



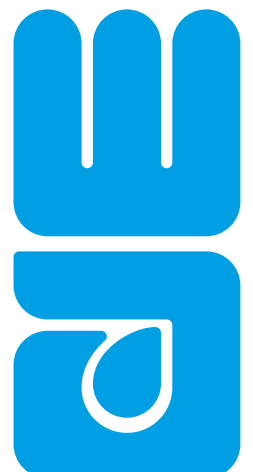
WaterAid/ DRIK/ Habibul Haque

# Short-changed on climate change

Money, water and the people  
on the frontline



WaterAid/ Chileshe Chanda



**WaterAid**

## Foreword

### **For the world's poorest people, the climate crisis is a water crisis that they are living with now.**

Climate change is affecting every aspect of life on the planet, putting the lives of the most vulnerable people under threat and multiplying risks they are already struggling with. The world urgently needs to make the shift to a low-carbon future to avoid irreversible damage to our planet.

But the more we allow global temperatures to rise, the greater the impact will be felt through our water. Without access to a water service that can withstand the impacts of climate change, communities cannot be resilient to anything.

The water crisis has been around for decades. Despite significant progress, around 800 million people still live without even a village water-pump or covered-well close to home. Two billion people live without a water service that is free from contamination, putting them at risk of water-borne disease and death.<sup>1</sup> For these people, clean water is the difference between coping and not coping.

The need for sustainable safely managed water and sanitation services couldn't be more urgent as threats – such as rapid and unregulated urbanisation, pollution, over-extraction of water for industrial use, and changing agricultural practices – escalate rapidly into crises, with almost 90% of all natural disasters being water-related.<sup>2</sup>

Climate change is accelerating these threats as weather patterns become more unpredictable: how much, how often, and how intensively it rains, and the frequency and severity of extreme events. The more global heating we lock in through inaction, the more the impacts will be felt

### **Three key points:**

- Most of the poorest countries in the world are also the ones highly vulnerable to the impacts of climate change. They are also the countries that have contributed least to the crisis.
- Clean water is a first line defence, but the most climate-vulnerable countries have some of the lowest levels of clean water access in the world.
- Only 5% of climate finance is spent on helping countries adapt to climate change. Even less is spent in the most vulnerable countries, and less still on vital services like clean water, placing billions of lives at risk.<sup>9</sup>

### **The time for action is now.**

through our water systems. That is why strengthening access to clean water is a first line of defence against climate change.

The impacts are being felt across the globe today, exacerbating pressure on already stretched water supplies, whether you live in bustling Cape Town or the slums of Chennai. In 2018, Mozambique was hit by unprecedented droughts that caused severe water shortages in the capital city. A year later, the same country was hit by two cyclones and flash flooding that stretched across the country. Both these events are increasingly regular occurrences, threatening already weak water and sanitation governance and service supply systems.

Just last month, in the UK – a country that is both wealthy and relatively invulnerable to climate change – severe flooding has caused challenges to water access, but a well-developed sector has been able to respond effectively.

The greatest injustice is that the people who will suffer the most have done the least to cause the climate crisis. The entire continent of Africa accounts for less than 4% of total global carbon emissions,<sup>3</sup> but is home to 33 of the 50 countries that are most vulnerable to climate change.<sup>4</sup> Millions of people who are already denied access to the basic human right to safe water are seeing this precious resource under even greater threat, whilst the major contributors to climate change are the countries that are most able to cope.

Without urgent action, the amount it will cost for developing countries to adapt to the impacts of climate change that are already happening is expected to soar.<sup>5</sup> Just bringing safely managed water and toilets to low and middle-income countries is predicted to cost \$198 billion a year. Climate change will push this cost higher, with a further \$103 billion required for flood protection.<sup>6</sup> Providing safe water for

an entire population, in the face of climate change is too big a challenge for developing countries to face alone.

Bringing clean water to everyone, everywhere is one of the best investments to protect the lives of people today. It's also an investment that brings high rates of return. For every \$1 invested in water and sanitation, there is an economic return of \$4 by keeping people healthy and productive.<sup>7</sup>

The countries in which WaterAid works in are on the frontline of climate change right now. Every day, we see how the impacts of actions taken – or not taken – by those with the power to bring about change, play out as daily realities for some of the poorest people on the planet.

Globally, average temperatures are 1 degree higher than they were a century ago, and even carbon emissions were reversed tomorrow, a further 0.5 degree rise is locked in.<sup>8</sup> We can expect more extreme weather events, more uncertainty and likely more people forced to live without safe water. We have to act and we have to act now.

### **What makes a water service climate-resilient?**

- Climate change is a global issue that causes local problems – so each individual context and location needs to be assessed for risks to understand the different threats at play. Interventions are then designed to respond to these threats.
- Different types of approaches must be assessed for how effectively they can manage climate and other risks, and the most resilient and robust options must be selected.
- Communities must be empowered to manage risk and respond to hazards continually.
- Strong institutions and a strong water sector must be in place to resist and recover from extreme events, and work to rapidly restore water services in the face of disasters.

### **Safe water**

An on-premise water supply that is reliable and free from contamination. Both Sustainable Development Goal (SDG) 6 and the human right to water refers to a safe water supply.

### **Clean water**

Also called a basic water supply. This refers to water that is from a source constructed to protect the water from contamination such as a village handpump or a covered well that can be collected within 30 minutes for a roundtrip including queuing.

