

# INFRASTRUCTURE AND SUSTAINABLE DEVELOPMENT GOALS IN THE BRICS-LED NEW DEVELOPMENT BANK

KATHRYN HOCHSTETLER

## KEY POINTS

- The presidents and foreign ministers of the BRICS (Brazil, Russia, India, China and South Africa) countries met in Fortaleza, Brazil on July 15 and signed a formal agreement to create the BRICS-led bank they are calling the New Development Bank (NDB).
- The new bank will focus its lending on infrastructure and sustainable development projects; however, these two priorities are at least partially incompatible. The heavy environmental costs of many infrastructure projects need more attention and cannot be offset by a separate set of sustainable development projects.
- On the other hand, international observers should recognize and reinforce the environmental progress BRICS countries have made. The NDB could help coordinate finance partnerships that aim to extend their innovations in reducing deforestation and expanding renewable energy across the developing world, bringing real environmental improvements, including in reducing climate emissions.

## INTRODUCTION

The BRICS countries held their annual meeting in Fortaleza, Brazil on July 15–17, 2014. While there, they formally launched their NDB, answering some of the many lingering questions about its function (BRICS 2014). The Shanghai-based bank will have at least US\$50 billion in initial capital, making it a significant new entrant into the sphere of global development finance. India will hold its first rotating presidency, but all five of the countries have particular roles to play. The lengthy presidential declaration gave little new information about the kinds of projects that will receive funding; however, simply repeating earlier statements that it will finance infrastructure and sustainable development projects. This



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policy brief examines how the NDB is likely to approach those two policy objectives, and notes a potential clash of these goals. There is already abundant evidence on this issue in the 2013 agreements and in the current financing patterns of the various national development banks of the BRICS member countries.<sup>1</sup>

The 2013 BRICS summit laid out a framework for the NDB’s mission: it would mobilize “resources for infrastructure and sustainable development in BRICS and other emerging economies and developing countries”(BRICS 2013). Alongside the BRICS leaders’ agreement to create the NDB, national development institutions from the five countries also signed a “BRICS Multilateral Agreement on Co-Financing for Infrastructure in Africa” and a “BRICS Multilateral Cooperation and Co-Financing Agreement for Sustainable Development” (Brazil’s National Bank for Economic and Social Development [BNDES] 2013). Thus, infrastructure and sustainable development will likely be the new bank’s major areas of action.

**INFRASTRUCTURE FINANCE FROM THE NATIONAL BRICS BANKS**

The focus on infrastructure finance emerges naturally from the national development agendas and national development institutions of the BRICS countries. Their need for large quantities of long-term development finance for infrastructure and other projects dates back at least to the 1940s through to the 1980s, when the BRICS countries created their national development banks of various kinds. More recently, the rapid economic growth that first drew global attention to the

<sup>1</sup> The discussion of current BRICS development finance in this brief draws on a 2014 forthcoming issue of *Global Policy*. See Bräutigam and Gallagher (2014); Chin (2014); Hochstetler (2014); and Qobo and Motsamai (2014).

BRICS grouping required equally rapid scaling up of their national infrastructures for production, transport and trade. The BRICS have made massive investments in these over the last decade, with special emphasis on energy and electricity infrastructures, a binding constraint for growth in all of them but Russia, which has invested in infrastructure for exporting its abundant energy resources. They hope to use their joint bank to leverage additional funds for investment in their own countries, as well as to make funds available for other developing countries.

The opposite side of this decades-long need for long-term capital and foreign direct investment for infrastructure development is the persistent failure of developed countries to provide it, notwithstanding many promises. While some of the BRICS, especially China, have extensive capital reserves now, other developing countries do not, and even the BRICS need additional and more diverse sources of finance. Even before the 2008 global financial crisis, traditional bilateral donors and the multilateral development banks (MDBs) had been pulling development finance from the emerging economies and reducing finance for infrastructure across developing countries for several decades (Chin 2012). Promises from the G20 leaders at their Seoul summit in 2010 that there would be a high-level panel for infrastructure development have seen few concrete results. G20 leaders' calls for the MDBs to join the effort also saw little take-up (Chin 2014). The NDB will allow the BRICS to collectively present a "Southern" alternative to traditional sources and forms of international development finance, both bilateral and multilateral. The BRICS countries stressed that they are "disappointed and seriously concerned" with the lack of significant change in the governance structures of the International Monetary Fund, and are looking for change in the World Bank as well (BRICS 2014).

