CLIMATE FINANCE

India

Climate Finance for WASH: India

Water, sanitation and hygiene (WASH) is integral to supporting community climate resilience that ensures no one is left behind. Inclusive, climate-resilient WASH goes beyond infrastructure to ensure that solutions meet the needs of the most marginalised and can continue functioning in the face of climate hazards.

Accessing climate adaptation financing for WASH projects has been a challenge for civil society organisations (CSOs) due to a number of procedural, design and systemic barriers. This brief provides a short overview of the climate finance available for the WASH sector in India. It identifies the main barriers to climate finance access and highlights proven pathways to funding. It also recommends ways for CSOs and funders (primarily donor governments and multilateral development banks (MDBs)) to improve access to funds for climate-resilient WASH. It is one of a series of briefs covering several countries in the Asia and Pacific region. It is based on analysis of secondary data from a desk review and interviews with key climate finance stakeholders[1] in late 2022.

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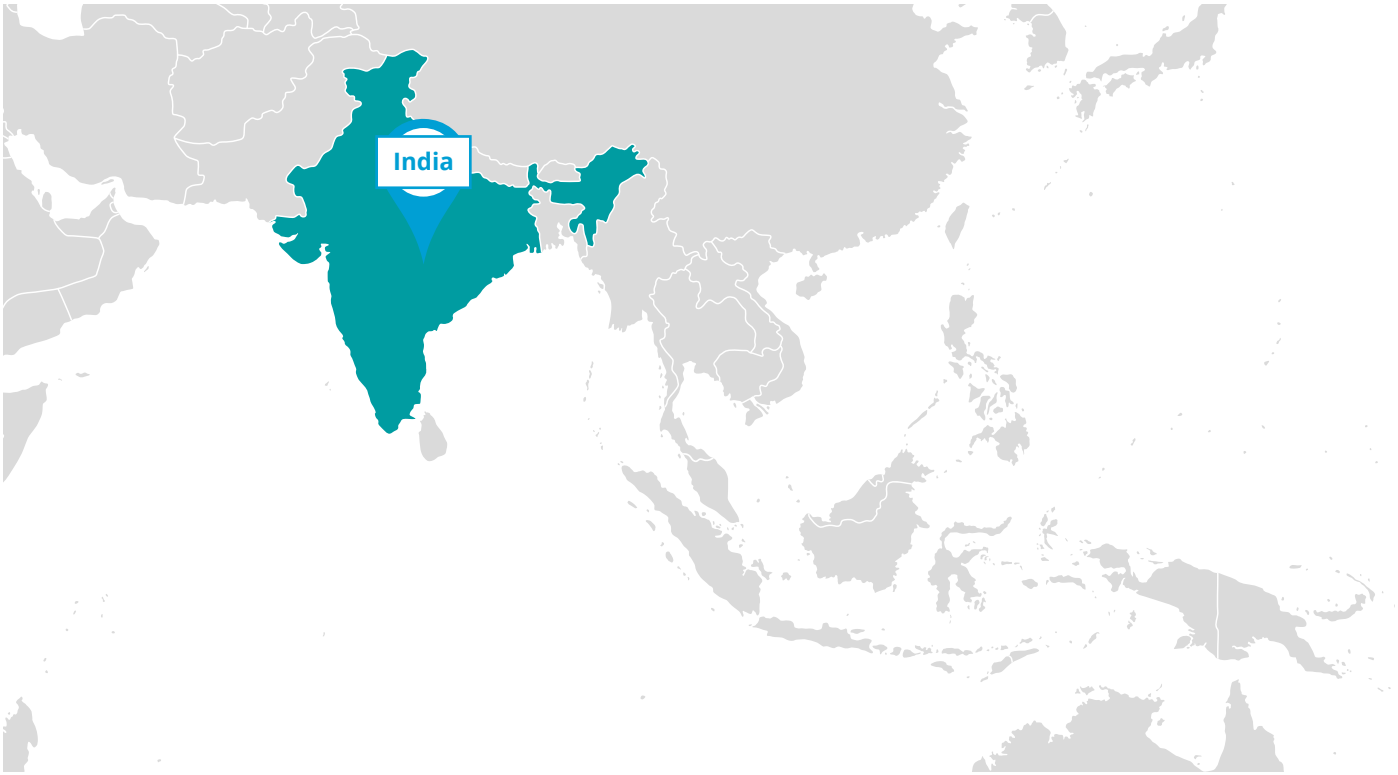
Introduction