## On the frontline

### In the communities we work in, we are already seeing the impacts today:

- Functional water sources can break down – because of increased pressure placed on them by people whose other water sources have dried up. There is sometimes no capacity to repair them in a timely manner.
- Shallow water sources, such as hand dug wells, can dry up completely and people, usually women and girls, have to walk further for water.
- Floods destroy sanitation systems, contaminating water sources and the surrounding communities with human waste.
- Healthcare facilities are overwhelmed as the impact of the above takes its toll on peoples' health.
- Conflict arises between different members of a community or neighbouring communities who are competing over scarce water resources. This conflict often further marginalises older people, those with disabilities, a different lifestyle e.g. nomadic or pastoral and women. Sometimes this can lead to cross-border tensions over shared water resources.

Climate change is exacerbating existing pressure on water access – often caused by poor governance, lack of political will and low levels of investment. In the past few years, we've seen the real-world consequences of many of these issues play out on a large scale in some of the most populous metropolises, tourist hubs and trade centres. As the impacts of climate change continue to bite, we can expect to see similar situations play out again and again.

### Chennai

In June 2019, one of India's largest cities ran out of water for its people to drink following an extended period without rain that led to the city's four main reservoirs drying up. Poor regulation and management of water resources combined with the lengthy dry spell put too much pressure on the already overstretched water supplies, leaving millions dependent on water supplied from trucks.



### Cape Town

Population growth, a three-year long drought and weaknesses in predicting the impacts of the effect of the changing climate on water resources led residents of Cape Town to face 'Day Zero' – the day when the city would run completely dry – in 2018. A huge government water-conservation campaign, coupled with governance reform, helped to prevent that day from ever being reached, but it served as a stark warning to other major cities.



## Bangladesh

Two-thirds of Bangladesh sits less than five metres above sea level, leaving these areas highly susceptible to river and tidal flooding.<sup>10</sup> Weak coastal land management and unregulated shrimp farming practices adds significantly to this problem. Saltwater intrusion into already limited drinking water supplies is causing health problems, forcing communities to use other unsafe sources of water to drink.



## Maputo

Mozambique's capital city was hit by unprecedented droughts that caused severe water shortages in the capital city in 2018, exacerbated by a weak capacity to effectively adapt in the short term. A year later, the same country was hit by two cyclones and flash flooding that stretched across the country. Both these weather events are increasingly regular and predictable occurrences, threatening already weak water and sanitation governance and service supply systems.

## Methodology

This report uses publicly available data to analyse how climate finance is spent in the most climate-vulnerable countries, with a particular focus on how money is spent on water, sanitation and hygiene (WASH) adaptation.

## Data sources

**Climate vulnerability data:** taken from the Notre Dame Global Adaptation Initiative (ND-GAIN) which ranks 181 countries annually based upon their vulnerability and their readiness to successfully adapt to climate change. The latest annual figures from 2017 were used. Data available at: [gain.nd.edu/our-work/country-index/](https://gain.nd.edu/our-work/country-index/)

WASH is included in this index as measure of vulnerability, reflecting how low levels of access to these basic services can make a country vulnerable. A WASH-adjusted version of this measure was created by removing WASH-linked indicators to ensure that this does not create a false correlation when graphed against WASH data.

**Water access data:** taken from WHO/UNICEF Joint Monitoring Programme on household WASH access. Data available at: [washdata.org/reports](https://washdata.org/reports)

**Climate finance data:** Climate finance data was extracted from the OECD Creditor Reporting System (CRS) in January 2020. It includes all entries into the CRS tagged with the climate 'Rio Marker', and is defined as gross disbursements at constant prices. This data was analysed from 2010–2017 and divided by population to identify a per capita and per year breakdown. Data available at: [stats.oecd.org/Index.aspx?DataSetCode=CRS1](https://stats.oecd.org/Index.aspx?DataSetCode=CRS1)

**Population data:** taken from the World Bank. Data available at: [data.worldbank.org/indicator/SP.POP.TOTL](https://data.worldbank.org/indicator/SP.POP.TOTL)

**Full appendix of individual country data is available at: [washmatters.wateraid.org/short-changed-on-climate-change](https://washmatters.wateraid.org/short-changed-on-climate-change)**

# What is climate finance?

Climate finance is investment aimed at both reducing emissions that contribute to climate change, and adaptive actions to minimise the negative impacts of climate change.

Climate finance flows through various channels, but the main mechanisms are:

- **Multilateral climate funds:** these are initiatives that are governed by various countries. The largest multilateral climate fund is currently the Green Climate Fund. Developed country governments pay into these funds as part of their obligations under the UN Framework Convention on Climate Change (UNFCCC).
- **Bilateral climate funds:** this is when money flows from one government to another, usually through an existing development agency.
- **Private finance:** Private sources of climate finance are mainly used for renewable energy and green transport rather than climate adaptation.<sup>8</sup>



WaterAid/ Tom Greenwood

**In 2017–2018 a total of \$579 billion was provided as climate finance, from both public and private actors. Of this, public finance – from multilateral and bilateral sources – accounted for \$253 billion or 44%. Very little of this goes towards the countries experiencing the impacts of climate change now.<sup>9</sup>**

## What about adaptation?

Both mitigation (cutting carbon emissions) and adaptation (managing threats from climate change) are essential to protect people and the planet. But for the communities WaterAid works in, climate change is happening now, and solutions are urgently needed. An additional 0.5 degrees celsius of warming is already locked in,<sup>8</sup> so helping communities to adapt to the impacts that are already inevitable is vital.

