

ISAS Working Paper

No. 278 – 18 December 2017

Institute of South Asian Studies
National University of Singapore
29 Heng Mui Keng Terrace
#08-06 (Block B)
Singapore 119620
Tel: (65) 6516 4239 Fax: (65) 6776 7505
www.isas.nus.edu.sg
http://southasiandiaspora.org



The ‘Interlinking of Rivers’ Project in India: Potentials and Challenges

India’s river-linking project carries significant possibilities and challenges for the country. Through the transfer of water from water-rich to water-stressed regions, the project may address the issue of floods and droughts, but it may also produce an adverse impact on the catchment areas of the respective rivers. This paper assesses the ‘Interlinking of Rivers’ project in India through a discussion of its positive and negative effects.

Amit Ranjan and Faiza Saleem¹

In 2017, the Union government of India pushed forward the ‘Interlinking of Rivers’ (ILR) project by allocating US\$87 billion (S\$117.37 billion) to it. The interlinking of rivers in India was first proposed by Sir Arthur Cotton in colonial India. After the independence of India in 1947, then-Union Minister of State for Power and Irrigation, K L Rao, spoke about the plan in the 1960s to link the Ganges River with the Cauvery River through a 2,640-kilometre long canal.² By 1970s, this was developed into a ‘national river grid’ plan by which the surplus waters from the Ganges and Brahmaputra would be diverted to the central and southern States. In 1974, an Air force pilot, Dinshaw J Dastur, submitted a proposal to the Indian government.

¹ Dr Amit Ranjan is Visiting Research Fellow at the Institute of South Asian Studies (ISAS), an autonomous research institute at the National University of Singapore (NUS). He can be contacted at isasar@nus.edu.sg. Ms Faiza Saleem is Research Assistant at ISAS. She can be contacted at faizasaleem@nus.edu.sg. The authors bear full responsibility for the facts cited and opinions expressed in this paper.

² “Supply-Side Hydrology in India”, Rohan D’Souza, *Economic & Political Weekly*, 6 September 2003, pp-3785-3790 (Journal Article).

He suggested the construction of a 4,200-kilometre long Himalayan canal and a 9,300-kilometre long southern canal to be linked up at New Delhi and Patna. Captain Dastur's proposal was popularly referred to as the Garland Canal.³ Corresponding to the river-linking debates, the Indian government prepared its own plan in 1980. The first step in this direction was the setting up of the National Water Development Agency (NWDA) in 1982 to carry out a detailed study of the river interlinking. The NWDA study supported the interlinking of rivers to address the issue of floods in one region and drought in another.

In 2000, the Supreme Court of India was brought in to decide over the ILR. The Supreme Court, in its order, directed the Indian government to speed up and complete the implementation of the ILR project by 2016.⁴ Consequently, the ILR initiative began, albeit at a slow pace. The present National Democratic Alliance government, led by the Bharatiya Janata Party under Prime Minister Narendra Modi, has given it a push by providing much-needed money and other necessary support.

About the ILR Initiative

The ILR project aims to transfer water from water-surplus regions to areas with shortages. This shall be done through construction of a country-wide network of reservoirs and canals to transfer water, and additional storage facilities. It is being assumed that, once completed, the ILR will reduce the inequities in water availability across the country, as some parts (north and northeast) face persistent flooding, while others (west and south) face droughts. To fulfil its objectives, the ILR project aims to create 30 links across India, divided in two components – Himalayan (14 links) and Peninsular (16 links) – as well as some additional intra-state links. Once completed, the project is expected to provide additional irrigation to approximately 30 million hectares of land, and increase power generation capacity by 20,000 to 25,000 megawatt (MW).

The argument being put forth for the need to transfer water from one region to another is due to the unequal distribution of water in India. Also, the rainfall pattern varies from one region

³ Ibid.

⁴ Sunita Narain 'Grand distraction called Interlinking' Centre for Science and Environment <http://www.cseindia.org/content/grand-distraction-called-river-interlinking>. Accessed on 11 December 2017.

to another and one season to the other. For instance, the southern and western States, such as Maharashtra, Rajasthan, Gujarat, Andhra Pradesh, Karnataka and Tamil Nadu, not only face rainfall deficits, but also large variations, resulting in consistent flood-drought cycles. These are amplified by the effects of climate change. While the summer monsoon rains account for more than 75 per cent of the annual rainfall in India, they are not uniformly distributed. At the same time, India's largest rivers have seasonal flows. The Brahmaputra basin in the northeast and Ganges basin in the north generate over 60 per cent of the total river flows in the country, and they depend on snow and glacier melt and monsoon rains, generating high flows and floods in the summer months. These patterns make some regions more water stressed than others.