In 2015, in its first Nationally Determined Contribution (NDC)[2], India estimated an annual climate financing need of USD165 billion per annum towards its mitigation and adaptation goals. It also mentioned that India's mitigation finance needs were almost four times its adaptation finance needs. India updated its NDC in August 2022[3] to include enhanced ambitions and a commitment to net zero carbon dioxide emissions by 2070. India's NDC recognises WASH as one of the pillars of achieving its climate change strategy, especially regarding adaptation.



India — like most countries in South Asia — is particularly vulnerable to climate change. In recent years, India has experienced more erratic and severe weather events and related crises, including floods, cloudbursts, landslides and heatwaves, and at least a billion people currently face severe water scarcity for at least one month annually

Overview of India's climate finance for WASH

India has significant climate finance flows, distributed relatively equally between adaptation and mitigation, and with a proportion focused on WASH.

- **In financial year 2021/2022, total climate finance flows in India were around USD66 billion, which reflects approximately 40% of the overall need documented in India's NDC**. Of this amount, ~59% was from government sources, followed by commercial finance (~20%) and multilateral funding agencies (~12%). Bilateral funding agencies and corporate finance each contributed 4.5%. Foreign and domestic philanthropic organisations contributed less than 0.2%.
- **Overall, climate finance flows were almost equally distributed between adaptation and mitigation activities**. However, presence of well-defined and dependable revenue streams is likely to have prompted multilateral and bilateral agencies, commercial financial institutions (FIs), and corporate entities to fund mitigation projects rather than adaptation projects (see Figure 1). Conversely, the climate finance portfolio of the Indian Government and domestic philanthropic entities is largely adaptation focused. With the intent of rerouting more of its mitigation commitments towards adaptation, India has increased its efforts to attract mitigation financing from commercial sources, both national and global. It is in this context that India estimated its mitigation financing need was four times its adaptation need.

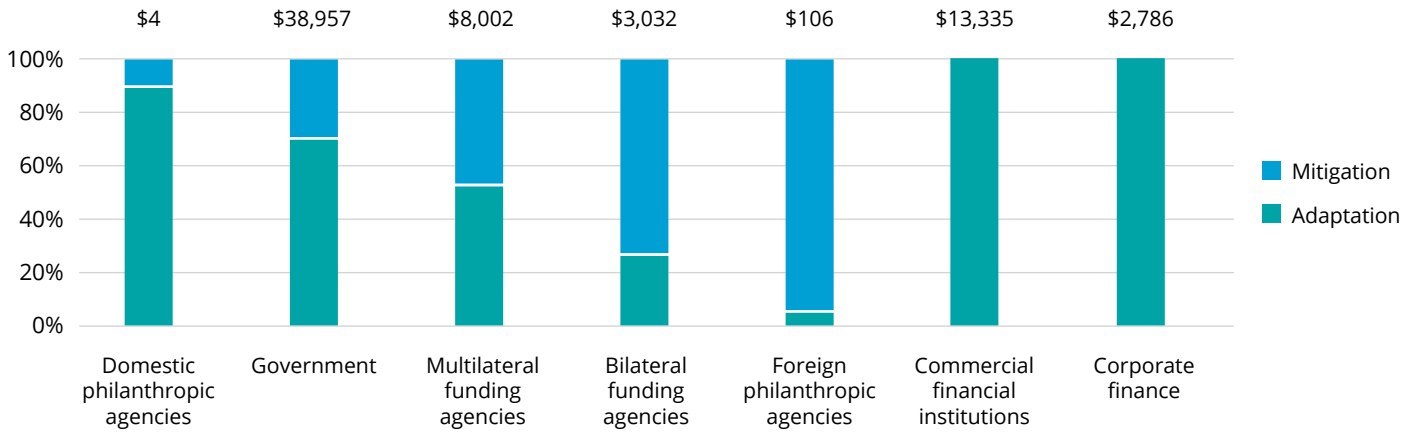


Figure 1. Total in USD million and share of adaptation/mitigation contributions by different funder archetypes in FY 2021/2022 Source: RTI 2022