Almost all climate finance for adaptation comes from public sources, but it still only accounts for around \$30 billion or 5% of the total. This is also a global figure – not just money spent on helping the most vulnerable countries.<sup>9</sup>



WaterAid/ DRIK/ Habibul Haque

### What about development finance?

It's estimated that achieving the Sustainable Developmental Goal (SDG) targets on universal safe water and sanitation by 2030 will cost low- and middle-income countries US \$198 billion a year,<sup>6</sup> with more investment required for climate adaption.

Current levels of investment are substantially below what is required, with over 80% of countries reporting insufficient finance to achieve national targets.<sup>13</sup> Given the size of the gap, there is an urgent need to mobilise more public and private finance for developing countries – including domestic resources and international aid. In the face of climate change it is vital that climate finance complements these resources, because delivering a water service that can withstand the impacts of climate change will cost more money. This can be from the higher costs of climate resilient technologies or the increased frequency that infrastructure needs to be replaced, but also from building up the skills required to effectively manage increased risks.

**Half of all countries get less than \$5.20 per head, per year to help them cope with the climate crisis. Some of the most vulnerable countries get a lot less than this.<sup>12</sup>**



WaterAid/ Ernest Randriarimalala



## How is climate finance spent in vulnerable countries?

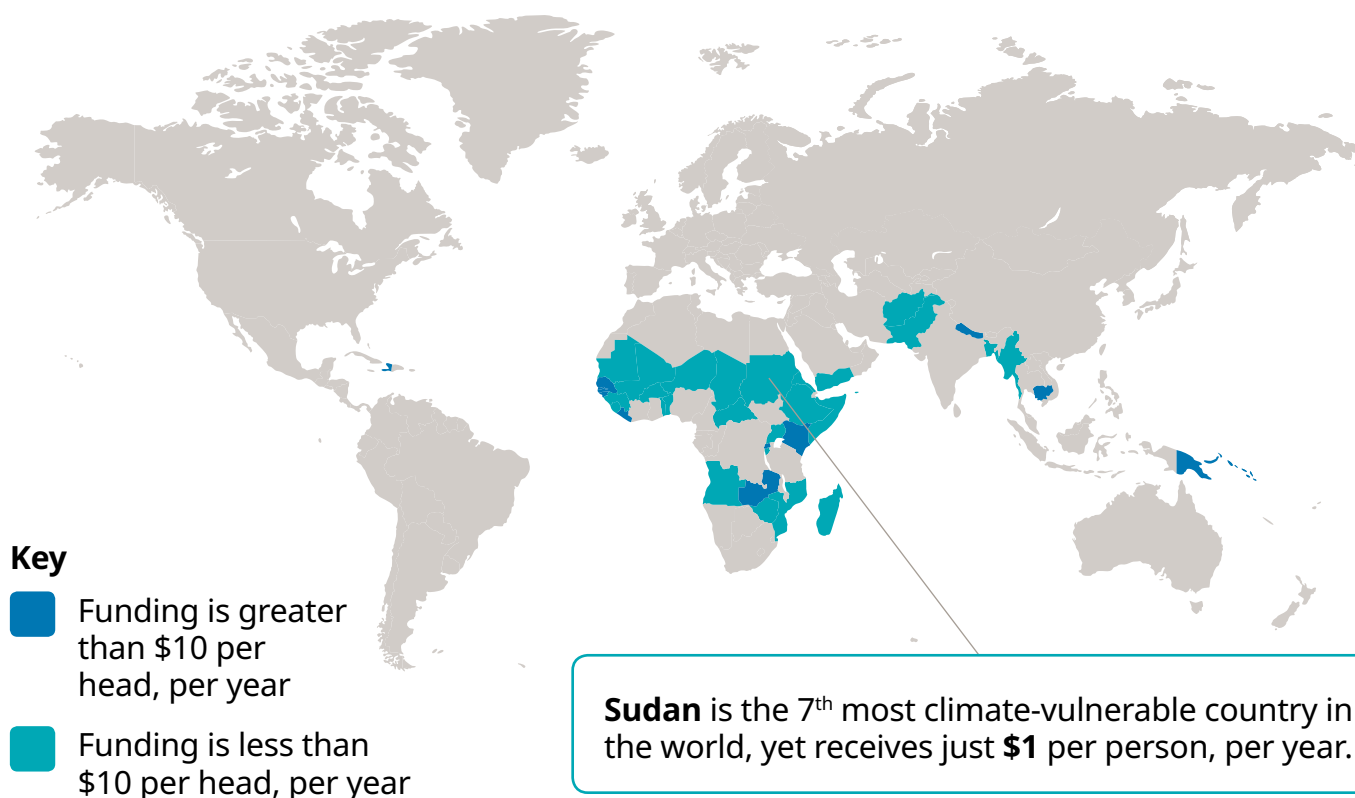
**There is very little correlation between how vulnerable a country is and how much money it receives to help to respond to the climate crisis.**

There is an imminent crisis facing developing countries as the impacts of climate change begin to bite. However, the low levels of spending on the most vulnerable countries and communities shows that there is no clear plan as to how to address this. Not only is investment vastly below where it needs to be, the money that is spent is allocated without prioritising those most in need.

There are some vulnerable countries that have received higher amounts of climate finance per person – mainly small island developing states (SIDS) in the Pacific Ocean. However, absolute amounts for these countries are still modest compared to the challenges they face. For example, one-third of people who live in SIDS live on land that is less than five meters above sea level. The scale of climate finance received – around \$14 million in total a year for Tuvalu, \$5 million for Nauru, and \$7 million for Palau<sup>12</sup> – does not match the existential threats posed by sea level rise, storm surges and coastal destruction.