As a water-stressed country, India's per capita water availability is estimated at 1588 cubic metres, and projected to drop to 1,401 cubic metres and 1,191 cubic metres by 2025 and 2050 respectively.⁵ There is a growing gap in water demand and supply. By 2030, it is expected to be 50 per cent, as total demand for water will grow to 1.5 trillion cubic metres, whereas supply shall be roughly 740 billion cubic metres.⁶ This rising demand for water is fuelled by a burgeoning population, accompanied by an increasing need from agriculture and industry. Agriculture is the biggest consumer of water in the country. While its contribution to gross domestic product is declining, water shortages will have an enormous impact on employment (the sector employs close to 50 per cent of the labour force) and food security in the country.

Due to declining precipitation and rising demands, ground water is being exploited in almost all States of India. At present, India is responsible for 25 per cent of total annual groundwater extracted globally.⁷ This has meant that groundwater levels are falling at alarming rates and increasingly contaminated with chemicals such as arsenic, fluoride and chloride.

⁵ According to Falkenmark's scale, a country is in 'water stress' when per capita water availability falls below 1,700 cubic metres and 'water scarce' if it is less than 1,000 cubic metres. See: "India's Water Wealth -". 2017. *India-Wris.Nrsc.Gov.In*. http://www.india-wris.nrsc.gov.in/wrpinfo/index.php?title=Indiapercent27s_Water_Wealth. Accessed on 13 November 2017.

⁶ "Charting Our Water Future". 2009. The 2030 Water Resources Group. https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/sustainability/pdfs/charting%20our%20water%20future/charting_our_water_future_full_report_.ashx. Accessed on 13 November 2017.

⁷ "The Alarming Levels Of India's Groundwater", *The Hindu*. 2017. <http://www.thehindu.com/news/cities/mumbai/the-alarming-levels-of-indias-groundwater/article19253949.ece>. Accessed on 13 November 2017.

Expected Benefits from the ILR

The ILR was conceived to overcome the aforementioned difficulties. Even after the Supreme Court judgement recommending expedited completion of the ILR project, progress has been limited. The first interlinking project was completed in July 2016 when the Rivers Godavari and Krishna were interlinked. The work on Ken-Betwa is going on. Once completed, it will divert excess water from the Ken River that flows through Madhya Pradesh and Uttar Pradesh to the water deficit Betwa River which also crosses the two States. It is then expected to irrigate 635,000 hectares of land in six of the 13 districts that form the Bundelkhand region – Chhatarpur, Tikamgarh and Panna districts in Madhya Pradesh, and Mahoba, Jhansi and Banda districts in Uttar Pradesh.⁸ The Modi government hoped to launch the first phase of the Ken-Betwa project by the end of 2017, but it has hit fresh obstacles due to new demands by Madhya Pradesh government to incorporate smaller projects, not originally part of the first phase plan, and the consequent objections of Uttar Pradesh to these new demands. At the same time, the National Green Tribunal (NGT) has accepted an appeal challenging the environmental clearance of the project.⁹ With a pending case in the NGT, the construction of the link will be delayed.

Apart from Ken-Betwa, other priority links are Damanganga-Pinjal, Par-Tapi-Narmada and Mahanadi-Godavari. The Detailed Project Reports of the former two have been completed, whereas discussions regarding the Mahanadi-Godavari link are underway with the concerned State of Odisha. It is proposed as a nine-link system, which will transfer surplus waters from the Mahanadi and Godavari basins to deficit basins in the south through Mahanadi-Godavari-Krishna-Pennar-Cauvery-Vaigai-Gundar linkages.¹⁰ While the National Water Development Agency (NWDA) has prepared the feasibility report for this, the project faces delay because of

⁸ Kumar, Raksha. 2017. "Farmers Don't Want Ken-Betwa River-Linking Project – So Why Is The Government Pushing It?". *Scroll.In*, 2017. <https://scroll.in/article/831471/farmers-dont-want-the-ken-betwa-river-linking-project-so-why-is-the-government-pushing-it>. Accessed on 17 November 2017.