- **Almost 32% of all annual climate finance (USD21 billion) in India over financial year 2021/2022 was invested in the WASH sector and originated mostly from public sources**. Such flows originate largely from the Indian Government (~90%), followed by support from multilateral (~7.5%) and bilateral agencies (~2.5%). Philanthropic, corporate and commercial FI contributions to WASH-related climate finance were negligible in comparison. Hence, India's WASH sector depends on public finance. Such dependence could be due to insufficient public–private engagement or lack of financially viable business models in the sector.
- **Mitigation focused projects accounted for 14% of WASH-based climate finance flow, while the rest was adaptation focused**. India's NDC identifies projects such as methane avoidance through solid waste and wastewater management and waste-to-energy schemes as mitigation activities. Government financing supported 97% of WASH-based mitigation activity, and 90% of WASH-based adaptation activity.
- **Research or technical assistance (R/TA) activities received 6% of annual WASH-related climate finance — that is, USD1.25 billion** (see Figure 2). Again, this was largely government funded (~94%), followed by support from multilateral (~5%), notably the World Bank, and bilateral agencies (~1%), particularly the United States Agency for International Development (USAID), the Australian Government Department of Foreign Affairs and Trade (DFAT) and the European Union (EU). Infrastructure financing was most prevalent among bilateral agencies, notably the Japan International Cooperation Agency, and multilateral agencies, again the World Bank, as well as government.

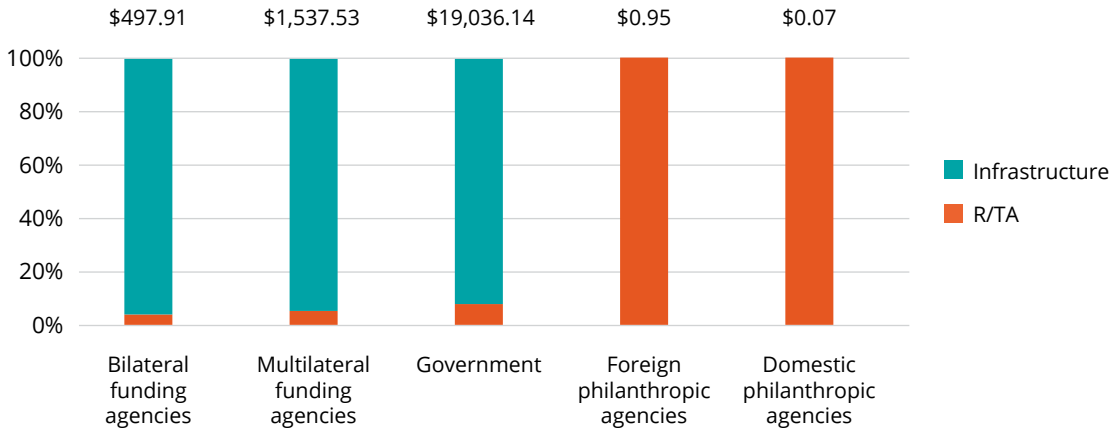


Figure 2. Total in USD million and share of WASH R/TA / infrastructure funding by funder archetypes in FY 2021/2022 Source: RTI 2022

- **Almost 60% of government WASH-related R/TA climate finance flow during financial year 2021/2022 was aimed at urban WASH activities, followed by wastewater management, and rural WASH**. Urban WASH also constituted 75% of multilateral and 84% of all bilateral WASH-related R/TA climate finance flows in India. Philanthropic agencies, especially foundations linked to industrial undertakings, were interested in WASH issues in the vicinity of their industrial setups. Since these are typically located in the hinterlands, rural WASH was the focus of philanthropic R/TA contributions.