Low levels of inefficiently allocated climate finance is failing to effectively help countries prepare for climate change and placing billions of lives at risk. It is also a misuse of development assistance to not spend it in ways that support the poorest people who will suffer the most.

### Where are the top fifty most climate-vulnerable countries?<sup>4</sup>







### Vulnerable countries\* which receive the least climate finance:

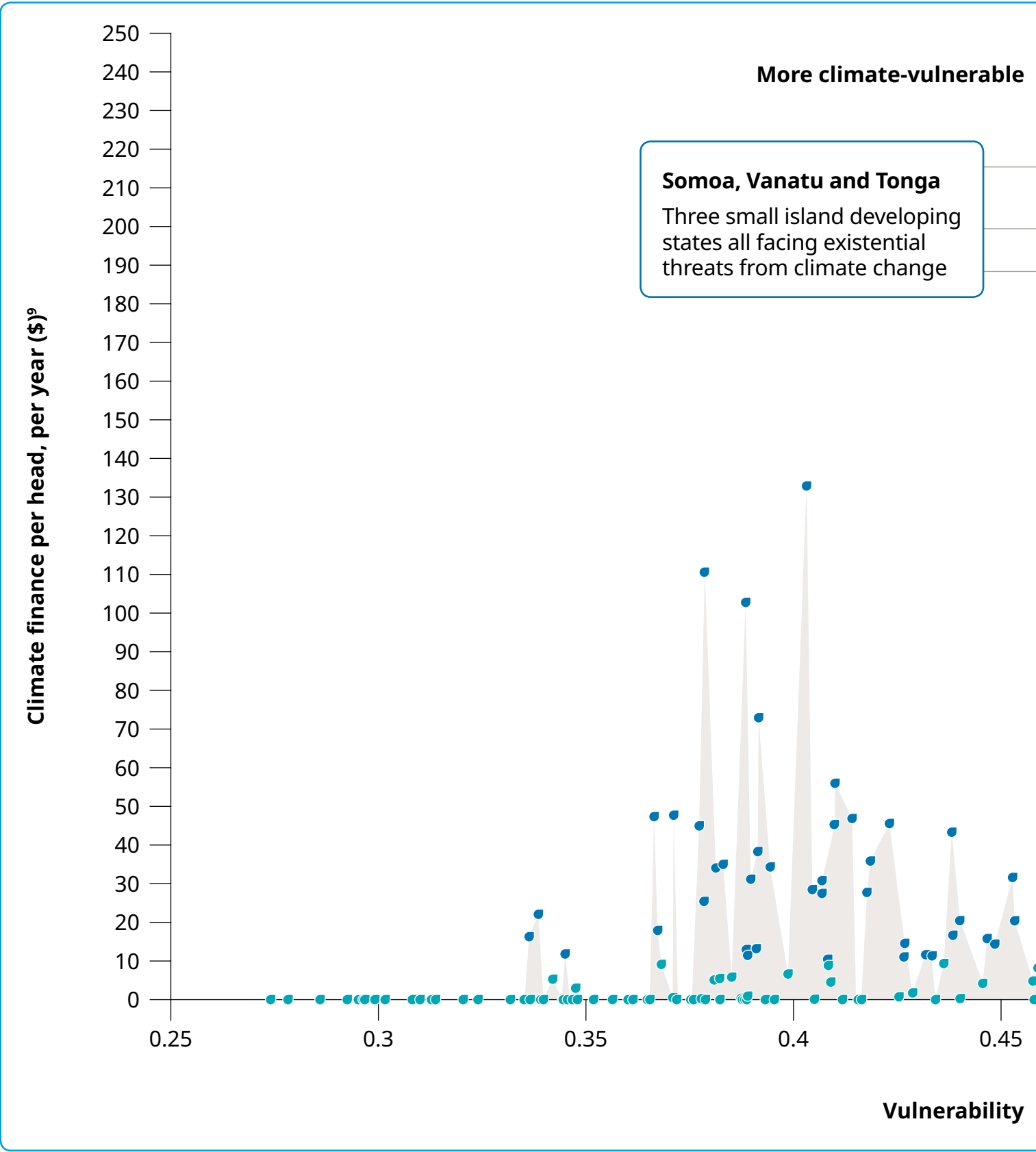
Climate vulnerability rank <sup>4</sup>	Country	Total climate finance per head per year, 2010–2017 (\$) <sup>12</sup>
29	Yemen	1.17
7	Sudan	1.33
46	Angola	1.58
16	Central African Republic	1.61
12	Democratic Republic of the Congo	2.27
35	Guinea	2.93
40	Togo	3.06
34	Zimbabwe	3.09
51	India	3.24
44	Republic of the Congo	3.31

