2005 level; and iii) to increase the share of non-fossil fuels in primary energy consumption to 25%. For its LTS, China aims to reach a narrower goal of carbon emissions neutrality by 2060 – ten years after the global net GHG emissions goal of 2050.

To decouple its growth from coal towards more sustainable developments, China's transition towards renewables takes place under green industrial policy. Aiming to further diversify its energy mix, the State considerably increased investments in solar and wind power. With the world's largest installed capacity for wind power, China actively explores inshore and offshore sites. In coastal areas, offshore projects can increase local energy supply and contribute to diversify the energy mix. This is the case in the Southeastern province of Fujian, where the *Putian Pinghai Bay Offshore Wind Power Project* operation was approved by the NDB to support China's exit from coal.

5.2 Project description

- Project name: Putian Pinghai Bay Offshore Wind Power Project.
- Financing mechanism: panda bonds as tools for industrial policy.
- NDB loan/investment: 2 billion RMB loan to Fujian Investment and Development Group (IDG).
- Target sector: multiple (SDG 7 on energy, 9 on sustainable infrastructure and 17 on partnerships).

As mentioned in the introduction, this brief case study is based on the project description available in the NDB's website (NDB, 2016d) and interviews done with the staff for the *Putian Pinghai Bay Offshore Wind Power Project*. In short, the document approved in 2016 details that the NDB would concede a RMB 2 billion – around US$ 300 million – loan to the PRC via the Fujian IDG to finance a offshore wind power project.

In line with the challenges for the transition in China, the project's main objective was for the NDB to support an ongoing offshore wind project in the Pinghai Bay area of Fujian Province. This was accomplished by financing the project's second phase of ampliation, covering the cost of equipment and civil works. Consisting of three phases, the project aimed at adding a total capacity of 700 MW offshore wind power in Fujian, avoiding around 869,900 tons of carbon emissions per year.

The borrower was the PRC and the implementing agency is the Fujian IDG. In practice, the group received a long-term RMB 2 billion loan with a sovereign guarantee to allocate it directly into the project. It should be noted that this project was the bank's first to be fully funded by the bank's first green bond denominated in RMB, a panda bond (NDB, 2016a) – satisfying one of the bank's claims of originality.[14] Additionally, Chinese commercial banks contributed RMB 3 billion to the total project cost, totaling RMB 5 billion – around US$ 750 million. It was fully implemented by Fujian IDG over 4 years.

As for its ESG safeguards, the project followed NDB's country-systems approach. Thus, Fujian IDG was responsible to run environmental mitigation assessments supervised by the NDB. It was the first project to be given an ESG score (B). In particular, the business group conducted regular assessments to protect the marine ecosystem, adapting work shifts to minimise construction noise.

All in all, the project contributed to diversifying China's exit from coal towards alternative renewable energies. It illustrates how the NDB has been able to innovate on the traditional MDB model by partnering up with governments and local institutions such as business groups to issue panda bonds, contributing to sustainable development. Since it kickstarted a green industrial cluster in Fujian, the case study also shows that green industrial policy is an essential part of the transition.

6 SOUTH AFRICA'S RENEWABLE ENERGY TRANSITION BY 2050 VIA ESKOM

6.1 Country context and challenges for the ecological transition

Africa's biggest economy, the Republic of South Africa (RSA) accounts for a big share of the continent's investment and GHG emissions. After the end of Apartheid in 1994, it is facing enormous challenges to overcome its structural inequalities and build a free democratic society (Padayachee, 2005). Following the 2000s continuous economic growth, South Africa joined the BRICS by positioning itself as the most important EME in the continent. It should be noted, however, that the fiscally

14. According to Cooper (2017), the NDB has three claims of originality: i) its member equality principle; ii) focus on sustainable infrastructure investment; and iii) capitalisation in local currency-denominated green bonds.

constrained State did not enact a redistributive developmental State (Francis and Webster, 2019; Kollamparambil, 2020). Hence, the end of the apartheid regime did not mean the same to all South Africans. More specifically, when economic growth stopped by the mid-2010s, the country's development was halted, giving way for social unrest. In this light, the RSA still faces important challenges in articulating and implementing a just agenda for its ecological transition (Annecke and Wolpe, 2022).