Barriers to CSOs accessing finance

Top three barriers to CSOs

1. **Lack of tested and financially viable business models for WASH and the broader adaptation ecosystem.** The research found that 86% of WASH-based climate finance in India over the 2021/2022 financial year was adaptation focused. This correlates with WaterAid and Overseas Development Institute's landscape analysis report,[4] which contains an estimate of ~80%. An apparent lack of financially viable and tested business models for adaptation projects (unlike mitigation projects), including those in WASH, has led to low participation and investment from private entities. Consequently, government currently supplies ~90% of funding for WASH-related R/TA activities.

2. **Lack of standardised approaches to the measurement of the climate change adaptation impact of WASH programs.** Donors and impact investors are keen to understand the outcomes of their investments. While impacts are easy to measure for mitigation-related projects, there are no standard methodologies for measuring and reporting the impacts of adaptation interventions, including those in the WASH sector.

3. **Inadequate time for field testing interventions around evolving climate science and awareness and associated donor expectations.** Rapidly changing climate understanding and climate terminology in India is bringing a host of related but confusing concepts like environmental, social and governance concerns, net zero, carbon neutral, resilience and vulnerability. Grassroots organisations, which are still implementing and testing concepts that emerged only a few years ago, are struggling to align with these novel and emerging concepts, which donors increasingly expect to be integral components of program design. Some grassroots organisations have learning budgets that are insufficient to keep up with evolving market needs. These factors reduce donors' interest in collaborating with these organisations on innovative climate-focused WASH projects for the most marginalised and vulnerable people.

Other barriers to CSOs

Lack of harmonisation of climate finance tracking and reporting

While undertaking ground-up research on climate finance flows in India, RTI International found multiple and mutually inconsistent methodologies and approaches for defining, tracking and reporting climate finance data. For example:

- the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) Rio Markers for Climate Handbook[5] tracks donor finance by assessing policy objectives in relation to each aid activity
- the Common Principles for Climate Change Adaptation Finance Tracking[6] help MDBs ascertain which projects, sub-programs or activities qualify for climate change adaptation finance
- the Common Principles for Climate Change Mitigation Finance Tracking[7] help MDBs identify which projects, sub-programs or activities qualify for climate change mitigation finance
- European Union regulation 2020/852[8] on the establishment of a framework to facilitate sustainable investment conveys taxonomies for screening climate adaptation and mitigation activities
- India's NDC regards contributions to WASH, agriculture and healthcare as relating to adaptation goals, and contributions to clean energy, energy efficiency and transport upgradation (among other areas) as relating to mitigation goals.

At the same time, several sources were observed to track climate finance flows with varying scope, vintage and assumptions, resulting in different values. For example:

- the Climate Policy Initiative's Landscape of Green Finance in India 2022[9] tracked about USD44 billion and USD5 billion of annual climate change mitigation and adaptation finance flows (respectively) to India in financial year 2019/2020
- OECD DAC External Development Finance Statistics tracked about USD8.8 billion of climate finance commitments to India for financial year 2020[10]
- the Climate Funds Update tracked about USD1.5 billion of finance coming into India from multilateral climate funds.[11]

Such wide-ranging data suggests that tracking climate finance demand, commitments and actual flows, and arriving at a conclusive assessment of adequacy and availability of climate finance flows, will continue to be difficult, and the lack of consistent accounting may even foster greenwashing.

Recommendations and opportunities

For civil society

- Develop financially viable business models for adaptation projects to increase private sector participation and investment. While model approaches for WASH-based adaptation projects are being developed, the following approaches could be prioritised to scale up overall WASH-based climate finance flows:
    - enhance focus on WASH-based adaptation projects that have mitigation co-benefits, and thereafter, monetise the mitigation-based climate finance flows to improve the financial viability of the overall program — for example, incorporate sewage recycling and sludge-to-energy components in sewage collection and treatment projects
    - introduce innovative market-based WASH mechanisms, with primarily adaptation benefits, which have been successful elsewhere — for example, water trading could be an important contribution from Australia that could complement its ongoing support for water-sensitive urban design in India (via the Australia–India Water Security Initiative (AIWASI))
    - promote targeted research for developing methodologies to measure impact of adaptation projects and develop models for attracting impact investment.
- Strengthen local implementation capabilities in climate change. The concept of open schools on climate change where communities can learn climate concepts and practices has supported agricultural adaptation particularly[12] and could be explored for WASH elements. The Indian Government and donors could support its implementation to provide subsidised professional capacity-building opportunities to grassroots organisations.