⁹ Mohini, Vishwa. 2017. "Appeal In NGT May Delay Ken-Betwa Linking Project". *Times of India*, 2017. <https://timesofindia.indiatimes.com/india/appeal-in-ngt-may-delay-ken-betwa-linking-project/articleshow/61350463.cms>. Accessed on 1 December 2017.

¹⁰ "Feasibility Report Of Mahanadi Godavari Link Project: National Water Development Agency". 2017. *Nwda.Gov.In*. <http://nwda.gov.in/content/innerpage/FRof-Mahanadi-Godavari.php>. Accessed on 17 November 2017.

concerns from the Odisha government regarding the large submergence of the Manibhadra dam, impact on water balance and the huge amount of water to be diverted.¹¹

The ILR project is expected to have an impact on the following sectors:

Agriculture: The sector is vital due to its impact on livelihoods and food production of the country. However, agricultural activity in the country has suffered due to consistent flood and drought cycles, and regional inequalities in water supply. With the ILR programme, these uncertainties may be reduced. Storage reservoirs and canals can link river basins from one part of the country to another, thereby increasing the area under irrigation by 35 million hectares (25 million hectares from surface waters and 10 million hectares from ground waters). This will raise India's irrigation potential from 140 million to 175 million hectares.¹² The programme may also address floods and droughts. For instance, the Ken-Betwa link is considered essential because of the recurrent droughts in the Bundelkhand region, affecting the livelihoods of farmers. In the past 15 years (2002-2016), this region has witnessed 13 droughts. As a result, the Indian government has spent close to US\$2.32 billion (S\$3.13 billion) on drought proofing and US\$3.39 billion (S\$4.57 billion) on drought relief.¹³

Power Sector: Reliable access to electricity is a prerequisite for socio-economic growth in a country. However, at present, close to 40 per cent of the Indian population does not have access to electricity and unreliable, expensive power is a key constraint for businesses.¹⁴ Hydropower, on the other hand, is a clean and renewable source of energy, holding immense potential for India. The country has the capacity to generate 84,000 MW but, at present, it only generates approximately 42,000 MW.¹⁵ The ILR programme envisions an additional 34,000 MW of hydropower through large dams.

¹¹ Vyawahare, Malavika. 2017. "River Linking Project Runs Off Course, Objections From Atleast 4 States". *Hindustan Times*, 2017. <http://www.hindustantimes.com/environment/river-linking-project-runs-off-course-objections-from-atleast-4-states/story-kopAwqabsYoZ3oMRJZiHTL.html>. Accessed on 17 November 2017.

¹² "Note On Interlinking Of Rivers Projects In The Country Details And Status". 2017. *Nwda.Gov.In*. [http://www.nwda.gov.in/upload/uploadfiles/files/File423\(3\).pdf](http://www.nwda.gov.in/upload/uploadfiles/files/File423(3).pdf). Accessed on 6 November 2017.

¹³ Vyawahare, River Linking Project Runs Off Course, Objections from Atleast 4 States, op. cit.

¹⁴ "India Hydropower Development". 2012. *World Bank*. <http://www.worldbank.org/en/news/feature/2012/03/23/india-hydropower-development>. Accessed on 7 November 2017.

¹⁵ Chandrasekaran, Kaavya. 2016. "Capacity For Renewable Energy In India Hits 42,850 Mw". *The Economic Times*, 2016. <https://economictimes.indiatimes.com/industry/energy/power/capacity-for-renewable-energy-in-india-hits-42850-mw-surpasses-capacity-of-hydel-projects/articleshow/52680042.cms>. Accessed on 7 November 2017.

Transport: The growing population in towns and cities alike has resulted in heavy traffic congestion on roads and rail networks in India. Therefore, the proposal of inland navigation facilities under the ILR project is especially appealing. Inland waterways can serve as an alternate and cheap mode of transport. They may also save fuel and provide revenue to local governments. However, this carries the risk of further pollution and destruction of river ecosystems.

Economic Impact: Under the ILR project, the construction of dams, canals, tunnels and power stations will create employment opportunities for a large number of people. With job creation becoming a serious challenge for the Indian economy, the employment of labour, especially from rural areas, will create a positive economic impact over a sustained period of time. In addition, the demand for construction material and heavy equipment may increase, which will be a boon for domestic businesses. Once construction is complete, there may be additional wide-ranging benefits for the economy as water will be available for irrigation, consumption and sanitation, industrial activity and power generation.

