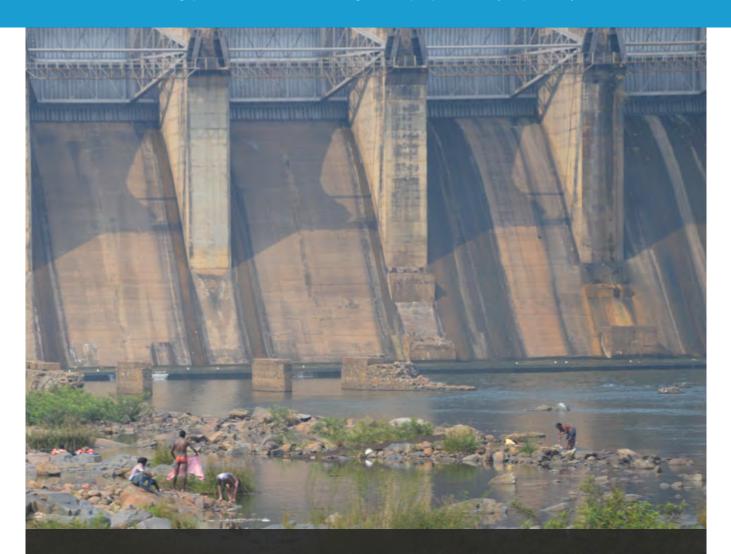






CASE STUDY SERIES

This series addresses a gap in awareness and knowledge about people internally displaced by dam construction.



DAMS AND INTERNAL DISPLACEMENT

An introduction

11 APRIL 2017

www.internal-displacement.org

An estimated 80 million people have been displaced by dam projects worldwide. Their fate is largely unknown, but evidence shows that those affected tend to become impoverished and marginalised.

With this case study series, IDMC aims to gradually draw a global picture of displacement associated with dam projects, with a focus on the most vulnerable people. We will cover the drivers and process of displacement, the numbers of people displaced, their onward movements, the impacts they face, progress towards solutions for them and factors that contribute to their vulnerability.

Dams contribute to the achievement of development goals, but displacement and its adverse effects undermine them. Truly people-centred development would ensure that the displaced are not left behind in the pursuit of its goals.

Global scale of displacement caused by dam projects

Over the past 20 years, as many as 300 million people have been displaced around the world by development– a rate of 10 to 15 million people a year.¹ Many of those affected live in developing countries where economic growth and poverty alleviation are considered top policy priorities, but displacement tends to leave people impoverished and marginalised, contrary to the very goals of development.

The impacts internally displaced people (IDPs) face can be severe, and include the loss of land, income, cultural identity, community and access to housing, health and education. Women, children, the elderly, indigenous people and members of ethnic minority groups are particularly susceptible and invariably pay the highest price of development.² States have primary responsibility for IDPs' wellbeing and international standards exist for the private sector and development finance institutions, but many of the people displaced by development projects have been left unprotected.³

Within the displacement caused by development projects, that associated with the construction of large dams is among the best-studied, in part because of the magnitude of dams' impacts. The International Commission on Large Dams defines large dams as greater than 15 meters in height or having a storage capacity greater than 3 million cubic meters.⁴ There are about 50,000 large dams in the world, half of them in China, and as many as 800,000 smaller ones.⁵ It has been estimated that as many as 80 million people have been displaced worldwide to make way for the construction of dams, a figure that is likely to be a significant underestimate given that it does not include those displaced by smaller dams.⁶

Displacement caused by dams often involves resettlement, in which people are moved to another location. This should be, but is by no means always accompanied by compensation for their losses and assistance to rebuild their lives. IDMC considers people compelled to move from their homes or livelihoods and who do not cross an international border as internally displaced despite any assistance or compensation they may receive, and we will include them in our estimates according to the definition of an IDP in the Guiding Principles on Internal Displacement.

There is a serious lack of data on the fate of the 80 million people displaced by dam projects. Information on whether their land appropriation and eviction process adhered to international standards is scarce, as is information on where they went following displacement, how many were resettled, the conditions in the resettlement areas, where they live today, the assistance and compensation they received, the vulnerabilities and protection issues they and their descendants still face as a result of their displacement, and how many have achieved a durable solution to their displacement. Where information does exist, it is dispersed.

Case study data provides some long-term data that measured the impacts on those displaced over time. It is still not possible, however, to paint a global picture of displacement caused by dam projects or – most worryingly – to identify the most vulnerable IDPs and their protection and assistance needs.

