

National Context of Sanitation Financing

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In cooperation with:



Some Basic concepts

- Money
 - Financing/Funding
 - Interest rate
-
- Time value of Money
 - Inflation
 - Value in international currency

Time value of money

$$FV = PV (1 + i)^N$$

FV – future value

PV- present value

i – interest rate

N – number of years (periods)

Test Question: What is the present value of USD 2000 received in year 5, assuming an interest rate of 10%??

INFRASTRUCTURE INVESTMENT NEED

The Global Water Challenge: Key Facts



Water-related losses in agriculture, health, income, and property could result in decline by as much as **6% of GDP by 2050** in some regions of the world.

WB (2016a)

Poor sanitation, water and hygiene lead to **675 000 premature deaths annually...**



...and losses of up to **7% in GDP** of certain countries.



WB (2016b)

Annual economic losses

USD 260 bn

due to inadequate water supply and sanitation



USD 120 bn

due to urban property flood damages



USD 94 bn

due to water insecurity to existing irrigators



Sadoff et al (2015)

4.5 bn people lack access to sanitation compatible with SDG6 objectives.



2.1 bn people lack access to safe drinking water.

WHO-UNICEF (2017)

Benefit-cost ratios for **investments in water sanitation services** have been reported to be as high as **7 to 1** in developing countries.



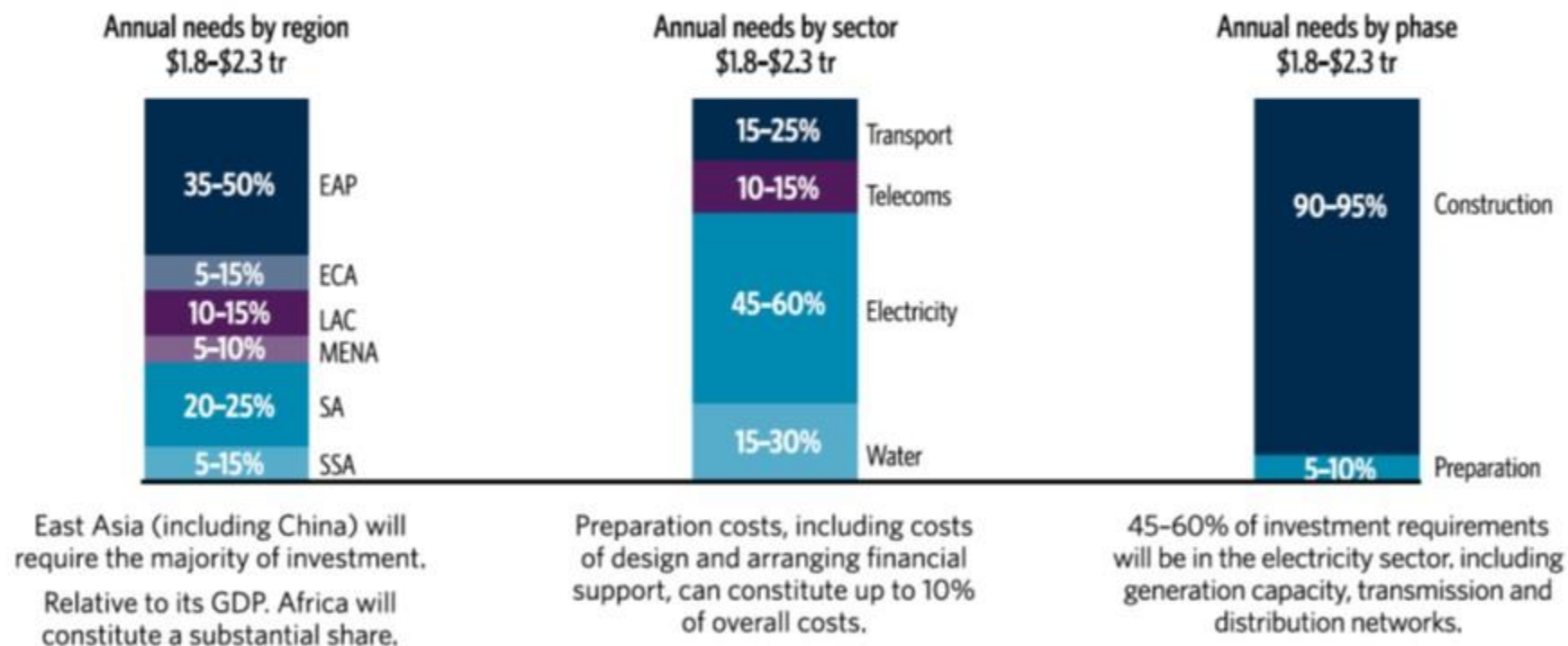
OECD (2011)

Why do national governments need to finance Water and Sanitation?

Infrastructure Need for Developing Countries

Figure 1: Estimated Infrastructure Investments in Developing Countries

Need for investment across developing and emerging markets over the next decade is estimated to be around \$2 trillion a year, ~\$1 trillion more than what is currently spent

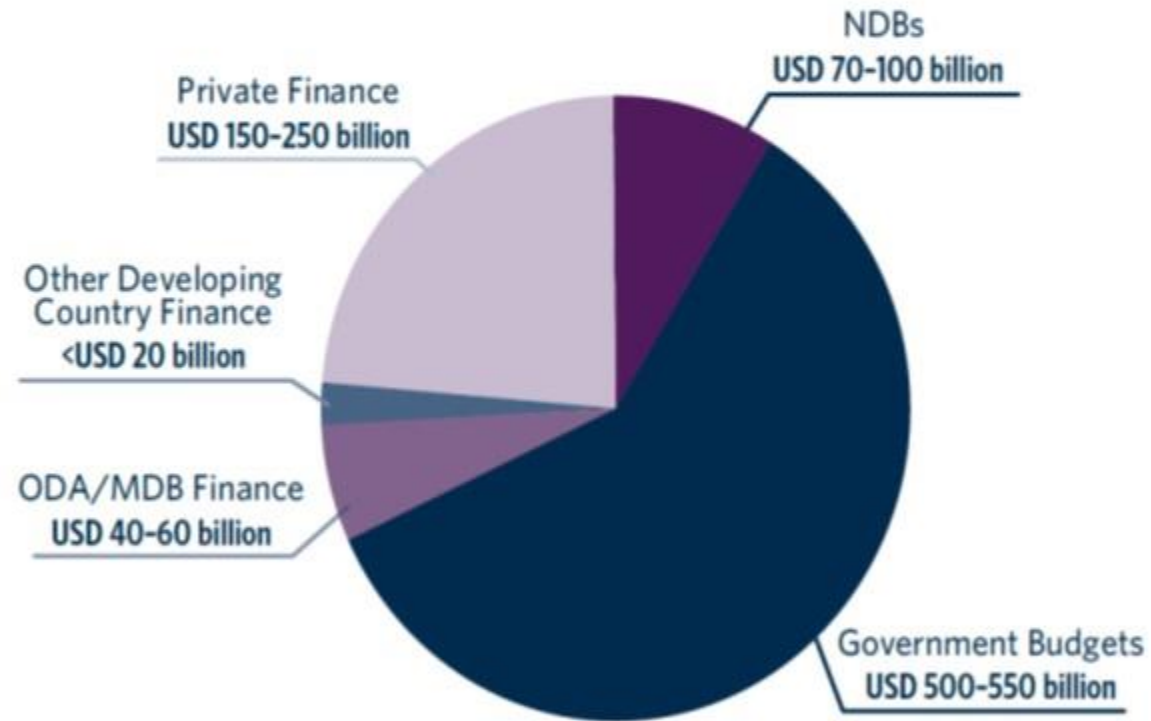


Note: \$ trillion per year, (2008 real prices), capital investments only (excl. operation and maintenance costs); note the \$200-300 billion annual requirement for sustainability is assumed split in the same ratio as the other investments across the regions, sectors and phases.