In particular, South Africa's dependence on coal imposes structural barriers to its development. This is the case both politically due to the extractivism focus of the Minerals-Energy Complex and economically given the common electricity shortages known as load shedding, heavily constraining energy supply. These features illustrate the shortcomings of Eskom – the giant state power utility (Baker and Phillips, 2019). Hence, diversifying South Africa's energy mix via green industrial policy is an important component of its ecological transition. The GND agenda in the country is centred on the notion of a people's new deal on agriculture for land redistribution (Ngam, 2022).

On the official agenda to advance on the ecological transition away from fossil fuels, the RSA introduced concrete ambitious plans. This is the case both internally in its 2019 Integrated Resource Plan and externally with the 2021 International Just Energy Transition Partnership. In its NDC, it committed to limit total GHG emissions to 398-510 Mt CO2-eq in 2025 and 350-420 MtCO2e in 2030. As for its LTS, the RSA aims to achieve GHG neutrality by 2050, aligned with the global net zero goal. To achieve the ambitious goals of securing energy supply while diversifying the energy mix, investment in the production of renewables is key. In areas where load sheddings are common and grid facilities are outdated, any circuit outage can down the entire network. This is the case of Soweto, a collective of townships in Johannesburg, where the NDB approved a PFF for Eskom to support the development of grid connection infrastructure.

6.2 Project description

- Project Name: PFF for Eskom.
- Financing mechanism: NDB-Eskom memorandum of cooperation.
- NDB loan/investment: USD 180 million.
- Target sector: multiple (SDG 7 on energy, 9 on sustainable infrastructure and 17 on partnerships).

As with the previous loans, this case study is based on the NDB's project description available in its website (NDB, 2016e) and interviews done with the staff for the *PFF for Eskom*. The document details that the NDB would provide a PFF of USD 180 million for Eskom to connect existing electrical infrastructure.

In line with the challenges for the transition in South Africa, the main objective of the PFF was for the NDB to support Eskom's transition towards the renewable energy sector, reducing the country's reliance on fossil fuels. This would be accomplished by financing seven sub-projects aiming at linking up independent renewable energy producers in a wide grid connections infrastructure allowing for the expansion of Eskom's transmission network in the Soweto area, a township in Johannesburg. The project aimed to integrate 670 MW of RE to Eskom's grid – 10% of South Africa's NDC target.

Both the borrower and the implementing agency, Eskom is South Africa's electricity SOE. As mentioned, it plays an important role in the country's development strategy by managing the Minerals-Energy Complex. For the PFF, Eskom received a USD 180 million loan from the NDB which was converted into 2.88 billion rands and then allocated into sub-projects. The total project cost was also fractionally financed by Eskom, adding up to 3.60 billion rands. As the project was given a sovereign guarantee by the federal government, its implementation was delayed by 2 years while the Parliament examined it, contradicting the claim of the NDB as a fast MDB.

As for its ESG safeguards, Eskom was responsible to run an environmental management plan to ensure minimal risk. However, since the PFF aimed at integrating independent renewable energy producers into Eskom's grid, the loans went to the grid connections which are heavily coal-reliant. Thus, the FPP ensures that clean energy can get into a dirty grid, but it will not phase out South Africa's reliance on coal (Braga et al., 2021). Hence, it displays a partial fulfilment of the NDB's potential as a mission oriented institution to finance the ecological transition in the complex context of energy production in South Africa. All in all, even if the project aims to reduce South Africa's reliance on fossil fuels, it is simply trying to get the undesirable system to work in the first place instead of overcoming it.