A large scale Inter-Basin Transfer (IBT), such as the one proposed in India, is not uncommon in the world. A look at some of the IBT projects can shed light on the tangible benefits to these countries. The Lesotho Highlands Water Project, to be completed by 2020, is one of the largest water transfer infrastructure projects being constructed in southern Africa. It diverts water from the Orange-Senque River in Lesotho to the Vaal River Basin in South Africa.¹⁶ Studies have shown an increase in agriculture activity, with farmers gaining access to local markets. The construction and tourism sectors have also benefitted, increasing employment opportunities for local communities. In addition, the regional political and economic relationship between Lesotho and South Africa has strengthened, and there is more collaboration on sharing data on stream flows, rainfall and the environment.¹⁷

The Tagus-Segura is an IBT in Spain which was constructed in the early 1980s. It draws and transfers water from the Tajo basin in central Spain to the Lorca valley in south-eastern Spain. The implementation of the scheme has increased the area for irrigation, which has, in turn,

¹⁶ Ahsan Uddin Ahmed, Daria T Smeh, Mirza, M Monirul Qader, "Interlinking of Rivers: Experience From Across the World" in *Interlinking Of Rivers In India: Issues And Concerns*, ed. Mirza, M. Monirul Qader, Ahsan Uddin Ahmed, and Qazi Kholiquzzaman Ahmad (Boca Raton: CRC Press, 2008) 20.

¹⁷ *Ibid*, p 21.

amplified the intensity of crops in the region. Flows from the Tajo basin have also mitigated surface water scarcity.¹⁸

Challenges and Pitfalls

Although the ILR initiative is being projected as a panacea to India's water woes, it presents many challenges. The discussion below highlights the environmental impact, relations between the States in India, effect on other riparian countries in the region and operational challenges that may emerge if this project is implemented.

Environment: The ILR project may create an adverse environmental impact on donor and recipient basins, as it will involve the construction of an estimated 3,000 reservoirs, 30 canals and additional tunnels, drainage structures and powerhouses. Sustained construction activity may cause air and water pollution. In addition, the infrastructure may cut across protected or conservation areas, damaging wildlife habitats and forests. For instance, the Ken-Betwa link will be constructed by submerging 4,000 hectares of forest spread and felling of 1.1 million trees in the Panna National Park, home to the Panna tiger.¹⁹

In the long run, the diversion of rivers is problematic because it hampers their natural flow. Natural-flow regime is what keeps alive the rivers' ecological health and viability, impacting the channel, floodplain, wetland and estuary.²⁰ Therefore, the ILR project may damage the ecosystem of India's largest rivers, without a clear measurement of the scale or degree of reversibility of the effects. The feasibility studies developed by the NWDA do not measure the costs to environment and ecological damage. In addition, the Environmental Impact Assessments are usually undertaken after the important project elements have already been designed. Thus, the concerns for adverse environmental effects are excluded from the decision-making process.²¹

¹⁸ Ibid, p 23.

¹⁹ Dutt, Bahar. 2017. "How To Drown A Tiger". *The Hindu*, 2017. <http://www.thehindu.com/sci-tech/energy-and-environment/how-to-drown-a-tiger/article18183135.ece>. Accessed on 7 November 2017.

²⁰ Rohan D'Souza, "River-linking and its Discontents" in *Water First: Issues and Challenges for Nations and Communities in South Asia*, ed. Lahiri-Dutt, Kuntala, and Robert J Wasson (Los Angeles, Calif., SAGE, 2008), 112.

²¹ Ahmed, Smeh, Mirza, Qader, "Interlinking of Rivers: Experience From Across the World", p 19.

Dams, Storage and Displacements: They will be used primarily for water storage and hydropower generation. Dam building peaked in the 20th century, after which there has been a re-evaluation of the costs and benefits of dams, and their place in the water management of countries. There is now greater understanding that while beneficial, large dams also cause environmental damage because of changes in the natural flow and volume of rivers. They are responsible for the destruction of aquatic ecosystems, loss of estuarine fisheries downstream of the dam and reduced quality of water.²²