Existing Infrastructure Financing

Figure 2: Existing Infrastructure Financing in Developing Countries

Current Annual Spending: USD 0.8-0.9 trillion



Source: *Bhattacharya et al. (2012)*⁵

Private sector involvement in Infrastructure

Figure 3: Private-Sector Involvement in Developing Countries' Infrastructure



Source: PPI database (2013)⁸

Infrastructure Financing and Investment Options

Figure 4: Infrastructure Financing and Investment Options

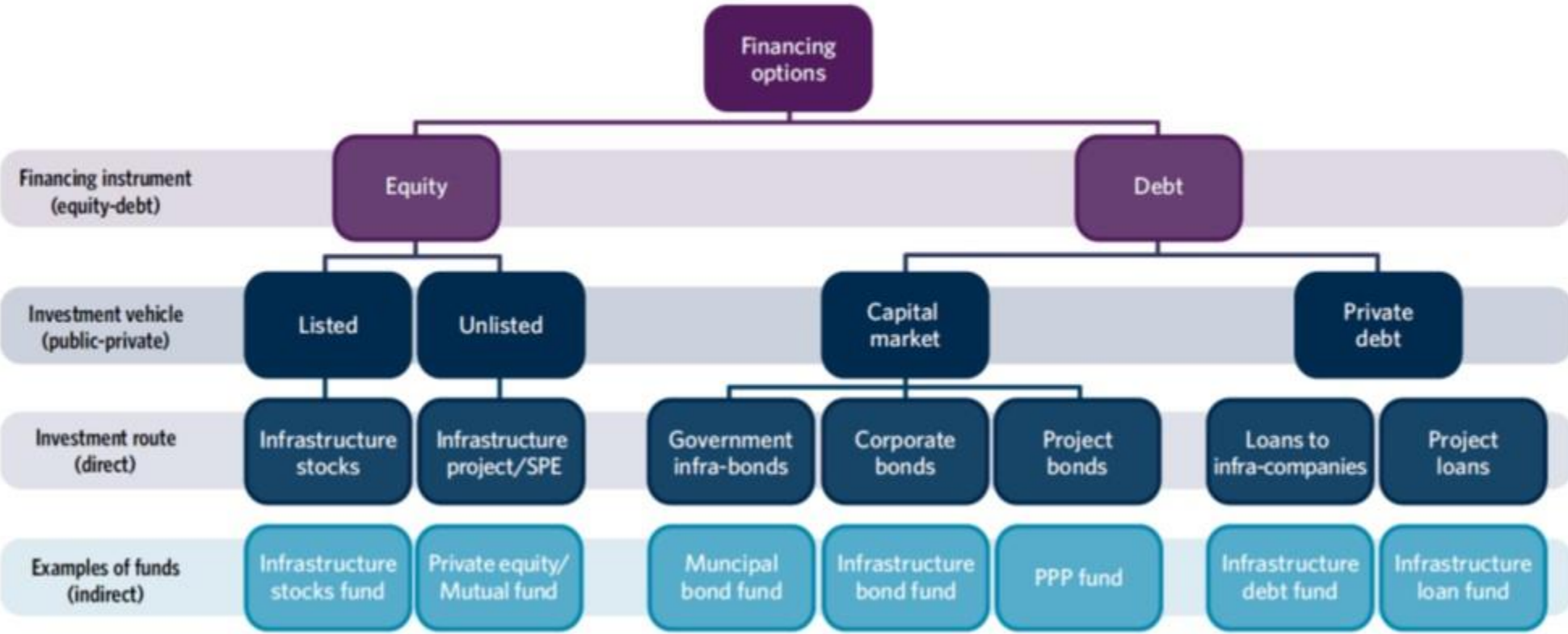
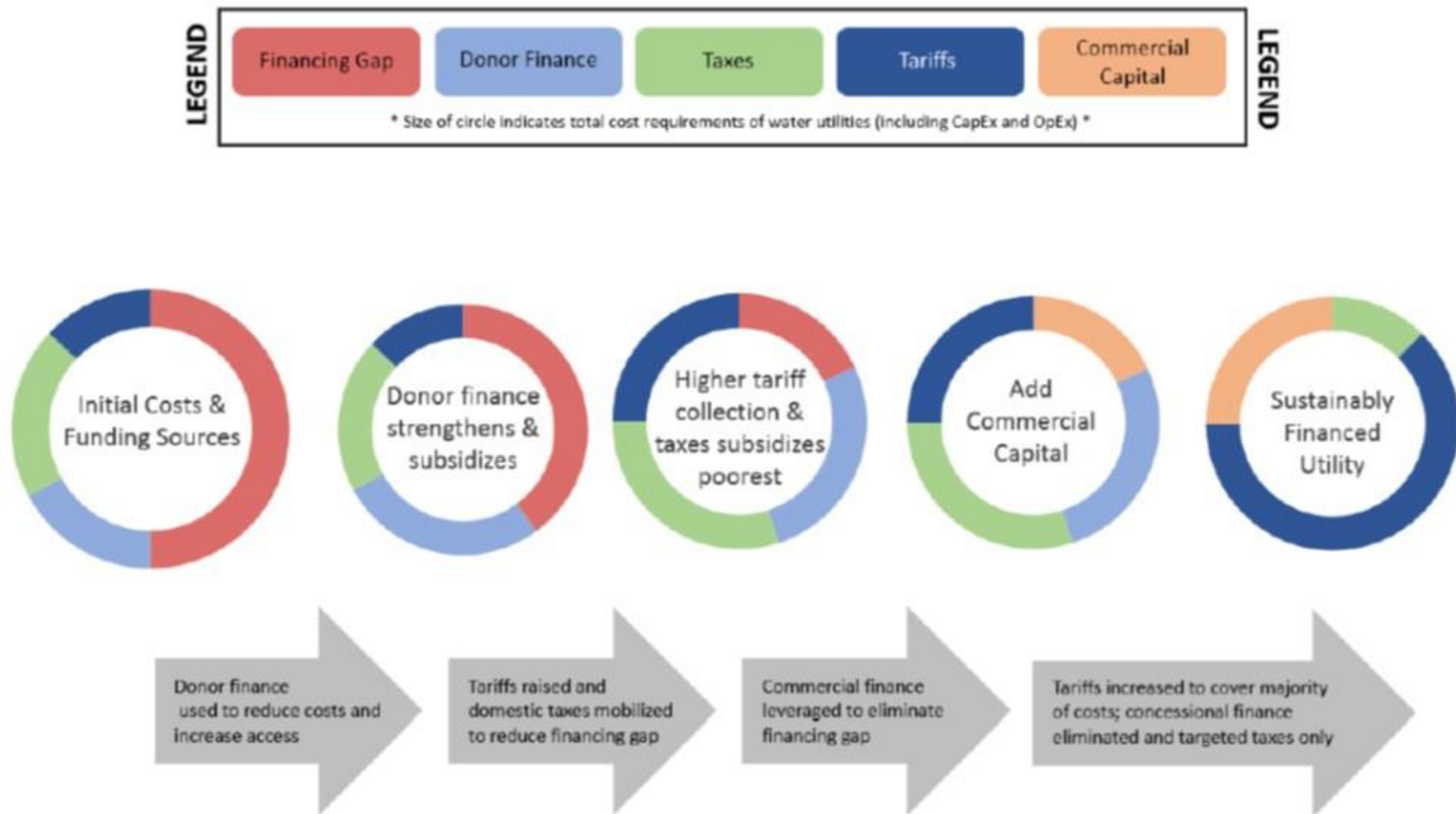