7 CONCLUSIONS

This paper's case studies on five selected NDB's projects point to the fact that during its first years of operation the bank succeeded in consolidating as a source of BRICS development finance. This was accomplished by establishing a business model that claims originality by focusing on sustainable infrastructure investment. However, the project case studies and the country-specific challenges of the ecological transition also illustrate important limitations of the NDB's corporate strategy. Summing up this paper, these conclusions provide a few remarks on how to address the "new in the NDB" so that the bank can consolidate as a full member of the development community.

It should be noticed that the task to position the NDB as a mission-oriented institution to finance the BRICS ecological transitions is a herculean one. Since the agendas for the transition in these five countries vary to a great extent, so do the sustainable development priorities. Making sense of this heterogeneity, table 1 provides a comparison of the main challenges for the energy transition in the BRICS. As shown, they not only have different policy environments and energy mixes, but also different targets. More importantly, this translates into different notions of sustainable development and plans to achieve it, rendering one-size fits all strategies impossible.

In this sense, what the bank can effectively do is support its members to achieve their long-term strategies to comply with climate action goals. To a certain extent, the case studies summarised in table 2 show that current operations already do so. Focusing on renewable energy projects, the selected operations combine sustainable infrastructure investment with emission reduction by building public-value centred partnerships. However, as indicated in the assessment, their effectiveness depends to a great extent on the choice of partners to deliver sustainable development.

All in all, the NDB has a successful mechanism for providing development finance to the BRICS countries. Hence, successful BRICS cooperation via the NDB sheds light on cooperative development strategies beyond market forces to finance just ecological transitions in the BRICS. However, as argued, the bank's limitations must be continuously tackled to effectively address the "new in the NDB". To do so, this paper argues that the bank should consider adopting a mission-oriented approach to development finance by linking its focus on sustainable infrastructure investment with the country-specific challenges of the ecological transition via public-value centred partnerships. This would imply opening up its corporate strategy to the extended BRICS development community. If it continues to rise up to the challenges it was created to tackle, the NDB will be fully addressing its newness.

TABLE 1
Main features of the country challenges for the ecological transition

Country	Country context	Official transition agenda	Concrete plans for the transition (NDCs, LTS, carbon neutrality)	Energy mix
Brazil	Multiple economic and political crisis since 2014	No official federal plan for the transition	NDC: -43% of emissions by 2035 LTS: not submitted Net zero target: by 2050	Fossil fuels: 19% Renewables: 79%
Russia	Geopolitical tensions and war since 2014	Official 2009 Energy Sector Strategy, extended to 2035	NDC: -80% of emissions by 2050 LTS: not submitted Net zero target: by 2060	Fossil fuels: 61% Renewables: 19%
India	Modi's consolidation, "Building a new India"	Official 2018 National Electricity Plan	NDC: -35% emission intensity by 2035 LTS: not submitted Net zero target: by 2070	Fossil fuels: 78% Renewables: 20%
China	Xi's consolidation, "the Chinese Dream"	Official CCP's 14th Five Year Plan	NDC: -60% emission intensity by 2035 LTS: submitted Net zero target: by 2060, only carbon	Fossil fuels: 67% Renewables: 28%
South Africa	Multiple economic and political crisis since 2014	2008 Framework for Sustainable Development	NDC: GHG emissions cap of 420 LTS: submitted Net zero target: by 2050	Fossil fuels: 86% Renewables: 8%

Authors' elaboration.