Country-wise, China leads the list with 23,842 dams followed by the United States (US) with 9,265. India is third with 5,102 dams.²³ Most of these are large, which, according to the International Commission on Large Dams, are dams “with a height of 15 metres or greater from lowest foundation to crest or a dam between 5 metres and 15 metres impounding more than 3 million cubic metres, and defined in greater detail in the World Register of Dams.”²⁴ Specifically, there are 58,519 large dams across the world.²⁵ According to an estimate, the construction of large dams has caused the displacement of about 40 to 80 million people worldwide. Such physical and social consequences of the large dams have made many countries decommission some of their dams which no longer serve a useful purpose and are too expensive to maintain safely. For example, in the US, 500 dams, relatively old, small dams have been decommissioned. Since 1988, the decommissioning rate for large dams has overtaken the rate of construction.²⁶

While the size and number of projects under the ILR programme is much bigger, India has, in the past, undertaken Inter-Basin Transfer (IBT) projects. A review of these projects sheds light on possible environmental effects. For instance, Indira Gandhi Nahar Pariyojana (IGNP) is 649 kilometres, and one of the largest IBT projects in the world. It covers seven districts of Rajasthan: Barmer, Bikaner, Churu, Hanumangarh, Jaisalmer, Jodhpur and Sriganganagar. While it is claimed that the IGNP has generated socio-economic benefits for the people of Rajasthan, numerous studies have shown the adverse effects of the project. Waterlogging and

²² D’Souza, “River-linking and its Discontents”, op. cit., p 105.

²³ ‘International Commission on Large Dams Report’ Retrieved from http://www.icold-cigb.net/article/GB/world_register/general_synthesis/number-of-dams-by-country-members. Accessed on 15 September 2017.

²⁴ Ibid.

²⁵ Ibid.

²⁶ The Report of the World Commission on Dams, 2000, p 11. https://www.internationalrivers.org/sites/default/files/attachedfiles/world_commission_on_dams_final_report.pdf. Accessed on 15 September 2017.

salinity have rendered large tracts of land unusable for agricultural activity, resulting in the resettlement of people to other areas. Malaria has become a consistent epidemic in the Thar Desert area. There are also changes in plant species, which have transformed the landscape of this area.²⁷

Inter-state Disputes: India's challenges in the management of its water resources are further amplified by the nature of its federal democracy. The implementation of the ILR initiative is likely to aggravate interstate water disputes because most of the rivers in India flow across more than one State. India has a history of persisting interstate water disputes. For instance, the Cauvery dispute over the sharing of waters between Karnataka and Tamil Nadu dates back to the agreements signed in 1892 and 1924. Since the 1960s, the issue has not only had political ramifications, but also resulted in violence and riots, often becoming worse in low rainfall years. Similarly, the Mullaperiyar dam continues to be a source of dispute between the States of Kerala and Tamil Nadu. Located on the Periyar River, it belongs to Kerala, but leased to Tamil Nadu, a State with chronic water shortages. Kerala now wants to repair or rebuild the dam which is 116 years old, whereas Tamil Nadu has refused to renegotiate the deal or agree to a new dam, citing the livelihoods of people who depend on its waters. Regional parties have often used this issue to stoke protests and violence in the two States. In the absence of an overarching dispute resolution mechanism, water-sharing disputes between the States remain unresolved. With the ILR project, waters will be transferred from one river basin to another, which is bound to create additional tensions. In such a scenario, not only will new conflicts arise, old ones will also be resurrected.

The lack of reliable data may also adversely affect coordination between the States. Regularly updated data on river flows, groundwater tables, net irrigated area and power generation will be crucial for the implementation and maintenance of the ILR projects. In India, there is a lack of consistency between the numbers provided by the Central Water Commission.²⁸ This creates confusion and may make it difficult for the States to agree to water transfers, especially in lean periods.

²⁷ Ahmed, Smeh, Mirza, Qader, "Interlinking of Rivers: Experience From Across the World", pp +29-31.

²⁸ D'Souza, "River-linking and its Discontents", op. cit, p 114.

International Tensions: Apart from disputes between the States, the ILR project may also escalate tensions between India and its neighbours. The lower riparian neighbours of India as well as Nepal allege that the ILR project would lead to the transfer and diversion of their water resources. It is being maintained in Bangladesh that the ILR initiative threatens the livelihoods of more than 100 million people, and, consequently, the economy, ecology, morphology and bio-diversity of the country.²⁹

According to international law, when it comes to shared rivers, the interests of all riparian states are to be taken into account. Historically, India has accommodated the legal rights and equitable shares of lower riparian states, as witnessed in the Indus Water Treaty of 1960 and successive agreements on sharing of the Ganges water with Bangladesh.³⁰ In view of this, it is expected that, the adverse effects, if any, of this project on India's riparian neighbours would need to be addressed.