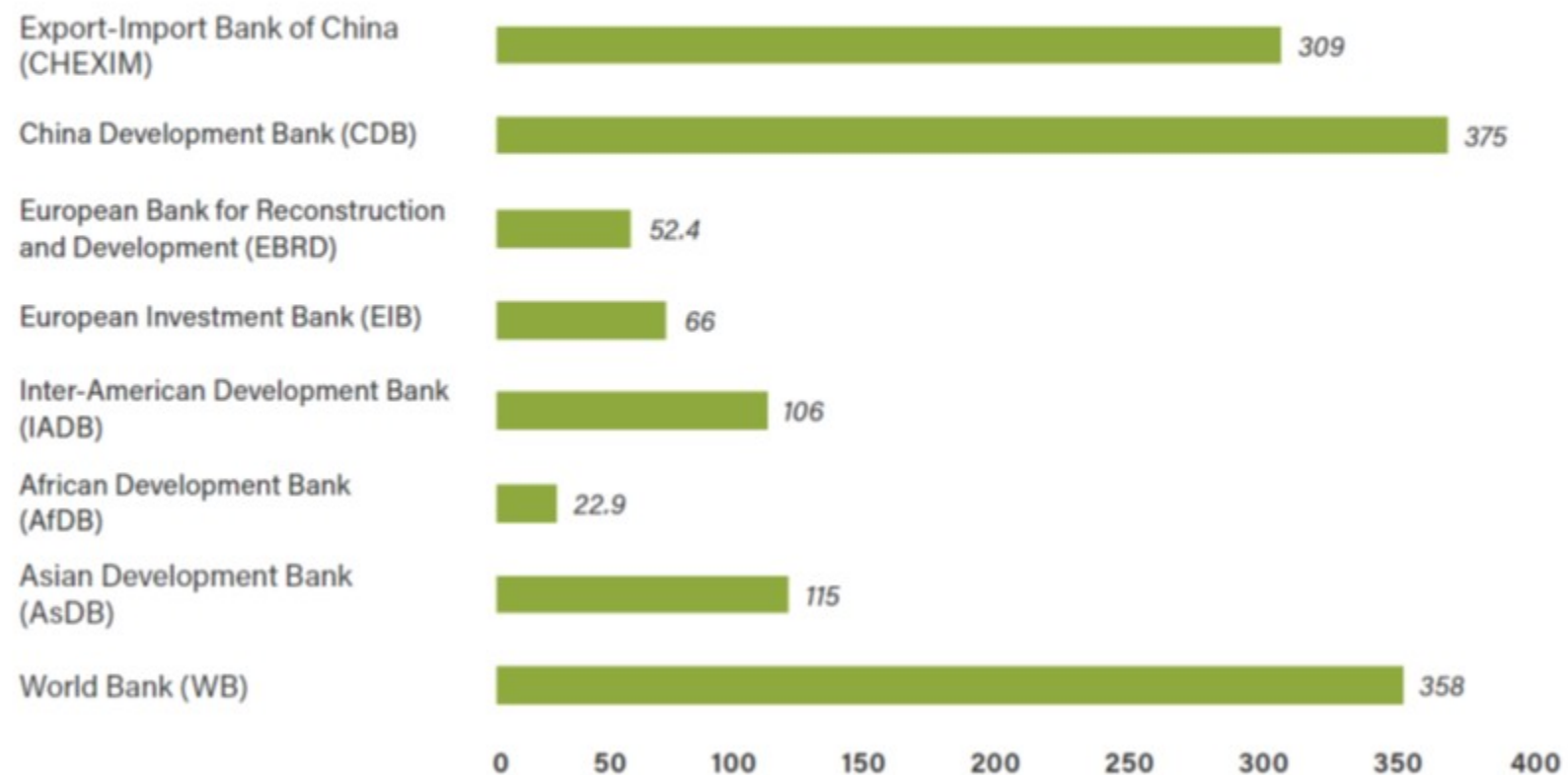
FIGURE 3

Pathway to Sustainably Financed Utility



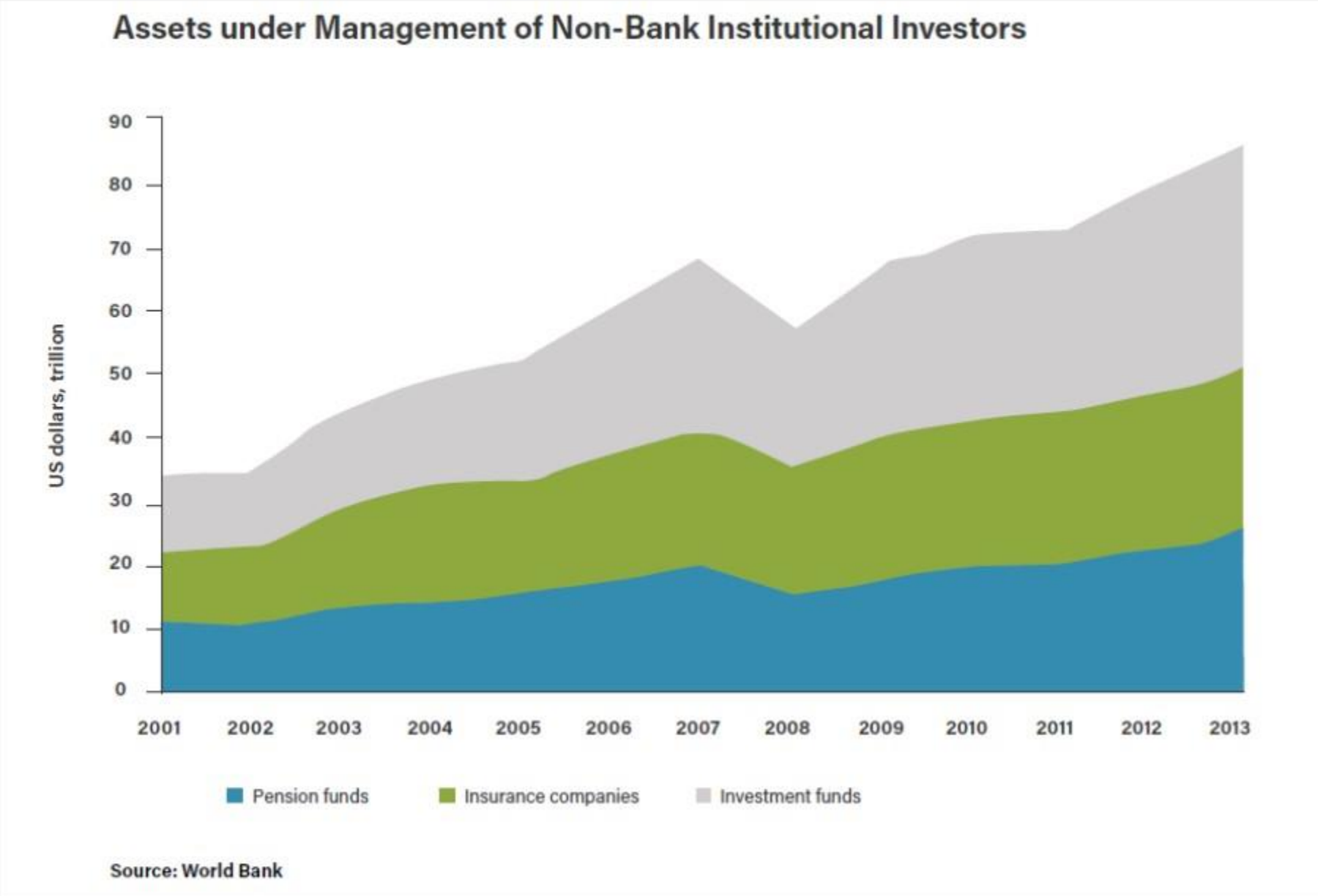
China is emerging as a major lender for infrastructure

China's National Development Banks in Context - Global Assets (US\$ billion)



Source: Boston University Global Economic Governance Initiative⁵¹

Importance of non-bank finance institutions



Sanitation

Sanitation Situation: Safe management will need more funds



Sanitation in a Dhaka Slum

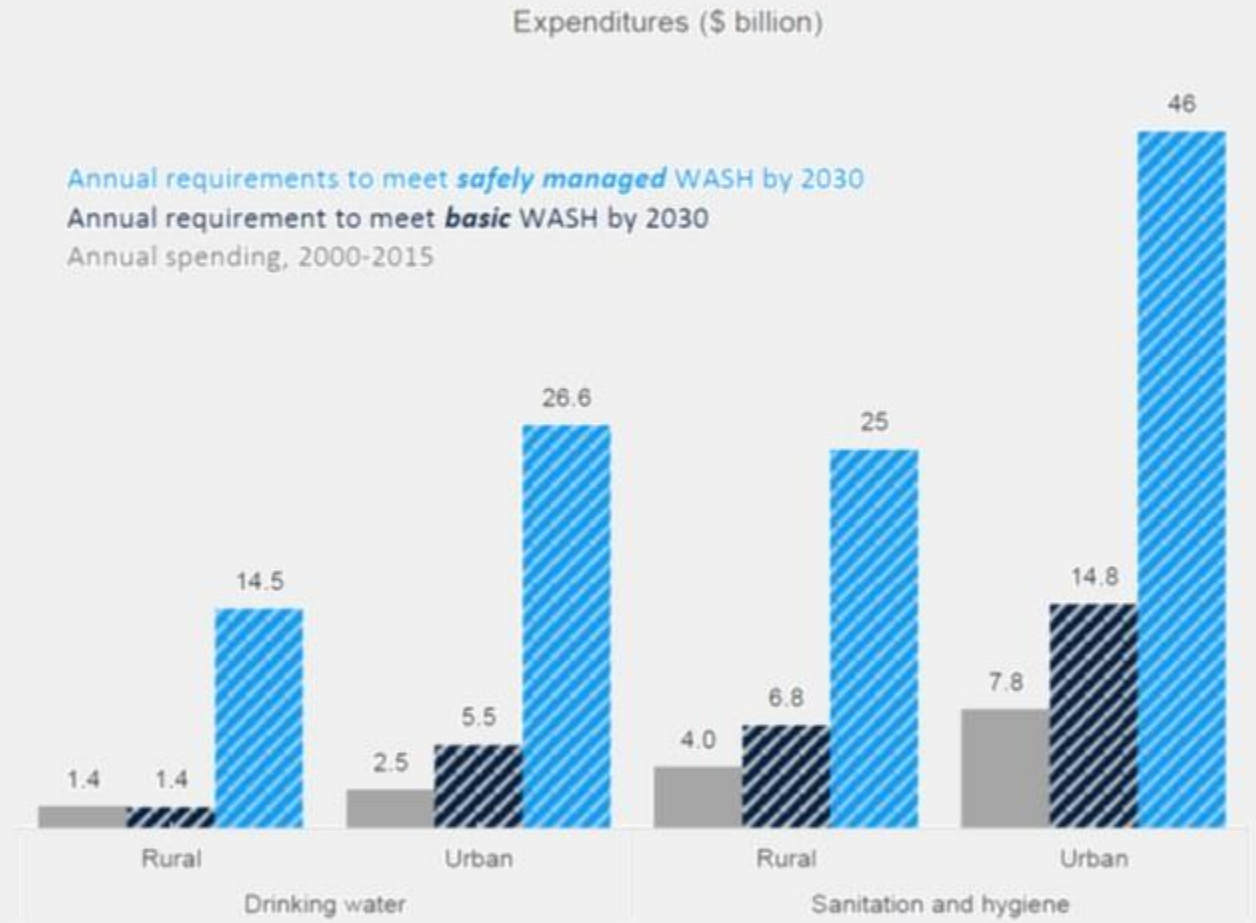


An open sewer in between houses, Woriziehi, Tamale, Ghana.

Sanitation Financing Gap

Urban Sanitation Ladder

- If we aim to meet SDG 6.2 as stipulated the annual requirement will be USD 46 billion
- For meeting only basic sanitation goal, the fund requirement will be around USD 15 billion
- But the annual spend is about USD 8 billion



Source: Based on Hutton and Varughese 2016.

Importance of Public Finance for SDG 6

- **The costs are increasing:** It is estimated that achieving the water supply, sanitation and hygiene (WASH) targets of SDG 6 will cost USD1.7 trillion. Currently, there are no estimates for what it will cost to achieve the whole of SDG 6. However, given the three-fold increase in existing levels of investments for WASH-related targets, the amounts will be well above historic allocations.
- **Aid is decreasing:** Aid commitments to water and sanitation are falling, requiring a better use of existing resources and an increase in the ability of the sector to attract additional sources of funding.
- **Households need support:** Households provide around two thirds of all funds for drinking water, sanitation and hygiene services through tariffs and self-supply (i.e. investing in wells, water tanks and household sanitation and hygiene facilities). Pro-poor subsidies need to be designed and applied so that no one is left behind.
- **Correct valuing is important:** The pricing of water and sanitation service provision needs to build in cost recovery to ensure sustainability, attract new investments, and extend service coverage.
- **Public Finance:** Public Finance for WASH will continue to be important

‘From Billions to Trillions’

- To meet the investment needs of the Sustainable Development Goals, the global community needs to move the discussion from “Billions” in ODA to “Trillions” in investments of all kinds: public and private, national and global, in both capital and capacity.
- Globally, achieving the proposed SDGs will require the best possible use of each grant dollar, beginning with some US\$ 135 billion in ODA.
- The most substantial development spending happens at the national level in the form of public resources, while the largest potential is from private sector business, finance and investment. This is the trajectory from billions to trillions, which each country and the global community must support together to finance and achieve the transformative vision of the SDGs.
- “Billions to trillions” is shorthand for the realization that achieving the SDGs will require more than money. It needs a global change of mindsets, approaches and accountabilities to reflect and transform the new reality of a developing world with highly varied country contexts.