Dams are a booming industry

The rate of dam construction shows no sign of abating. In fact interest and investment in hydropower generation have increased significantly in recent years. At least 3,700 major dams are planned or under construction.⁷ The recent increase is in large part a result of private, state and regional banks from the global south filling the financing void that was left during World Bank's brief retreat from financing large dam projects in the developing world during the late 1990s and early 2000s.⁸

As of August 2012, Chinese companies or financiers were involved in at least 308 dam projects under way in 70 countries.⁹ China's growing involvement in global dam construction is a result of numerous factors. These include drastic reform of the country's energy sector that has allowed its firms to operate with more flexibility abroad, and the expertise accumulated through China's long history of domestic dam construction, which enables its firms to build large dams cheaply and efficiently.¹⁰

Whether the benefits of new dams will outweigh their costs remains to be seen, but the debate has been contentious. Proponents argue that large hydropower dams are a relatively inexpensive, climate-friendly way for countries to meet their own energy needs and to store water as climate change makes the amount and distribution of precipitation less predictable.

Opponents argue that they are neither entirely clean nor harmless. They displace and impoverish large numbers of people and alter river ecosystems, which can adversely affect flora, fauna and people's livelihoods both up and downstream. They say dams are a source of climate pollution because their reservoirs emit methane for a period of time after inundation, and may disrupt local economies as a result of power shortages in times of drought.¹¹ Many dams have also proven too costly and taken too long to build to deliver a positive return, making them economically unviable.¹²

The impacts of displacement

The evidence available shows that people displaced by dams tend to end up worse off than before. A 2012 study of 50 large

dams unearthed no statistical evidence that outcomes for resettled IDPs improved over time. In fact, their living conditions and socio-economic situation deteriorated in 82 per cent of cases.¹³

Among the many negative impacts that people displaced by dam projects frequently face are changes in household size and structure, poorer housing, fewer employment and income generating opportunities, less access to education, land and water, fragmented social networks and communities, and increased health and psychosocial risks.¹⁴ In its seminal 2000 report, the World Commission on Dams (WCD) brought many of these impacts to light, concluding that they were "spatially significant, socially disruptive, lasting, and often irreversible".¹⁵

The human impacts are shaped by a range of factors, including political will, financing, the degree of participation of those to be displaced in the process, the institutional capacity of the project implementer, the assistance and compensation provided, the ability of those displaced to rely on their social networks for support, relations with host communities and other unexpected events.¹⁶

Beyond displacement itself, when indirect social impacts are considered the picture is even more striking. Experts estimate that as many as 472 million people have been affected by the 7,000 largest dams alone, and dam construction has affected more than half of the world's largest river systems.¹⁷ The impacts are felt in a variety of ways, and may be positive or negative. Dams alter local water flows and river ecosystems, which can harm sustenance and livelihoods both up and downstream, in some cases prompting displacement. On the other hand, local communities and those displaced may benefit from better irrigated land, improved access to electricity, less vulnerability to flooding and reservoir fish farms.¹⁸

Tensions, violence and conflict may also accompany dam displacement if the political environment, the history of land relations and local grievances are not taken into account, and international standards not followed. International finance provides the money and means to deploy military control and the depopulation of areas around has in some cases involved intimidation and violence that can escalate, particularly in countries or regions where the rule of law is weak.¹⁹ Those who resist displacement or call for better protection for IDPs have been threatened, verbally and physically assaulted, sexually harassed, arrested and even killed.²⁰

The power asymmetry between project implementers and the affected communities can lead to a skewed distribution of costs and benefits.²¹ There is also the risk of communal violence between local communities and those displaced in resettlement areas, and of abuses as people attempt to exercise their human rights. Violence may lead to further displacement.

IDMC's focus

Starting in 2017, we will monitor displacement caused by development projects by focusing on that associated with dam construction. Dams were the most common type of development project picked up by our monitoring of the phenomenon in 2016, indicating that they may be reported on more often than other projects. Dams also tend to displace more people than other types of project, so compiling figures for the displacement they cause will give us closest approximation to the number of people displaced by development projects globally.

There are lists of dams that we can work from, we can learn from and build on WCD's work and we can analyse satellite imagery to monitor dam construction and estimate the scale of displacement caused. We can also learn about methods of data collection and analysis from others such as Oregon State University, MIT's Displacement Research Action Network, China's National Research Centre on Resettlement and NGOs working on water issues such as Eau Vive and International Rivers. Given that conflict and disasters arise before, during and after dam construction, we will also be able to study the interface between the displacement caused by conflict, disasters and development.