Operational Concerns: On the practical side, there are concerns about what defines a surplus or deficit region. With a highly seasonal pattern of rainfall, the monsoon rains bring up water levels in rivers, which are then needed for drinking and agricultural activities in later months, with low levels of rainfall. The ILR project will have to clearly delineate water withdrawal limits and timings from surplus or donor regions. This will be very challenging in practice, with the weak availability of data on river flows throughout the year.

Apart from the seasonality of rainfall, the other concern is that the Indian subcontinent has a natural tilt towards the east, with the rivers flowing towards the east and southeast.³¹ The ILR project, on the other hand, will shift waters to the western part of the country, against the natural slope. For instance, in the Ken-Betwa link, the Ken river will be channelled west, against its natural flow. Not only will this require extra effort, it will also hamper the 'natural flow' of rivers and, in the process, destroy the river ecosystems. There is the additional concern of pollution. Many of India's rivers suffer from widespread contamination. By connecting rivers through the canals and water grids, all rivers face the risk of contamination. Many communities

²⁹ M Rafiqul Islam, Shawkat Alam, "Interlinking of Rivers: International and Regional Legal Aspects" in *Interlinking Of Rivers In India: Issues And Concerns*, ed. Mirza, M. Monirul Qader, Ahsan Uddin Ahmed, and Qazi Kholiqzaman Ahmad (Boca Raton: CRC Press, 2008), p 222.

³⁰ Ibid.

³¹ Misra, Anil Kumar, Anju Saxena, Manish Yaduvanshi, Ajai Mishra, Yogendra Bhadauriya, and Alok Thakur. 2006. "Proposed River-Linking Project Of India: A Boon Or Bane To Nature". *Environmental Geology* 51 (8): 1365. doi:10.1007/s00254-006-0434-7.

in India depend on the rivers for consumption and sanitation as well as a source of livelihood. For instance, it was found that the Tagus-Segura project caused environmental deterioration as the clean water in Tagus absorbed the pollution from rivers coming from Madrid.³²

The scale of the ILR project will involve clearing of large tracts of land and forests. Many of the villages affected are home to farming communities, settled there for centuries. Therefore, it will involve unprecedented numbers of displaced people. With growing pressures on land and funding constraints on the State government, this may prove to be immensely challenging. It has been in the past. For instance, the families affected by the Sardar Sarovar project received compensation of US\$93,000 (S\$126,000) each, after a 38-year battle, through a judgement by the Supreme Court in February this year.³³ The Internal Displacement Monitoring Centre has estimated that at least 65 million people have been displaced by development projects between 1950 and 2005 in India. Of these, only an estimated 17 per cent have been resettled, with little or no information on their whereabouts.³⁴ To make the resettlement process smooth, the ILR project needs a standard rehabilitation procedure, agreed upon by the States. It should have details of compensation for fully and partially affected families. Those losing their livelihoods and farmland will need to be compensated with cash or equivalent land elsewhere.

Concluding Remarks

The ILR project is one of the most ambitious projects being undertaken in India. It will centralise the river water system in India through which waters from one region will be transferred to the other based on need and demand. This will help to tackle the regional inequities in water supply, but may produce an adverse impact on people and land from the catchment areas. In addition, it has the potential to aggravate interstate water disputes and create tensions between India and its riparian neighbours. Therefore, the government needs to carefully weigh the costs to the people and the environment, against the expected benefits of the project. Alternative solutions geared towards local issues, improvements in data gathering,

³² Ahmed, Smeh, Mirza, Qader, "Interlinking of Rivers: Experience From Across the World", p 24.

³³ The Tribune. 2017. "After 38-Year Wait, Narmada Dam Oustees To Get Rs 60 Lakh", 2017. <http://www.tribuneindia.com/news/nation/after-38-year-wait-narmada-dam-oustees-to-get-rs-60-lakh/361616.html>. Accessed on 1 December 2017.

³⁴ Nadine Walicki, Marita Swain. 2016. "Pushed Aside: Displaced For 'Development' In India". Internal Displacement Monitoring Centre. <http://www.internal-displacement.org/assets/publications/2016/201607-ap-india-pushed-aside-en.pdf>.

dispute resolution mechanisms and rehabilitation procedures must also be considered before the projects under the ILR initiative are implemented.

• • • • •