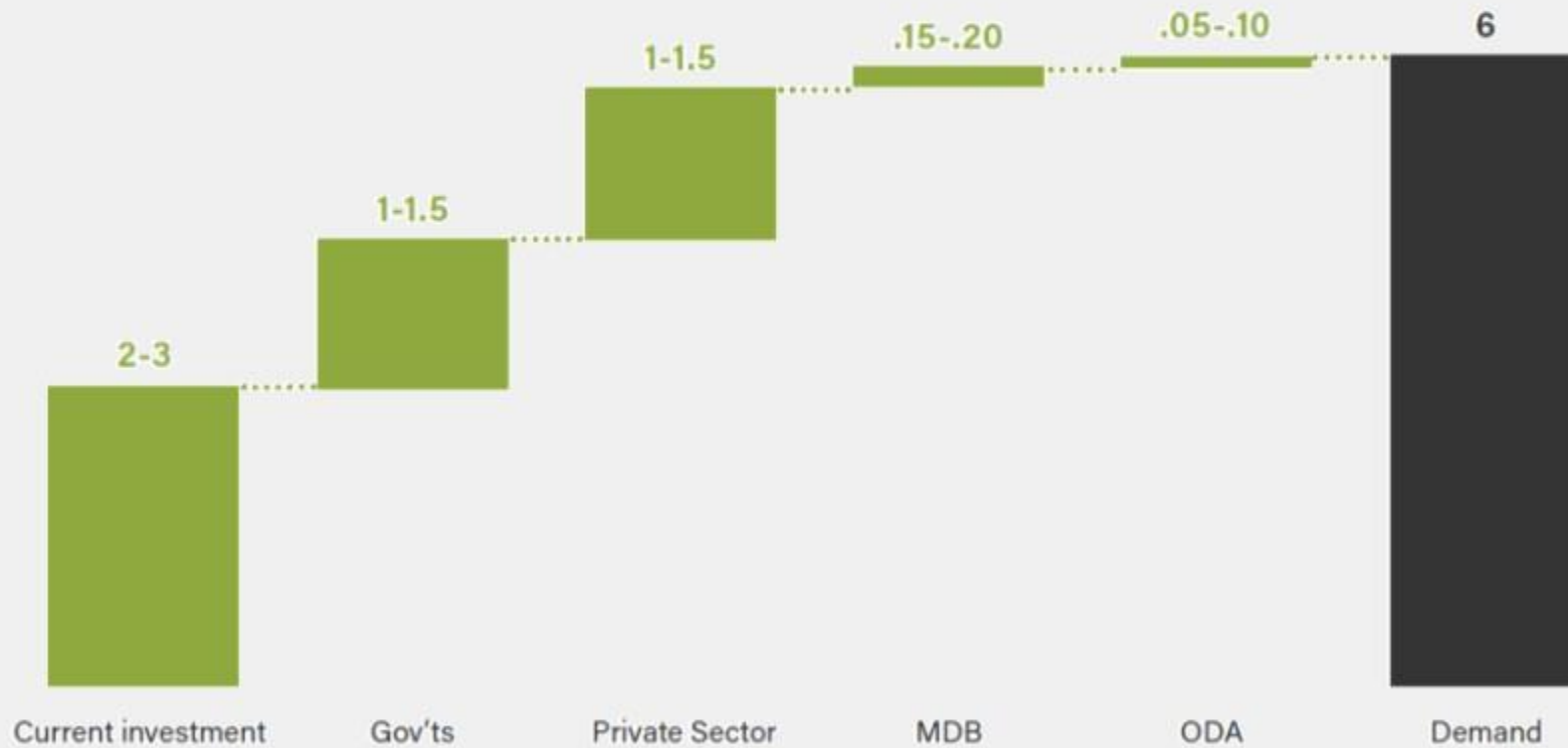
“From Billions to Trillions: Transforming Development Finance; Post-2015 Financing for Development: Multilateral Development Finance”

Development Committee Discussion Note -prepared jointly by the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the Inter-American Development Bank, the International Monetary Fund, and the World Bank Group for the April 18, 2015 Development Committee meeting

Incremental Investment needs (in tr. USD)

Figure 4

Incremental Investment Needs for Global Infrastructure

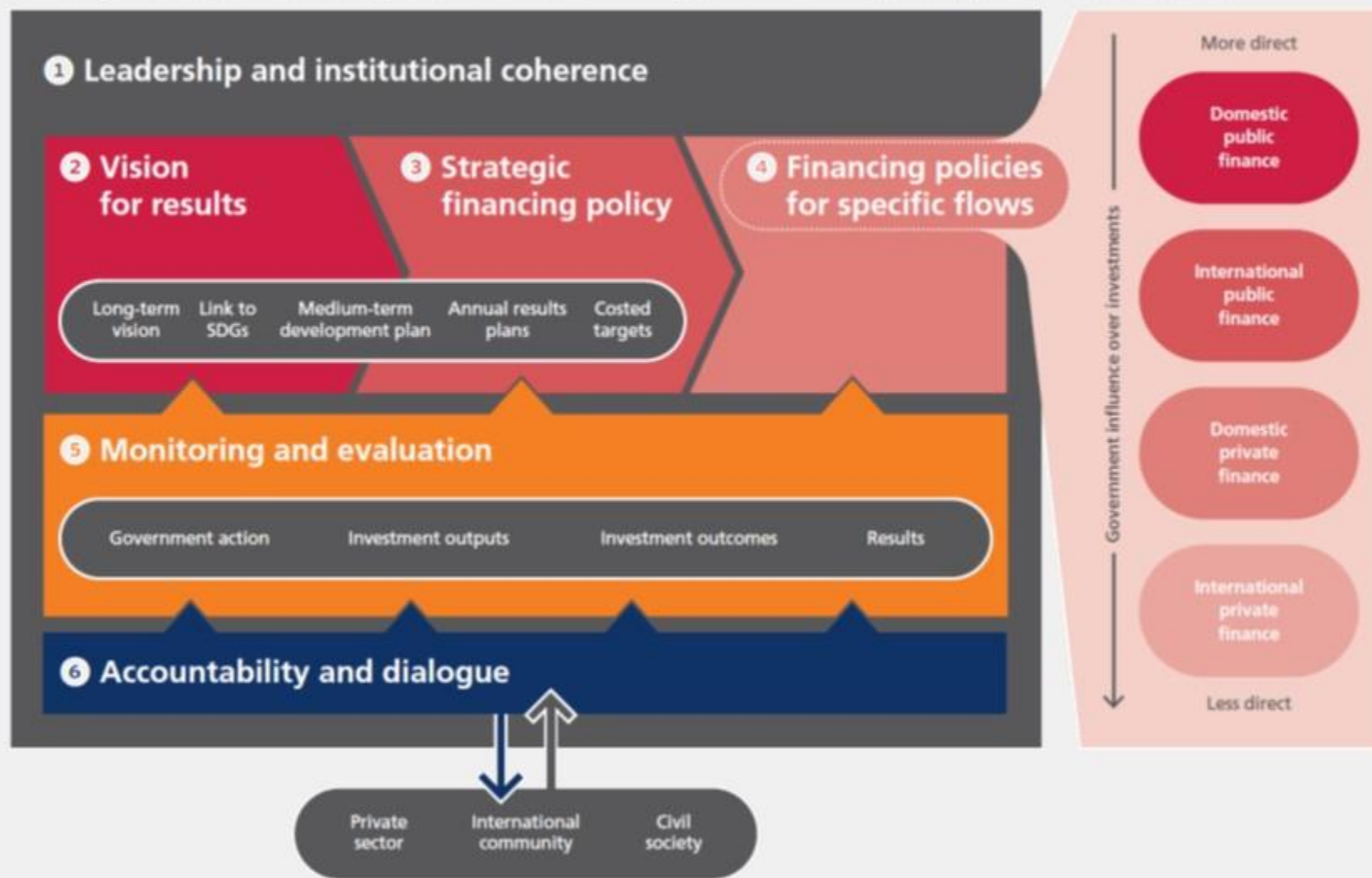


Source: Brookings²⁸

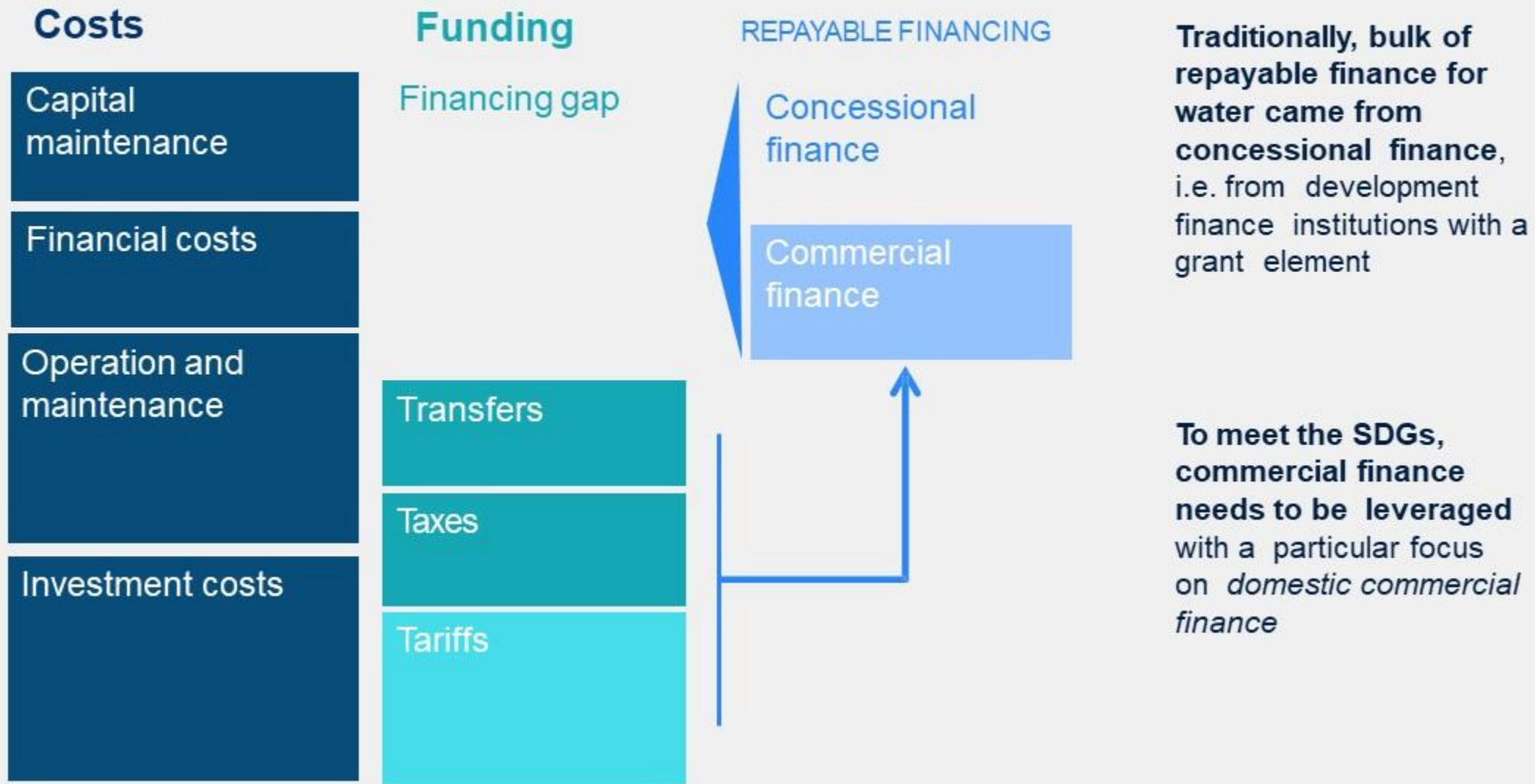
National Financing Framework for SDGs

- Finance for Development (FfD) is a global platform for UN, MLD, and BL to come together to discuss how the development goals can be financed. The last meeting of this forum took place in Addis Ababa