\*vulnerable countries defined as those with a vulnerability ranking above 0.5



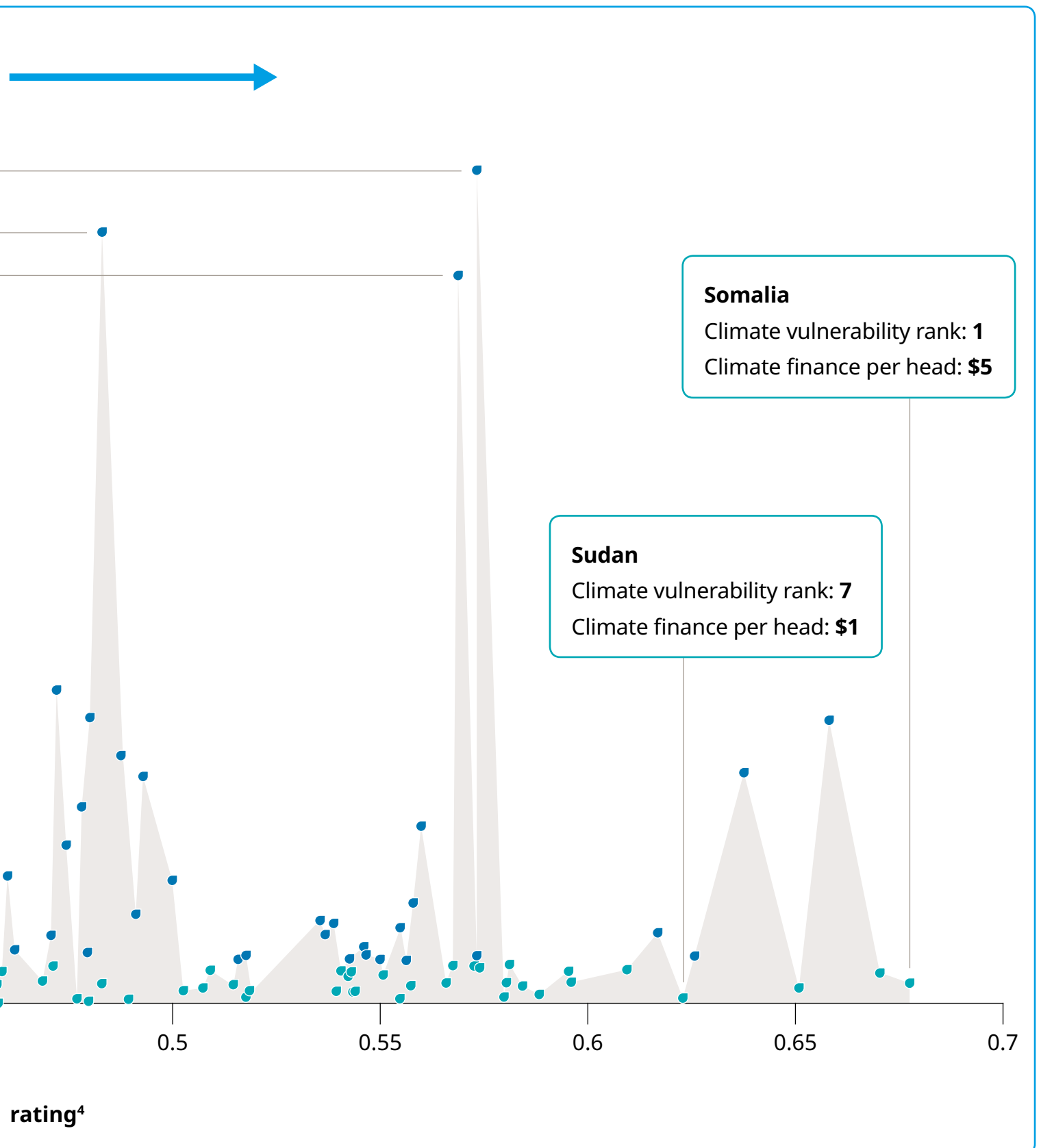
There is little consistency between how climate-vulnerable a country is and how much climate finance it receives

Climate vulnerability compared with how much climate finance a country receives per head, per year 2010–2017



**Key**

- Funding is greater than \$10 per head, per year
- Funding is less than \$10 per head, per year



## What has this got to do with water?

Clean water is a first line of defence against climate change – but the countries that are most vulnerable to climate change have some of the lowest levels of clean water access in the world.

800 million people still live without clean water close to home and two billion people live without safe water, putting them at risk of water-borne diseases and death.<sup>1</sup> Many of the poorest countries are also the most vulnerable to the impacts of the climate crisis. Those same countries often have a high proportion of people without access to clean water close to home.

Currently, it is these people and countries who are forced to face the daily reality of the impacts that climate change is having on their water supplies and lives. In many of the most climate-vulnerable countries, millions are forced to drink dirty water.

**Two billion people live without a water service that is free from contamination, putting them at risk of water-borne disease and death.<sup>1</sup>**



Access to WASH services are included as part of a country's vulnerability measure, reflecting how fundamental they are to climate resilience. When vulnerability is adjusted to avoid double-counting WASH indicators and measured against water access, Niger ranks as the most vulnerable country in the world. 50% of people in Niger – around 10 million people – also live without clean water close to home.<sup>1</sup>

Mounting instability and conflict across the Sahel region as well as climate factors such as increasingly irregular rainfall, rising temperatures, land degradation and climate shocks such as flooding are proving a volatile cocktail; compounding the dire situation faced by communities already struggling to survive in this desert nation.

Bringing climate-resilient water to everyone, everywhere would have a transformational impact on people's ability to adapt to climate change – and to a country's overall development.