The international development finance already provided by the individual BRICS to developing countries has filled some of the finance gap, including for infrastructure projects:

- The BNDES financed 27 infrastructure projects in South America from 1997 to 2013, including eight water and sanitation projects and six gas pipelines. BNDES' total support for exports of Brazilian goods and services to the region totalled US\$3.67 billion from 2001 to 2010, with smaller sums going to Lusophone Africa (Portuguese-speaking African countries) (Hochstetler 2014).
- South Africa's Industrial Development Corporation added US\$2 billion for 41 projects in 17 African countries between 2001 and 2010. The Development Bank of Southern Africa spent hundreds of millions of dollars more for cross-border infrastructure projects that will rebuild regional trade, sometimes recreating infrastructure destroyed by the apartheid government (Qobo and Motsamai 2014).
- China's policy banks dwarf all the others, committing US\$132 billion to African and Latin American governments from 2003 to 2011. About half of the loans are commodity backed, with in-kind reimbursement, since neither side has convertible currency (Bräutigam and Gallagher 2014). Many of these are for resource extraction, but they include many infrastructure loans as well. In Latin America, China largely complements the lending of the World Bank and Inter-American Development Bank (IADB), making infrastructure loans when they do not and financing countries with risky borrowing profiles (Gallagher, Irwin and Koleski 2012).

The Chinese loan commitments of US\$37 billion to Latin America in 2010 alone totalled more than those of such traditional lenders as the World Bank, IADB and the US Export-Import Bank (ibid., 1). In the same year, the BNDES' lending was three times that of the World Bank, although only a small fraction of that finance was distributed internationally (Hochstetler 2014).

Brazil, China and India all distribute much of their foreign development finance as export-import support or otherwise tie it to their national firms. Finally, the BRICS' national development banks increasingly provide large sums to directly cover internal development finance needs at home. Much of both their domestic and foreign funding goes to infrastructure and other long-term growth requirements. In short, an infrastructure focus for the NDB is a natural extension of the financing already being done by the BRICS' national development institutions.

**SUSTAINABLE DEVELOPMENT AND CLIMATE IN BRICS FINANCE**

The second of the NDB's announced priorities — sustainable development — is more of a departure for the BRICS, but is also plausibly rooted in some changes in their internal thinking over the last decade. Evaluating their existing commitment to sustainable development requires noting that this is a profoundly ambiguous term (Happaerts and Bruyninckx 2014). The classic definition of sustainable development was articulated by the Brundtland Commission in its 1987 report *Our Common Future*: sustainable development is “development that meets the needs of the present, without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development 1987, 43). While states have sometimes interpreted sustainable development

to be the economically focused “sustained economic growth,” the BRICS' use of the term, with respect to the NDB and related agreements, appears to lean more heavily on its ecological and environmental legs.

The BRICS Multilateral Cooperation and Co-Financing Agreement for Sustainable Development spotlights the low-carbon economy, and will include elements such as “projects for mitigating and adapting climate change, infrastructure projects in keeping with the principles of sustainable development, investments in renewable energy and energy efficiency, or that foster the sustainable use of biodiversity, ecosystems and the regeneration of natural resources, in addition to efforts aimed at developing, disseminating and transferring environmentally-sustainable technology” (BNDES 2013). In each of these areas, it is possible to point to existing achievements and initiatives — and gaps — by the BRICS countries.

In global climate negotiations, Brazil, South Africa, India and China coordinate their positions as the BASIC coalition. China and India stand out for their rapidly increasing GHG emissions. India's emissions remain low on a per capita basis, while China is currently the largest national emitter of such gases. Russia, originally one of the Annex 1 countries required to reduce emissions under the Kyoto Protocol, has refused to sign up for the protocol's second commitment period. All of the BRICS countries thus have no current treaty-based obligations to reduce emissions, and they have even worked to undermine international requirements for their action on climate change. On the other hand, all five have made voluntary commitments to reduce emissions through pledges to the Copenhagen Accord, and all but Russia have taken some significant steps in the direction of low-carbon development.



Since 2005, Brazil has seen a rapid decline in deforestation in the Amazon region, now down about 70 percent from that year's peak. Since deforestation was the most significant contributor to Brazil's GHG emissions, those emissions were already 30 percent below 2005 levels by 2009 and they have dropped since (Hochstetler and Viola 2012, 759). If the NDB is to "foster the sustainable use of biodiversity, ecosystems" and so on, there is expertise here to be shared.

China and India have made the most significant changes in their energy sectors. While still heavily dependent on coal, they have made large investments in renewable energy. India finances these with a kind of carbon tax on coal (Thaker and Leiserowitz 2014). China has made even more substantial investments and pushed to not only localize production of the components of renewable electricity, but to also be on the innovation edge for wind and solar technology (Lewis 2013). China's cheap production of wind and solar components have brought down prices of renewable energy around the world, although its industry-supportive policies are also now triggering a backlash at the World Trade Organization. There is again expertise and technology in BRICS countries that could be an important component of the NDB.