An integrated national financing framework for delivering national development priorities and the SDGs



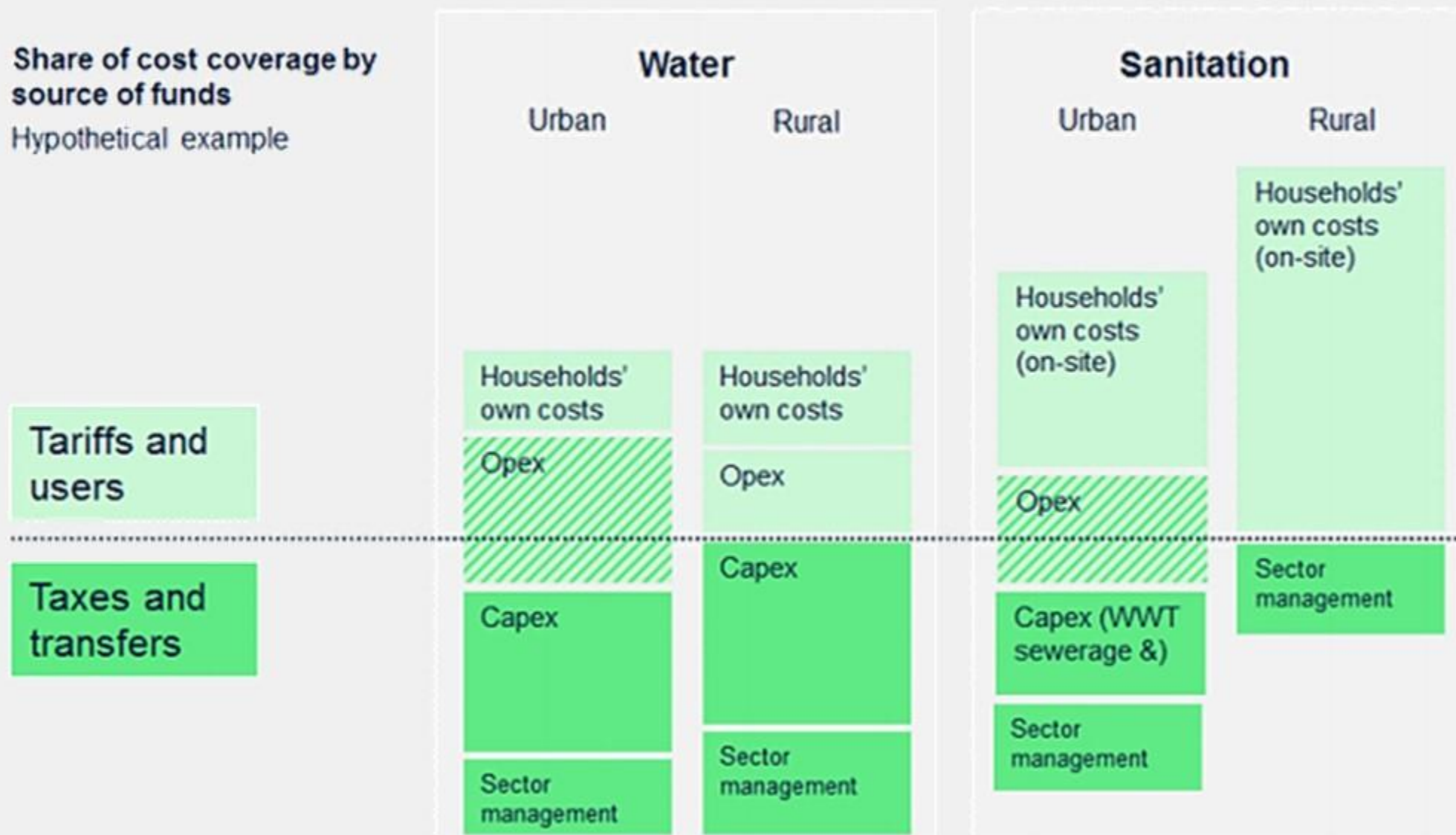
All countries, regardless of their state of development, need repayable financing



Sources of WASH Financing

Share of cost coverage by source of funds

Hypothetical example



Sources of Financing how 3Ts can unlock financing

Funding sources ("3Ts")

Tariffs

User fees for services provided and households' investment for self-supply

Transfers

Transfers from external sources, such as international donors (ODA grants), foundations, NGOs, remittances

Taxes

Domestic taxes levied by local and central governments and provided as grants or subsidies

Pre-finance



Repay



Repayable financing

Concessional finance

Provided by development agencies with a grant element (e.g. "soft loans")

Private finance

Provided by private sector financiers at market rate (vendor finance, microfinance, loans, bonds, equity)

Key



Private funds



Mixed public and private funds



Public funds

Financing Challenge for WSS: A Framework

Table 1.1

Financing Challenge for WSS: A Framework

The Financing Challenges	Addressing these Challenges
<p>1: Institutional framework and financing policies that result in ineffective and inefficient use of existing resources</p>	<p>Providing incentives for promoting sector reforms</p> <p>through mechanisms related to:</p> <ul style="list-style-type: none"> a. Decentralization-linked mechanisms to support local-level reforms b. Special fund mechanisms for supporting reform-linked programs, local partnerships, or difficult institutional reforms c. Programmatic approaches to link sector financing to sector-wide programs
<p>2: Available public resources are often inadequate to meet the costs of sustained enhanced coverage</p>	<p>Leveraging additional 'market-based' resources</p> <p>through mechanisms related to:</p> <ul style="list-style-type: none"> a. Attracting private sector participation and investments b. Promoting local investments through development of local credit markets c. Enhancing household and community resources for water and sanitation
<p>3: The poor often do not benefit from increased coverage and existing WSS services</p>	<p>Using appropriate pro-poor subsidies</p> <p>through mechanisms related to:</p> <ul style="list-style-type: none"> a. Access subsidies for WSS, demand promotion, and hygiene awareness b. Improving cross-subsidies widely used in the sector through appropriate rules, universal funds, and auctions c. Output-based aid to provide incentive-linked subsidies for access, consumption, or pro-poor reforms

Financing Mechanisms to Provide Incentives for Reforms

Table 1.2

Financing Mechanisms to Provide Incentives for Reforms

Decentralization-linked Mechanisms	Special Fund-related Mechanisms
<p>Fiscal framework for decentralization: Expenditure responsibilities and matching revenue mandates assigned to local governments (LGs) for local services. <i>Constitutional Amendment Acts and state efforts in India for mandates and fiscal powers of LGs (Box 2.1)</i></p>	<p>Social investment funds/special projects: Independently managed funds to provide demand-responsive grants for infrastructure to communities <i>Ethiopia Social Rehabilitation and Development Fund (Box 2.6); Rural WSS Project, India (Box 2.7)</i></p>
<p>Inter-governmental transfers to promote reforms: Using transfers to provide incentives and support for reforms through:</p> <ul style="list-style-type: none"> i. <i>Conditional grants tied to reforms in specific sectors/uses, available to all local authorities Conditional RWSS grants in Uganda (Box 2.2)</i> ii. <i>Discretionary transfers with conditions for local reform but not earmarked for specific sectors/uses Local authority transfer fund in Kenya (Box 2.3)</i> iii. <i>Performance-based conditional grants through a challenge fund structure Nigeria local governance scorecards (Box 2.4); India Urban Services for the Poor Project (Box 2.5)</i> 	<p>Community development funds: Special funds for poor communities focused on creating social capital, capitalized from grants, with operational costs met through fund income <i>Community Organization Development Institute (CODI) in Thailand (Box 2.8); Civil society challenge funds (Table 2.1)</i></p>
	<p>Institutional reform-linked challenge funds: Funds to meet costs of complex and difficult institutional reforms, implemented through a challenge fund structure <i>City restructuring grant in South Africa, city challenge fund and urban reform initiative fund in India (Box 2.9)</i></p>

GLAAS report 2017

EXTERNAL SUPPORT

8.2 billion

Official development assistance commitments for water and sanitation in 2015 (constant 2014 US\$)

3.8%

Percentage of total ODA commitments for water and sanitation in 2015

7.4 billion

Official development assistance disbursements for water and sanitation in 2015 (constant 2014 US\$)