TABLE 2
Main features of the case studies

Country	Project	Objective	Partnerships	Financial aspects	Mission assessment
Brazil	Financing of RE Projects	Increase finance for BNDES RE projects	BNDES BNDES-NDB RE partnership	USD 300 million loan without guarantee, financial intermediation	Importance of partnering up with established NDBs on public value
Russia	Two Loans to EDB and IIB for Nord-Hydro	Increase hydel energy supply in Karelia Republic	NDB-RDBs partnership with EDB and IIB	USD 100 million loan with sovereign guarantee	Ecological transition as multiple local and bottom-up solutions
India	Canara Renewable Energy Financing Scheme	Enhance Canara Bank's capacity to scale up on-lending for renewables	Financing scheme with the Canara Bank	250 million to Canara with sovereign guarantee	Cancellations and importance to choose the right partners
China	Putian Pinghai Bay Offshore Wind Project	Support an offshore wind project	PRC as the borrower, Fujian IDG as implementing agency Green bonds, panda bonds	2 billion RMB loan to Fujian IDG with sovereign guarantee	Green industrial policy to advance on the transition
South Africa	PFF for Eskom	Support Eskom's transition into REs	Eskom NDB-Eskom memorandum of cooperation	USD 180 million with sovereign guarantee, financial intermediation	Partial fulfiment of NDB as a mission-oriented institution

Authors' elaboration.

REFERENCES

AGLIETTA, M.; BAI, G. **La voie chinoise**: capitalisme et empire. Paris: Odile Jacob, 2012.

ALVARENGA JUNIOR, M.; YOUNG, C.; COSTA, L. Um Green New Deal para o Brasil. **GV Executivo**, v. 21, n. 1, 2022.

ANDREONI, A. et al. How can South Africa advance a new energy paradigm? A mission-oriented approach to megaprojects. **Oxford Review of Economic Policy**, v. 38, n. 2, p. 237-259, 2022.

ANNECKE, W.; WOLPE, P. **What role for social policies in the framework of the just transition in South Africa?** Paris: AFD, 2022. (Research papers, n. 230).

ARESTIS, P. et al. A critical analysis of the Brazilian 'expansionary fiscal austerity': why did it fail to ensure economic growth and structural development? **International Review of Applied Economics**, v. 36, n. 1, p. 4-16, 2022.

BAKER, L.; PHILLIPS, J. Tensions in the transition: the politics of electricity distribution in South Africa. **Environment and Planning C**: Politics and Space, v. 37, n. 1, p. 177-196, 2019.

BATISTA JR., P. N. **O Brasil não cabe no quintal de ninguém**: bastidores da vida de um economista brasileiro no FMI e nos Brics e outros textos sobre nacionalismo e nosso complexo de vira-lata. Lisboa: Leya, 2019.

BHATTACHARYA, A.; ROMANI, M.; STERN, N. **Infrastructure for development**: meeting the challenge. [s.l.]: G-24, 2012. p. 26.

BRAGA, J. **Addressing the 'new in the New Development Bank (NDB)'**: a mission-oriented institution to finance the Brics' ecological transitions. 2022. Thesis (Master's Degree) – Joint Degree Programme in Economic Policies, Economic Policies for the Global transition, Paris, 2022.

BRAGA, J. et al. **Brics economic sustainable cooperation via the New Development Bank**. Shangai: Fudan University, 2021. (2021 Shanghai Summer School – Brics Program).

BRICS. **Agreement on the New Development Bank**. Fortaleza: VI Brics Summit, 2014a.

_____. **Treaty for the establishment of a Brics contingent reserve arrangement**. Fortaleza: VI Brics Summit, 2014b.

BYRD, W. A. Planning in India: lessons from four decades of development experience. **Journal of Comparative Economics**, v. 14, n. 4, p. 713-735, 1990.

COOPER, A. F. The Brics' New Development Bank: shifting from material leverage to innovative capacity. **Global Policy**, v. 8, n. 3, p. 275-284, 2017.

DONATO, D. The green new deal and China's green revolution. **People's World**, 2020. Retrieved from: <https://bit.ly/3DTJ4Ez>.

DRÈZE, J.; SEN, A. **An uncertain glory**: India and its contradictions. Oxford: Princeton University Press, 2013.

FRANCIS, D.; WEBSTER, E. Poverty and inequality in South Africa: critical reflections. **Development Southern Africa**, p. 788-802, 2019.

GODZIMIRSKI, J. M. Energy, climate change and security: the Russian strategic conundrum. **Journal of Eurasian Studies**, v. 13, n. 1, p. 16-31, 2022.