South Africa has pushed its BASIC partners to greater action in recent years. With the effects of global warming already beginning to appear in local weather systems around the world, the South African government has become increasingly worried that its vulnerable continental neighbours will struggle to adapt to the changing conditions. South Africa would then face negative economic spillovers, migration and other challenging side effects of climate change. In this context, the country sees political and economic as well as moral imperatives to offer assistance to the African

continent.<sup>2</sup> It is also making a very slow transition away from an electricity matrix that was 95 percent coal, and an industrial sector with high emissions.

Beyond their own climate actions, the environmental dimensions of their current external development finance presents a mixed picture that suggests reasons to monitor the sustainability impacts of additional BRICS-based finance. On the one hand, the very focus on finance for infrastructure presents substantial challenges for sustainability. The roads, dams and other infrastructure that the BRICS countries fund cause essentially unavoidable environmental damage and social disruption, although they can be built in ways that reduce those damages. The World Bank has recognized the unavoidability of the environmental and social impacts of large dams for hydroelectric power and irrigation, refusing to fund them through much of the 2000s, before beginning again in 2009 (World Bank 2009). The World Bank and the regional development banks have returned to financing such projects, in part because BRICS countries have been financing them even when the traditional banks have not (Chin 2014). In this sense, the two focuses of the proposed NDB are at least partially incompatible. The same is true for the resource extraction projects that have been the focus of much Chinese finance.

As the World Bank and other traditional lenders are cautiously returning to funding such projects, they have insisted that environmental and social "bottom lines" need to be adhered to as firmly as economic ones, an approach that the NDB should also take (World Bank 2009, 4). In fact, economic viability often depends on social and environmental viability — for example, poor and out-of-date hydrological data can result in

<sup>2</sup> Interview with official of the South African Department of Environmental Affairs, Johannesburg, May 5, 2014.

hydropower projects that cause a great deal of socio-environmental damage for little energy payoff. The BRICS countries, like other lenders, have often preferred to finance prominent greenfield projects. But they can also learn from the World Bank's new insistence that improving both consumer and operational efficiency is often the best way to promote the security and sustainability of the energy supply, as well as resource use more generally (World Bank 2013).

The second sustainable development dimension of the BRICS' development finance has to do with the question of whether they are as careful with environmental protection in their investment projects as the traditional lenders have become. Part of the appeal of BRICS-based lending for recipient states is that it has come with many fewer of the policy conditions required by traditional lenders, such as environmental and human rights protections. The environmental and social impacts of many projects financed by BRICS countries — at home and abroad — are in fact strongly negative. In this context, Chinese financial institutions have come in for sharp criticism of their environmental practices, as have those of Chinese firms. Starting in 2007, the People's Republic of China's former President Hu Jintao made environmental protection one of seven foreign investment principles, which has begun a process of some improvement (Power, Mohane and Tan-Mullins 2012, 200). While overall conclusions are hard to draw, the environmental dimensions of Chinese finance are now about average and responsive to the stringency of host government oversight and regulations, while funding from BNDES has somewhat stronger internal and national environmental controls (Hochstetler 2014). There is still extensive room for reducing the environmental and social impacts of BRICS finance.

## RECOMMENDATIONS

The BRICS countries need to address their infrastructure spending, which carries inherent environmental and social costs, making the NDB's two priorities at least partially incompatible. The heavy environmental costs of many infrastructure projects need more attention than their national development banks have usually given to the issue and cannot be offset by a separate set of sustainable development projects.

International observers should recognize and reinforce the environmental progress BRICS countries have made. In the last decade, several of the BRICS countries have developed significant environmental expertise — notably in controlling deforestation and building renewable electricity — that will support their aim of providing finance for sustainable development. Partnerships that aim to extend these innovations across the developing world can bring real environmental improvements, including in the critical area of reducing GHG emissions. At least some of these can be coordinated and financed through the NDB.

## CONCLUSION

The BRICS-based NDB has announced its plans to focus its lending on infrastructure and sustainable development. The focus on infrastructure reflects long-standing national preoccupations and experiences and is likely to be the stronger focus of their future lending. The commitment to finance for sustainable development presents a more mixed picture, weakened in part by the inevitable environmental consequences of infrastructural development. The BRICS countries need to devote special attention to the potential incompatibilities, raising their environmental

awareness above the levels historically shown by their national development banks. On the other hand, the BRICS countries have a number of positive sustainable development experiences to draw on. International observers should form partnerships with the NDB to disseminate those beyond the BRICS.