65% / 35%

Breakdown of water and sanitation ODA commitments between water / sanitation

25%

Water and sanitation ODA commitments directed to basic services

73% / 24% / 3%

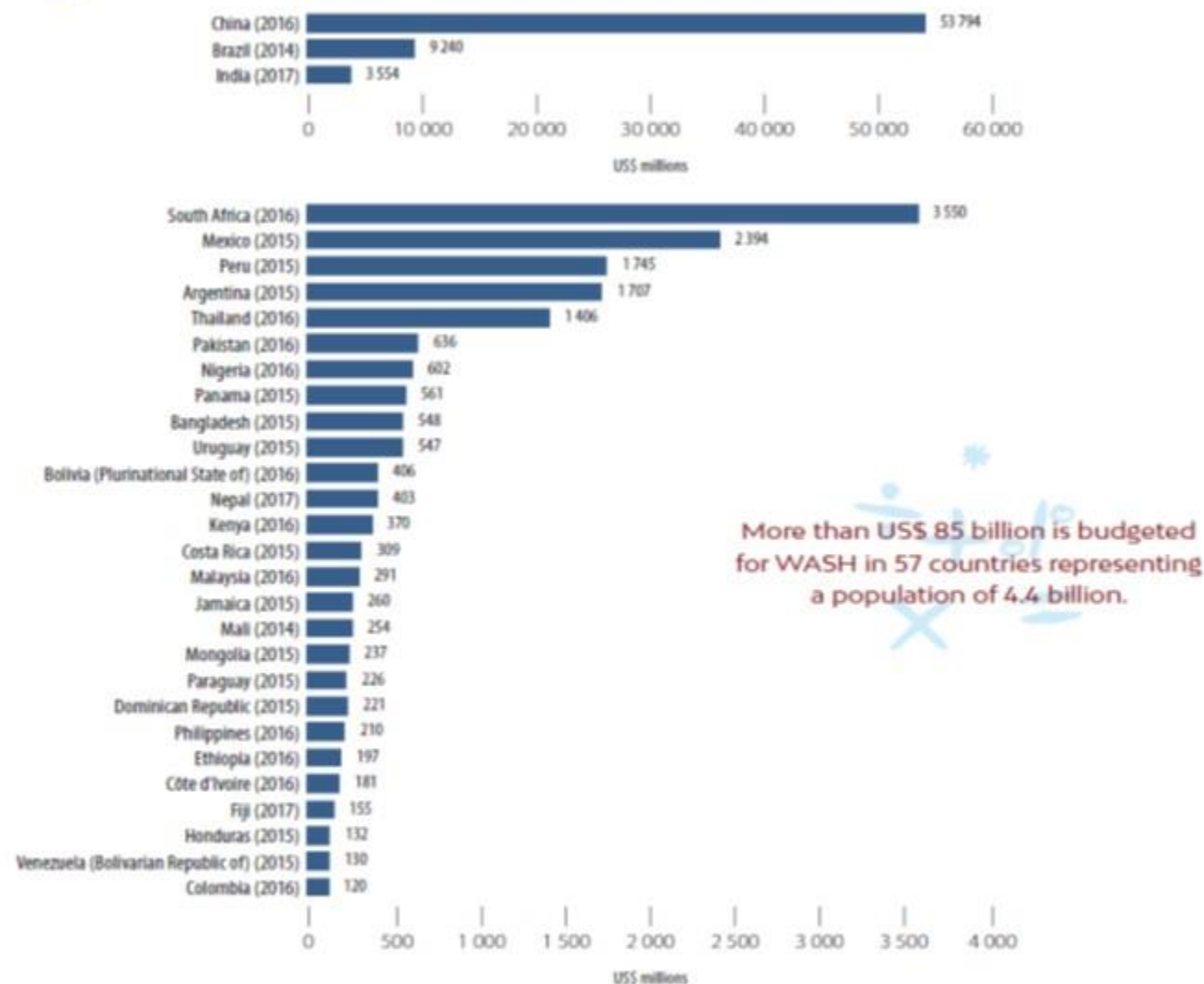
Breakdown of water and sanitation ODA disbursements between urban / rural / combined

32% / 36% / 32%

Breakdown of water and sanitation development assistance between ODA grants / ODA loans / non-concessional loans



Reported WASH budgets, most recent fiscal year (n= 57)



Note that WASH budget data are not always comparable between countries as data may not be reported for all ministries involved in WASH, subnational/national and service provider data may not be reported, and the scope of activities covered may differ by country.

Exchange rates for currency conversion were downloaded from the World Development Indicators database (originally sourced from the International Monetary Fund, International Financial Statistics) of the World Bank in early February 2017. For conversion of 2016 and 2017 budget figures, the average exchange rates for 2015 were used, as these were the most recent rates available from this dataset at the time of analysis.

Additional countries with a national WASH budget less than US\$ 100 million include: Georgia (97), Afghanistan (92), Senegal (87), Uzbekistan (68), United Republic of Tanzania (61), Albania (60), Rwanda (57), Guinea (56), Lithuania (51), Swaziland (47), Burkina Faso (45), Zambia (39), Lesotho (36), Lao People's Democratic Republic (26), Madagascar (24), Cambodia (22), Liberia (20), Solomon Islands (19), Tajikistan (16), Bhutan (14), Serbia (13), Maldives (12), El Salvador (11), Tonga (10), Bosnia and Herzegovina (10), Timor-Leste (9), Burundi (3), and Vanuatu (2).

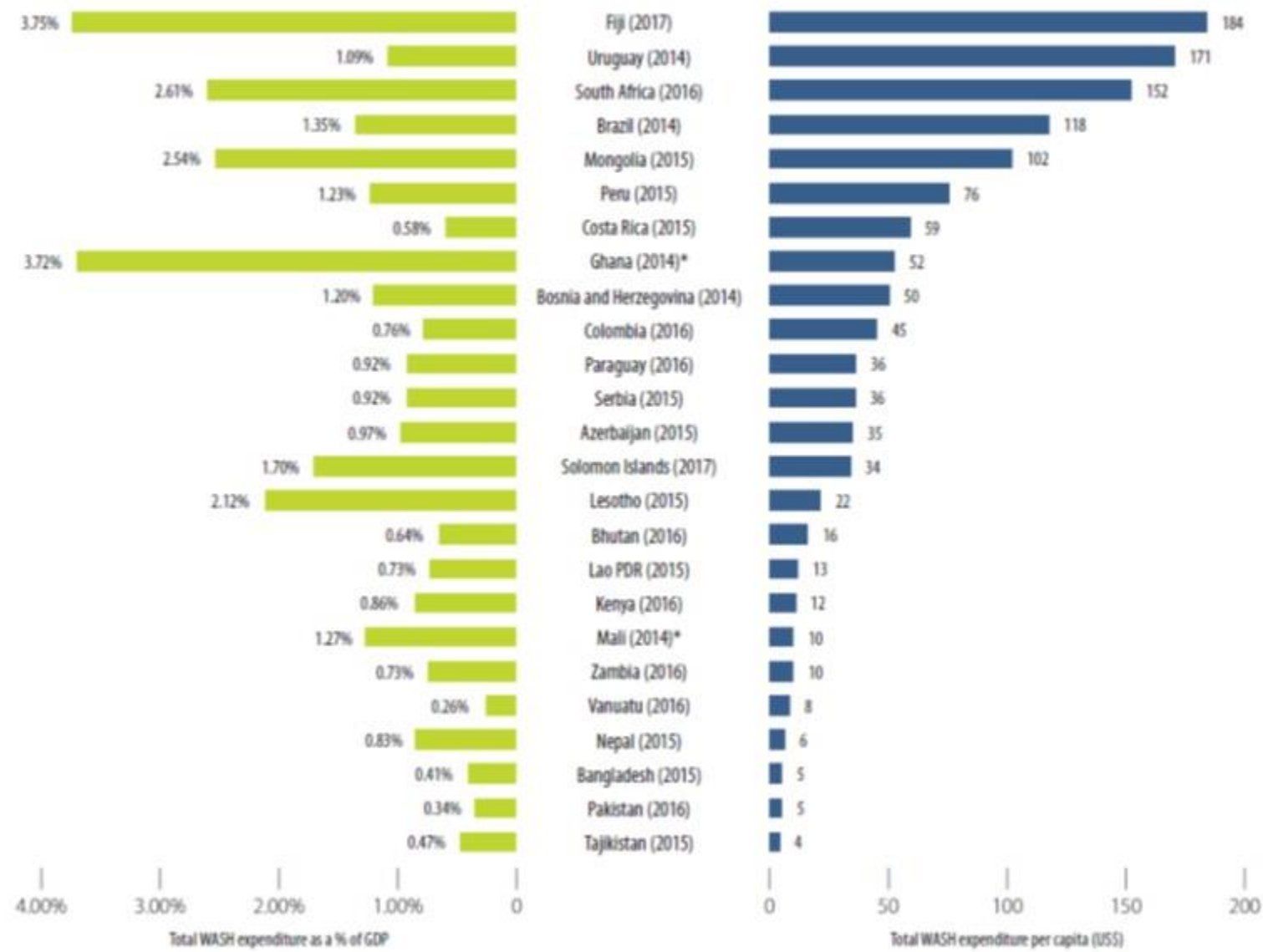
Source: GLAAS 2016/2017 country survey.

WHO (2017) UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2017 report: financing universal water, sanitation and hygiene under the sustainable development goals



Figure 8

Total WASH expenditure as a per cent of GDP and per capita (25 countries, population of 875 million)