For more information, see Water for Women's finance brief for civil society organisations: Improving opportunities for civil society to access climate adaptation funding for WASH

Solar-powered, cloud-connected water ATMs are among innovations giving communities in informal settlements in Bhubaneswar safe water services. Supported by Odisha state and local governments, working with private companies and the communities, the water ATMs provide 24/7 access to safe water on a pay-per-transaction basis, with water quality tracked remotely
Credit: Centre for Advocacy and Research (CFAR) archives, 2019

Pathways to access funding

Provide clear evidence of climate-related need for proposed project interventions

Support sector-wide efforts to build evidence about WASH's contribution to resilience and mitigation and the impacts of climate hazards on WASH

Link proposed activities directly to climate mitigation or adaptation outcomes

Check what else is being done and reference and build on existing climate programs

Directly align proposals with national targets and plans

Seek to collaborate with other sectors so that WASH is included as part of larger programmes

Build and maintain relationships with donors and advocate for inclusion of WASH in future programs

For funders

- Government could accelerate the roll-out of the recommendations for civil society. For example, it could extend climate mitigation-related key performance indicators or incentives to India's WASH-related line ministries, primarily the Ministry of Housing and Urban Affairs (MoHUA) and Ministry of Jal Shakti (MoJS). Simultaneously, India's nodal climate change ministry, the Ministry of Environment, Forests and Climate Change, could enhance strategic and knowledge-based support to these and other line ministries.
- Funders should seek to harmonise existing tracking and reporting on climate finance to improve accuracy of finance flow data. In addition, funders should pay greater attention to substantiation of concurrent claims of development finance outflows as climate finance. During interviews, it was suggested that domestic philanthropists have little awareness of the potential for such substitutions, meaning climate finance flows from these stakeholders are likely to be under-reported. Collaboration between domestic and foreign philanthropists could reduce the problem. Such cooperation could improve the climate finance tracking and reporting capacities of domestic organisations, and help foreign donors leverage their contributions.

For more information, see Water for Women's finance brief for funders: Accelerating adaptation finance for climate-resilient WASH in Asia and the Pacific

Conclusion

Several studies suggest that climate finance flows in India are increasing. This trend is likely to continue, at least for mitigation measures, via corporates investing in low-carbon energy systems. The government's recent decision to introduce a national carbon market[13] will provide additional impetus to climate investment.

Drawing learnings from the energy sector, India's WASH sector needs to fast-track private sector engagement and subsequent investment for accelerating climate finance flows as well as overall sector finance mobilisation. In the short term, this appears to be the most compelling R/TA-based task for financiers and research/consulting entities.

Endnotes

[1] Asian Development Bank (ADB), Agence Française De Développement (AFD), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) — India, HCL Foundation, Indian Institute of Technology (IIT) — Madras, Proparco, The Energy and Resources Institute (TERI)

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[3] Government of India, *India's Updated First Nationally Determined Contribution Under Paris Agreement (2021-2030), Government of India*, August 2022, accessed from https://unfccc.int/sites/default/files/NDC/2022-08/India%20Updated%20First%20Nationally%20Determined%20Contrib.pdf

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[6] European Investment Bank, *Common Principles for Climate Change Adaptation Finance Tracking*, European Investment Bank, 2015, accessed from https://www.eib.org/attachments/documents/mdb_idfc_adaptation_common_principles_en.pdf

[7] European Investment Bank, *Common Principles for Climate Change Adaptation Finance Tracking*.