## WORKS CITED

- Bräutigam, Deborah and Kevin Gallagher. 2014. "Bartering Globalization: China's Commodity-Backed Finance in Africa and Latin America." *Global Policy* 5 (3).
- BNDES. 2013. "BNDES and Other Development Banks in the BRICS Sign Cooperation Agreements." March 27. [www.bndes.gov.br/SiteBNDES/bndes/bndes\\_en/Institucional/Press/Noticias/2013/20130327\\_brics.html](http://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/Press/Noticias/2013/20130327_brics.html).
- BRICS. 2013. "Fifth BRICS Summit: BRICS and Africa: Partnership for Development, Integration and Industrialisation." March 27. [www.brics5.co.za/fifth-brics-summit-declaration-and-action-plan/](http://www.brics5.co.za/fifth-brics-summit-declaration-and-action-plan/).
- . 2014. "Sixth BRICS Summit — Fortaleza Declaration." July 15. [Brics6.itamaraty.gov.br/media2/press-releases/214-sixth-brics-summit-fortaleza-declaration](http://Brics6.itamaraty.gov.br/media2/press-releases/214-sixth-brics-summit-fortaleza-declaration).
- Chin, Gregory. 2014. "The BRICS-led Development Bank: Purpose and Politics Beyond the G20." *Global Policy* 5 (3).
- Chin, Gregory. 2012. "China as a 'Net Donor': Tracking Dollars and Sense." *Cambridge Review of International Affairs* 25 (4): 579–604.
- Gallagher, Kevin, Amos Irwin and Katherine Koleski. 2012. *New Banks in Town: Chinese Finance in Latin America. Inter-American Dialogue Report*. [www.thedialogue.org/PublicationFiles/TheNewBanksinTown-FullTextnewversion.pdf](http://www.thedialogue.org/PublicationFiles/TheNewBanksinTown-FullTextnewversion.pdf).
- Happaerts, Sander and Hans Bruyninckx. 2014. "Sustainable Development: The Institutionalization of a Contested Policy Concept." In *Advances in International Environmental Politics*, Second Edition, edited by M.M. Betsill, K. Hochstetler and D. Stevis. Hampshire, UK: Palgrave MacMillan.
- Hochstetler, Kathryn. 2014. "The Labor and Environmental Consequences of South-South Finance." *Brown Journal of World Affairs* 20 (2): 221–35.
- . 2014. "The Brazilian National Development Bank Goes International: Innovations and Limitations of BNDES' Internationalization." *Global Policy* 5 (3).
- Hochstetler, Kathryn and Eduardo Viola. 2012. "Brazil and the Politics of Climate Change: Beyond the Global Commons." *Environmental Politics* 21 (5): 753–71.
- Lewis, Joanna I. 2013. *Green Innovation in China: China's Wind Power Industry and the Global Transition to a Low-Carbon Economy*. New York: Columbia University Press.
- Qobo, Mzukisi and Dimpho Motsamai. 2014. "Developmental State Construction and Strategic Regionalism: The Continental Reach of South Africa's Development Finance Institutions." *Global Policy* 5 (3).
- Power, Marcus, Giles Mohane and May Tan-Mullins. 2012. *China's Resource Diplomacy in Africa: Powering Development?* Basingstoke, UK: Palgrave MacMillan.

Thaker, Jagadish and Anthony Leiserowitz. 2014.

“Shifting Discourses of Climate Change in India.”

*Climatic Change* DOI 10.1007/s10584-014-1059-6.

World Bank. 2009. *Directions in Hydropower*. Washington, DC: World Bank.

———. 2013. *Toward a Sustainable Energy Future for All:*

*Directions for the World Bank Group’s Energy Sector*.

Washington, DC: World Bank. [www.worldbank.org/content/dam/Worldbank/document/SDN/energy-2013-0281-2.pdf](http://www.worldbank.org/content/dam/Worldbank/document/SDN/energy-2013-0281-2.pdf).

World Commission on Environment and Development.

1987. *Our Common Future*. Oxford: Oxford University Press.



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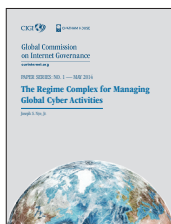


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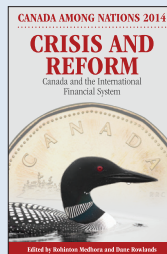
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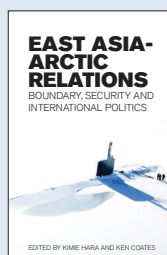
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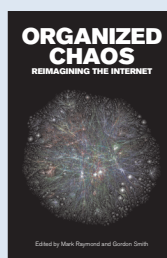
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