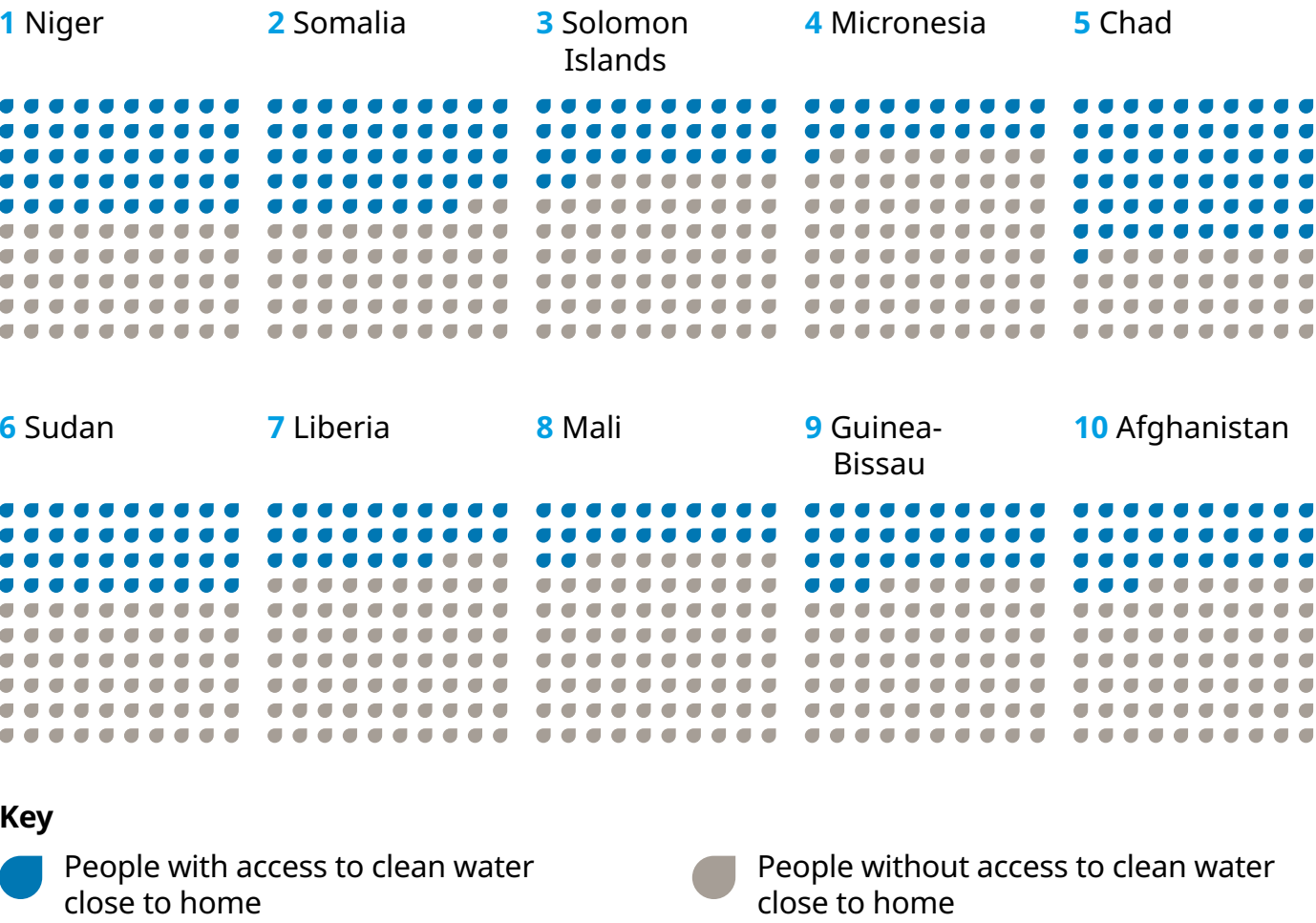


How many people in the most vulnerable countries lack access to water?

Climate vulnerability rank <sup>*4</sup>	Country	% of people without water close to home <sup>1</sup>	Number of people without clean water close to home <sup>1</sup>
1	Niger	50	10,680,027
2	Somalia	48	7,012,106
3	Solomon Islands	32	197,000
4	Micronesia	21	22,622
5	Chad	61	9,129,447

*\*WASH-adjusted*

The top ten most climate-vulnerable countries also have some of the lowest levels of water access in the world.



## How is climate finance spent on water, sanitation and hygiene?

Despite being a basic human right and a first line of defence, a paltry amount of climate finance is currently invested in getting clean water to everyone, everywhere. Money for WASH adaptation accounts for just \$9bn, or 1.6%, of total climate finance.<sup>9</sup>

The ten countries with the lowest number of people with access to water close to home get on average 84 cents per person<sup>1,12</sup> per year to help tackle the impacts of climate change on their water services – despite also being some of the most vulnerable.



WaterAid/ DRIK/ Habibul Haque

This low level of climate finance spent on WASH services reflects the poor recognition of how these services can build resilience to climate change. Not only is clean water fundamental to development, but it is also as a critical adaptation strategy for poor and vulnerable communities.