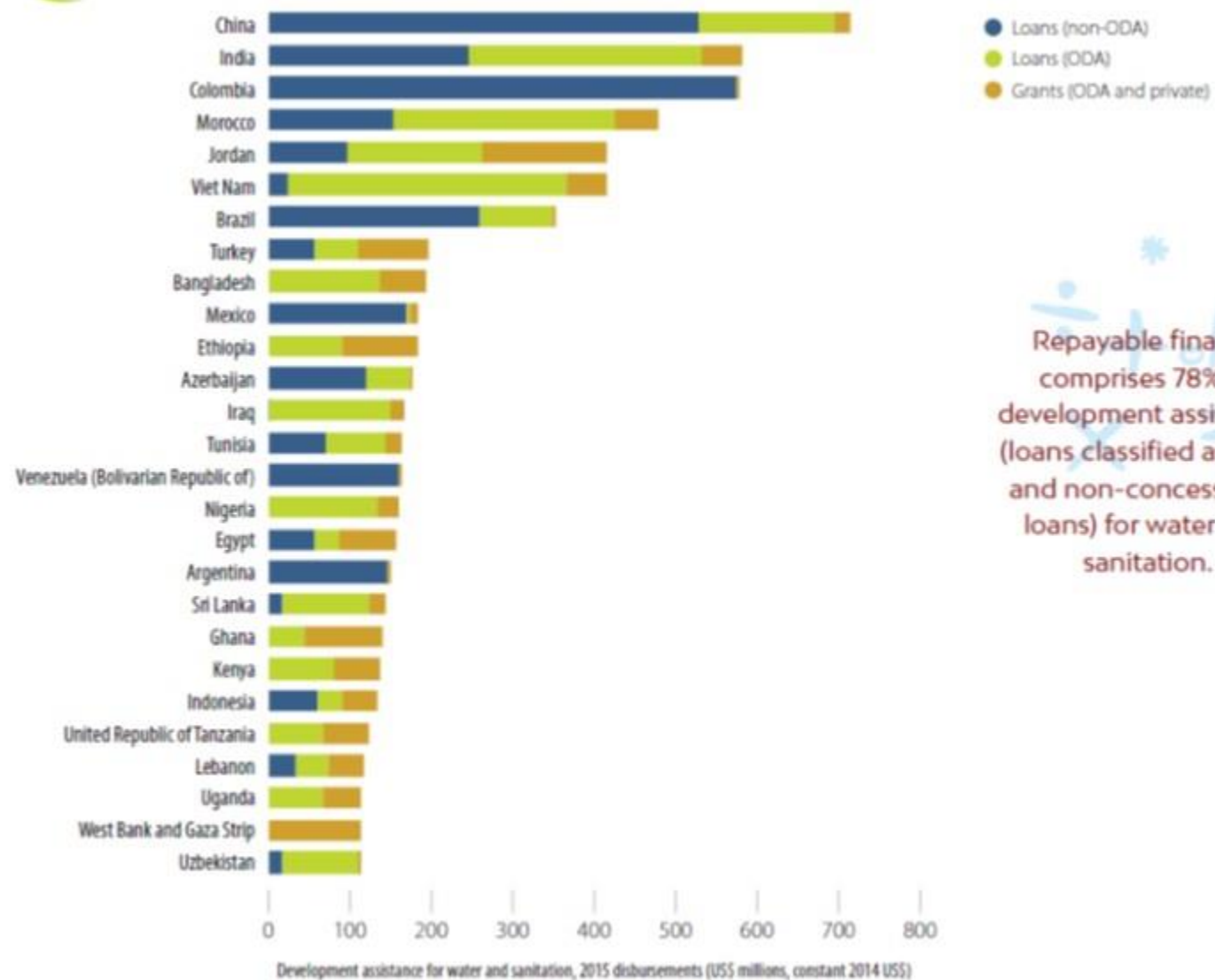


Sources: GLAAS 2016/2017 country survey; TrackFin, 2017 where indicated with an asterisk (*).

WHO (2017) UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2017 report: financing universal water, sanitation and hygiene under the sustainable development goals

Figure 22

Top recipients of development assistance for water and sanitation (greater than US\$ 100 million in disbursements in 2015), grants versus loans



Repayable finance comprises 78% of development assistance (loans classified as ODA and non-concessional loans) for water and sanitation.

Source: OECD-CRS, 2016.

WHO (2017) UN-Water global analysis and assessment of sanitation and drinking-water (GLAAS) 2017 report: financing universal water, sanitation and hygiene under the sustainable development goals

Do Governments Allocate enough? WSS Budget share 2000-2008

Table 3.3: WSS Budget as a Share of Overall Government Budget (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	Mean
Rural sector only										
Burkina Faso		2.9	2.5	1.7	1.1	1.8	2.9	3.1		2.3
Cameroon			1.3	0.7	0.4	0.7	0.3	0.5		0.6
Côte d'Ivoire			0.5	0.4	0.3	0.5	0.1	0.1	0.4	0.3
Ethiopia										
Ghana		0.9	2.5	2.3	1.1	2.1	2.6			1.9
Madagascar	0.6	1.2	0.7	1.6	1.3	1.3	1.4			1.2
Mali		1.9	1.4	1.4	1.6	2.3	2.1			1.8
Niger						4.2	3.2	5.4		4.3
<i>Rural mean</i>	<i>0.6</i>	<i>1.7</i>	<i>1.5</i>	<i>1.3</i>	<i>1.0</i>	<i>1.8</i>	<i>1.8</i>	<i>2.3</i>	<i>0.4</i>	<i>1.8</i>
Rural+urban										
Central African Republic			0.2	0.4	0.7	0.3	1.2	1.0	4.3	1.2
Congo, Rep. of			0.6	0.1	0.3	0.5	0.9	1.4	2.3	0.9
Congo, Dem. Rep. of										
Mozambique			2.6	1.6	2.1	3.6	3.5	2.3	3.5	2.7
Sierra Leone										
Tanzania							2.4	4.0	6.5	4.3
Togo			3.3	2.8	4.9	1.2	1.9	0.8	1.0	2.3
<i>Rural+urban mean</i>			<i>1.7</i>	<i>1.3</i>	<i>2.0</i>	<i>1.4</i>	<i>2.0</i>	<i>1.9</i>	<i>3.5</i>	<i>2.3</i>
Overall mean	0.6	1.7	1.6	1.3	1.4	1.7	1.9	2.1	3.0	2.0

To establish specific public sector budget allocations for sanitation and hygiene programs. Our aspiration is that these allocations should be a minimum of 0.5% of GDP for sanitation and hygiene;

e-Thekiwini declaration, 2008, Africasan , 2008

Has Funding for WASH in Africa improved?

Table 2: Government and donor actual funding for water and sanitation (with the exception of Rwanda, where figures are for planned expenditure) – constant local currency, unless stated*

Country	2007	2008	2009	2010	2011	2012	US\$ average	% GDP average
Ghana (Ghanaian Cedi)	-	139.8m	86.3m	107.5m	132.2m	-	86.1m	0.34
Niger (CFA Francs)	18.5bn	20.1bn	17.7bn	22.6bn	-	-	41.6m	0.89
Rwanda - planned (Rwandan Francs)	-	24.9bn	17.3bn	17.2bn	16.3bn	23.2bn	32.7m	0.65
Sierra Leone (Leones)	-	69.4bn	51.7bn	91.2bn	81.5bn	-	20.0m	1.33
Uganda (Shillings)	-	122.8bn	116.5bn	127.4bn	97.4bn	84.92bn	44.4m	0.37

*Includes only on-budget donor funding.

Public Finance for WASH

	GDP 2012 (USD \$ mill)	WASH expenditure as % of GDP in 2012	Sanitation as % of WASH expenditure	Sanitation expenditure as % of GDP	Sanitation expenditure (USD \$ mill)	Projection 0.5% of GDP (USD \$ mill)	Gap (USD \$ mill)
Ethiopia	43,311	0.30%	2%	0.01%	2	217	215
Ghana	41,939	0.44%*	3%	0.01%	7	103	96
Benin	6,020	0.98%	14%	0.13%	8	30	22
Morocco	95,980	0.38%*	36%	0.13%	128	479	352
Tunisia	45,660	0.46%	36%	0.17%	76	228	152
Senegal	11,250	0.81%	31%	0.25%	28	56	28
Burkina Faso	9,250	1.04%	25%	0.26%	24	46	22
DRC	8,720	1.69%	23%	0.39%	34	43	10

*Source: World Bank (2015). WHO and UN-Water (2014b), own estimates. *Findings from the TrackFin initiative suggest these numbers might be higher, as Ghana, Morocco and Brazil all reported lower spending on WASH than what was found by TrackFin. For instance, TrackFin estimated that WASH spending in Ghana was 1.3% of GDP.*

Are Countries Spending Enough?

TABLE 1 EXPENDITURE ON SANITATION IN SELECTED COUNTRIES

Country	GDP 2012 (USD Million)	WASH expenditure as % of GDP in 2012	Sanitation as % of WASH expenditure	Sanitation expenditure as % of GDP	Sanitation Expenditure (USD Million)	Projection 0.5% of GDP (USD million)	Gap (USD million)
Afghanistan	20,500	0,13%	13%	0,017%	3,5	102	99
Bangladesh	116,360	0,26%	23%	0,060%	69,6	581	512
Bolivia	20,040	0,64%	32%	0,205%	41,0	100	59
Brazil	2,252,660	0,11%*	40%	0,044%	991,2	11,263	10,272
Fiji	3,910	0,81%	33%	0,267%	10,5	19	9
Iran	552,400	0,12%	28%	0,034%	185,6	2762	2,576
Morocco	95,980	0,38%*	36%	0,133%	127,8	479	352
Nepal	18,960	0,57%	13%	0,074%	14,0	94	80
Serbia	37,490	0,06%	22%	0,013%	4,9	187	182
Tunisia	45,660	0,46%	36%	0,166%	75,6	228	152

Public Finance for WASH in Ghana

- Allocation for WASH programmes declined by 28% in 2018, reducing the share of the sector's budget to 0.3% in 2018 from 0.5% in 2017. In 2017, the allocation was GH¢ 255.5 million compared to GH¢183,632,576 in 2018. Given the state of sanitation in the country and the fact that the President recently launched a national sanitation campaign, this raises a lot of concerns.
- The 2018 budget has promised to construct 200,000 household toilets and 20,000 institutional latrines through the 'Toilet for All' agenda. How is government going to implement these projects with a budget cut of 28.1%

The 2015/16 budget allocation to Water and Sanitation was MK19.2 billion, down from MK36.3 billion in 2014/15,

representing a 47% decline in nominal terms. Considering an average inflation rate of 22% in 2014/15 fiscal year, the drop amounts to 69% in real terms. This therefore means that the government allocated less resources to WASH in 2015/16 than in 2013/14.

Malawi spends about 2% of the national budget, or 0.5% of GDP, on the WASH sector. This is far below the 1.5% of GDP it signed up to in the eThekweni Declaration (2008).

With only 41% households using an improved sanitation facility and 20% of the schools with protected water sources, there is a need to ensure no reduction in the budget allocation to WASH.

There is a need to strengthen the PFM system to improve outcomes in the WASH sector.

There is no clear indication of sanitation expenditure in the national budget, which reduces accountability and inhibits monitoring for national policies on sanitation. Less than half the population of Malawi enjoys access to improved sanitation facilities. Yet the key tool used by Government to demonstrate their response to that problem – the national budget – does not clearly identify how the government will address the challenge.

As a first step, a separate budget line should be created for sanitation and hygiene.

The WASH sector remains highly centralised, with national expenditure through districts accounting for less than 1% (MK120 million) of the total government expenditure in the sector.

There should be more decentralization of WASH expenditure, with a specific focus on enhancing capacity at district level (both personnel and equipment); the central level should focus on policy and oversight.