With this case study series, we aim to paint an initial global picture of displacement caused by dam construction. To do so, we require disaggregated data and information on the number of people displaced from their homes, land and livelihoods, the number of people resettled and their locations, the assistance and compensation received, the fate of those who were not resettled, the ability of those displaced to exercise their rights over time, any onward or return movements, and details of the displacement planning and implementation process.

To undertake this huge task, we need and invite all the support, data and information that affected communities, NGOs, scholars and governments can provide. We seek cases of displacement caused by dam projects from 1960 onwards in any country, including longitudinal studies. We will use the information we receive to compile an estimate of the number of people displaced by dam projects, and to show the global impacts of the phenomenon.

Acknowledging that not everyone displaced by dams is affected in the same way, we will focus our work on the most vulnerable. The vulnerability of people displaced by dam projects is not homogenous across or within countries, communities or families. It also changes over time.

Our understanding of the factors that shape human impacts is far from complete. As such, this case study series also aims to help identify the trends and distil the main factors that determine how severe the impacts of displacement caused by dam projects are. Doing so it will make it easier to identify and assist the most vulnerable IDPs.

ENDNOTES

- Kirchherr J and Katrina J C, The Social Impacts of Dams: A New Framework for Scholarly Analysis, Environmental Impact Assessment Review, 2016, p.100; Kaida N and Tofail M, Rural-Urban Perspectives on Impoverishment Risks in Development-Induced Involuntary Resettlement in Bangladesh, Habitat International 50, 2015, p.73; Randell H, The Short-Term Impacts of Development-Induced Displacement on Wealth and Subjective Well-Being in the Brazilian Amazon, World Development 87, 2016, p.385; Cernea M, The Risks and Reconstruction Model for Resettling Displaced Populations, World Development 25(10), 1997, p.1,570
- Cernea M, The Risks and Reconstruction Model for Resettling Displaced Populations, World Development 25(10), 1997, p.1,576; Pandey B, Depriving the Underprivileged for Development, Institute for Socio-Economic Development: Bhubaneswar, India, 1998, p.185; Downing T and McDowell C, Findings and Recommenda-

tions of the First International Conference on Development-Induced Displacement and Impoverishment, 9 December 1996, available at <u>goo.gl/fhicbn</u>; Downing T, Avoiding New Poverty: Mining-Induced Displacement and Resettlement, IIED, No.58, April 2002, p.3, available at <u>goo.gl/OAGFNc</u>; World Commission on Dams, Dams and Development: A New Framework for Decision-Making, 16 November 2000, p.17,124, available at <u>goo.gl/ So91U</u>; Washington Post, The Violence of Development, 9 August 2001, available at <u>goo.gl/xIPEIE</u>

- De Wet C, Introducing the Issues in Development-Induced Displacement: Problems, Policies and People, Berghahn Books, 2006, p.1-12
- 4. Tilt B and Gerkey D, Dams and Population Displacement on China's Upper Mekong River: Implications for Social Capital and Socio-Ecological Resilience, Global Environmental Change 36, 2016, p.153; Li X with Dong S, Zhao Q and Liu S, Impacts of Manwan Dam Construction on Aquatic Habitat and Community in Middle Reach of Lancang River, Procedia Environmental Sciences 2, 2010, p.709-711
- 5. Tilt B and Gerkey D, Dams and Population Displacement on China's Upper Mekong River: Implications for Social Capital and Socio-Ecological Resilience, Global Environmental Change 36, 2016, p.153; Li X with Dong S, Zhao Q and Liu S, Impacts of Manwan Dam Construction on Aquatic Habitat and Community in Middle Reach of Lancang River, Procedia Environmental Sciences 2, 2010, p.706; Wei G with Yang Z, Cui B, Li B, Chen H, Bai J and Dong S, Impact of Dam Construction on Water Quality and Water Self-Purification Capacity of the Lancang River, China, Water Resources Management 23, 2008, p.1,764.
- World Commission on Dams, Dams and Development: A New Framework for Decision-Making, 16 November 2000, p.102, available at: <u>goo.gl/So91U</u>
- Zarfl C, Lumsdon A E, Berlekamp J, Tydecks L and Tockner K, A global boom in hydropower dam construction, Aquatic Sciences 77(1), 2015, p.161; Ansar A, Flyvbjerg B, Budzier A and Lunn D, Should we build more large dams? The actual costs of hydropower megaproject development, Energy Policy, 2014, p.1
- Kirchherr J with Pohlner H and Charles K J, Cleaning Up the Big Muddy: A Meta-Synthesis of the Research on the Social Impact of Dams, Environmental Impact Assessment Review 60, 2016, p.115; McDonald K with Bosshard P and Brewer P, Exporting Dams: China's Hydropower Industry Goes Global, Journal of Environmental Management 90 (Supplement 3), 2008, S.294; MIT Displacement Research Action Network, Lessons from the Past for the Course Ahead, March 2017, p.15, on file with IDMC
- 9. International Rivers, The New Great Walls: A Guide to China's Overseas Dam Industry, 2012, p.4
- McDonald K with Bosshard P and Brewer P, Exporting Dams: China's Hydropower Industry Goes Global, Journal of Environmental Management 90 (Supplement 3), 2008, S.297
- 11. Maeck A with DelSontro T, McGinnis D F, Fischer H, Flury S, Schmidt M, Fietzek P and Lorke A, Sediment Trapping by Dams Creates Methane Emission Hot Spots, Environmental Science and Technology 47(15), 2013, p.8,130; The human impacts are shaped by a range of factors, including political will, financing, the degree of participation of those to be displaced in the process, the institutional capacity of the project implementer, the assistance and compensation provided, the ability of those displaced to rely on their social networks for support, relations with host communities and other unexpected events.
- Ansar A, Flyvbjerg B, Budzier A and Lunn D, Should we build more large dams? The actual costs of hydropower megaproject development, Energy Policy, 2014, p.1; MIT Displacement Research Action Network, Lessons from the Past for the Course Ahead, March 2017, p.22, on file with IDMC