### How much money do the countries with the lowest levels of water access receive for WASH from climate finance?

Country	% of people lacking access to water close to home <sup>1</sup>	Climate vulnerability ranking <sup>4*</sup>	Climate finance for WASH per person, per year <sup>12</sup>
Chad	61	5	\$0.19
Ethiopia	59	23	\$0.39
Papua New Guinea	59	32	\$0.82
South Sudan	59	n/a	\$2.37
Democratic Republic of the Congo	57	49	\$0.29
Burkina Faso	52	19	\$1.94
Uganda	51	16	\$1.01
Niger	50	1	\$0.82
Somalia	48	2	\$0.39
Madagascar	46	18	\$0.17

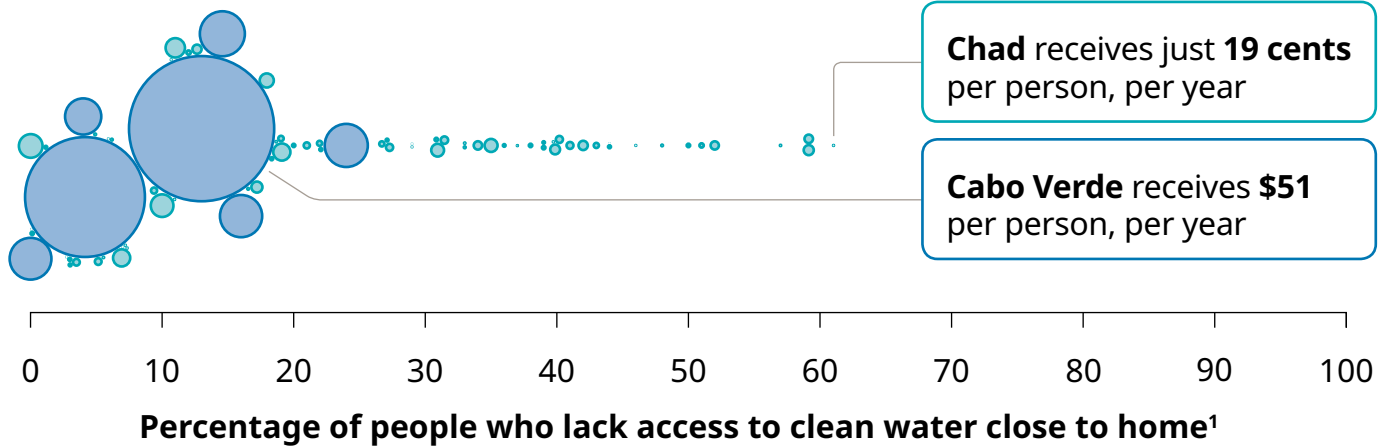
\*WASH-adjusted

## Many countries with very low levels of water access receive tiny amounts of climate finance for WASH projects

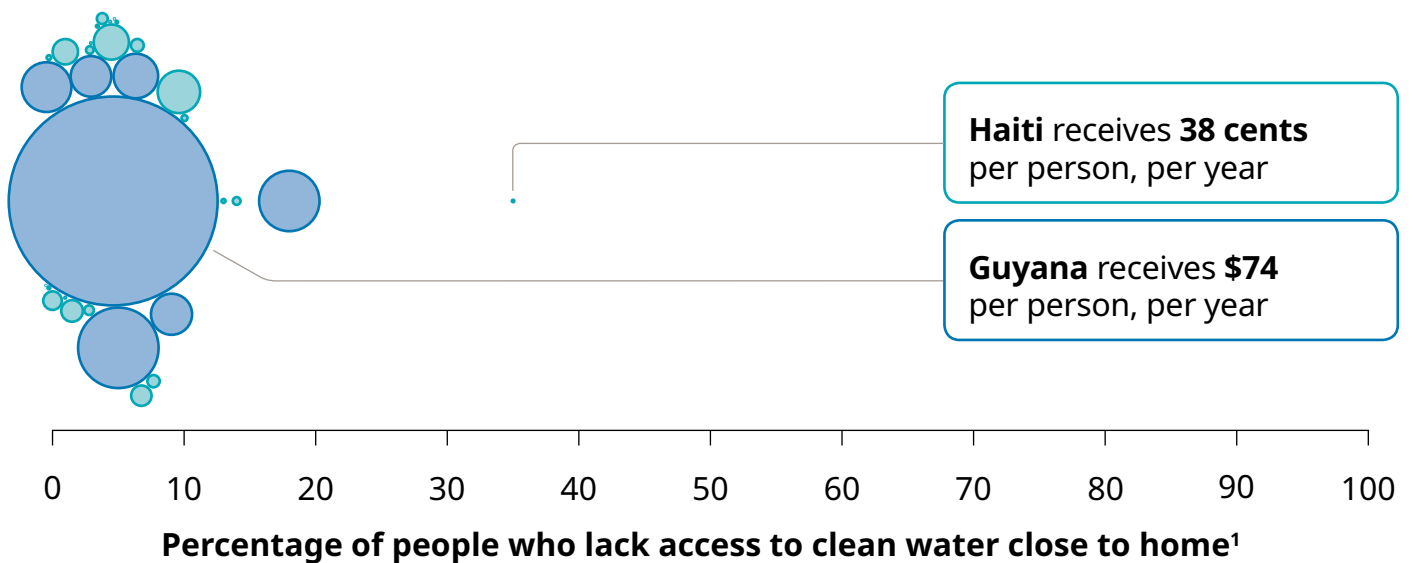
### Key

- Funding is greater than \$10 per head, per year
- Funding is less than \$10 per head, per year

### Africa and Asia



### Europe and Americas



Half of countries where more than 10% of people do not have water close to home get less than \$1 per head per year for WASH service adaptation.<sup>9</sup>

## Case study

Abeba, 23, lives with her husband and nine-month-old baby in the village in the Amhara region of northern Ethiopia. It's a hot and dry region of the country and Abeba fetches water from a nearby hand-dug well. She has noticed the weather changing over the years and the effect this is having on the community.