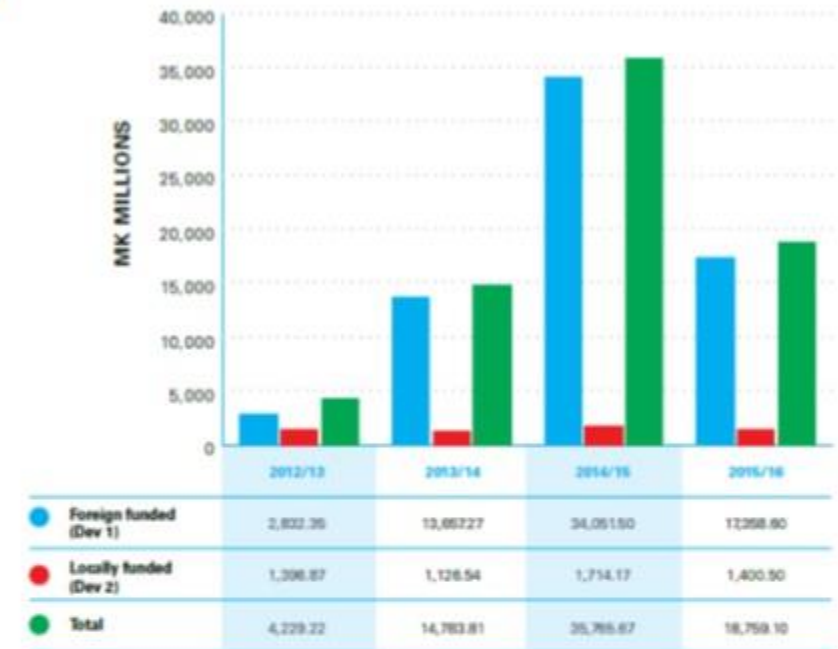
District allocations are not aligned to needs in water.

Kasungu and Thyolo have low percentages of households using improved water sources (74% and 66% respectively), yet are among the districts allocated the least per capita expenditure (MK2.73 Kasungu and MK5.39 Thyolo). This is in contrast with Mwanza, which has an above average percentage of households using improved drinking water sources (94.3%), yet is allocated the highest expenditure per capita of MK33.02.

The district allocation formula should be revised for the budget to be an effective tool to respond to varying needs.

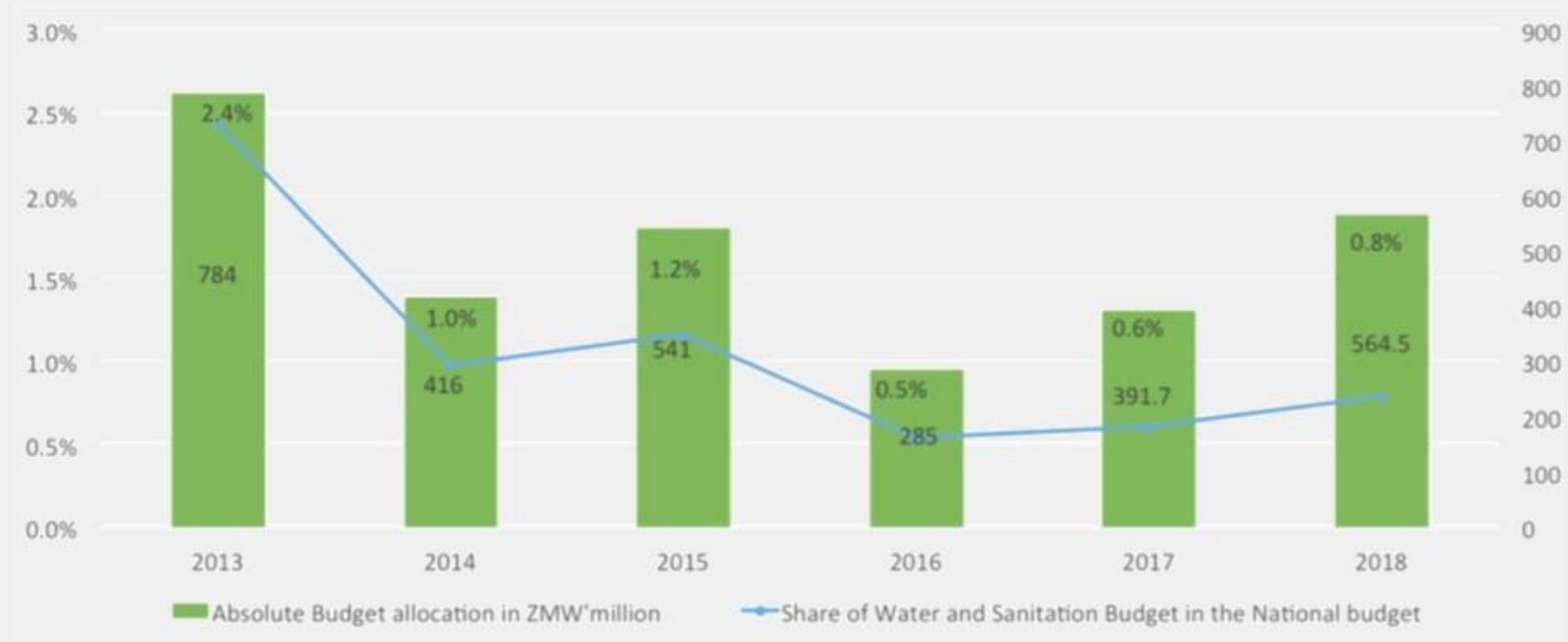
A significant proportion of the WASH budget is made up of foreign aid. The capital budget represents 98% of the total budget for WASH, and more than 80% of the capital budget for WASH is funded by external sources.

Figure 3: WASH development expenditure (MK millions)



Zambia: Water and Sanitation Budget: Absolute and Share of National Budget

- No consistent Trend in budget allocation for WASH is observed in Zambia.
- Post 2016 increase in budget is a good sign for SDG achievement



South Asia: Sanitation Financing

Country	Previous Year Financial Investment		Latest Year Financial Investment	
	Year	Expenditures (in US \$ million)	Year	Expenditures (in US \$ million)
Afghanistan	2012	29	2015	170
Bangladesh	2012/13	473	2015	794
Bhutan	2012/13	9	2016	13
India	2012	3,650 ⁷	2016	5,514
Nepal	2012	134	2015	174
Pakistan	2011/12	544	2016	916
Sri Lanka	2012	204 ³	2015	286 ⁹
Total		5,043		7,867

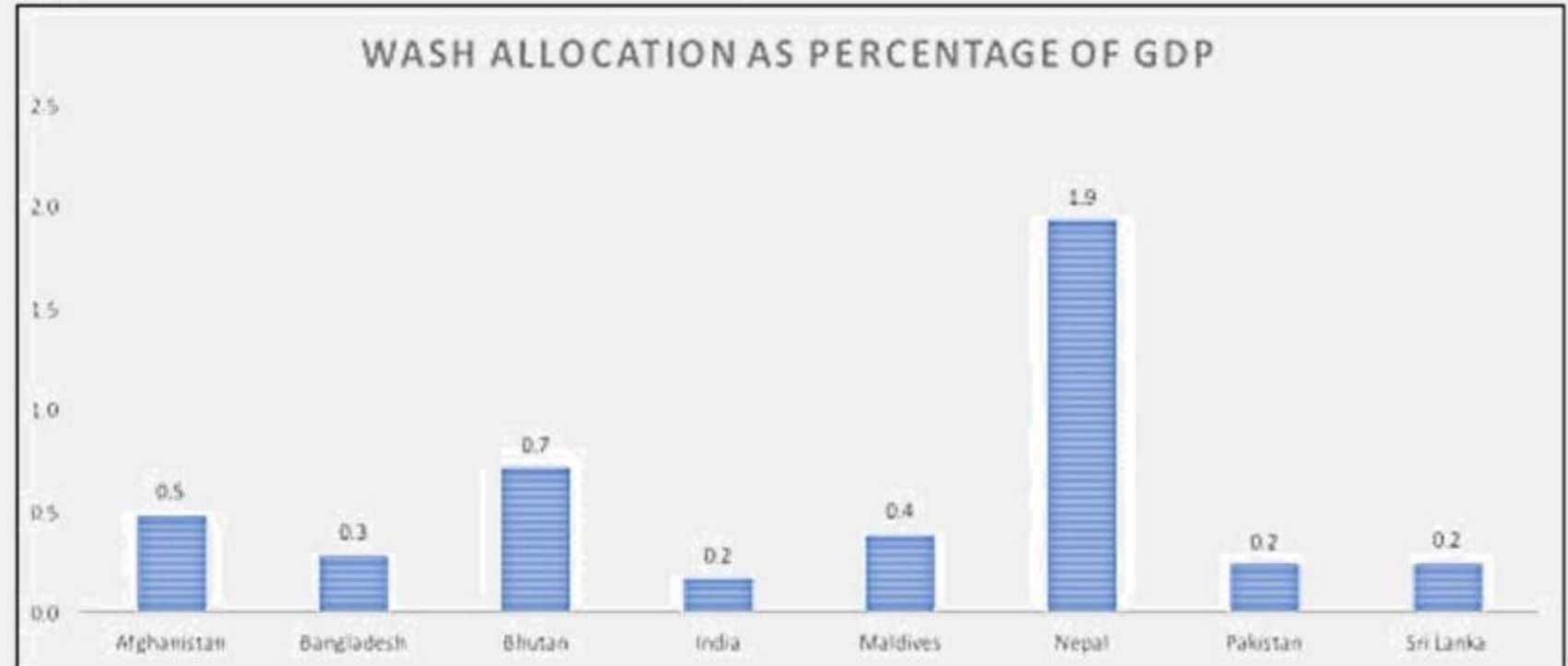
Table 2: Comparison of WASH Expenditures

Source: GLASS Report 2016/17 and 2014, except where foot reference given

South Asia: WASH Allocations

In South Asia, Nepal has a much greater commitment to achieving SDG 6

Figure II: WASH Allocation as Percentage of GDP in South Asian Countries



Sources: WASH Budget in GLAAS 2016/17, World Bank GDP Data and, Annual Report 2015 Ministry of Finance Sri Lanka

Discussion Points

- What is meant by Transfers, Tariffs, and Taxes?
- Which of the above is more important for sanitation?
- How to bridge gaps and imbalances in existing fund allocations to sanitation programme?

National Context of Sanitation Financing

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