GREENPEACE. **The Russian green deal**: summary for policymakers. Vancouver: Greenpeace, 2020.

GRIFFITH-JONES, S. **A Brics development bank**: a dream come true? Geneva: UN, 2014. (UNCTAD Discussion Papers).

GROUIEZ, P.; VERCUEIL, J.; VOLKOV, D. D. Beyond oil: the international integration of the Russian economy between macroeconomic constraints and sectoral dynamics. **Post-Communist Economies**, v. 33, n. 6, p. 770-794, 2021.

HOPKINS, R. **From what is to what if**: unleashing the power of imagination to create the future we want. Vermont: Chelsea Green Publishing, 2019.

HUMPHREY, C. **From drawing board to reality**: the first four years of operations at the Asian Infrastructure Investment Bank and New Development Bank. Boston: G-24, 2020.

KOLLAMPARAMBIL, U. Happiness, happiness inequality and income dynamics in South Africa. **Journal of Happiness Studies**, v. 21, n. 1, p. 201-222, 2020.

MACFARLANE, L.; MAZZUCATO, M. **State investment banks and patient finance**: an international comparison. London: UCL, 2018.

MAZZUCATO, M. **Mission economy**: a moonshot guide to changing capitalism. London: Harper Business, 2021.

MAZZUCATO, M.; RYAN-COLLINS, J. Putting value creation back into "public value": from market-fixing to market-shaping. **Journal of Economic Policy Reform**, p. 1-16, 2022.

MOLON, A. Resgatando nosso futuro: Por um "novo normal" verde e justo. **Internacional Progressista**, [s.d.].

NAUGHTON, B. **The Chinese economy**: transitions and growth. London: MIT Press, 2007.

_____. **The Chinese economy**: adaptation and growth. 2nd ed. Cambridge, United States: MIT Press, 2018.

NDB – NEW DEVELOPMENT BANK. **Towards a greener tomorrow**. Shanghai: NDB, 2016a. (Annual Report 2016).

_____. **Financing of renewable energy projects and associated transmission**. Shangai: NDB, 2016b. Retrieved May 22, 2022, from: <https://bit.ly/3sWrNW1>.

_____. **Canara renewable energy financing scheme**. Shangai: NDB, 2016c. Retrieved May 22, 2022, from: <https://bit.ly/3FKqotq>.

_____. **Putian Pinghai Bay offshore wind power project**. Shangai: NDB, 2016d. Retrieved May 22, 2022, from: <https://bit.ly/3U63dhe>.

_____. **Project finance facility for Eskom**. Shangai: NDB, 2016e. Retrieved May 22, 2022, from: <https://bit.ly/3UmVmM3>.

_____. **NDB successfully issued first RMB-denominated green financial bond**. Shangai: NDB, 2016f. Retrieved May 22, 2022, from: <https://bit.ly/3U5wNng>.

_____. **Meeting ever-evolving development challenges**. Shanghai: NDB, 2020. (Annual Report 2020).

_____. **Two loans to EDB and IIB for Nord-Hydro**. Shangai: NDB, 2021. Retrieved May 22, 2022, from: <https://bit.ly/3fw5QKe>.

_____. **New Development Bank 7th annual meeting (virtual)**: NDB – optimising development impact. Shangai: NDB, 2022a. Retrieved May 22, 2022, from: <https://bit.ly/3h6RdO0>.

_____. **NDB board of governors approved the bank's general strategy for 2022-2026**. Shangai: NDB, 2022b. Retrieved May 22, 2022, from: <https://bit.ly/3sXjlFT>.

_____. **List of all projects**. Shangai: NDB, [s.d.]. Retrieved May 22, 2022, from: <https://bit.ly/3DWkZy0>.

NGAM, R. It's time for an agriculture green new deal in South Africa. **Rosa-Luxemburg-Stiftung**, 2022.

NOGUEIRA, I.; GUIMARÃES, J. V.; BRAGA, J. Inequalities and capital accumulation in China. **Brazilian Journal of Political Economy**, v. 39, n. 3, p. 449-469, 2019.