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[10] The Organisation for Economic Co-operation and Development, *OECD DAC External Development Finance Statistics*, OECD, 2020, accessed from https://webfs.oecd.org/climate/RecipientPerspective/CRDF-RP-2020.xlsx

[11] Climate Funds Update, *Website Master*, January 2022, accessed from https://climatefundsupdate.org/cfu-website-master-january-2022/

[12] Samantaray, *Farmers learn climate adaptation in 'open sky' schools in India* [blog], World Bank, 4 August 2021, accessed from https://blogs.worldbank.org/endpovertyinsouthasia/farmers-learn-climate-adaptation-open-sky-schools-india

[13] Bureau of Energy Efficiency India, *Discussion Paper on schemes for Voluntary Carbon Market in India*, BEE Government of India Ministry of Power, 2022, accessed from https://beeindia.gov.in/sites/default/files/NCM%20Final.pdf

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Annex A. Climate funding data

In the absence of sound data on WASH-related climate finance in India, RTI International undertook ground-up research on various climate finance flows in the country for financial year 2021/2022. The following considerations were made when recording climate finance flows:

- while India has presented its overall climate finance needs, its NDC does not specify these needs by sector, so WASH-specific data was unavailable. Consequently, the WASH-related climate finance flows, documented below, could not be used to ascertain WASH-related climate finance supply surplus/ shortfalls
- project/program financing was included in the analysis as a climate finance stream only if the funding agency claimed it as such (adaptation/mitigation/both) in its official statement, reports, or similar
- if agencies, especially MDBs, claimed only a portion of total funds qualify as climate finance, only those earmarked portions were included
- if total project cost was available along with total duration, it was assumed that finance flows were distributed evenly
- data was collated as best as possible by leveraging secondary and other open information sources; as such, data-specific observations and inferences are limited by the extent of exhaustiveness and accuracy which could be reasonably achieved within the research timelines (blank cells indicate a lack of information).

Funding source	Source category	Facility/program purpose/program name	Total funding volume (USD)	Annual funding volume (USD)	Implementing agency/ partners involved
AFD	Bilateral funding agencies	Technical Assistance Programme for Sustainable Urban Development	700,000	116,667	Government
German Federal Ministry of Economic Cooperation and Development (BMZ)		Climate Adaptation and Finance in Rural India (CAFRI) (2020-22)			GIZ
BMZ		Piloting a circular system for plastics in Haridwar and Rishikesh (2019–22)			GIZ
DFAT		AIWASI	3,666,667	733,333	World Resources Institute (WRI)
DFAT		AIWASI TA	2,933,333	586,667	Arup
DFAT		Water for Women Fund	4,000,000	888,889	RTI, CFAR
EU		SPRING: Strategic planning for water resources	3,180,970	795,243	National Mission for Clean Ganga (NMCG)
EU		India-EU Water Partnership	2,820,000	940,000	GIZ
EU		Action for Transforming Lives of the Particularly Vulnerable Tribal Groups of Jharkhand and Madhya Pradesh – Enhancing the quality of outcomes of the grassroots CSO intervention in the areas of water and clean energy in the wake of increasing climate change (2020–21)		398,990	Bharat Rural Livelihoods Foundation (BRLF)
USAID		Adaptation Financing Assistance (SUWASI, et al.)		9,000,000	

Funding source	Source category	Facility/program purpose/program name	Total funding volume (USD)	Annual funding volume (USD)	Implementing agency/ partners involved
A.T.E Chandra Foundation	Domestic philanthropic agencies	Sustainable Rural Development: dam desilting to increase water and nutrient availability to farmers, zero-budget natural farming and other initiatives that help scale-up natural climate-resilient farming practices and help build rural livelihoods. A.T.E Chandra Foundation has funded and helped in the implementation of water for agriculture in the state of Maharashtra to support farmers and their livelihoods. Water Security: supporting the rejuvenation of water bodies in partnership with CSOs and the state and local governments. Partnered with IITians for Influencing India's Transformation (IIT-IIT) to scale rejuvenation of water bodies across 124 priority districts in 12 states through its Grow to National Scale Platform. Climate Resilient Farming: documented 100+ detailed case studies of natural farmers across five states, analysing what has worked and what has not, for subsequent scale-up.			Several
Adani Foundation		Community Infrastructure Program: Water Conservation & Potable Water Facilities.			Several
Arghyam		Efficiencies Through Digital Tools (EDIT): provision of tools to collect data on springs, wells and watersheds and support decision-making and planning for inland water and groundwater management.		32,308	
Azim Premji Foundation		Establish 18 water user associations for 48 villages, which will ensure water entitlements to all households and allow management of water resources in an integrated, equitable, participatory and efficient manner.			Society for Promoting Participative Ecosystem Management (SOPPECOM)
Azim Premji Foundation		Strengthen measures for tackling water security issues in Adivasi settlements.			Raah Foundation
Azim Premji Foundation		Grant support for sustainable drinking and domestic water security for 64 tribal hamlets in West Bengal.			PRASARI, World Bank
Azim Premji Foundation		Scaling up a field initiative in Jhabua and Ali Rajpur districts of western Madhya Pradesh to 38 villages with direct intervention for mitigation of fluorosis.			INREM Foundation
Indiabulls Foundation (IBF)		Rahat: identify water sources and provide water connection by laying a pipeline from the source to the school, complemented by pumps, water tanks and/or concrete diversion structures.			Bosco SamajVikas Sanstha
IBF		Rainwater Harvesting: to curb the water shortage problem in Sugaon, IBF has set up a rooftop rainwater harvesting plant at the Zilla Parishad school.			IBF
IBF		Water Wheels Program: provides 45–50 litres of water per filling. Consisting of a handle attached to a rolling drum, the design allows the user to pull or push the water wheel with ease.		40,000	