"Though the place is very dry and hot, the water situation was much better when we first came. We used to get two jerry cans of water per day from the hand-dug well. However, we can't get that now because the water level is decreasing from time to time. We are now allowed to take only one jerry can per day." The World Health Organization recommends a very minimum of 20 litres – or one jerry cans a day for drinking and basic hygiene purposes, but the optimum amount is 50 litres – or two and a half jerry cans.<sup>11</sup>



**The World Health Organization recommends a very minimum of 20 litres – or one jerry cans a day for drinking and basic hygiene purposes, but the optimum amount is 50 litres – or two and a half jerry cans.<sup>11</sup>**



Abeba also needs water for cooking and cleaning so must walk 20 minutes to a river to get more water.

**"I know the water from the river is not clean and safe for us, but I have no other option. If the weather continues like this, it will be very difficult to live here."**



## Taking action on climate and water

Clean water is the first line of defence against climate impacts – whatever those impacts may be. It brings significant benefits which boosts the lives and livelihoods of the poorest and most vulnerable communities on the planet. But many of the impacts of climate change are felt through our water – droughts, sea level rises, floods – so WASH services are uniquely vulnerable.



### What can we do about it?

Climate change – and how we respond to it – is the defining challenge of our time. The need has never been greater or more urgent, but with significant action change is possible. The world urgently needs to make the shift to a low-carbon future to avoid irreversible damage to our planet. Getting everyone, everywhere access to clean water is the single most important thing we can do to help make people resilient to climate change.

WaterAid already works with the communities on the frontline to ensure reliable access to clean water that is fit for the future. This requires different skills to help make communities resilient, but there are huge capacity gaps in the sector which means countries are struggling to deliver sustainable access to clean water.

The world has committed to ensuring everyone has safely managed WASH services by 2030 through the SDGs, and for urgent action on climate change. But far too little attention, money and ambition is currently committed to meeting these interconnected challenges, leaving millions of people to face an uncertain future.

# What needs to change

## Priorities

- Water services fail because of a lack of investment in the infrastructure and support needed to keep services running. National governments must prioritise investment in these areas to build a reliable and properly managed water service for their people.
- National governments must include clean water access in their national climate change planning processes.
- Climate-resilient WASH services should be rolled out, monitored and reported on as a key measure of how a country is dealing with the effects of climate change.



## Money

- There needs to be a ten-fold increase in the amount of climate finance that is spent on getting clean water to those currently forced to live without, increasing their ability to cope with climate impacts.
- To help the poorest countries create effective climate-resilient water programmes, a pipeline fund needs to be created that provides these countries with the technical support needed to access climate finance.

WaterAid/ Eliza Powell



## People

- National governments must develop actionable strategies to address the huge capacity gaps that currently exist in the sector in order to bring climate-resilient water to all.
- Climate planning must include the requirements for the policy-makers, engineers, planners, builders and others who can bring clean water services to everyone in that country.





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<sup>2</sup>United Nations Office for Disaster Risk Reduction (2015). *The Human Cost of Weather Related Disasters 1995-2015*. Available at: [unisdr.org/2015/docs/climatechange/COP21\\_WeatherDisastersReport\\_2015\\_FINAL.pdf](http://unisdr.org/2015/docs/climatechange/COP21_WeatherDisastersReport_2015_FINAL.pdf) (accessed 14 Jan 2020).

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<sup>6</sup>World Bank (2019). *Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet*. Available at: [openknowledge.worldbank.org/handle/10986/31291](http://openknowledge.worldbank.org/handle/10986/31291) (accessed 28 Jan 2020).

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<sup>8</sup>Intergovernmental Panel on Climate Change (2018). *Special Report: Global Warming of 1.5°C: Summary for Policymakers*. Available at: [ipcc.ch/sr15/chapter/spm/](http://ipcc.ch/sr15/chapter/spm/) (accessed 28 Jan 2020).



<sup>9</sup>Climate Policy Initiative (2019). *Global landscape of climate finance*. Available at: [climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019/](http://climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2019/) (accessed 20 Jan 2020).

<sup>10</sup>Environmental Justice Foundation. *Climate Displacement in Bangladesh*. Available at: [ejfoundation.org/reports/climate-displacement-in-bangladesh](http://ejfoundation.org/reports/climate-displacement-in-bangladesh) (accessed 20 Dec 2019).

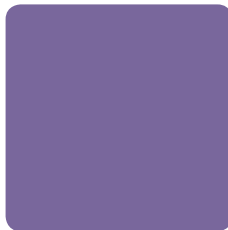
<sup>11</sup>WHO (2019). *UN-Water global analysis and assessment of sanitation and drinking water (GLAAS) 2019 report*. Available at: [who.int/water\\_sanitation\\_health/publications/glaas-report-2019/en/](http://who.int/water_sanitation_health/publications/glaas-report-2019/en/) (accessed 30 Jan 2020).

<sup>12</sup>OECD. *Creditor Reporting System*. Available at: [stats.oecd.org/Index.aspx?DataSetCode=CRS1](http://stats.oecd.org/Index.aspx?DataSetCode=CRS1) (accessed 19 Dec 2019).

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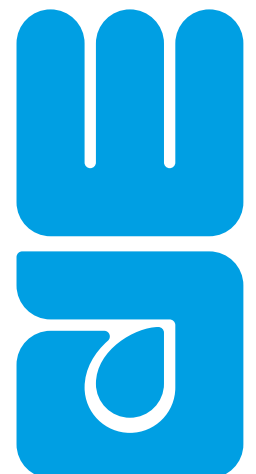
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