- 13. Scudder T, Resettlement Outcomes of Large Dams in Impacts of Large Dams: A Global Assessment, Springer, 2012, p.46
- Tilt B with Braun Y and He D, Social Impacts of Large Dam Projects: A Comparison of International Case Studies and Implications for Best Practice, Journal of Environmental Management 90 (Supplement 3), 2008, S.254
- Tullos D with Tilt B and Liermann K, Introduction to the Special Issue: Understanding and Linking the Biophysical, Socioeconomic and Geopolitical Effects of Dams, Journal of Environmental Management 90 (Supplement 3), 2008, S.205
- Scudder T, Aswan High Dam Resettlement of Egyptian Nubians, 2016, p.49; World Bank, Resettlement and development: the bankwide review of projects involving involuntary resettlement: 1986–1993, 1994, p.6, available at <u>goo.gl/qGeQnv</u>
- 17. Richter B with Postel S, Revenga C, Scudder T, Lehner B, Churchill A and Chow M, Lost in Development's Shadow: The Downstream Human Consequences of Dams Water Alternatives 3(2), 2010, p.177; Li X with Dong S, Zhao Q and Liu S, Impacts of Manwan Dam Construction on Aquatic Habitat and Community in Middle Reach of Lancang River, Procedia Environmental Sciences 2, 2010, p.707; Tullos D with Tilt B and Liermann K, Introduction to the Special Issue: Understanding and Linking the Biophysical, Socioeconomic and Geopolitical Effects of Dams, Journal of Environmental Management 90 (Supplement 3), 2008, S.204
- IDMC, Pushed Aside: Displaced for 'Development' in India, June 2016, available at <u>goo.gl/JG9qes</u>
- 19. Johnston B R, Action Research and Environmental Justice: Lessons from Guatemala's Chixoy Dam, forthcoming, p.9
- International Accountability Project, What Development Is and What It Could Be, March 2015, p. 62,74, available at <u>goo.gl/paOCMA</u>; World Commission on Dams, Dams and Development: A New Framework for Decision Making, November 2000, p.103,106, available at <u>goo.gl/j0hoc9</u>; FMR, Undermining Development: Forced Eviction in Bangladesh, December 2012, available at <u>goo.gl/WdCbh4</u>
- 21. MIT Displacement Research Action Network, Lessons from the Past for the Course Ahead, March 2017, p.19, on file with IDMC

This case study introduction is authored by Nadine Walicki, Michael J. Ioannides and Bryan Tilt.

Cover photo: A view of the Chandil dam in Jharkhand, India. IDMC, March 2016

Nadine Walicki

Senior Strategic Advisor on Development +41 22 552 36 35 nadine.walicki@idmc.ch

IDMC

NRC, 3 rue de Varembé 1202 Geneva, Switzerland www.internal-displacement.org +41 22 552 3600 info@idmc.ch