NOLAN, P. **Integrating China**: towards the coordinated market economy. London: Anthem Press, 2007.

OUR WORLD IN DATA. Greenhouse gas emissions. *In*: RITCHIE H.; ROSER, M.; ROSADO, P. CO_2 and greenhouse gas emissions. **Our World in Data**, 2020. Retrieved May 22, 2022, from: <https://bit.ly/3UlSKOG>.

PADAYACHEE, V. The South African economy, 1994-2004. **Social Research**, v. 72, n. 3, p. 549-580, 2005.

PATNAIK, P. The Modi years. **Guardian**, Dec. 2019. Retrieved July 4, 2022, from: <https://bit.ly/3WrsFPX>.

ROY, B.; SCHAFFARTZIK, A. Talk renewables, walk coal: the paradox of India's energy transition. **Ecological Economics**, v. 180, 2021. Retrieved from: <bit.ly/3GV02Wf>.

SEN, S.; DASGUPTA, B. **Unfreedom and waged work**: labour in India's manufacturing industry. 1st ed. New Delhi: Sage Publications India Pvt. Ltd., 2009.

THAROOR, S. Do the Brics need a bigger voice in the world? **World Economic Forum**, 2015.

UNFCCC – UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE. **NDC registry**. Bonn: UNFCCC, [s.d.]. Retrieved from: <https://bit.ly/3hc7e59>.

VAZQUEZ, K. C. As China moves towards net zero emissions, is the world ready for the economic impact? **South China Morning Post**, 2021.

VAZQUEZ, K. C.; ROYCHOUDHURY, S.; BORGES, C. **Building infrastructure for 21st century sustainable development**: lessons and opportunities for the Brics-led New Development Bank. Sonipat: O.P. Jindal Global University, 2018.

VERCUEIL, J. Entre l'État russe et les marchés mondiaux: les transformations stratégiques de Gazprom et Rosneft (1989-2017). **Entreprises et Histoire**, n. 103, p. 144-162, 2021.

WANG, H. The New Development Bank and the Asian Infrastructure Investment Bank: China's ambiguous approach to global financial governance. **Development and Change**, v. 50, n. 1, p. 221-244, 2019.

WEBER, I. M. **How China escaped shock therapy**: the market reform debate. London: Routledge, 2021.

YIN, R. K. **Case study research design and methods**. Thousand Oaks: Sage, 2014.

APPENDIX

A semi-structured questionnaire to be used for interviews with staff. Methodology for the interviews:

- semi-structured Zoom interviews will serve to elaborate the qualitative assessment of the case studies to get closer to the bank perspective on sustainable development banking;
- invitations will be sent by email to the New Development Bank (NDB) staff professionals, BRICS scholars and development finance experts based on the principle of snowballing (check below); and
- confidentiality will be agreed upon before the interview – the data will be used ethically.

General interview structure, as follows.

1) Introduction and openings.
2) Questions regarding the regional office/area concerned:
   a) what are the advantages of the NDB as a demand-driven borrower-led institution?;
   b) how can the NDB foster private project financing and innovative financial instruments beyond sovereign backed guarantees to its loans?; and
   c) regional offices help boost the bank's actions in member countries. How to understand the action of the offices in parallel with national development banks?
3) Questions regarding the bank's sustainable development framework:
   a) how will the bank extend its green bonds strategy to other member currencies?;
   b) are country-level social and environmental safeguards enough to guarantee that the bank provides development opportunities in its members?; and
   c) how does the sustainability criteria adopted by the bank relate to the challenges of the BRICS countries ecological transition and the Paris Agenda?

4) Questions regarding the case studies:
    a) country context and project description;
    b) what are the expected benefits?;
    c) who absorbs the risk? Financial intermediation and ESGs?;
    d) are country systems safeguards enough for this project?; and
    e) what is the current status of the project? How much has been disbursed?
5) Clarifications, wrapping up and acknowledgement.