Funding source	Source category	Facility/program purpose/program name	Total funding volume (USD)	Annual funding volume (USD)	Implementing agency/ partners involved
JSPL Foundation	Domestic philanthropic agencies	Ensure clean and safe drinking water at the household level for the community living in the vicinity of JSPL's business locations.			
Sehgal Foundation		The water management program works with communities to harvest and store rainwater for direct use, and/or replenish groundwater by building and restoring infrastructure in villages. It supports revival of traditional water bodies, construction of water storage infrastructure, and safe disposal of wastewater.			
Shell Foundation	Foreign philanthropic agencies	Innovative communications campaigns and research (using real-time tracking via mobile applications) to encourage behaviour change in the areas of indoor air pollution, access to clean energy, health, hygiene and sanitation, education, livelihood and nutrition.		950,000	Dharma Life
MoHUA	Government	Swachh Bharat Mission 2.0 Urban (TA)		267,573,333	
MoHUA		AMRUT 2.0		443,200,000	
MoJS		Swachh Bharat Mission 2.0 Gramin (TA)		281,762,000	
MoJS		Jal Jeevan Mission (TA)		192,000,000	
ADB	Multilateral funding agencies	Promoting Smart and Integrated Urban Planning for Liveability and Cultural Economy in Rajasthan		63,000	Government
ADB		Capacity Development for the Agartala City Urban Development Project (attached TA to the Agartala City Urban Development Project)		100,000	Government
ADB		Enhancing Climate Resilience in Uttarakhand Urban Development (attached TA to Uttarakhand Integrated and Resilient Urban Development Project)		1,000,000	Government
World Bank		Chennai City Partnership: Sustainable Urban Services Program (TA)	150,000,000	28,571,429	State of Tamil Nadu
World Bank		Punjab Municipal Services Improvement Project (TA)	105,000,000	19,384,615	Ludhiana Municipal Corporation, Amritsar Municipal Corporation, Punjab Municipal Infrastructure Development Company
World Bank		Kerala Solid Waste Management Project (TA)	105,000,000	16,800,000	Local Self Government Department, Government of Kerala

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Header image: Flash flooding in urban Jaipur. Credit: CFAR archives, 2022

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Limitations: The finance information in this brief was collected from online sources and interviews and was correct when compiled. Unfortunately, reporting of WASH and climate finance in India is not comprehensive; most figures provided represent total funds invested or available.

Learn more
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About Water for Women

Water for Women supports improved health, gender equality and wellbeing in Asian and Pacific communities through socially inclusive and climate-resilient water, sanitation and hygiene (WASH) projects and research. It is the Australian Government's flagship WASH program, investing AUD154.9 million over seven years. Water for Women is partnering with civil society organisations, research organisations and local partners to deliver 40 projects in 16 countries from 2018 to 2024. Knowledge and learning are central to Water for Women, positioning the Fund as an important contributor to global knowledge development and sharing in inclusive and climate-resilient WASH. Water for Women's Learning Agenda promotes collaborative learning, knowledge development and sharing to support long-term transformative change to WASH policy and practice globally.

Find out more at
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